

THE
SINGAPORE
RED DATA BOOK

RED LISTS OF SINGAPORE BIODIVERSITY

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Editors

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Red Lists of Singapore Biodiversity, Third Edition

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Cover illustration of Striped bead anemone *Paracondylactis singaporesis*, Singapore freshwater crab *Johora singaporesis*, Singapore ginger *Zingiber singapurensis* by: Choo Yen Ee

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FOREWORD

We have come a long way in discovering more about our natural heritage since the release of the first Singapore Red Data Book in 1994. As we continue our journey towards transforming Singapore into a City in Nature, our commitment remains steadfast in our efforts to safeguard our native biodiversity and integrate nature into our urban landscape, while ensuring a liveable and sustainable environment for everyone.

Today, we enjoy the benefits of living close to nature through our extensive network of parks, park connectors and ecological corridors across Singapore – anchored by our Nature Reserves.

By taking a science-based approach to nature conservation, we continue to enhance and restore natural habitats and enable the long-term survival of our native biodiversity. The National Parks Board (NParks)'s Nature Conservation Master Plan consolidates and intensifies our conservation efforts. Examples include NParks' Species Recovery Programme, which helps rare species that are endemic, native or critically endangered to thrive.

This third edition of the Singapore Red Data Book marks a timely update in our biodiversity knowledge, and guides us in our conservation efforts moving forward. It is the result of 15 years of work, building upon the efforts from earlier editions of the Book. The breadth and depth of coverage of native species in this Book has increased significantly – more than tripled – over the past edition.

This book is made possible only because of the community coming together and working together. To produce this publication, NParks worked with the National University of Singapore's Lee Kong Chian Natural History Museum and the Nature Society Singapore. They represent the partnership of government, academia and civil society that continues from the approach taken for the second edition of the Singapore Red Data Book.

I trust that this book will continue to inform and inspire conservation efforts in Singapore, serving as a useful resource for people to better appreciate and cherish our biodiversity. I believe it will also encourage young Singaporeans with a passion for nature to look into addressing the gaps in our knowledge and find ways to make Singapore the best home for us and the biodiversity that share this island.

To all the editors, scientists and volunteers of the Singapore Red Data Book, thank you for contributing towards Singapore's transformation into a City in Nature, and your tireless efforts in conserving our natural heritage for generations to come.

DESMOND LEE

Minister for National Development
Minister-in-charge of Social Services Integration
Singapore

PREAMBLE

The IUCN Red List Categories and Criteria were developed for classifying species at risk of global extinction. Assessments of living species have been performed at the global level and results published in Red Data Books since the early 1960s. In the years thereafter, IUCN recognised that it could be useful to have regional assessments for species at the national and even local levels.

The first Singapore Red Data Book (SRDB) of threatened plants and animal species was compiled by Wee Yeow Chin and Peter K.L. Ng in the early 1990s with the book published in 1994. Inputs were sought and received from a wide variety of professionals who were also dedicated nature lovers. The intent was to highlight biodiversity that was in trouble and at risk of being extirpated so that conservation plans could be drawn up for actions to follow.

The second edition of the SRDB (RDB2) was published 14 years after the first edition – in 2008. The intervening years saw Singapore's landscape change biologically, physically, and politically. New conservation areas were established with the gazettlement of the Labrador Nature Reserve (2001) and the Sungei Buloh Wetland Reserve (2002), while Chek Jawa in Pulau Ubin was administratively protected (2001). The human population of Singapore had increased while land reclamation and development work for urban infrastructure as well as a large increase in building projects meant that there were impacts to natural habitats affecting the populations of many native species.

Fast forward to today, the present third edition of the SRDB (RDB3) is produced by the National Parks Board working together with the National University of Singapore's Lee Kong Chian Natural History Museum and the Nature Society (Singapore), representing the partnership of government, academia and civil society that continues from RDB2. The six members of the editorial team formed in this partnership also constitute the core of the steering committee behind RDB3.

All contributors to the RDB3 project were invited to an inaugural workshop, which was held primarily to provide consistency, so far as it was practically possible, to the application of assessment criteria at the national level and across diverse taxa. The workshop enabled participants contributing to the RDB3 to hear the rationale of the RDB3 project and the call for data and stock take of the biodiversity of Singapore. It also promoted a common understanding among the contributors, enabling them to engage as well as to understand one another's perspectives on various issues.

In this RDB3, the number of taxonomic groups with species assessed has increased significantly over the RDB2, including new assessments of algae, fungi, poriferans (sponges), freshwater aquatic bugs, assassin bugs, marine insects, tanaids and marine fishes - chondrichthyians (sharks and rays). These taxonomic groups have species that are being assessed and assigned a category of threat status for the very first time. In addition to the breadth of coverage across taxa, many taxonomic groups have seen an increase in the depth of coverage. For example, only one ant species was assessed in RDB2, whereas in RDB3, 230 species were assessed. Taxa such as bees, beetles, cnidarians, echinoderms, flies, marine fishes, molluscs, moths, scleractinians, spiders and wasps also saw substantial numbers of species assessed for the first time. This increased the number of species compiled in the RDB3 over the RDB2 from just above 2,900 species to more than 9,400 species.

As editors, we have endeavoured to make a fair compilation of opinions from the contributors who are experts, specialists and authors in their respective fields. We are aware that compilations and categorisations of this nature are never exhaustive or perfect. While significant strides have been made over the past 16 years in both terrestrial and, especially, marine biodiversity, the ecological information on the population sizes and rates of decline that are required to assign the category of threat status using the IUCN threat categories is still patchy for many taxa even for national territories as small as Singapore's.

As such, there are plenty of opportunities for everyone with an interest in biodiversity to contribute to the body of knowledge and understanding that leads to the conservation and management of species, species recovery programmes and, just as importantly, the conservation of habitats and the ecological corridors connecting them in Singapore.

While the contributions to this book are substantial, and for which we hope will help spark an interest and raise awareness among readers that Singapore is home to a multitude of biodiversity, we have also enabled easy and convenient access to the general public to refer to the checklists and Red Lists of the species from the taxonomic groups covered in this book on the NParks biodiversity webpages.

We look forward to the growing use of this edition of the Singapore Red Data Book.

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May 2024

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Orthoptera – Crickets and Katydids

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Phasmida – Stick Insects

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Arachnida – Spiders

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Miscellaneous Arthropoda and Onychophora

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National University of Singapore**Arthropoda – Tanaidacean Crustaceans**

C.K. Chim

Tropical Marine Science Institute,
National University of Singapore**Arthropoda – Freshwater Decapod Crustaceans**

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Terrestrial Mammals

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APPLYING THE RED LIST CATEGORIES

G.W.H. DAVISON

Rationale for the Red Data Book

Red Data Books were first begun in 1961 by the International Union for the Conservation of Nature and Natural Resources (IUCN). They were loose-leaf ring binders containing one sheet of paper for each species, considered at global level, and covered only a relatively small number of interesting and charismatic species, mostly birds and mammals. The species included made up the "Red List" of threatened species. Whenever the text on a species was revised, the outdated sheet could be removed and replaced by the new one.

Red Lists have changed dramatically. They are still produced globally, but many nations and even some subnational territories have produced regional and local Red Lists or Red Data Books. The functions have also expanded. Currently, they:

- Help to fulfill and to track performance and commitment to international treaty obligations (e.g. the Convention on Biological Diversity)
- Provide common terms of reference and baseline data on the status of species, of biodiversity as a whole, and information for Singapore's biodiversity reports (including for planning purposes, environmental impact assessments)
- Highlight taxonomic groups and individual species for conservation action (including habitat recovery, connectivity, species recovery programmes).

Background to previous editions

The first edition of the Singapore Red Data Book was published by the Nature Society Singapore in 1994 and edited by representatives of the society (NSS) and the National University of Singapore (NUS). The categories of threat used then were Extinct (Ex), Endangered (E), Vulnerable (V), Rare (R), and Indeterminate (I). The second edition (RDB2) was published in 2008, with representatives of NSS, NUS and the National Parks Board (NParks). It had greater taxonomic coverage of the flora and fauna and used the revised threat categories then recommended by IUCN and adopted by the global conservation community.

A third edition of the Singapore Red Data Book (RDB3) was required in order to:

- Update information for all potential users;
- Improve taxonomic and species coverage;
- Enhance consultation with a broader pool of expertise;
- Align more closely with the recommended IUCN guidelines for the assessment process; and
- Provide background information relevant to new and amended legislation (see the chapter in this volume).

The basic principles that were applied throughout the Red Data Book revision were:

- That the IUCN criteria apply across all taxonomic groups;
- That assessments are fact based;
- That the precautionary principle should be applied; and
- That the assessments be done according to the best of the groups' current knowledge, recognizing the continuing shifts in status and information.

The individuals and organisations responsible for the Singapore Red Data Book already intended, before RDB2, that it would eventually become an on-line resource. RDB3 now begins that trend with both print and a summarized on-line version.

Resources

In addition to the Singapore Red Data Book first edition and second edition, useful guiding documents were:

- Bubb, P.J., Butchart, S.H.M., Collen, B., Dublin, H., Kapos, V., Pollock, C., Stuart, S.N. & Vié, J-C. 2009. IUCN Red List Index - Guidance for National and Regional Use. IUCN, Gland, Switzerland.
- IUCN Species Survival Commission. 2012a. IUCN Red List Categories and Criteria, Version 3.1. Gland, Switzerland.
- IUCN Species Survival Commission. 2012b. Guidelines for Application of IUCN Red List Criteria at Regional and National Level. Version 4.0. IUCN, Gland, Switzerland. (<http://www.iucnredlist.org/technical-documents/categories-and-criteria>).
- IUCN Standards and Petitions Subcommittee. 2017. Guidelines for Using the IUCN Red List Categories and Criteria. Version 13. Prepared by the Standards and Petitions Subcommittee, IUCN. Gland, Switzerland. Downloadable from <http://www.iucnredlist.org/documents/RedListGuidelines.pdf>

Steering Committee

A steering committee was formed consisting of representatives of the National Parks Board, Nature Society (Singapore) and the National University of Singapore. On 10th September 2019, the steering committee members held a coordination meeting:

The approach taken for the third edition was articulated. The tripartite group of academia, civil society and government as practiced in the second edition should continue. The steering committee had been formed to drive the project, approve editors and taxonomic leads, manage the process and scientific strategy, define and realise the publication of the Red Data Book. The committee members agreed on the following:

- Adherence to IUCN principles and guidelines as far as is practical in the national context;
- Highlighted the composition of the steering committee and the leads for all taxonomic groups;
- The form of credits and acknowledgements for all parties involved in the work was discussed.

Comments were welcomed on the Species Information Sheet template. Specific comments received include how to calibrate and assess between what is endangered nationally but abundant throughout its range in other countries; this comment also applies especially to invertebrates that have largely disappeared from Singapore but are abundant in

South-east Asia. Other comments included adding additional fields such as a “Justification” field and also the date of “First Record for Singapore”, “Number of Digital Records”, and “Remarks”.

It was agreed to circulate an amended Species Information Sheet to all taxonomic leads for further collaborative comments.

Mention was made of the plant taxonomy groups. The Singapore Herbarium (SING) had largely worked out the species list of higher plants for the forthcoming Flora of Singapore project and was already in the process of assigning status and categories to every species.

Discussion was held on the development of common standards for invertebrates so that there would be consistency in application across taxonomic groups. The taxonomic leads for the various invertebrates were encouraged to coordinate their mutual approach.

As a guideline, the overall approach would include all Singapore native species. All other species that are non-native, naturalised and hybrids would be subject to further scrutiny by the steering committee for consideration. The status of non-breeding migrant and vagrant animal species would rely on their international assessment by IUCN, because criteria such as breeding population size, number of mature individuals, and area of occupancy do not apply in the Singapore national context.

Taxonomic Group Leads were identified, and each leader was invited to form a group to consider the status of every species respectively.

Participants’ Workshop

A full day workshop was held on 7th March 2020. There were 65 participants including independent experts and taxonomic specialists, the Group Leads and their group members, and representatives of the National Parks Board, Nature Society (Singapore), National University of Singapore, and Wildlife Reserves Singapore. The expectations of the workshop by participants were:

- Learning from other taxon groups’ experiences;
- Addressing instances where there are incomplete data;
- Achieving alignment between taxa and between global/regional/local assessments;
- Understanding and using IUCN criteria properly especially for data deficient taxa, unknown taxa, invertebrates, and small geographic areas;
- Resolving inconsistencies of assessment across taxa;
- Credible information that will help guide policy, development and conservation management plans; and
- Managing the ‘Species Information Sheets’ that had been prepared as a resource document for participants to use in compiling relevant information for every species.

There was substantial agreement on key issues. All taxonomic group leads were encouraged to commence assessment for their respective taxonomic groups and to complete the assignment of categories and status.

- **Native Species**

All native species were to be assessed while non-native species were to be excluded unless they are of conservation concern but to be placed in a holding section.

- **Residents and Migrants**

We aimed to assess the status of migrants and not vagrants. Vagrants to Singapore already globally assessed by IUCN may be noted in a separate list.

- **Hybridisation**

Natural hybrids were to be assessed (should look for and focus on parent species and assess them) and artificial hybrids were not to be assessed.

- **Nationally Extinct versus Non-Extinct**

Time frame criteria were adopted to determine a threshold for presuming that a species is Nationally Extinct: No records for 30 years for plants, and 50 years for animals with some flexibility based on recent context and justifications.

- **Endemic species**

Assessment should mirror the existing IUCN red list status and an endemic species not yet assessed should have both the national and global IUCN assessments done. Any non-alignment at national and global levels should be followed by coordination with IUCN for a review in change of status.

- **Cryptic species**

Described species to be assessed; and if there is strong evidence to suspect the presence of an undescribed cryptic species, then groups may provide an assessment with thorough justification.

- **Data Deficient**

All taxon leads were advised to attempt a status for all species, other than DD, by relying on historic records and other data. No target was given for the number of taxa that may be listed as DD.

The process was impacted soon after the workshop by the advent of Covid-19 and response measures including transmission ‘circuit breakers’ when everyone in Singapore was advised to stay at home as much as possible and to avoid public spaces and public gatherings. However, taxon expert groups were able to continue their efforts through emails and the use of other technology in IT, preparing the requisite information in the form of MS Excel™ spreadsheets.



Red List Criteria and Categories

The criteria used internationally for assessing threat levels include:

- Absolute population size and number of mature (potentially breeding) individuals;
- Rate of decline
- Range size and fragmentation

The categories used in this third edition are shown in Table 1. They follow the categories and definitions used by IUCN, plus one additional category relevant to Singapore (Not Listed).

Table 1. The list of categories used in RDB3 and the criteria applied to each category

	Category	Abbreviation	Criteria
Not Threatened	Least Concern	LC	Not approaching the threat criteria
	Near Threatened	NT	Approaching but not yet reaching the threshold for the threat criteria
Threatened	Vulnerable	VU	There are fewer than 1,000 mature individuals but more than 250 and there may or may not be any other evidence of decline, small range size or fragmentation
	Endangered	EN	There are fewer than 250 mature individuals and no other evidence of decline or fragmentation
	Critically Endangered	CR	There are fewer than 50 mature individuals OR, if more than 50 but fewer than 250 mature individuals, with some evidence of decline or fragmentation
Extirpated or Extinct	Presumed Nationally Extinct	NEx	The species is extinct (extirpated) within Singapore but it still survives outside Singapore
	Globally Extinct	EX	The species is extinct all over the world, both in the wild and in cultivation
Other Categories	Data Deficient	DD	Species eligible for assessment at the national level but with inadequate information to make an informed assessment
	Not Applicable	NA	Species that are not eligible for assessment at the national level (mainly introduced taxa and vagrants)
	Not Evaluated	NE	Species that are possibly eligible for assessment but have not yet been evaluated against the criteria
	Not Listed	NL	Species not listed in the records (in the IUCN Global Red List database, or the Singapore RDB1 and RDB2) for whatever reason (e.g., taxonomic uncertainty, synonyms)

Scope and Coverage

The entire land area, freshwater system and marine territory of Singapore has been included within the geographical scope.

All species of angiosperms, pteridophytes and bryophytes were included. Most recorded species of algae were included (a significant improvement to previous editions), but information about fungi and lichens is still too fragmentary to make a full species-by-species assessment.

All species of vertebrates were included, whether terrestrial, freshwater or marine. There have been major advances in coverage of invertebrate groups, notably cnidarians, soft and hard corals, polyclads, molluscs, beetles, flies, bees, wasps, ants, moths, dragonflies and damselflies, spiders, and marine insects. In the first and second editions, small selections from these groups had been included as examples. But since 2008 there have been major surveys of national scope (e.g., spiders, and the Comprehensive Marine Biodiversity Survey) as well as in some of Singapore's key nature reserves and natural areas (Nee Soon freshwater swamp forest, Bukit Timah Nature Reserve, Pulau Ubin). These have permitted much improved coverage and assessments of status.

Already in the second edition, taxonomic coverage of horseshoe crabs and marine decapods, butterflies, phasmids and echinoderms were largely complete, and the status of all species has been revised for the third edition.

Realities in Singapore

The land area of Singapore including all its offshore islands is currently about 735.2 km², and it has increased owing to various land reclamation projects during the past two centuries. For comparison, Rhode Island (the smallest US state) is more than four times bigger and Denmark is 60 times bigger than Singapore. The human population density of about 9,000 individuals per square kilometre, very high in comparison with the global average, reflects the fact that Singapore is a city state with extremely limited hinterland.

Small size and high population density have placed significant constraints on land use. Areas of dense urban development, non-natural soil profiles (e.g. through reclamation, landfill and site preparation following many years of prior agricultural and mixed land use) meant that most natural habitats were modified long before the modern conservation era. Even by the end of the 19th century the extent of primary forest was extremely limited, and very little primary forest has been lost since 1900.

The small size of Singapore has meant that populations of all species of plants and animals, even those occurring as commensals with man, are limited. For even the best-known species in such a small area as Singapore, there is seldom any information about population size, area of occupancy and rates of decline. Like other countries, Singapore has difficulty using the criteria to modify categories at 'regional' or national level. This is primarily because man-made political boundaries are a poor reflection of biological processes and limits.

In spite of that, surprising diversity still remains, with more than 2600 species of native plants. Since the publication of the second edition of the Red Data Book there have even been discoveries of totally new plant species such as *Hanguana rubinea* and a new orchid *Nervilia singaporenensis*, as well as numerous rediscoveries of species previously thought to have been extirpated such as the orchid *Pinalia floribunda*. New records of species already known from neighbouring countries include even big trees such as *Dipterocarpus chartaceus*. There have been major changes in populations of conspicuous animals such as the Eurasian wild boar, smooth otter and red junglefowl, also of less conspicuous species such as sambar deer, lesser mouse-deer and Malayan porcupine, and there have undoubtedly been changes in many overlooked species as well.

The concept of Singapore as a Garden City was introduced shortly after national independence in 1965. The result was impressive greenery in the form of roadside treescapes, as well as the conservation of forests within the Central Catchment. The concept then developed further to make Singapore a City in a Garden: the implication was that Singapore had shifted from greenery maintained in a garden that was an adjunct to development, towards a garden with a city embedded in it. That concept has since transitioned into a City in Nature, in which both flora and fauna are recognised and valued as an integral part of everyone's day-to-day life in Singapore.

Singapore has adopted very long-term planning horizons. The Urban Redevelopment Authority leads the formulation of the iterative Concept Plan, relevant many decades into the future, through well defined consultation procedures between government agencies, non-governmental organisations, members of the public, and the private sector. The broad brush approach of the Concept Plan is elaborated within Master Plans that have shorter time horizons. Accompanying plans are prepared for special purposes including the Parks and Waterbodies Plan, which includes designated National Parks, Nature Reserves and Nature Areas.

There has been a succession of Singapore Green Plans (SGP), beginning with the SGP 2012 (covering the years 2002–2012), then SGP 2020 (2012–2020) and the next SGP is in preparation covering the period up to 2030. There is also a Singapore Blue Plan (SBP) covering the marine environment and biodiversity. These plans all rely on consultation with communities and non-governmental organisations.

In addition to the above, government agencies maintain much longer lists of sites requiring consultation on biodiversity and options for requiring environmental impact assessments.

Singapore has a National Biodiversity Strategy and Action Plan (NBSAP) reflecting national policy and commitments under the Convention on Biological Diversity. SGP, SBP and NBSAP are all underpinned by the species listing in the Singapore Red Data Book. A Nature Conservation Masterplan outlines the National Parks Board's plans to coordinate, strengthen and intensify our biodiversity conservation efforts.

The National Parks Board is the principal agency responsible for the conservation of biological diversity in Singapore. Significant changes in scope occurred in 2017 when the former Agri-Food and Veterinary Agency (AVA) was split. The veterinary and animal health functions, wildlife trade and management, and enforcement of wildlife protection under the old Animals and Birds Act and the Wild Animals and Birds Act (now completely revised and re-enacted) were all subsumed under the National Parks Board.

The National Parks Board is responsible for maintenance and management of the two national parks, four nature reserves, more than 400 public parks (some of them termed 'nature parks'), and roadside plantings ('Streetscapes') throughout Singapore. In addition there is a system of Park Connectors for pedestrians and cyclists, connecting parks and public spaces throughout the country, with a Round Island Route that will eventually link them all together.

Some streetscapes have been upgraded to Nature Ways by dense interplanting between tall roadside trees, consisting of both higher and lower vegetation layers, understorey and ground vegetation. These now give emphasis to native plant species (including some on the Red List) that support native wildlife. They have greater biomass, more complex layered structure, and greater plant species diversity than unmodified lines of roadside trees. Nature Ways are intended to benefit the public by providing greater shade, more variety and pleasant surroundings, to facilitate people's movement and access to green spaces especially for pedestrians, and to facilitate the natural spread of animal and plant populations from area to area.

Innovative connectors for wildlife have been created such as the BKE wildlife bridge, and rope connectors for use by arboreal monkeys and squirrels,

Species Recovery Programme

A Species Recovery Programme was introduced in 2015 as part of the Nature Conservation Masterplan. It aims to conserve native flora and fauna by targeting endemic, rare or threatened native species in Singapore through

reintroduction, habitat enhancement and protection efforts. Some species targeted by the programme occur in small populations or in only a few places. The programme thus aims to increase the populations of these species and help them survive adverse environmental changes, together with the help of volunteers including academia and the nature community.

In 2020, NParks announced its aim to have 90 plant and 40 animal species under the programme by 2030. In 2021 the targets were raised to 100 plant and 60 animal species by 2030. These efforts to strengthen the conservation of our endangered and key species will further restore ecological habitats for our wildlife and provide Singaporeans with greater access to biodiversity and a more immersive experience in nature.

Ten species of hard corals were added so as to enhance the resilience of Singapore's reefs, as they are extremely vulnerable to climate change. The coral nubbins of these species will be nurtured in NParks' coral nursery at St John's Island and outplanted onto reef enhancement units off Sisters' Islands Marine Park when ready. Further research and conservation efforts focused on these reef-building hard corals will enhance the resilience of Singapore's reefs and benefit the marine life that inhabit them. In addition, 17 animal species that have ongoing species recovery efforts will be included into the programme. This brings the total number of species under the Species Recovery Programme to 80 plant and 40 animal species, as of September 2023. These include trees, climbers, palms, orchids, gingers, freshwater prawns and crabs, butterflies, amphibians, birds and mammals. All of the targeted species have threatened status in the Singapore Red Data Book.

Uses of the Singapore Red Data Book

All of the steps mentioned above, including the designation of park connectors, nature ways, national parks, nature reserves, corridors for animal and plant dispersal, the Concept Plan, Master Plan and Parks and Waterbodies Plan, the Singapore Green Plans and Blue Plans, the lists of sites for biodiversity consultation and environmental impact assessment, all make reference to the Singapore Red Data Book (first, second, and now third edition) as a fundamental reference when assessing biodiversity values.

The choice of species for the Species Recovery Programme is also guided by the Red Data Book.

Least Cost Pathway analysis has been used to identify appropriate routes for enhancement. Source areas (where species of interest already occur), and potential sites for the spread of these species (where they do not yet occur) are identified, and connecting routes evaluated in terms of distance, cost and ease of creating suitable ecological links that can facilitate movements from patch to patch.

Agent Based Modelling is now being used to analyse animal movements between patches, including the dispersal of their propagules (e.g., coral larval dispersal), and plant colonization and genetic exchange (e.g., mangrove fruit dispersal).

The listing of threat status is of basic importance to environmental impact assessments (EIAs). The EIA processes are able to quantify rarity, the number of species under threat, the types of threat, and their relationship to specific development proposals and project designs. The use of the Red Data Book ensures that consultants are using a common source and that studies are comparable across sites.

Newer conservation techniques include camera trapping, bioacoustics, telemetry, the use of drones, and eDNA (environmental DNA or trace DNA). Their use often depends on the existence of biodiversity databases, intelligent

or interactive intuitive databases, and Artificial Intelligence. For example, ultrasound detection of bats requires specialized (but increasingly affordable) equipment, and also a robust library of definitively identified recordings to be used for comparison. Bioacoustics to detect birds or crickets and grasshoppers requires similarly robust databases, and recordings can be analysed by training computer programmes to identify sound patterns.

Tracking Conservation Progress with Biodiversity Databases

When the IUCN criteria are consistently applied to a wide range of organisms, then changes in the number of species in each category can be used as a tracking system to determine whether we are approaching the target of the Convention on Biological Diversity (CBD): to reduce the rate of loss of the world's biodiversity by the year 2010. Since 1988 or 1994, when the criteria for different groups of organisms underwent their last major amendments, such tracking has been possible at a global scale (Butchart et al. 2004, 2005), at regional scale (Gregory et al. 2005) and at individual country level, for example Switzerland (Keller et al. 2005) and Britain (Eaton et al. 2005).

The relevant organisations in Singapore — principally the National Biodiversity Centre and the Singapore Herbarium under the National Parks Board; the Nature Society Singapore; and the Lee Kong Chian Natural History Museum of the National University of Singapore — are repositories for species information that can be analysed using the IUCN criteria. Enthusiasts also maintain databases on selected groups of their interest, such as seagrasses, molluscs, dragonflies, birds and other vertebrates. Singapore records are also represented on international databases such as eBird. Hence it should be possible to use the IUCN categories as a measurement of Singapore's performance in contributing towards the 2030 target of the CBD, and our performance in the decades beyond.

RESTORING SINGAPORE'S BIODIVERSITY: From A Garden City To A City In Nature - Laws, Policies And Environmental Governance

LYE LIN HENG

This chapter provides a short history of Singapore's journey in nature conservation, from the time of its independence in 1965, to the present. It examines the efforts of the National Parks Board (NParks), guided by government policies as expressed in the Singapore Green Plans, and the laws that were passed to protect flora, fauna and the natural environment. It concludes with NParks' Biodiversity Impact Assessment Guidelines; and the aspirations expressed in the Singapore 2030 Green Plan.

Introduction

The tiny city-state of Singapore (735.2 km²) faces the constant challenge of development versus conservation. Much of its original forest cover was cleared in the early years for gambier, pepper, rubber, and coconut plantations. Mangroves were exploited for firewood, charcoal, and prawn farms. Demands on the land were exacerbated upon independence with the urgent need to urbanise and industrialise. The need for more land made necessary the reclamation of its coastline and islands, which also adversely impacted the marine environment.

Today, more than 95% of the original forest cover has been cleared, and less than 10% of what remains is primary forest.¹ The present forest reserves cover 5% of total land area and harbour over 50% of remaining native biodiversity. Singapore has also lost up to 65% of its live coral cover since 1986,² as well as 95% of its mangroves³ and 85% of its sand and mudflats.⁴

Despite these challenges, Singapore has made concerted efforts to protect and preserve its greenery and has received many accolades for its efforts, the latest being voted the cleanest and greenest city, on 13th September 2021.⁵ Many native species have adapted successfully to the urban habitat, species of plants and animals new to science continue to be discovered, and some species thought to have been extirpated have had remnant populations rediscovered. It has been a journey of learning, as Singapore moved from merely greening its environment in the most expeditious way, which unwittingly brought in some alien invasive species, to carefully considered efforts to restore habitats and populations of native species.

From Garden City to City in a Garden

The Garden City was conceived by Singapore's first Prime Minister, Mr. Lee Kuan Yew, as a strategy to woo foreign investors as well as to make the environment more pleasant, particularly to reduce the heat of the tropics.⁶ The greening of Singapore as a government policy was declared in Parliament in 1968 when, during the second reading of the Environmental Public Health Bill, the Minister stated, "The improvement in the quality of our urban environment

1 The Natural Heritage of Singapore 3rd ed. 2010; Hugh Tan, Chou LM, Darren Yeo, Peter Ng. See also Peter K. L Ng, Richard Corlett & Hugh T. W. Tan, *Singapore Biodiversity: An Encyclopaedia of the Natural Environment and Sustainable Development*, Editions Didier Millet, 2011.

2 Ria Tan, "Loss of coastal ecosystems" (December 2019), *wildsingapore*, online: <www.wildsingapore.com/wildfacts/concepts/loss.htm>.

3 Chou Lake Ming, "Nature and Sustainability of the Marine Environment", in Wong Tai-Chee et al, ed, *Spatial planning for a sustainable Singapore* (Berlin: Springer Science & Business, 2008) 169 at 170.

4 Zeehan Jaafar et al, *The Singapore Blue Plan 2018* (Singapore: The Singapore Institute of Biology, 2018) at 55.

5 Singapore was voted the cleanest and greenest city in the world, according to Time Out survey (yahoo.com)

6 See Lee Kuan Yew, *From Third World to First – The Singapore Story: 1965–2000 – Singapore and the Asian Economic Boom* (Harper Collins Publishers: New York, 2000).at 176: To achieve First World standards in a Third World region, we set out to transform Singapore into a tropical garden city... We planted millions of trees, palms and shrubs. Greening raised the morale of people and gave them pride in their surroundings. We taught them to care for and not vandalize the area. We did not differentiate between middle-class and working-class areas... Within a year, there was a distinct spruceness of public spaces.

See also Lee Sing Kong, "Concept of the Garden City" in Ooi Giok Ling, ed., *Environment and the City: Sharing Singapore's Experience and Future Challenges* (Singapore: Times Academic Press, 1995) at 133; and Lye Lin-Heng, "A Fine City in a Garden – Environmental Law and Governance in Singapore", [2008] Sing JLS 68-117.

and the transformation of Singapore into a garden city – a clean and green city – is the declared objective of the Government.”⁷ PM Lee started the first Tree Planting Day in 1967 even before it became fashionable in the developed world. An Annual Tree Planting Day was launched on the first Sunday of November 1971. “In wooing investors, even trees matter”, reaffirmed Lee on 1 August 1996, when the Economic Development Board celebrated its 35th Anniversary.⁸

Singapore’s concerted efforts to green the city have been highly successful. In 1998, NParks declared that its mission “has evolved from realising a vision for a Garden City to creating a City in a Garden where the island’s seamless green infrastructure of parks and streetscapes play an essential part of Singaporeans’ lives, homes, workplaces and playgrounds.”⁹ Today, Singapore continues to place great emphasis on its greenery. It has strengthened its laws to protect its biodiversity and eco-systems, progressing to “a City in Nature”. This paper provides a quick overview of these laws.

Nature Conservation Laws

Laws to protect Singapore’s wild flora and fauna were passed over a hundred years ago, starting with the Protection of Wild Birds Ordinance in 1884.¹⁰

The Wild Animals and Birds Act (WABA) was passed in 1965 and renamed in 2020 as the Wildlife Act (WA) 1965, commencing 31 December 2021. It is ‘An Act for the protection, preservation and management of wildlife for the purposes of maintaining a healthy ecosystem and safeguarding public safety and health, and for related matters.’ This Act and its subsidiary laws used to be administered by the Agri-Food and Veterinary Authority (AVA) but are now administered by the National Parks Board (NParks). It requires NParks to appoint a Director-General, Wildlife Management.

Today, under the Wildlife Act (2020) all wildlife (fauna) are protected in Singapore, with added protection given to highly endangered species. There are also laws protecting trees and other plants. The extent of protection depends on their location as different laws and regulations apply. The greatest protection is for nature reserves and national parks, where breaches of the law will entail a fine of up to S\$50,000 or imprisonment of up to six months, or both fine and imprisonment under the Parks and Trees Act (PTA) 2005. Flora and fauna in public parks are protected to a lesser extent under the same Act. Separate laws protect parks in Sentosa Island, and parks administered by the Jurong Town Corporation (JTC) and the Public Utilities Board (PUB). Lastly, there are laws governing particular areas in Singapore, such as tree conservation areas and a marine park.

(1) General protection for wildlife in Singapore

The Wildlife Act 2020¹¹ protects all wild animals in Singapore – defined to include “any mammal, bird, reptile, amphibian, fish or invertebrate”. It is an offence to kill, trap, take or keep any wildlife without written permission from NParks - maximum \$5,000 fine for a first offence and \$10,000 for a subsequent offence (s. 5C). These penalties are enhanced for wildlife listed in the Wildlife (Protected Species) Rules, 2020 – fine \$50,000 or imprisonment for up to 2 years or both fine and imprisonment. These Rules protect 11 categories and species of mammals (including otters,

⁷ Mr. Chua Sian Chin, Minister for the Environment, in Sing., *Parliamentary Debates*, vol. 28 at col. 396 (16 December 1968).

⁸ See Chan Chin Bock, *Heart Work – Stories of How EDB Steered the Singapore Economy from 1961 to the 21st Century* (Singapore: Economic Development Board, 2002);

⁹ See NParks, “Singapore, The Garden City – Looking Ahead”, online: http://www.nparks.gov.sg/gardencity_d.asp; see also “City in a Garden Plan” set out for Singapore” *The Straits Times* (11 December 1998); “Look Up, See the Green” *The Straits Times* (24 February 2001); and “Green Piece” *The Straits Times* (5 October 2002). See Mission and History - Who We Are - National Parks Board (NParks) for a history of NParks and a timeline of its evolution and conservation efforts.

¹⁰ See Lye Lin Heng, “Wildlife Protection Laws in Singapore”, (1991) SJLS 287–319; Lye Lin Heng, “Legal Protection of the Natural Environment”, *State of the Natural Environment in Singapore*, Clive Briffett and Ho Hua Chew eds., Nature Society, Singapore, June 1999; Joseph Chun, “Wildlife Law in Singapore: Protecting Wildlife in the “Garden City” in *Wildlife Law: A Global Perspective* (ABA Publishing, 2008); Joseph Chun ‘Enhancing the Garden City: Towards a Deeper Shade of Green’ (2006) *Singapore Academy of Law Journal*, Melissa B.N. Tan and Hugh T.W. Tan, *The Laws relating to Biodiversity in Singapore*, Raffles Museum of Biodiversity Research, NUS (2013).

¹¹ Singapore’s statutory laws can be found on this site - Home - Singapore Statutes Online (agc.gov.sg)

Sunda pangolin, Masked palm civet, Large Indian civet, Sunda slow loris, the Raffles' banded langur, fruit bats and flying foxes); 6 categories and species of birds; 9 categories and species of reptiles; 3 categories of fishes (rays, saw fishes and seahorses) and 8 categories and species of invertebrates (the Common birdwing butterfly, Giant clams and six categories of corals).

However, some wildlife species are not protected. These are listed in the Wildlife (Exemption) Order - 4 species of mammals (rats and mice), 4 species of birds, 5 species of lizards, and all invertebrates other than those that are specially protected under the Wildlife (Protected Species) Rules, 2020.

The Act also prohibits the "intentional" feeding of wildlife without permission from NParks – fine \$5,000 for a first offence, \$10,000 fine for subsequent offences (s. 5A). It is also an offence to release any wildlife "in any place" unless with written approval – fine \$5,000 (s. 5B). It is an offence to set up any spring gun, trap or device for the purpose of hunting or trapping a wild animal, if that device is likely to endanger human life – fine \$20,000 or imprisonment up to 12 months or both fine and imprisonment (s. 7). The sale or export of any wildlife (whether alive or dead) is an offence – fine \$10,000 or 12 months imprisonment or both; but if the animal is a protected species, the fine is \$50,000 or imprisonment up to 2 years or both (s. 8). It is also an offence to import any "living" wildlife without permission – fine \$10,000 or imprisonment up to 12 months or both (s. 9). These penalties are enhanced if the offence is committed in the course of an "animal-related business" (defined in the Act) - fine up to \$20,000 or imprisonment up to 12 months or both (s.5C (3)(b)).

Authorised officers and the police are given wide powers - they may remove wildlife traps on any private property, search, seize and arrest without a warrant (s.11A, 11B, 12). The court has power to order forfeiture of a conveyance seized in the commission of the offence (s.12C-E), and power to authorize repayment of expenses incurred in storage, housing, maintenance, transport, repatriation or disposal of any seized item (s 12F). The court may also direct that any fine or part thereof be paid to the informer as a reward (s.13).

However, section 6 allows the occupier or person in charge of any land to "kill, trap or take any wildlife found damaging or destroying the crops or any other property thereon." This provision should be removed, particularly for protected species of wildlife, as they are extremely precious in urbanised Singapore. If it remains, the law should place the onus on the owner of property that was allegedly damaged by wildlife, to prove that he had taken all reasonable steps to protect his property and prevent any access by wildlife.

(2) Enhanced Protection for flora and fauna in Nature Reserves and National Parks

Singapore has four nature reserves (Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Labrador Nature Reserve and the Sungei Buloh Wetland Reserve)¹² and two national parks (the Singapore Botanic Gardens and Fort Canning Park). All are protected under the Parks and Trees Act (PTA), 2005.¹³

Various activities are prohibited in a national park or nature reserve (s. 9 PTA). It is an offence to capture, displace or feed any animal; disturb or take its nest; use or possess any net, trap or hunting device for its capture, or carry out any activity which may injure or kill any animal. It is also an offence to release any animal into a nature reserve or to allow a domestic animal to stray into a nature reserve. The penalty is a fine up to \$50,000, or imprisonment up to six months or both fine and imprisonment, and a daily fine of \$500. The term 'animal' is given a very wide definition in section 2, to mean 'any mammal (other than man), bird, reptile, amphibian, fish (including shellfish), insect or any other living creature, vertebrate or invertebrate, and includes any egg or young thereof'.

¹² Sungei Buloh and the Bukit Timah Nature Reserve are also ASEAN Heritage Parks, declared on 18 December 2003 and 19 October 2011 respective. See Joseph Chun, "The Protection of Nature Reserves under the Parks and Trees Act – A Deep Dive," APCEL Working Paper series 1905 (dec 2019).

¹³ Act 4 of 2005.

For plants, it is an offence to carry out any activity within any national park or nature reserve which causes alteration, damage or destruction to any property, tree or plant within the park. The same penalties apply. Smoking is prohibited (fine up to \$2,000).¹⁴

(3) Protection of flora and fauna in Public Parks

A 'public park' is defined under the PTA (section 2) as 'any State land, any land belonging to the NParks or any other land, which is:

- (a) utilised as a public park, marine park, recreation ground, playground, garden, public open space, walk, park connector or green verge; and
- (b) managed or maintained by the Board.

The same prohibitions apply except the penalties are reduced to a maximum fine of \$5,000 (see Parks & Trees Regulations). There are also restrictions on the bringing of animals (other than a pet or guide dog) into a national park or public park or allowing the animal to enter any water body. For plants, it is an offence to cut, collect or displace any tree or plant or clear, break up, dig or cultivate any land. In both cases, the penalty is a maximum fine of \$2,000.

(4) Protection of flora and fauna in other parks in Singapore

Specific laws protect flora and fauna in the parks managed by the Jurong Town Corporation (JTC), Sentosa Development Corporation, and the Public Utilities Board (PUB).

The JTC manages several parks that used to include the Chinese Garden and Japanese Garden (today managed by the National Parks Board as the Jurong Lake Gardens). Various offences are listed under the JTC (Parks) Regulations¹⁵, particularly Regulation 4 that relate to the protection of animals, fish and waterfowl, birds, reptiles, insects as well as trees and plants. There are also restrictions on the bringing in of dogs and other animals to JTC parks. The maximum fine is \$500 for each offence.

Sentosa Development Corporation Parks

The Sentosa Development Corporation Regulations¹⁶ apply to Sentosa Island as well as eleven other smaller islands, namely St John's Island; Kusu Island; Pulau Hantu; Terembu Retan Laut; Sister's Islands; Pulau Renggit; Lazarus Island; Pulau Seletar; Pulau Sudong; Pulau Jong; and Pulau Biola. Regulation 7 lists various acts that are prohibited on these islands. They are quite similar to the offences under the JTC (Parks) Regulations, including the prohibition on collection of any bird's egg or nest and the removal of any plant or tree. The penalty is a fine of up to \$2,000.¹⁷

Catchment Area Parks (under the Public Utilities Board (PUB))

The Public Utilities (Reservoirs, Catchment Areas and Waterway) Regulations were passed in 2006.¹⁸ "Catchment Area Parks are defined in the First Schedule to include a long list of reservoirs as well as some lakes. The Second Schedule specifies boundaries of the "Central Water Catchment Area", and the Third Schedule relates to parts of the Kallang River as a "waterway".

Regulation 6 lists various prohibited activities in Catchment Area Parks. These are quite similar to JTC and Sentosa Island parks, prohibiting the damage of any flora and the killing, hunting, shooting or trapping of any animal or the doing of any act which causes injury to the fauna. Regulation 7 lists activities that require prior approval – these include

¹⁴ Regulation 23 above.

¹⁵ Rg.2, GN.No. S 285/1988.

¹⁶ Rg.1 GN No.S 454/1997

¹⁷ Regulation 57.

entering or fishing in any reservoir or stream; collecting any bird's egg or nest; releasing any animal or allowing any animal to stray into a catchment area park; or removing or cut any plant, shrub or tree. Additional offences (unless with a permit) include using any part of the Central Water Catchment Area or Catchment Area Park as a location for the shooting of a film or the setting of a play; using live bait for fishing; drawing water from any reservoir or stream; releasing any animal into the waters or feeding marine animals. The penalty is a maximum fine of \$3,000.

(5) General Protection of Flora

Tree Conservation Areas

The Parks and Trees (Preservation of Trees) Order 1991, designated two areas of Singapore as tree conservation areas.¹⁹ It is an offence to cut down a tree with a girth that exceeds 1 metre, measured half a metre from the ground, if it is growing on vacant land or in a tree conservation area. Such trees can only be felled with permission of the Commissioner of Parks and Recreation. The penalty is a fine of up to S\$50,000 (s.13-15 PTA). The PTA also empowers the Commissioner to order any person to maintain or preserve a tree in a tree conservation area.

The Commissioner may protect a large tree or group of large trees (girth of at least one metre) by serving a Tree Conservation Notice, (s.15, PTA). However, this can be done only if the tree is either in a tree conservation area or is growing on vacant land. This Notice can be revoked at any time. In 2002, a real estate corporation was fined \$8,000 (the maximum fine then was \$10,000) for cutting down the last Changi tree (*Hopea sangal*) in a tree conservation area, taking into account that it was a first-time offender. The company was also ordered to pay S\$76,035 as compensation to the state for loss of the tree.²⁰

Heritage Road Green Buffers

Trees and plants along the verges of roads with mature trees and greenery may be protected, by designation as Heritage Road Green Buffers (s. 16, PTA). Five roads have been so gazetted – they are Mount Pleasant Road, South Buona Vista Road, Lim Chu Kang Road, Arcadia Road, and Mandai Road.²¹ It is the duty of the Board to manage and maintain these areas (s. 17). No tree or plant within these buffers can be cut or damaged without the permission of the Board (s. 18). The penalty of a maximum fine of \$50,000 applies.

Heritage Trees

In 2001, NParks established a Heritage Tree Scheme for the conservation of Singapore's mature trees. The public may nominate these trees via an online Heritage Tree nomination form. The list of nominated trees will be inspected by arborists from NParks before being submitted to the Heritage Tree Panel for approval. The criteria for endorsement of a Heritage Tree include (dependent on species) a girth (trunk circumference) of more than 5 metres and /or botanical, social, historical, cultural and/or aesthetical value. However, it does not appear that trees designated as "Heritage Trees" have legal protection per se. To date, there are some 260 heritage trees, located all over the island, each specifically mentioned in "Singapore's Heritage Trees Register", kept by NParks.²²

¹⁸ S 401/2006, formerly Public Utilities (Catchment Area Parks) Regulations (S 48/89). Amended by S 235/2010, S 70/2015 and S 155/2018.

¹⁹ The two tree conservation areas are: (1) The area bounded by Dunearn Road, Whitley Road, Mt. Pleasant Road, Thomson Road, Lorrie Road, Pan Island Expressway, Clementi Road, Pasir Panjang Road, Telok Blangah Road, Lower Delta Road, Ayer Rajah Expressway, Alexandra Road, River Valley Road, Fort Canning Road and Selegie Road; (2) The area bounded by Netheravon Road, Cranwell Road, Loyang Avenue, Loyang Way, Upper Changi Road North and Changi Village Road.

²⁰ See Felling of the Chengal Pasir tree | Infopedia (nlb.gov.sg).

²¹ Section 15, PTA, Parks and Trees (Heritage Road Green Buffers) Order, 1 June 2006.

²² <https://www.nparks.gov.sg/gardens-parks-and-nature/heritage-trees>

Planting Areas and Streetscapes

The PTA enables the Commissioner of Building Control, where building works are being carried out, to require that the area be surrounded by a 'planting area' of certain dimensions (s. 22-27). It is an offence to carry out building works within these planting areas or to interfere with these planting areas (s. 24 - fine \$30,000 and a daily fine of \$500 for a continuing offence). The occupier of the premises has a duty to maintain the planting area (s. 25). The Commissioner is also empowered under s. 27 to require that the occupier of any premises "fronting, adjoining or abutting any public street", plant or replant any tree or plant within the green margin as well as maintain it, and even clear the area of weeds or cut the grass.

(6) The Protection of Marine Life and Eco-systems

Although four coral reefs were identified for conservation under the Singapore Green Plan in 1992, only one marine park exists – the Sisters' Island Marine Park, established in 2014. This is a 40 hectare area around Sisters' Islands and along the western reefs of both St John's Island and Pulau Tekukor.²³ In 2017 the definition of a 'public park' under the Parks & Trees Act was amended to include 'land utilised as a marine park'; and "marine park" is defined to mean "any area of the sea or seabed that is set aside for conservation of marine organisms and is designated in Part III of the Schedule."²⁴

It would appear that with the 2017 amendment to the PTA, the responsibility for marine conservation and protection of marine parks falls on NParks. Indeed, NParks is assuming increasing responsibility for surveys and data collection on marine life, protection and rehabilitation projects. The Singapore Land Authority (SLA) is responsible for the issuing of licences for removal of the substrate (sand, rock, coral) under the State Lands Encroachment Act (1883), but not for living organisms on the substrate or in the water column.

The Singapore Food Agency is responsible for the Fisheries Act²⁵ and its regulations. These laws require persons who use fishing gear to obtain a licence. Fishing vessels plying at any port in Singapore also require a licence. The trapping of fish by explosives or poisons, and the use of trawl nets are prohibited. Penalties include a fine of up to \$10,000 and/or imprisonment of up to 12 months. It is an offence to keep dangerous fish such as the piranha, and the penalty is a fine of up to \$50,000 and/or imprisonment up to 12 months.²⁶

Trade in Endangered Species - CITES

Singapore acceded to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) in 1986 and passed the Endangered Species (Import and Export) Act (ESA) in implementation, in 1989. This was repealed and replaced with a new ESA in 2006²⁷ and this again was substantially amended in 2022, with effect from 1 November 2022. Each amendment increased penalties and tightened loopholes. NParks is now the authority that enforces the ESA, taking over from the Agri-Food and Veterinary Authority (AVA) which no longer exists as from 2019. NParks has appointed a Director, Wildlife Trade Control to implement the ESA.

CITES has three appendices – Appendix I is a list of animals and plants on the verge of extinction (no trade is allowed except for non-commercial purposes e.g. scientific research); Appendix II lists species which are not now threatened with extinction but may become so unless trade is carefully controlled; Appendix III lists species that need

²³ <https://www.straitstimes.com/singapore/environment/5-things-about-the-sisters-islands-singapores-first-marine-park> (15 July 2014)

²⁴ Act 4 of 2005, Cap 216, amended by Act 9 of 2017.

²⁵ Cap. 111, 2002 Rev. Ed. 1st January 1969. Amended by Act 11 of 2019 and Act 2015 of 2019.

²⁶ Animals and Birds (Piranha) Rules 2019, S 210/19.

special control in specific countries that list them. In all three cases, permits are required from various authorities and monitored by the CITES Secretariat in Geneva, Switzerland.

Singapore's ESA prohibits trade in endangered animals, plants and their by-products, unless with a permit from the National Parks Board. The subsidiary laws prohibit the sale of parts and derivatives of tigers, rhinoceros (horns) and elephants (tusks and teeth). Artificially propagated plants with proper permits may be brought into Singapore. As from 1 November 2022, ivory is prohibited from display except for educational or religious purposes.

Under the ESA, the penalty for trade in Appendix I species is a maximum fine of \$100,000 (up from \$50,000 previously) for each specimen of that scheduled species (but not to exceed \$500,000 or the market value of all the specimens of that species at the time of the offence, whichever is higher) or imprisonment for up to 6 years or both fine and imprisonment. For specimens in Appendix II or III, the maximum fine is \$50,000 for each specimen of that species (but not exceeding \$500,000 or the market value at the time of the offence, whichever is higher) or imprisonment up to 4 years or both fine and imprisonment. This new law makes it clear that the ESA applies to specimens on transit – proper permits must be issued by the country of export at least 14 days before its arrival in Singapore, and by the country of import or the final destination.²⁸ The same penalties for breach apply.

However, in the case of an offence by a corporation, unincorporated association or partnership, the fines are doubled – for Appendix I species, a maximum fine of \$200,000 for each specimen of that scheduled species (but not exceeding \$1,000,000 or the market value of all the specimens of that species at the time of the offence, whichever is higher), or imprisonment up to 8 years or both; and for Appendix II and III specimens, the maximum fine is \$100,000 for each specimen of that scheduled species (but not to exceed \$1,000,000 or the market value at the time of the offence, whichever is higher) or to imprisonment for a term not exceeding 6 years or both.

Officers from NParks have wide powers of enforcement including powers to investigate and powers of entry, search and seizure. Persons may be arrested without a warrant, and items used in connection with the offence including any conveyance such as vehicles, aircraft or ships or may be seized and forfeited, with some exceptions.

Protection of Biological Diversity

Singapore signed the Convention on Biological Diversity (CBD) in 1993 and ratified it on 21 December 1995. Many steps have been taken towards implementing this framework Convention. Surveys have been done of the biodiversity resources in Singapore. Under Article 15 (Access to Genetic Resources), States have sovereign rights over their natural resources; and access to genetic resources is to be determined by national laws. NParks has devised an application form which requires all persons conducting taxonomic/ecological research to seek prior written permission from the Board, but only for research on organisms within areas under the control or management of the Board.²⁹ The form requires the applicant to state the purpose for this research, the methodology (including duration and frequency of intended field survey or schedule of field trips); the logistic and field requirements (equipment, manpower, field survey locations, permanent traps/plots, marking, etc.). It also requests details on the collection of specimens - the applicant is to indicate the type/number/amount/ collection frequency required, specimen collection type (e.g., whether whole plant, animal, or part), the field or locality of research. The application requires a minimum of two weeks' processing time. As for marine species, the application must be made to the Land Office for permission. There does not appear to be any prescribed form.

²⁷ 2020 Rev. ed.

²⁸ See PP v Wong Wee Keong, [2019] SGCA 21; Burton Ong, Lye Lin Heng & Joseph Chun, "Regulating International Trade in Endangered Species – Transhipments of CITES-listed Species in Singapore" [2016] SingJLS 277-306.

²⁹ See Lye Lin-Heng & Rose-Liza Eisma-Osorio, "Regulatory Measures on Access & Benefit Sharing for Biological and Genetic Resources—National & Regional Perspectives from the Philippines, Singapore & ASEAN," chapter 13, Charles M McManis & Burton Ong (2017) Routledge Handbook of Biodiversity and the Law.

The Research Permit devised by NParks contains various conditions. These include the following: (1) the researcher must give prior notice to NParks before he proceeds to the field; (2) he must take into account the delicate ecosystem of the field venue, observing minimum clearance and disturbance to surroundings; and (3) he must keep the team small and not schedule trips during high-peak hours such as during school.

NParks initiated the Cities Biodiversity Index, which was adopted at the Convention on Biodiversity's Conference of the Parties in Nagoya in 2010.³⁰ The Singapore Index comprises three components;

- (a) Biodiversity in the City,
- (b) Ecosystem Services provided by the Native Biodiversity in the City, and
- (c) Governance and Management of Biodiversity in the City.

In this form, it would function as a monitoring tool.³¹ It is being tested now by other cities.

Beyond the Garden City to a City in Nature - Land Stewardship

The Garden City concept has been criticized as being "more successful in 'taming and manicuring' the urban environment with greenery and less so with protecting the ecological integrity of the natural heritage of Singapore."³² Environmental lawyers have also expressed disquiet that notwithstanding laws to protect wildlife habitats and ecosystems, "these laws are powerless against state encroachment."³³ Examples include the cutting of a 50 meter swathe separating the Bukit Timah Nature Reserve from the Central Catchment Nature Reserve in 1985 and the removal of part of the Kranji Reservoir Marshes in 2004 to make way for Singapore's 20th golf course, the Kranji Sanctuary Golf Course. Indeed, a major controversy started in 1992, soon after Singapore shared its 1992 Green Plan at the UNCED meeting in Rio, as this was soon followed by a proposal to take part of the Lower Peirce Reservoir (legally protected as part of a nature reserve) for a golf course. Thereafter came the proposed reclamation of Chek Jawa, a rich inter-tidal eco-system. The Nature Society objected strongly to both these proposed projects, producing its own Environmental Impact Assessment (EIA) as the authorities refused to disclose theirs.³⁴ Recent controversies include the Cross-Island mass rapid transit line which will cut beneath one of the country's largest nature reserves; the Bukit Brown cemetery, the Mandai Nature project, the Dover Forest and the Clementi Forest.

These issues are exacerbated as Singapore's laws do not provide for mandatory EIAs for projects that may have an adverse impact on the environment. The essence of the EIA is to "Look before you Leap", and it is a very important tool in planning for development projects. The nearest statutory equivalents to the EIA are sections 26 and 36 of the Environmental Protection and Management Act (EPMA³⁵), both of which relate to environmental pollution and hazardous installations. They focus only on industries or projects with high polluting capacity, whereas EIAs require a comprehensive, integrated and detailed study of all potential impacts on the environment, including ecological and sociological impacts. It is also a hallmark of EIA laws that they allow public participation and access to information, whereas sections 26 and 36 do not involve any third parties.

Many multilateral environmental instruments have called for states to implement EIAs, including the Rio Declaration on Environment and Development, 1992; the Convention on Biological Diversity (CBD), Agenda 21 (Earth's Action Plan)

³⁰ <https://www.nparks.gov.sg/biodiversity/urban-biodiversity/the-singapore-index-on-cities-biodiversity>

³¹ <https://www.nparks.gov.sg/-/media/nparks-real-content/biodiversity/singapore-index/handbook-on-the-singapore-index-on-cities-biodiversity-cbd-ts98.ashx>

³² Joseph Chun, "Enhancing the Garden City: Towards a Deeper Shade of Green" (2006) 18 Sing. Ac. LJ. 248 at 250.

³³ See Joseph Chun, "Wildlife Law in Singapore: Protecting Wildlife in the 'Garden City'", chapter 5 pp 201-256 in Wildlife Law – A Global Perspective, Raj Panwani, ed. (2008), American Bar Association at p. 213. See also J Chun "The Protection of Nature Reserves under the Parks and Trees Act – A Deep Dive", APCEL working paper 2019.

³⁴ See Goh Hong Yi, "The Nature Society, Endangered Species and Conservation in Singapore", chapter 8 in *Nature Contained – Environmental Histories of Singapore*, Timothy P Barnard (ed.), NUS Press, 2014, pp 245-275.

³⁵ Cap. 94A, 2002 Rev. ed; Act

and the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources.³⁶ The EIA process is also promoted by the United Nations Environment Program (UNEP).³⁷

Today, EIAs continue to be done in Singapore on an ad hoc basis, but increasingly, access to EIAs has been given to non-government organisations such as the Nature Society. It would appear that the authorities and responsible NGOs have started to work at achieving a workable partnership in caring for the environment. Announcements have been made on the Government Gazette informing readers that the EIA report can be viewed.³⁸ However, as there is no legislation mandating environmental impact studies, there is no system in place for the proper facilitation of such studies. There is no spelling out of the roles of the different parties, the right of the public to be informed and to be allowed to participate in the process of deliberation. This is a glaring inadequacy in our laws.

In 2020, NParks released its *Biodiversity Impact Guidelines*³⁹, stating that it is the biodiversity component of a full EIA and that "Development projects that are in or near to sensitive areas such as Nature Reserves, Nature Areas and areas of biodiversity interest, and all coastal and marine development projects, will be subject to greater scrutiny on their impacts to biodiversity." However, this still falls short of an EIA as it only focuses on the impacts on biodiversity of a proposed development project whereas an EIA examines all the potential impacts of a proposed project including issues relating to pollution and contamination of natural resources as well as social impacts. The Guidelines are also not mandatory as they are not laws.

In February 2021, the government announced its Green Plan 2030, a "whole-of-nation movement" to advance the national agenda on sustainable development.⁴⁰ The plan, which is spearheaded by five ministries, charts Singapore's green targets over the next 10 years, mindful of the challenges of climate change. In the context of nature, it aims to build "A City in Nature" with specific and laudable targets including the addition of new parks, more green spaces, and the planting of one million more trees.

Conclusion

While Singapore has indeed become the clean and green city state that its first Prime Minister strived for, it can do better. This calls for ethical public land stewardship using the concept of the public trust, wherein the government is viewed as trustee of all publicly-owned lands, for present and future generations of citizens and is under an obligation to give due consideration to ecological concerns and involve the public in its deliberations on land-use.⁴¹ It is essential that Singapore's laws require the conduct of full EIAs before any development project is allowed to proceed. This is especially critical as climate change is a reality, and decisions on land use must be very carefully considered with the fullest possible information. There is therefore a need for public participation in environmental decision-making, as a true measure of the partnership between the state and the people.

Finally, this chapter calls for environmental education, which should include an understanding of ecology as well as ethics. This should be the way forward, in the spirit of Agenda 21, towards attaining the Sustainable Development Goals (SDGs), with government and citizens as co-stewards of the land for future generations of Singaporeans.⁴²

³⁶ See Article 14 of the ASEAN Agreement; Article 14 of the CBD; and Section III of the Agenda 21.

³⁷ See <http://www.unep.fr/pc/pc/tools/eia.htm>

³⁸ See the EIA commissioned by Jurong Town Corporation, relating to the reclamation of Pulau Ular. This appeared in the Government Gazette on 13 July 2006, informing the public that the EIA can be viewed at their office; see online <http://www.e-gazette.com.sg/Document/gg/2006/065016.pdf> Re the Cross Island MRT line, the Land Transport Authority has released its EIA online. See LTA | Environmental Impact Assessment (Phase 2) Report

³⁹ bio-guidelines.pdf (nparks.gov.sg)

⁴⁰ Home (greenplan.gov.sg)

⁴¹ See Joseph Chun, "Reclaiming the Public Trust in Singapore", (2005) SAcLJ 717-746; Lye Lin Heng, "Land Law and the Environment - Re-examining the Concept of Ownership and Forging New Rights and Obligations in a Changed World", (2010) SAcLJ 189-229.

⁴² For a comprehensive text on Singapore's environmental laws, see Joseph Chun and Lye Lin Heng, Environmental Law in Singapore (2019), Singapore Academy of Law, 759 pp.

ALGAE

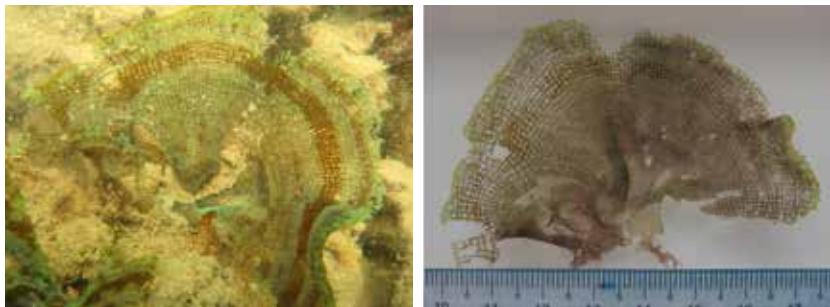
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Algae were a taxon not assessed in the 2nd edition of the Singapore Red Data Book. For this 3rd edition, a total of 1107 species of algae were considered for assessment of which 932 were Not Evaluated (NE), 159 were Data Deficient (DD) and 16 were given a category of threat status of Least Concern (LC). While none of the algae species have been assessed as threatened, there is much work that remains to be done for anyone who is interested to study this fascinating taxon. A brief overview of some of the algae found in Singapore is provided in the following pages in the hope that some readers may choose to take an interest in this taxon with such a large number of species that are as yet awaiting detailed study in Singapore.

Phylum:
Rhodophyta

Family:
Delesseriaceae

Genus:
***Martlesia* K.Hering,
1841**



Left image: field image, Pulau Hantu reef flat 14 Jan 2013; Right image: laboratory image

Martlesia is a red alga that has thin membranous blades when young, mature thallus becoming net-like in appearance towards the edges. Generally sparsely distributed, most often found in sandy environments.

Phylum:
Rhodophyta

Family:
Rhizophyllidaceae

Genus:
Portieria

Species:
***Portieria hornemannii*
(Lyngbye) P.C.Silva 1987**



Left image: field photo Pulau Subar Laut, 28 Feb 2012; Right image: close up, scale bar = 5 mm

Portieria hornemannii is a small red alga, up to 50 mm tall. It is easily distinguishable by the in-curled tips of the thallus. This red algae is often found in areas of higher wave exposure, particularly on rocks and rubble in subtidal environments.

Phylum:
Chlorophyta

Family:
Bryopsidaceae

Genus:
***Bryopsis* J.V.Lamouroux,
1809**



Left image: field photo, St. John's Island reef flat 12 Jan 2013

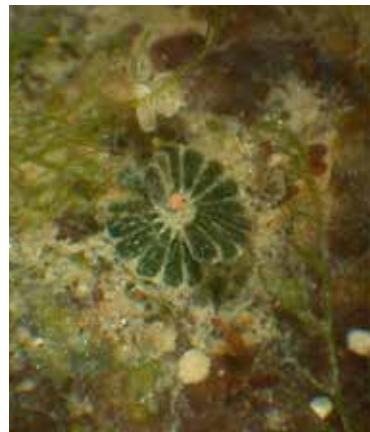
Bryopsis is a common green alga with feather-like fronds, growing on hard substratum such as rock, rubble and dead corals. Some species can form large seasonal blooms which persists for several months. Widely distributed in Singapore, found in many different habitats.

Phylum:
Chlorophyta

Family:
Polyphysaceae

Genus:
Parvocaulis

Species:
***Parvocaulis parvulus*
(Solms-Laubach)
S.Berger, Fettweiss,
Gleissberg, Liddle,
U.Richter, Sawitzky &
Zuccarello, 2003**



Left image: field photo, St. John's Island reef flat 12 Jan 2013; Right image: close up of cap, scale bar = 1mm

Parvocaulis parvulus is a small green alga that is usually less than 2.5mm in diameter, resembling a daisy in appearance, consisting of a cap on a stalk. Often overlooked due to its small size. Can be found growing on rocks and rubble in the intertidal and subtidal.

Phylum:
Ochrophyta

Family:
Dictyotaceae

Genus:
***Padina* Adanson, 1763,**
nom. cons.



Left image: Field photo of *Padina* sp., Pulau Hantu 14 Jan 2013; Right image: Pressed *Padina* sp. algae (herbarium specimen)

Padina is a fan-shaped brown alga, commonly found in both intertidal and subtidal environments, growing on rocks and rubble. Found in many areas in Singapore, in low to moderate cover.

Phylum:
Ochrophyta

Family:
Dictyotaceae

Genus:
***Dictyota* J.V.Lamouroux,**
1809



Left image: field photo Pulau Satumu 21-08-2008; Right image: laboratory photo of cleaned algae, scale bar = 5 mm

Dictyota is a brown alga that is characterized by flattened blades that are dichotomously branched. Found in many areas in Singapore, in low to moderate cover.

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FLORA

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Included in this account are the bryophytes (liverworts, mosses and hornworts), lycophytes, ferns, gymnosperms and flowering plants. The classification systems we use here are the same as used in the *Flora of Singapore* (Middleton et al., 2019b) and are explained in more detail there. We do not include the algae and fungi which are classified separately.

The starting point to assess the conservation status of the plants of Singapore is the exploration of Singapore's forest and other habitats, the identification of the species found, and a comprehensive and accurate list of the taxa that occur in the country (Er et al., 2022). The greater the number of collections made in a country, coupled with the resources to properly study those collections, the better the chance that a country's plant diversity has been accurately recorded. Singapore has the highest collection density of any country in Southeast Asia, and possibly in the world (Middleton et al., 2019a).

There have been several checklists over time, the most recent and most detailed of which is the checklist and bibliography published by Lindsay et al. (2022). That list also included the most recent published national conservation assessment applied to each of Singapore's plant taxa or, when there was no previous published assessment or when the authors of the checklist and bibliography knew the previous assessment to be inaccurate, a new assessment was given. Lindsay et al. (2022) made clear, however, that they were not comprehensively reassessing all of the species known from Singapore as this was something to be done for the *Singapore Red Data Book* instead. Nevertheless, almost 1200 new or updated assessments were published in Lindsay et al. (2022). All the taxa recorded as Not Evaluated in Lindsay et al. (2022) have now been evaluated. The total number of native species and the number of species in each IUCN category is presented in Table 1.

The reassessment of the conservation status of all native plant taxa in Singapore has now been completed and is presented here. Since Lindsay et al. (2022), three species new to science and 16 new records of native species have been published. Moreover, about 28 species recorded by Lindsay et al. (2022) as Nationally Extinct have been rediscovered and their conservation assessments are updated here. In addition, further research has clarified the native status or otherwise of several species. As research on Singapore's plant diversity continues and as we progress with our work on the *Flora of Singapore*, we shall have an ever-more accurate list of the species that occur, whether they are native or not, where they can be found, what their ecological niches are, and what their conservation needs are. Research in the wider region and internationally will lead to the publication of papers which challenge our established norms. For example, since the publication of Lindsay et al. (2022), a paper has been published which has made some fundamental changes to the genus *Shorea* in the iconic plant family Dipterocarpaceae (Ashton & Heckenauer, 2022). These changes and others are incorporated here and will be reflected in forthcoming *Flora of Singapore* accounts, meaning that a few species now have names different from those presented in Lindsay et al. (2022).

As a consequence of the substantial reassessments that already appeared in Lindsay et al. (2022), rather fewer taxa than one might expect, given the greater scrutiny applied in this work, have updated or new assessments, around 301 in all. The changes in some of the threat categories between the data presented in Lindsay et al. (2022) and the data

presented in Table 1, particularly for the bryophytes, is primarily due to the assessment of species previously listed as Not Evaluated rather than due to material differences in the fortunes of species in Singapore.

It should be borne in mind that this new review of the threatened statuses of Singapore's plants relies upon and builds upon the work published in Lindsay et al. (2022) which was compiled by over 100 authors. The authorship of this new review of the plants for the Red Data Book does not include the entire authorship of Lindsay et al. (2022) but rather only those who were actively involved in the reassessments and updating of the data presented here.

In the second edition of the *Singapore Red Data Book*, Tan (2008) presented a mixed picture of the prospects for plant diversity conservation in Singapore, emphasising both the huge deforestation in Singapore but also that the rate of deforestation has not been matched by a proportionate rate of species loss. This latter point, that Singapore has experienced a much lower rate of species loss than one would expect based on the amount of forest loss, has also been highlighted by Turner et al. (1994) and Neo et al. (2024). Nevertheless, 78% of Singapore's extant native plant taxa are assessed in one of the threat categories. Many plant species in Singapore are known from extremely few populations, sometimes even extremely few individuals, and NParks aims to ensure that these are protected in situ and are studied to assess their reproductive potential. When possible, these species are also brought into cultivation and Singapore Botanic Gardens' Seed Bank in order to protect against population loss or declines. They are sometimes also brought into tissue culture to increase the number of individuals. Plants cultivated from native stock, including those incorporated into NParks' Species Recovery Programme, can eventually be planted out in the nature reserves, nature parks, streetscapes, parks and gardens to ensure these species persist and eventually thrive again in Singapore. These initiatives complement ongoing work to better understand the ecology of Singapore's primary and secondary forests which could lead to informed forest restoration programmes using native stock.

	Total Species	Globally Extinct	Nationally Extinct (NEx)	CR/D	EN/D	VU/D	LC	DD
Liverworts	122	1	37	37	22	5	15	5
Mosses	156	0	42	27	25	14	27	21
Hornworts	3	0	0	0	0	2	0	1
Lycophytes	12	0	4	1	2	2	3	0
Ferns	163	0	47	29	26	14	40	7
Gymnosperms	8	0	0	6	2	0	0	0
Angiosperms	2199	3	514	910	255	190	294	33
Totals	2663	4	644	1010	332	227	379	67

Table 1. Number of native species in each of the major plant groups and disposition of these species in the IUCN categories.

Liverworts

Scientific Name:

Gaolejeunea hoi W.Ye & Y.M.Wei

Common Name:

-

Family:

Lejeuneaceae

National Status: Endangered (EN)

Habitat and Ecology: This tiny, leafy liverwort is restricted to exposed tree roots and tree bases in shade under the canopy of mature forest.

Distribution: In the Bukit Timah and Central Catchment Nature Reserves but in small and scattered populations. Endemic to Singapore.

Threats: Degradation of habitat.

Scientific Name:

Podomitrium malaccense (Steph.) Campb.

Common Name:

-

Family:

Pallaviciniaceae

National Status: Endangered (EN)

Habitat and Ecology: This thalloid liverwort is restricted to soil banks, rotten logs and boulders in moist and shady gullies in mature forest.

Distribution: In Singapore, known in the Bukit Timah and Central Catchment Nature Reserves but in small and scattered populations confined to shady moist microhabitats. Also known from southern Thailand, Cambodia, Peninsular Malaysia, Sumatra, Borneo, Moluccas, Philippines, New Guinea and the Pacific Islands.

Photo: Wen Ye



Gaolejeunea hoi colony. Inset: close up.

Scientific Interest and Potential Value: It was recognised as a new species in 2021 and named after a local botanist who was the first to collect specimens. The Lejeuneaceae, the largest liverwort family, includes about half of all reported liverwort species in Singapore.

Conservation Measures: Its known localities are in nature reserves.

Photo: Ho Boon Chuan



Podomitrium malaccense colony.

Threats: Degradation of habitat and small population size.

Scientific Interest and Potential Value: First described from a specimen collected by H.N. Ridley on Bukit Timah. This liverwort belongs to a small genus of three species which is characterised by having sex organs that develop on the ventral surface of the thallus.

Conservation Measures: Its known localities are in nature reserves.

Mosses

Scientific Name:
Syrrhopodon ciliatus (Hook.) Schwägr.

Common Name:

-

Family:
 Calymperaceae

National Status: Endangered (EN)

Habitat and Ecology: This moss grows on tree trunks and, occasionally, also on humus in light shade in mature secondary lowland forest. In Borneo, it has been found above 1000 m on humus overlying limestone.

Distribution: In Singapore, sporadic and currently known only from very small populations in the Singapore Botanic Gardens and on Pulau Semakau. It is widespread throughout Malesia, northern Australia and across Oceania.

Threats: Degradation of habitat.

Scientific Name:
Ectropothecium singapurense Dixon

Common Name:

-

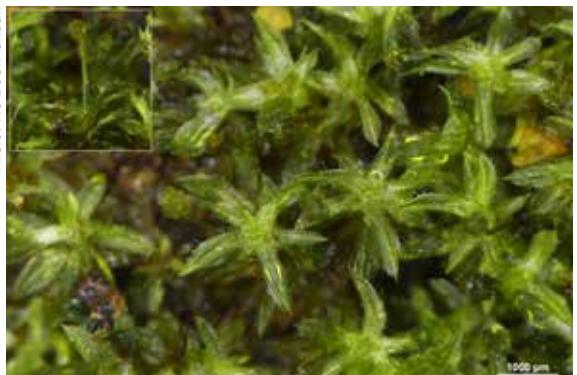
Family:
 Hypnaceae

National Status: Endangered (EN)

Habitat and Ecology: Tree bases and exposed tree roots.

Distribution: Endemic to Singapore. Specimens have been collected from Singapore Botanic Gardens and a few parks and gardens.

Photo: Ho Boon Chuan

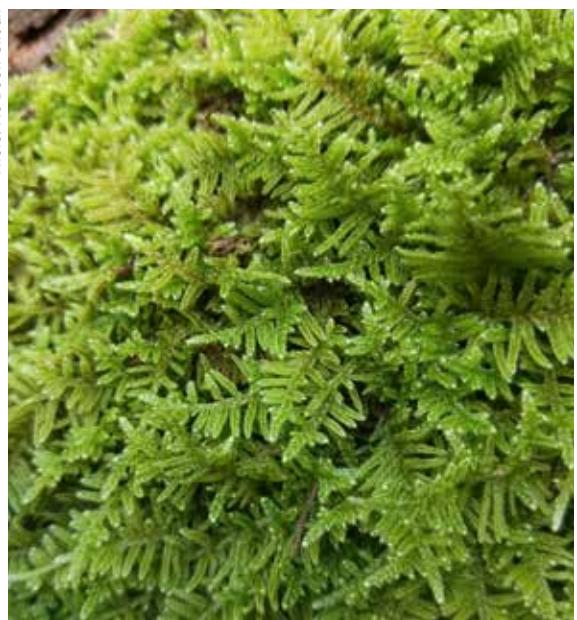


Syrrhopodon ciliatus colony.

Scientific Interest and Potential Value: With long delicate cilia along the leaf margins, this is one of the most distinctive species in this large pantropical genus of over a hundred species. Some of its leaves are strongly modified into a tube-like structures bearing fusiform gemmae (asexual reproductive structures).

Conservation Measures: The population in Singapore Botanic Gardens is protected under the Parks and Trees Act.

Photo: Ho Boon Chuan



Ectropothecium singapurense colony.

Threats: Staff in parks may routinely clear bryophytes from tree bases and exposed roots unaware that they are removing threatened plants.

Scientific Interest and Potential Value: This prostrate moss species was first described from a specimen collected in 1913 from Singapore Botanic Gardens where it persists today.

Conservation Measures: The populations in Singapore Botanic Gardens are protected under the Parks and Trees Act. There has been some success in the propagation of this species in the Evolution Garden of Singapore Botanic Gardens.

Hornworts

Scientific Name:

Notothylas javanica (Sande Lac.) Gottsche

Common Name:

-

Family:

Notothyladaceae

National Status: Vulnerable (VU)

Habitat and Ecology: This thalloid species is a colonist found on the surface of disturbed soils including those in flowerpots. However, populations are short-lived and occur sporadically then disappear after a few months.

Distribution: In Singapore, it has been collected fewer than 10 times in the last 30 years. It is, however, likely to be more common. Also known from other tropical and subtropical parts of Asia (Sri Lanka, China, Japan, Thailand, Sumatra and Java), Australasia (Australia), America (Mexico, Panama, Brazil), and Africa (Ivory Coast, Ghana and DR Congo).

Threats: Availability of suitable wild habitats, sporadic distribution and small population size.

Photo: Ho Boon Chuan



Notothylas javanica colony.

Scientific Interest and Potential Value: Unlike other hornworts with typical erect sporangia, those in the genus *Notothylas* are short, finger-like and horizontal. In *Notothylas javanica*, the sporangia do not have any sutures and thus rupture irregularly to release their spores. The species is also distinguished by the absence of pseudoelaters.

Conservation Measures: Mostly collected from plant nurseries and gardens (horticultural settings) and more research is needed to assess its conservation needs in the wild.

Lycophytes

Scientific Name:

Phlegmariurus carinatus (Desv.) Ching

Common Name:

Keeled tassel-fern, Shoelace tassel-fern,
Paku tali kasut

Family:

Lycopodiaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore, a pendulous epiphyte in the crowns of tall trees. Elsewhere, also on mossy rocks in forests below 400 m.

Distribution: In Singapore, now only known from one locality in the Central Catchment Nature Reserve and from one rain tree close to the Central Catchment Nature Reserve. It is native to India (Andaman & Nicobar Islands) through to China and Japan and throughout continental Southeast Asia and Malesia to Australia (Queensland) and the Pacific Islands.

Threats: Degradation of habitat and loss of small populations. Most of the known plants are on a single rain tree in a semi-urban area that may be subject to overzealous pruning or even removal.

Photo: Ng Xin Yi



Pendent plant of *Phlegmariurus carinatus*.

Scientific Interest and Potential Value: Nowadays, one of only two species of native tassel-ferns; three others are presumed Nationally Extinct (NEx). A very attractive plant widely used in horticulture.

Conservation Measures: A small ex-situ conservation collection has recently been established at NParks' Native Plant Centre with the goal of preserving and propagating native stock. The fate of the rain tree that is home to most of the remaining plants must be closely monitored and, if necessary, its survival championed.

Ferns

Scientific Name:

Dipteris conjugata Reinw.

Common Name:

Broad-leaf fern, Bua cek, Paku payung

Family:

Dipteridaceae

Photo: Ng Xin Yi



A stand of *Dipteris conjugata*.

National Status: Critically Endangered (CR)

Habitat and Ecology: Large, terrestrial, sun-loving and stand-forming fern. In Singapore, it grows more-or-less at sea-level on coastal cliffs and steep earth embankments. Elsewhere, it grows in open montane forest and on exposed high-altitude ridges.

Distribution: In Singapore, now only known to occur naturally at a few coastal localities in the Western Catchment, including Pulau Sarimbun. It is native to China and Japan, through continental Southeast Asia and Malesia to Australia (Queensland) and the Pacific Islands.

Threats: Degradation of habitat and loss of small populations. Susceptible to being shaded-out by encroaching vegetation and to being wiped-out by cliff falls and landslides.

Scientific Interest and Potential Value: The populations in Singapore, which are more-or-less at sea level, are unusual for the species as a whole which is mostly known as being a species of higher altitudes up to 1700 m.

Conservation Measures: The remaining populations are within a military training area which affords some protection, and the species has also been included in NParks' Species Recovery Programme. The most accessible populations are regularly monitored and encroaching vegetation cleared. Propagation by rhizome division and by spores is proving difficult but one small clump has been successfully translocated from the Western Catchment to Labrador Park (a former locality) and a few sporelings have been raised from soil samples. Unverified reports of a population on Pulau Tekong warrant investigation.

Scientific Name:

Lindsaea parasitica (Roxb.) Wall. ex Hieron.

Common Name:

-

Family:

Lindsaeaceae

National Status: Endangered (EN)

Habitat and Ecology: A climbing fern (reaching heights of 2–3 m) which, in Singapore, grows only on trees and only in shady places with permanently wet soil and very high humidity such as by streams in primary forest and in intact freshwater swamp forest. Elsewhere in its range it is not restricted to stream banks and swamp forest; it also climbs rocks and occurs at altitudes up to 1100 m.

Distribution: In Singapore, now only known from one locality in Bukit Timah Nature Reserve and two localities in the Central Catchment Nature Reserve, including Nee Soon freshwater swamp forest. It is also found in Peninsular Thailand, Peninsular Malaysia, Sumatra and Borneo.

Photo: Stuart Lindsey



Lindsaea parasitica climbing a tree.

Threats: Degradation of habitat and loss of small populations. In Singapore, this species is vulnerable to any event or activity that could alter the normal levels of the water table and changes that reduce humidity or shade.

Scientific Interest and Potential Value: The behaviour of this species requires further study. While currently believed to always be a ground-rooted

climber in Singapore, published descriptions claiming the species is 'epiphytic' may mean that it sometimes loses its connection to the ground.

Conservation Measures: The remaining populations are in protected areas. Preservation of its stream and swamp habitats is the only way to ensure the survival of this species in Singapore.

Scientific Name:
Nephrolepis acutifolia (Desv.) Christ

Common Name:
Sword fern, Fish-bone fern

Family:
Nephrolepidaceae

National Status: Endangered (EN)

Habitat and Ecology: Nowadays in Singapore, only known as a low hanging (but very long) epiphyte on a range of tree species in secondary forest and parks in full or dappled sunlight. Formerly an epiphyte of trees near the sea, including in mangroves, and once reported as being 'common on ground in humus on rocky sea cliffs'. Elsewhere in its range is also epiphytic in swamp and riverine forests, on oil palms, and terrestrial in heath forest.

Distribution: Currently uncertain in Singapore but the distribution and habitats of the known plants suggests that more individuals may be widely scattered in secondary forests, parks and on street trees all over the island. It is native to tropical Africa and the Mascarene Islands through continental Southeast Asia and Malesia to parts of Australia and the Pacific Islands.

Threats: Degradation of habitat and loss of small populations. None of the known plants are in protected areas. Most are on trees that may be subject to overzealous pruning or even removal.

Scientific Interest and Potential Value: This is the only species of *Nephrolepis* with linear marginal sori, a characteristic that led to its misclassification in the wrong

Photo: Stuart Lindsay



Curtain of *Nephrolepis acutifolia*.

family for many years. Capable of forming a curtain of pendulous fronds up to 4 m long, this can be a strikingly beautiful fern whose horticultural potential may not yet be fully realised.

Conservation Measures: Although no plants are in protected areas, a few plants are epiphytic on at least one Heritage Tree which affords them some protection. Plants salvaged from a rain tree before it was cut down are being propagated in NParks' Native Plant Centre nursery for introduction to suitable sites. The fate of the other trees that are home to this fern must be closely monitored and, if necessary, their survival championed.

Gymnosperms

Scientific Name:
Cycas edentata de Laub.

Common Name:
Paku raja

Family:
Cycadaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore, in coastal forests along shorelines..

Distribution: Found on Pulau Tekong and in the Western Catchment. Also in Myanmar, Thailand, Vietnam, Malaysia, western Indonesia and the Philippines.

Threats: Loss of coastal habitats and loss of very small populations.

Scientific Interest and Potential Value: The only native cycad species in Singapore. It is extremely hardy and makes a striking ornamental plant, even at non-coastal locations. It is also the host plant of the native Cycad blue butterfly.

Conservation Measures: Individuals have been successfully propagated via manual pollination of female plants. Viable seeds have been collected from successful pollination and germinated in NParks' Native Plant Centre nursery. Established plants have been planted out to suitable coastal sites such as Kranji Marshes and Pulau Ubin.

Photo: Ng Xin Yi



Female cone of *Cycas edentata* bearing young seeds.

Photo: Ng Xin Yi



Cycas edentata in the wild.

Scientific Name:*Podocarpus polystachyus* R.Br. ex Endl.**Common Name:**

Sea teak

Family:

Podocarpaceae

National Status: Endangered (EN)

Habitat and Ecology: In Singapore, mostly in coastal forest, beach vegetation and coastal cliffs but also found in lowland forest..

Distribution: Found on several of the southern islands, on Pulau Ubin, in Labrador Nature Reserve and in the Western Catchment. There are a few trees in the Central Catchment Nature Reserve but it is likely that these were planted.

Threats: Loss of habitat and loss of very small populations.

Scientific Interest and Potential Value: One of only two native conifer species in Singapore. The trees are attractive and are sometimes used as ornamental and roadside trees.

Conservation Measures: Some of the populations are in the Central Catchment and Labrador Nature Reserves and some are in the Sisters' Islands Marine Park. Other populations are not in protected areas. The provenance of many cultivated trees is unknown. Seeds and wildlings have been collected from native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to suitable coastal sites such as Sungei Buloh Wetland Reserve and Labrador Nature Reserve.

Photo: Zaki Jamil

Male cones of *Podocarpus polystachyus*.

Angiosperms

Scientific Name:

Ptyssiglottis kunthiana (Nees) B.Hansen

Common Name:

-

Family:

Acanthaceae

National Status: Endangered (EN)

Habitat and Ecology: A herb of humid primary forest. Elsewhere, also associated with limestone forest.

Distribution: In Singapore, only known from Bukit Timah Nature Reserve. The species is widespread in the region, occurring in Vietnam, Thailand, Peninsular Malaysia, Borneo, Java and the Philippines.

Threats: Degradation of habitat and loss of small populations.

Scientific Interest and Potential Value: The discovery of *Ptyssiglottis kunthiana* in Bukit Timah Nature Reserve in 2021 was the first record of both the genus and species in Singapore. The species is morphologically very variable, especially in leaf shape.

Conservation Measures: The species grows within a nature reserve.

Photo: Mati Nissalo



Flower of *Ptyssiglottis kunthiana*.

Scientific Name:
Mangifera magnifica Kochummen

Common Name:
Machang pulasan

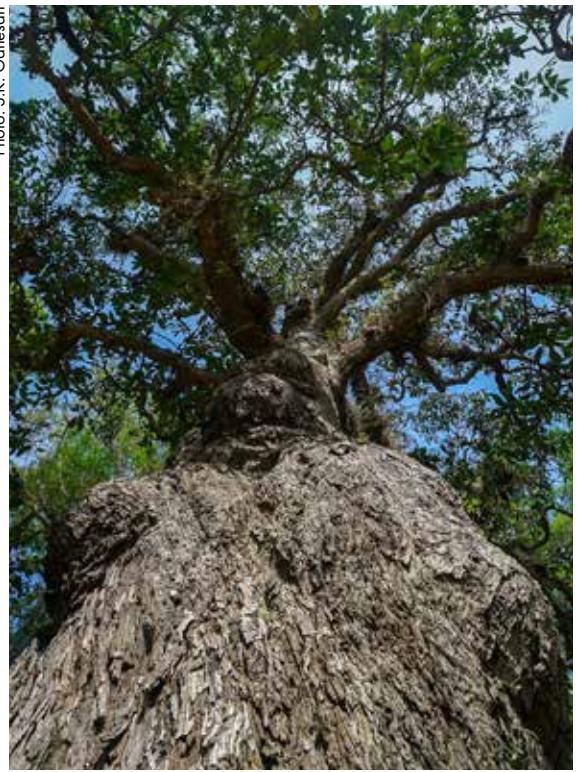
Family:
Anacardiaceae

Photo: S.K. Ganeshan



Close up of a dissected fruit of *Mangifera magnifica*.

Photo: S.K. Ganeshan



Mangifera magnifica on St John's Island.

National Status: Critically Endangered (CR)

Habitat and Ecology: Lowland primary forest

Distribution: In Singapore, known from St John's Island, Pulau Tekong and the Central Catchment Nature Reserve. Also in Peninsular Malaysia, Sumatra and Borneo.

Threats: Degradation of habitat and small number of mature trees.

Scientific Interest and Potential Value: Adults of this species have wide-spreading and dense crowns making them ideal for planting in parks as a shade

tree. The potential problem of fallen fruits is somewhat minimized by its low frequency of flowering and fruiting, and if fruiting does occur, the edible fruits can be harvested before they fall.

Conservation Measures: The few mature individuals in Singapore are in protected and restricted areas, or protected under the Heritage Trees scheme. This species is included in NParks' Species Recovery Programme, through which seeds collected from the Central Catchment Nature Reserve and St. John's Island have been grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:***Gongreos wallichii* (Wight) Rodda et al.****Common Name:**

-

Family:**Apocynaceae****National Status:** Critically Endangered (CR)**Habitat and Ecology:** Twining climber found in lowland primary forests.**Distribution:** In Singapore, only known from the Central Catchment Nature Reserve. Also, in Peninsular Malaysia and Borneo.**Threats:** Degradation of habitat and loss of small populations.**Scientific Interest and Potential Value:** The only known species of Gongreos in Singapore. This species

Photo: Yeoh Yishuen

Flowers of *Gongreos wallichii*.

was presumed Nationally Extinct (NEx) for nearly 200 years and was only rediscovered recently. It has potential for cultivation in urban environments. Cultivated plants develop small, urn-shaped flowers reminiscent of *Dischidia* species.

Conservation Measures: Seedlings have been collected and grown in NParks' Native Plant Centre nursery. Cultivation has been successful on fences and trellises.

Scientific Name:***Kopsia singapurensis* Ridl.****Common Name:****Singapore kopsia****Family:****Apocynaceae****National Status:** Critically Endangered (CR)**Habitat and Ecology:** A small tree or shrub of swamp forest. Elsewhere, also in lowland forest.**Distribution:** In Singapore, only known from small populations in Nee Soon freshwater swamp forest and the Upper Seletar area of the Central Catchment Nature Reserve. It is also found in Peninsular Malaysia.**Threats:** Degradation of habitat and loss of small populations.

Photo: Zaki Jamil

Flowers of *Kopsia singapurensis*.

Scientific Interest and Potential Value: With attractive flowers in the national colours, this has become a popular ornamental in Singapore, particularly in Singapore Botanic Gardens but increasingly also in parks around the country.

Conservation Measures: The remaining wild populations are in protected areas. It is also being widely cultivated from native stock, thereby reducing

the chances of loss of the species and also reducing potential pressures on the wild populations of this attractive plant. The cultivated plants are, however, almost entirely grown from cuttings or air-layering as seed is rarely set. From the few seeds grown from cultivated *Kopsia singapurensis*, there is some evidence that they may be hybridising with cultivated *Kopsia fruticosa*.

Scientific Name:

Homalomena nathanielii
S.Y.Wong & P.C.Boyce

Common Name:

-

Family:

Araceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A herb growing mainly in wet, tropical rain forests.

Distribution: Currently known with certainty only from Singapore. It is now only found in the Bukit Timah and Central Catchment Nature Reserves.

Threats: Degradation of habitat and small population size.

Scientific Interest and Potential Value: First discovered in Singapore in the 19th century but described as a distinct species only recently. It has ornamental foliage and leaves.

Photo: Yeoh Yi Shuen



Homalomena nathanielii by a small stream.

Conservation Measures: Its known localities are in protected areas.

Scientific Name:
Calamus lobbianus Becc.

Common Name:
 -

Family:
 Arecaceae

Photo: Choo Le Min



Calamus lobbianus in the forest.

Photo: Choo Le Min



Flowering shoot of *Calamus lobbianus*.

National Status: Critically Endangered (CR)

Habitat and Ecology: A non-climbing palm of primary forests. Elsewhere, the species is associated with hill forests up to 700 m in altitude.

Distribution: In Singapore, only known from a handful of localities in the Bukit Timah and Central Catchment Nature Reserves. The species is also recorded from Peninsular Malaysia, Sumatra and Borneo.

Threats: Degradation of habitat and loss of small populations.

Scientific Interest and Potential Value: This species is a curious example of a non-climbing, solitary rattan in a genus otherwise characterised by climbing rattans. The ripe fruits are said to be edible.

Conservation Measures: The species grows within nature reserves.

Scientific Name:
Dracaena breviflora Ridl.

Common Name:
 -

Family:
 Asparagaceae

Photo: Matti Niissalo



Flowers of *Dracaena breviflora*.

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore, the species seems to be restricted to swamp forest, near streams in shaded localities with permanently wet soil.

Distribution: In Singapore, the species is restricted to the Central Catchment Nature Reserve. There are several historical herbarium records, all well over 100 years old, of the species also occurring in Johor, Peninsular Malaysia.

Threats: Degradation of habitat including local stochastic events (e.g. microstorms, damage by wild boars), small population size and poaching.

Scientific Name:

Dolichandrone spathacea (L.f.)
K.Schum.

Common Name:

Mangrove trumpet tree, Tui

Family:

Bignoniaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Tree in the back mangroves and banks of tidal rivers and estuaries.

Distribution: In Singapore, *Dolichandrone spathacea* was once common in the back of mangroves and tidal rivers but is now restricted to areas in Sungei Pang Sua, Sungei Buloh Wetland Reserve and surrounding islands such as Pulau Sakeng, Pulau Semakau, Pulau Sudong, Pulau Tekong, Pulau Ubin and Pulau Unum. Elsewhere, *Dolichandrone spathacea* is a widespread species occurring in tropical and subtropical regions from India to New Caledonia.

Threats: Degradation of habitat.

Scientific Interest and Potential Value:

Dolichandrone spathacea is used in traditional medicine to treat bacterial infections. In some cultures, the flowers are also eaten. Like all members of the Bignoniaceae,

Scientific Interest and Potential Value: Recently discovered in Singapore (observed in 2015 and formally recorded in 2020). Only three small populations are known in the wild but, if successfully propagated, the species could have horticultural value.

Conservation Measures: The species has been included in NParks' Species Recovery Programme. When ample material has been propagated, it will be trialed for re-introductions and made available to the public as an ornamental.

Photo: Koh Sin Lan



Flower of *Dolichandrone spathacea*.

Dolichandrone spathacea has large, attractive and scented flowers and is therefore cultivated as an ornamental tree.

Conservation Measures: The remaining wild populations are mostly in protected areas. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:
Triomma malaccensis Hook.f.

Common Name:
Malaccan triomma

Family:
Burseraceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A tree, mainly found in primary lowland forests and rarely found in secondary forests and swampy or permanently flooded sites.

Distribution: In Singapore, it has been collected from the Bukit Timah and Central Catchment Nature Reserves and in the Singapore Botanic Gardens Rain Forest. It is also found in Peninsular Malaysia, Sumatra, Bangka and Borneo.

Threats: Degradation of habitat and loss of small populations.

Scientific Interest and Potential Value: *Triomma malaccensis* is the only species in the genus. It is dioecious, meaning that male and female flowers are borne on separate individuals and both need to be present and flowering at the same time for reproduction.

Photo: Seah Wei Wei



Leaves and inflorescence of *Triomma malaccensis*.

The timber is suitable for use in indoor construction and the resin is sometimes used for torches. Since 2018, two fruiting events of the single known female individual in the MacRitchie area of the Central Catchment Nature Reserve did not result in seeds, highlighting the challenges faced in recruitment and propagation of this species.

Conservation Measures: Most of its localities are in nature reserves or protected areas.

Scientific Name:
Garcinia griffithii T.Anderson

Common Name:
Elephant kandis

Family:
Clusiaceae

National Status: Endangered (EN)

Habitat and Ecology: In Singapore, a medium-sized tree reaching the lower canopy in lowland forest.

Photo: Chong Kwek Yan



Fruit of *Garcinia griffithii*.

Distribution: Peninsular Malaysia, Sumatra, Singapore. All known individuals in Singapore (except for one collection) are in the Bukit Timah and Central Catchment Nature Reserves and Windsor Nature Park.

Threats: Mature individuals are widely scattered and may be vulnerable to reproductive isolation due to fragmentation and loss of connectivity for pollinators.

Scientific Interest and Potential Value: Distinctive leaves that are the second largest among the *Garcinia*

species of this region and have often been described as 'cabbagy'. Possibly some potential as an ornamental tree.

Conservation Measures: Most wild individuals are protected in nature reserves/parks. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:
Dillenia excelsa (Jack) Gilg var.
tomentella (Martelli) Masam.

Common Name:
 Simpoh ungu

Family:
 Dilleniaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A medium to large tree. In Singapore, it is found in primary and old secondary lowland mixed dipterocarp forests.

Distribution: In Singapore, it is only known from the Bukit Timah and Central Catchment Nature Reserves. Also known from Peninsular Malaysia (Johor).

Threats: Degradation and loss of habitat and loss of very small populations.

Scientific Interest and Potential Value: *Dillenia excelsa* (Jack) Gilg var. *excelsa* is commonly used as an ornamental and roadside tree because it flowers often

Photo: Ng Xin Yi



Flowers of *Dillenia excelsa* var. *tomentella*.

and profusely. *Dillenia excelsa* var. *tomentella* is likely to have similar flowering habits in cultivation and may likewise have ornamental value.

Conservation Measures: Its known localities are in nature reserves. No fruits have been observed on an individual monitored since 2020. Attempts to propagate the species from cuttings by NParks' Native Plant Centre have so far not been successful.

Scientific Name:

Rubroshorea pauciflora (King)
P.S.Ashton & J.Heck.

Common Name:

Nemesu

Family:

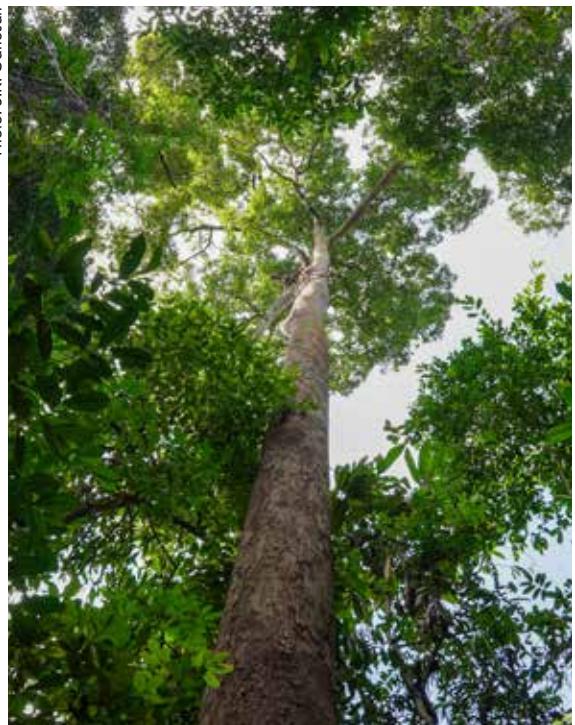
Dipterocarpaceae

Photo: S.K. Ganeshan



Flowers of *Rubroshorea pauciflora*.

Photo: S.K. Ganeshan



Large tree of *Rubroshorea pauciflora*.

National Status: Endangered (EN)

Habitat and Ecology: Very big emergent tree, to 30 m tall in Singapore (up to 65 m tall in Borneo), of well-drained lowland forest.

Distribution: In Singapore, only known from the Bukit Timah and Central Catchment Nature Reserves. Also in Peninsular Thailand, Sumatra, Peninsular Malaysia and Borneo.

Threats: Degradation of habitat and loss of adult trees.

Scientific Interest and Potential Value: This tree produces one of the finest red meranti timbers in the world. A street in Singapore, 'Nemesu Avenue' is named after it. This tree is often the largest of the trees in primary forests in Singapore with trees exceeding 1 m diameter often encountered.

Conservation Measures: All known localities are in nature reserves. Wildlings have been collected from several native localities and grown in NParks' Native Plant Centre nursery and will be planted out once they reach sufficient size.

Photo: S.K. Ganeshan



Leaf and seed of *Rubroshorea pauciflora*.

Scientific Name:
Sindora velutina Baker

Common Name:
 -

Family:
 Fabaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Tree to 45 m tall, generally found only in primary lowland forest.

Distribution: In Singapore, only known from the Bukit Timah and Central Catchment Nature Reserves. Also in Peninsular Malaysia, Sumatra and Borneo.

Threats: Habitat degradation and loss of small populations.

Scientific Interest and Potential Value: The rarest of all *Sindora* species in Singapore, *Sindora velutina*

Scientific Name:
Whitfordiodendron erianthum
 (Benth.) Dunn

Common Name:
 -

Family:
 Fabaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A woody climber in primary and mature secondary forests.

Distribution: In Singapore, known from a handful of scattered populations in the Central Catchment Nature Reserve and one small population in the Singapore Botanic Gardens Rain Forest. Also known from Southern Thailand, Peninsular Malaysia, Sumatra and Borneo.

Photo: Choo Le Min

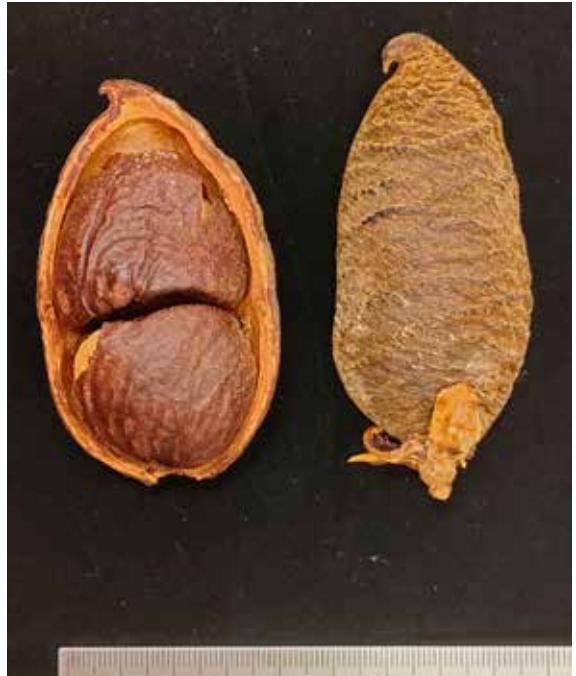


Flowers of *Sindora velutina*.

is only known from eight scattered mature individuals. The colour, scent and other characteristics of the fresh flowers of this species were first documented in Singapore in 2021.

Conservation Measures: It is found within protected areas and seeds have been collected for propagation.

Photo: Ho Boon Chuan



Woody pod and two seeds inside an open pod of *Whitfordiodendron erianthum*.

Threats: Degradation of habitat and small population size.

Scientific Interest and Potential Value: This is the only species of the genus known in Singapore. The small genus of four species was recently segregated from the genus *Callerya*. The woody pods are typically ovate to obovate, inflated, the surface rugose, and each contains up to two seeds.

Scientific Name:
Fagraea splendens Blume

Common Name:

-

Family:
Gentianaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Shrub or hemi-epiphyte. In Singapore, found only in drier parts of freshwater swamp forest.

Distribution: In Singapore, found only in Nee Soon freshwater swamp forest of the Central Catchment Nature Reserve. Also found in Peninsular Malaysia, Sumatra and Borneo.

Threats: Loss of habitat and loss of very small populations.

Scientific Interest and Potential Value: With thick leathery leaves and beautiful flowers, it has potential to be a good ornamental plant for parks and gardens.

Conservation Measures: Its known localities are in protected areas. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Photo: Ng Xin Yi



Flowers of *Fagraea splendens*.

Conservation Measures: Its known localities are in a nature reserve. Individuals have been propagated via air-layering in NParks' Native Plant Centre nursery and introduced to various sites in Singapore. Manual pollination of stock plants in the nursery has produced seeds from which other plants have been grown.

Scientific Name:
Codonoboea platypus
(C.B.Clarke) C.L.Lim

Common Name:
 -

Family:
Gesneriaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Terrestrial herb in shaded damp gullies in mature forest.

Distribution: In the Bukit Timah and Central Catchment Nature Reserves but in very small populations. Also known from southern Thailand, Peninsular Malaysia and Sumatra.

Threats: Degradation of habitat and small population size.

Scientific Interest and Potential Value: One of only two species recorded from Singapore in this hyper-diverse genus, most species of which are found in the mountains of Peninsular Malaysia, Sumatra and Borneo.

Conservation Measures: Its known localities are in nature reserves. Native stock is also being propagated in the Tissue Culture Laboratory in Singapore Botanic Gardens. Plantlets are being grown in NParks' Native Plant Centre nursery and established plants have been planted out to several suitable sites.

Photo: Paul Leong



Flowers and leaves of *Codonoboea platypus*.

Scientific Name:
Hanguana triangulata
 Škorničk. & P.C.Boyce

Common Name:
 -

Family:
 Hanguanaceae



Fruits of *Hanguana triangulata*.



Habit of *Hanguana triangulata*.

National Status: Critically Endangered (CR)

Habitat and Ecology: Terrestrial rhizomatous herb growing in the understorey of lowland primary forest, often near or beside streams.

Distribution: In the Bukit Timah and Central Catchment Nature Reserves but in extremely small populations. Endemic to Singapore.

Threats: Degradation of habitat including local stochastic events (e.g., microstorms, damage by wild boars), small population size and poaching.

Scientific Interest and Potential Value: The species has potential value as a bioindicator of primary forest. In a sterile state, it is easily confused with *Hanguana podzolicola*.

Conservation Measures: All known populations are in nature reserves. The species is included in NParks' Species Recovery Programme, but mass propagation has not been successful to date. The species, although apomictic, flowers and fruits very infrequently, is extremely slow-growing and is not easy to cultivate. Current efforts focus on frequent monitoring of wild plants and establishment in tissue culture.

Scientific Name:
Enhalus acoroides
(L.f.) Royle

Common Name:
Tape seagrass

Family:
Hydrocharitaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A seagrass of shallow intertidal areas with sandy substrate.

Distribution: In Singapore, it can be found along the southern mainland coastline (including reclaimed areas) such as Tanah Merah, Labrador and East Coast. The species is widely distributed across the Indo-Pacific, from Northern Australia to Southern Japan, and extends to East Africa.

Threats: Degradation and loss of habitat.

Scientific Interest and Potential Value: The largest seagrass species, *Enhalus acoroides* has strap-like

Photo: Siti M. Yaakub



Coastal stand of *Enhalus acoroides*.

leaves growing up to 150 cm in length. The seeds are harvested in some coastal communities for food.

Conservation Measures: Requires intertidal habitats to be protected and a halt to further damage to existing seagrass meadows.

Scientific Name:
Cratoxylum arborescens
(Vahl) Blume

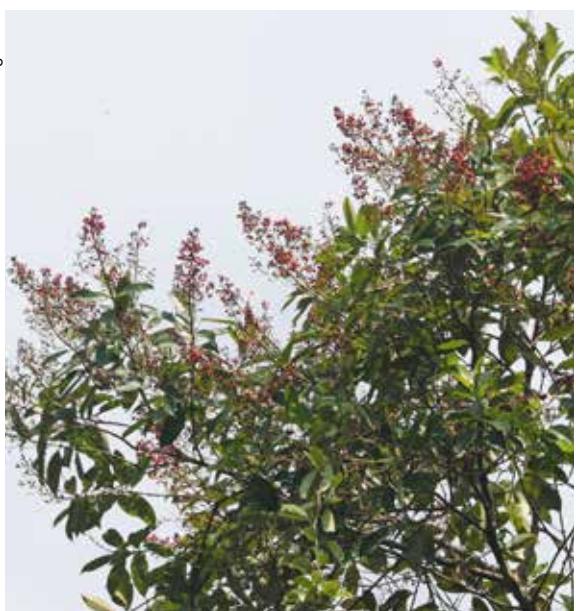
Common Name:
Geronggang

Family:
Hypericaceae

National Status: Endangered (EN)

Habitat and Ecology: A medium to large tree. In Singapore, it is found in primary and old secondary lowland mixed dipterocarp forests. Elsewhere, it also occurs in lower montane, heath and peat swamp forests.

Photo: Ng Xin Yi



Branches and flowers of *Cratoxylum arborescens*.

Distribution: In Singapore, it is only known from the Bukit Timah and Central Catchment Nature Reserves. Also in southern Myanmar, Peninsular Thailand, Peninsular Malaysia, Sumatra and Borneo.

Threats: Degradation and loss of habitat and loss of very small populations.

Scientific Interest and Potential Value: Other members of this genus are commonly used as ornamental and roadside trees. This species may likewise have ornamental value as it produces attractive red flowers.

Conservation Measures: Its known localities are in nature reserves.

Scientific Name:
Litsea ridleyi Gamble

Common Name:
Ridley's litsea

Family:
Lauraceae

National Status: Endangered (EN)

Habitat and Ecology: Tree to 25 m tall in lowland forest.

Distribution: In Singapore, only known from the Bukit Timah and Central Catchment Nature Reserves. There are unconfirmed reports of the species from Borneo.

Threats: Degradation of habitat and loss of small populations.

Scientific Interest and Potential Value: If the material from Borneo is eventually identified as a different species, *Litsea ridleyi* will be confirmed as endemic to Singapore.

Conservation Measures: Its known localities are in nature reserves.

Photo: Ng Xin Yi



Fruits of *Litsea ridleyi*.

Photo: Ng Xin Yi



Flowers of *Litsea ridleyi*.

Scientific Name:
Magnolia singapurensis
 (Ridl.) H.Keng

Common Name:
Singapore magnolia

Family:
Magnoliaceae

Photo: Ng Xin Yi



Fruit of *Magnolia singapurensis*.

National Status: Critically Endangered (CR)

Habitat and Ecology: A tree of lowland forest and freshwater swamp forest.

Distribution: In Singapore, now only known from Nee Soon freshwater swamp forest of the Central Catchment Nature Reserve. Also known from Peninsular Malaysia, Sumatra, Bangka and Borneo.

Threats: Habitat degradation and loss of very small populations.

Scientific Interest and Potential Value: One of only four native *Magnolia* species in Singapore. With attractive white flowers and seeds with a bright pink sarcotesta, this tree may be cultivated in parks and has the potential to become a popular ornamental in Singapore. It is also suitable for marshes and other waterlogged areas owing to its tolerance of wet conditions.

Conservation Measures: All the known wild trees are in a nature reserve. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:
Durio singaporenensis Ridl.

Common Name:
Durian bujor, Durian daun,
Singapore durian

Family:
Malvaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A tree of lowland primary and late secondary forests.

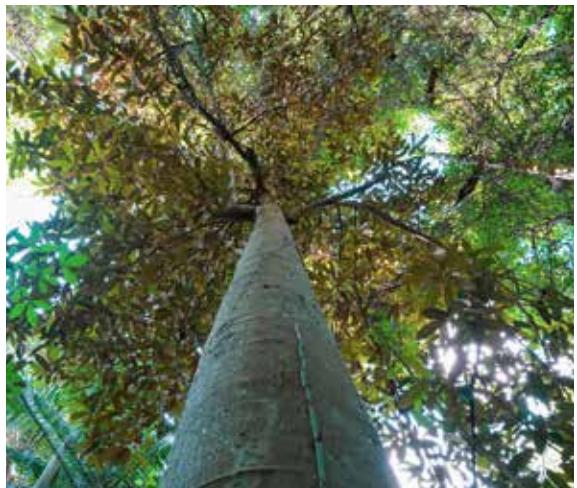
Distribution: In Singapore, it is found in the Bukit Timah and Central Catchment Nature Reserves. Also known from Peninsular Malaysia.

Threats: Very small populations with few mature individuals.

Scientific Interest and Potential Value: The seed of this species of durian is devoid of an aril except at the base where there is a white leathery inedible aril. This species was first described by one of the past Directors of Singapore Botanic Gardens, H.N. Ridley, from material collected from Singapore and Johor. It can be used as an ornamental tree in the urban environment in Singapore because of its attractive leaves and tree form. Another attraction for planting is its specific epithet '*singaporenensis*'. The potential problem of its fruits falling onto people can be mitigated by harvesting them before they ripen and fall.

Conservation Measures: All known populations of *Durio singaporenensis* in Singapore are in nature reserves. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery.

Photo: S.K. Ganeshan



Durio singaporenensis tree.

Photo: Zaki Jamil

Flowers of *Durio singaporenensis*.

Photo: Ng Xin Yi

Fruit of *Durio singaporenensis*.

Scientific Name:
Phrynum hirtum Ridl.

Common Name:
-

Family:
Marantaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Terrestrial rhizomatous herb in shaded damp gullies in primary forest.

Distribution: In Singapore, there is a single population of fewer than 10 individuals in the Central Catchment Nature Reserve. Also found in Thailand, Peninsular Malaysia, Sumatra and Borneo.

Threats: Degradation of habitat including local stochastic events (e.g. microstorms), small population size and poaching.

Scientific Interest and Potential Value: The species, first recorded in Singapore in 2016, is suitable for introduction into horticulture due to its beautiful foliage. It also has potential as a bioindicator of primary forest.

Photo: Jana Leong-Škorničková



Flowers of *Phrynum hirtum*.

Conservation Measures: This species has been included in NParks' Species Recovery Programme and the wild populations are frequently monitored for flowering and fruit set. Efforts also focus on propagation of plants at Singapore Botanic Gardens and in NParks' Native Plant Centre nursery. Established plants have been planted out to suitable sites.

Scientific Name:
Ficus delosyce Corner

Common Name:
-

Family:
Moraceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Strangling hemiepiphyte or free-standing tree to 25 m tall in dry areas of freshwater swamp forest.

Photo: Reuben Lim



Leaves and figs of *Ficus delosyce*.

Distribution: Only one population in Nee Soon freshwater swamp forest of the Central Catchment Nature Reserve. Also known from Borneo, Peninsular Malaysia and Sumatra.

Threats: Degradation of habitat and loss of very small populations.

Scientific Interest and Potential Value: The fig-wasp pollinators for rare fig species in Singapore

have not been studied much. This species forms small, dense bushes like *Ficus microcarpa* when consistently maintained.

Conservation Measures: The wild population is in a protected area. This species has been included in the NParks' Species Recovery Programme since its inception. Seeds and cuttings have been collected for growing and individuals have been planted out at many suitable sites to establish new populations.

Scientific Name:
Endocomia canarioides
(King) W.J.de Wilde

Common Name:
-

Family:
Myristicaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Tree to 30 m tall in lowland forest.

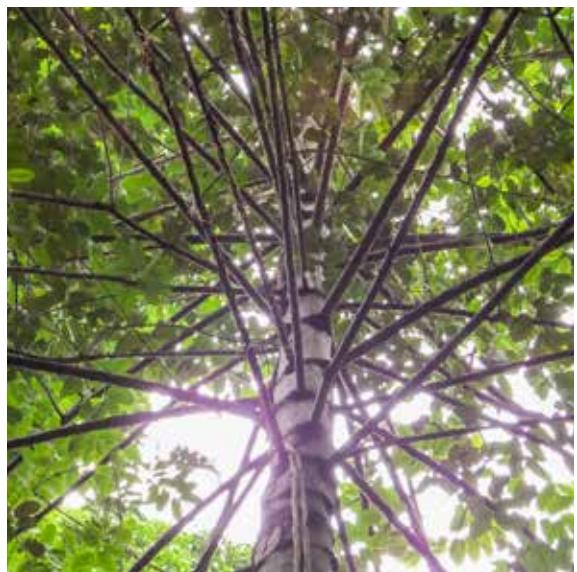
Distribution: Found only in two small populations in Bukit Timah Nature Reserve and the Singapore Botanic Gardens Rain Forest. Also known from southern Thailand, Peninsular Malaysia and Sumatra.

Threats: Degradation of habitat and loss of very small populations.

Scientific Interest and Potential Value: The only monoecious genus in the family with only one species in Singapore. The male flowers on a single individual can pollinate female flowers on the same individual to form fruits with viable seeds that are attractive to large frugivorous birds.

Conservation Measures: The wild populations are in protected areas. This species has been included in NParks' Species Recovery Programme. Seeds from both populations have been collected and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Photo: Reuben Lim



Branches of *Endocomia canarioides*.

Photo: Reuben Lim



Fruit of *Endocomia canarioides*.

Scientific Name:
Syzygium singaporense
 (King) Airy Shaw

Common Name:
Singapore syzygium

Family:
Myrtaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A tree of freshwater swamp forest and lowland forest.

Distribution: In Singapore, *Syzygium singaporense* is known from Nee Soon freshwater swamp forest and the Bukit Mandai, Upper Seletar and MacRitchie areas of the Central Catchment Nature Reserve, and from Bukit Timah Nature Reserve. It is also known from Peninsular Malaysia (West Coast from Penang to Johor).

Threats: Degradation of habitat and loss of small populations.

Photo: Low Yee Wen



Leaves and flowers of *Syzygium singaporense*.

Scientific Interest and Potential Value: *Syzygium singaporense* is a small- to medium-sized tree with a neat crown worthy of being introduced as a green screening tree for landscaping and streetscaping.

Conservation Measures: The remaining wild populations are within protected areas. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:
Nepenthes rafflesiana
 Jack

Common Name:
Raffles' pitcher plant

Family:
Nepenthaceae

National Status: Vulnerable (VU)

Habitat and Ecology: Scrambling vine in resam fern-dominated scrub, secondary forests and coastal cliffs. It is a carnivorous plant.

Photo: Lam Weng Ngai



Pitcher of *Nepenthes rafflesiana*.

Distribution: In Singapore, found in the Central Catchment Nature Reserve, Kent Ridge Park, Western Catchment, and the Southern Islands. Also in Peninsular Malaysia, Borneo and Sumatra.

Threats: Habitat loss, poaching and ecological succession, as *Nepenthes rafflesiana* seldom persist in mature forests.

Scientific Interest and Potential Value: Attractive ornamental plant. Source of the protease nepenthesin, which has potential biomedical and biotechnological

applications. The pitchers act as aquatic habitats for many specialised invertebrates which are found nowhere else.

Conservation Measures: Large populations are well protected within nature reserves, but populations occurring outside of nature reserves in resam fern-dominated scrub are extremely vulnerable to development. Cuttings have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.

Scientific Name:

Scorodocarpus borneensis
(Baill.) Becc.

Common Name:

Kulim, Bawang hutan

Family:

Olacaceae



Fruit of *Scorodocarpus borneensis*.

Photo: Louise Neo



Trunk and branching of *Scorodocarpus borneensis*.

National Status: Critically Endangered (CR)

Habitat and Ecology: Slow-growing medium to large tree in primary and old secondary lowland mixed dipterocarp forests.

Distribution: In Singapore, it is only known from the Bukit Timah and Central Catchment Nature Reserves. Also in Peninsular Thailand, Peninsular Malaysia, Sumatra and Borneo.

Threats: Degradation and loss of habitat and loss of very small populations.

Scientific Interest and Potential Value: The only known member of its genus. The tree has a powerful odour of garlic which may be detectable even from a distance.

Conservation Measures: All known localities are in nature reserves. Flowering and fruiting events are being monitored by NParks' Native Plant Centre in the hope of collecting seeds to propagate.

Scientific Name:
Lepidogyne longifolia
(Blume) Blume

Common Name:
Long-leaved lepidogyne

Family:
Orchidaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Freshwater swamp forest.

Distribution: In Singapore, this species has only been recorded from Bukit Timah Nature Reserve. The species is widespread but often rare in the region, occurring in Peninsular Malaysia, Sumatra, Pulau Lingga, Borneo, Java, Flores, Philippines and New Guinea.

Threats: Small population size and loss of small populations due to stochastic events.

Scientific Interest and Potential Value:
Lepidogyne longifolia is the only species in the genus. It was first discovered in Singapore in 2019. Only

Photo: Matti Niissalo



Leaves of *Lepidogyne longifolia*.

four plants have been found so far and they have not flowered since their discovery. The species is diverse in size and flower colour and has sometimes been split into several separate species. The population continues to be monitored for signs of flowers so that the flower morphology of the Singapore plants can be recorded. The species is vegetatively distinct with long, narrow leaves and thick stilt roots.

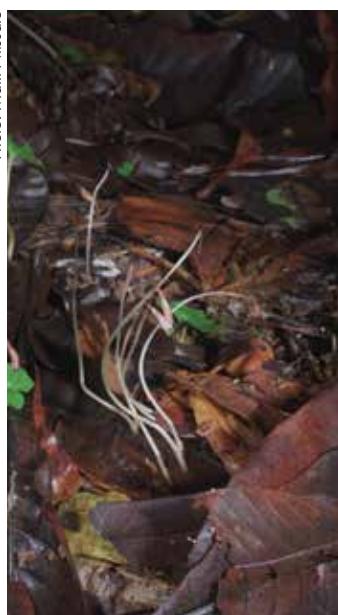
Conservation Measures: The species grows within a nature reserve.

Scientific Name:
Nervilia singaporenensis
Niissalo

Common Name:
Singapore nervilia

Family:
Orchidaceae

Photo: Matti Niissalo



Nervilia singaporenensis plant.

Photo: Matti Niissalo



Close up of flower of *Nervilia singaporenensis*.

National Status: Endangered (EN)

Habitat and Ecology: Secondary forest, including old orchards, in leaf litter. Also found in freshwater swamp forest.

Distribution: This species is endemic to Singapore. It has been recently recorded in the Bukit Timah and Central Catchment Nature Reserves, Rifle Range Nature Park and Bukit Batok Nature Park.

Threats: Small population size and potential poaching.

Scientific Interest and Potential Value: *Nervilia singaporensis* is the only extant endemic orchid in Singapore. It has small flowers that never open fully, which makes it hard to find, and the species might be under-recorded. Unusually for the genus, this species produces new leaves and flowers year-round, but it can also go dormant during droughts.

Conservation Measures: The species grows within protected areas. This species is included in NParks' Species Recovery Programme and efforts are underway to propagate plants *ex situ*.

Scientific Name:

Glochidion singaporense Gage

Common Name:

Singapore cheese tree

Family:

Phyllanthaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A gap and understorey tree in secondary forests.

Distribution: In Singapore, only known from the Central Catchment Nature Reserve. Also known from Peninsular Malaysia, Borneo and Sumatra.

Threats: Degradation of habitat and loss of small populations.

Scientific Interest and Potential Value: Potential ornamental value as a small tree with droopy phyllanthoid branches and attractive red young foliage. Named after Singapore, where it was first observed.

Conservation Measures: Its known localities are in nature reserves. Seeds and cuttings have been collected from native localities and grown in NParks' Native Plant Centre nursery, but did not establish.

Photo: Lam Weng Ngai



Leaves of *Glochidion singaporense*.

Scientific Name:
Piper porphyrophyllum (Lindl.
 ex Blandy) N.E.Br.

Common Name:
 Sireh rimau, Tiger's betel

Family:
 Piperaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: A slender climbing plant that is found in primary and mature secondary forest, near forest streams and on valley slopes. It climbs by adventitious roots at stem internodes which attach to the bark of trees. Slow growing, rarely observed in flower or fruit.

Distribution: In Singapore, only found in small numbers in localised spots in the Central Catchment Nature Reserve. It is also known from Thailand, Malaysia and western Indonesia.

Threats: Small, fragmented population and poaching.

Scientific Interest and Potential Value: The leaves on climbing stems in the forest understorey are dark green with an attractive speckled colouration, fading into a monotonous green in leaves that emerge into the exposed canopy. The leaves are reportedly used in traditional medicine for treatment of various maladies. Introduced as an ornamental in the horticultural trade for its attractive foliage.

Conservation Measures: All known populations are in protected areas. The species is included in NParks' Species Recovery Programme. Cuttings have been collected from native plants and grown in NParks' Native Plant Centre nursery. Established plants will eventually be planted out to suitable sites.

Photo: Iua Hock Keong



Piper porphyrophyllum in the forest understorey climbing up a tree sapling.

Scientific Name:
Singaporandia macrophylla
(Hook.f.) K.M.Wong

Common Name:
Hidung babi

Family:
Rubiaceae

National Status: Vulnerable (VU)

Habitat and Ecology: A shrub or small tree in the forest understorey.

Distribution: In Singapore, it has been recorded from Nee Soon freshwater swamp forest and the MacRitchie area of the Central Catchment Nature Reserve and in the Bukit Timah Nature Reserve. There are older collections from Chan Chu Kang, Ang Mo Kio and Changi. In the Bukit Timah long-term dynamics study plot, the population seems stable over time, with recruitment and mortality roughly in balance. Also in Peninsular Malaysia, central Sumatra and the Riau Islands.

Threats: Degradation of habitat.

Photo: Ng Xin Yi



Flowers of *Singaporandia macrophylla*.

Scientific Interest and Potential Value: Restricted in distribution to Singapore's immediate region, the genus has a unique plant form in the *Gardenia* alliance, with lateral branches bearing just a single pair of expanded leaves before termination by a flower. With large showy flowers that are produced regularly, this species could be a good prospect for ornamental horticulture.

Conservation Measures: All extant localities are in nature reserves. Cuttings have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants will eventually be planted out to suitable sites.

Scientific Name:
***Palaquium obovatum* (Griff.)**
Engl. var. *obovatum*

Common Name:
Nyatoh, Nyatoh putih

Family:
Sapotaceae

Photo: Aireen Phang



Palaquium obovatum tree.

National Status: Vulnerable (VU)

Habitat and Ecology: Tree to 40 m tall, mostly in primary or mature secondary lowland forest patches, but also in some coastal and swamp areas.

Distribution: In Singapore, fragmented wild populations are present in the Bukit Timah and Central Catchment Nature Reserves and also offshore on Sentosa, Pulau Ubin, Pulau Tekukor, Pulau Pawai, Big Sister's, St. John's and Lazarus islands. Found too in parts of Indonesia, Borneo, Peninsular Malaysia, Thailand and the Philippines.

Threats: Loss of habitat, population fragmentation and decline of mature individuals.

Scientific Name:
Kadsura scandens
(Blume) Blume

Common Name:
Akar dama-dama

Family:
Schisandraceae

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore, a climber in lowland forest. Elsewhere, also in tropical montane forests (to 2400 m altitude).

Distribution: In Singapore, only known from small populations in Nee Soon freshwater swamp forest of the Central Catchment Nature Reserve and in Bukit Timah Nature Reserve. Also known from Peninsular Malaysia, Sumatra and Java.

Threats: Habitat degradation and loss of very small populations.

Scientific Interest and Potential Value: One of only two native *Kadsura* species in Singapore. Some members of this genus have co-evolved with resin midges: the midges oviposit in the flowers, forming

Scientific Interest and Potential Value:

Historically felled for latex used in underwater cable insulation. Today, the latex is still used in dental fillings and implants. The trees have reddish, hard timber used in furniture and boat/house construction. With distinctive obovate leaves in spirally arranged clusters, they are sometimes planted as roadside trees.

Conservation Measures: Occurs in nature reserves, Singapore Botanic Gardens (both in the rain forest and cultivated zones) and some nature parks. The origins of cultivated trees are mostly unknown. Seeds have been collected from several native localities and grown in NParks' Native Plant Centre nursery. Established plants have been planted out to several suitable sites.



Flower of *Kadsura scandens*.

resin-filled floral chambers that provide a food reward and nursery for their larvae; meanwhile the flowers are pollinated by the midges. With attractive red flowers, this twining climber may be cultivated on trellises and has the potential to become a popular ornamental.

Conservation Measures: All known localities are in nature reserves. Seeds have been collected and grown in NParks' Native Plant Centre nursery. Established plants will be planted out to suitable sites.

Scientific Name:
*Zingiber singapurens*e Škorničk.

Common Name:
 Singapore ginger

Family:
 Zingiberaceae

Photo: Jana Leong-Škorničková



Flower of *Zingiber singapurens*.

Photo: Jana Leong-Škorničková



Zingiber singapurens in the nature reserve.

National Status: Critically Endangered (CR)

Habitat and Ecology: Terrestrial rhizomatous herb in shaded damp gullies in primary forest.

Distribution: In the Bukit Timah and Central Catchment Nature Reserves but in very small populations. Endemic to Singapore.

Threats: Degradation of habitat including local stochastic events (e.g. microstorms, damage by wild boars), small population size and poaching.

Scientific Interest and Potential Value: This species belongs to the same subgenus of *Zingiber* as

the ginger of commerce, *Zingiber officinale*. It also has potential as a bioindicator of primary forest. The species is suitable for introduction into horticulture.

Conservation Measures: All known populations are in nature reserves. The species is included in NParks' Species Recovery Programme. All currently known 13 genetic clones are cultivated at Singapore Botanic Gardens, in the nursery as well as the tissue culture lab, with plants being further propagated and reintroduced to nature reserves as well as nature parks by NParks' Native Plant Centre. Plants are also being made available to the public to alleviate stress caused by poaching.

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FUNGI

AMY M.F. CHOONG, SERENA M.L. LEE

Fungi can be found in many different habitats: in the air (outdoor and indoor, Lim et al. 1998; Shelton, 2002), soil (Egidi et al., 2019), freshwater habitats (Raja et al., 2018), mangroves (Lee et al., 2020) and marine), surfaces or interior organs of different flora, fauna and even other fungi as well as on man-made structures. They may be endophytic in the form of commensals or mutualists; parasites, symbionts, pathogens or saprotrophs. Not only that, their roles may switch from being a commensal to pathogen to saprotroph.

Fungi provide diverse ecosystem services. Fungal mycelia and fruiting bodies are eaten by meiofauna, insects, mammals and reptiles. Decomposition of leaf litter and wood releases nutrients to support growth of other plants and to avoid potential fire from litter accumulation. Should the decomposers decline in number, the rate of decomposition will drop. After the Chernobyl explosion, the high radiation nearest to the nuclear power plant led to a proportional increase in leaf litter accumulation (Mousseau et al., 2014). Mycorrhizal fungi are especially important. They mine phosphates and nitrates to pass to plants enabling them to grow, slow down decomposition, thus carbon remains locked and not released into the atmosphere. The extensive mycelia below ground store carbon critical in this climate crisis. Fungi can be rainmakers (Hassett et al., 2015) as their spores serve as nuclei for condensation of water in cloud formation. A number of fungi have medicinal properties and there are others that have antimicrobial potential (Manusamy et al., 2023). Endophytes can be a source of novel biological active secondary metabolites as they also protect host plants from herbivores and diseases (Schulz et al., 2002).

The records of fungi in Singapore are growing slowly but a lot about their ecology or biology is still unknown. Lee et al. (2019) have found mangroves' endophytes and fungi on the surfaces of mangrove plants. The Singapore Botanic Gardens (SBG) is documenting macrofungi and slime moulds and specimens are being vouchered at the Singapore Herbarium (SING). Undergraduate projects are working closely with SBG to identify fungi found and document fungal diversity in Singapore.

The national conservation status of fungi has not been assessed for Singapore owing to the paucity of mycological studies (Choong, 2022). At the global level, the situation is slightly better. At least, it is being investigated by The Global Fungal Red List initiative (<http://iucn.ekoo.se/iucn/about/>) which started in 2013 and is led by Dr Greg Mueller, chair of the mushroom, bracket and puffball specialist group. Other groups included under this initiative are Chytrid, Zygomycete, Downy Mildew and Slime Mould; Cup-fungi, Truffles and allies; Lichens; Rust and Smuts. To date, 597 species of fungi have been evaluated and half are considered threatened (Mueller, 2022).

Some records of fungi are indirect, for example, Singapore has recorded *Thismia aseroe* and *T. fumida* (Saunders, 1996). These are angiosperms that are mycoheterotrophs, relying on arbuscular mycorrhizal fungi to supply all their nutritional needs (Feller et al., 2022). However, we do not know if these fungi can switch host should the *Thismia* be extirpated.

Threats to local fungi are especially pronounced to ectomycorrhizal fungi (ECM) associated with Dipterocarpaceae, Fagaceae, Phyllanthaceae, Juglandaceae and some others as these native plants are already endangered (Corrales et al., 2022). With the loss of forested habitats, endophytes, symbionts, saprotrophs will not fare well. Introduction of exotic tree species with their associated mycorrhizal fungi or colonization of a site by invasive plants could displace native fungi which has been documented elsewhere (Pickett et al., 2019). As Singapore has past and on-going land use change, how does that affect the fungal community should be investigated. Brinkman et al. (2019) have shown that the soil fungal communities had a massive shift from ECM to endomycorrhizal symbionts and increase Ascomycota with a decline in Basidiomycota with corresponding rise in saprotrophs and pathogens when forests are converted to rubber or oil palm plantations.

Research questions that need to be addressed in the near future:

- What species of fungi we do have in Singapore? Are there changes seasonally or between years? Are they also present elsewhere in the region? The latter will require close collaborations with regional mycologists to understand fungal distribution.
- How tight are the mycological relationships between plants and fungi especially ectomycorrhizal fungi? Can the ECM switch host if the host becomes extinct? This may be difficult to answer, perhaps molecular studies and active inoculation experiments can be conducted.
- What are the fungal compositions in good quality aquatic habitats in Singapore, for example the Nee Soon Swamp forest, the freshwater streams from nature reserves? Are they pantropical or they vary from lentic and lotic habitats?
- Can forest soil transplant help in local reforestation? Busby et al. (2022) have shown it can be possible. Mycorrhizal seedling inoculation could also aid successful reforestation using non-native plants (Assad et al., 2022)

Scientific Name:
***Amanita sculpta* Corner & Bas**

Common Name:
Sculptured Toadstool

Order/Family:
Agaricales: Amanitaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from old growth lowland forest.

Distribution: Found in Asia from Singapore (TYPE), Brunei, Malaysia, Thailand, Laos into China and Japan.

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: First collected by E.J.H. Corner in the Bukit Timah Nature Reserve (BTNR) on 15 Oct 1939 and 9 July 1940 and described by him as a species new to science in 1962.

Photo: Ang Wee Foong



Not recorded again in Singapore until it was collected on 30 Aug 2020. The specimen of 2020 is deposited at the Singapore Herbarium (SING).

Conservation Measures: Conservation of forest habitat, particularly old growth tropical lowland forest of dipterocarp species such as *Shorea leprosula* may be helpful.

Scientific Name:
***Boletellus dissiliens* (Corner)**
Pegler & T.W.K. Young

Common Name:
 -

Order/Family:
Boletales: Boletaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from lowland dipterocarp forest (dominated by *Quercus* spp.) and under *Oncosperma tigillarium*.

Distribution: Found in Australia, Borneo, India, Malaysia and Singapore (TYPE).

Threats: Loss of suitable habitat.

Photo: Serena Lee



Scientific Interest and Potential Value: First 4 collections were by E.J.H. Corner in Reservoir Jungle (current day MacRitchie area) over 1931 to 1940 and described by him as a species new to science in 1972. The next 2 collections were by Chang K.L. in 1974 and 1978 in the Bukit Timah Nature Reserve (BTNR) on Hempstead Path and Boundary path respectively, these areas are currently closed for public safety and

protection of key conservation sites. The recent most 2021 collection was found within the Central Catchment Nature Reserve. The last 3 collections mentioned, are deposited at the Singapore Herbarium (SING).

Conservation Measures: Conservation of forest habitats.

Scientific Name:
Fistulinella nana (Massee) E. Horak

Common Name:

-

Order/Family:
Boletales: Boletaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from tropical lowland (kerangas) forest. Ectomycorrhizal.

Distribution: Found in Indonesia (Java), Malaysia (Sarawak), Singapore (TYPE) and Thailand.

Threats: Loss of suitable habitat.



Scientific Name:
Pulveroboletus frians (Corner)
Singer

Common Name:

-

Order/Family:
Boletales: Boletaceae



National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from tropical lowland dipterocarp forest. Ectomycorrhizal.

Distribution: Found in Australia, Brunei, Malaysia and Singapore (TYPE).

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Another species in which Bukit Timah Nature Reserve (BTNR) is its type locality, last collected in BTNR in 1939. The common chrome yellow *Pulveroboletus icterinus* has been mistaken for this species.

Conservation Measures: Conservation of forest habitat, particularly coastal hill dipterocarp forest.

Scientific Name:

Entoloma murrayi (Berk. & M.A. Curtis) Sacc. & P. Syd.,

Common Name:

-

Order/Family:

Agaricales: Entolomataceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from secondary forest habitat in Singapore.

Distribution: Found in Brazil, Canada, China, Costa Rica, Honduras, Japan, Korea, Malaysia (Sabah), Mexico, Siberia, Singapore and USA (type).

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: The species was first collected in Singapore in 2018 from the forested area, close to Upper Peirce Reservoir Park, it has not been found elsewhere to date.

Conservation Measures: Conservation of secondary forest habitat.

Photo: Derek Liew



Scientific Name:
Gloeocantharellus echinosporus
 Corner

Common Name:
 -

Order/Family:
 Gomphales: Gomphaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from tropical lowland dipterocarp forest.

Distribution: Found in Malaysia, Borneo, Solomon Islands and Singapore (TYPE).

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Another species in which Bukit Timah Nature Reserve (BTNR) it



its type locality, last collected in BTNR in 1939, it was Rediscovered in 2019 and is deposited in SING.

Conservation Measures: Conservation of forest habitat, particularly lowland dipterocarp forest.

Scientific Name:
Praearthromyces corneri D. Stubbe,
 T.J. Baroni, T.W. Kuyper & van de
 Peppel

Common Name:
 -

Order/Family:
 Agaricales: Lyophyllaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded from tropical lowland dipterocarp forest.

Distribution: Found in Malaysia, Singapore (TYPE).



Threats: Loss of suitable habitat. The species may already be lost to us as the area in which it was collected had undergone restoration work and has not been located since.

Scientific Interest and Potential Value: It was first described by Corner from Bukit Timah Nature Reserve in 1939 as *Tricholoma furcatifolium* Corner; It was rediscovered in 2016 and is deposited in SING. The current name was a new name given as the authors who examined the type specimens did not find the presence of arthroconidia and as the DNA of the type

was not able to yield any sequences to confirm, hence a new name was given. We have since sequenced our material and confirmed it to be the same organism.

Conservation Measures: Substrate/soil should not be removed nor added from site in forest (in 'restoration' works).

Scientific Name:
Cyathus stercoreus (Schwein.) De Toni

Common Name:
-

Order/Family:
Agaricales: Nidulariaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Growing sparsely on mulch.

Distribution: Found in Argentina, Australia, Brazil, Canada, Japan, Mexico, Netherlands, Singapore, Spain, Switzerland, United States of America (TYPE).

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Collected just once in Singapore (2013) and deposited in SING,



Photo: Ho Boon Chuan
it was in a mix collection, among the common *Cyathus subglobisporus*. It is possible that this fungus has been overlooked in collections made before 1979 and under recorded under the name of *Cyathus* sp.

Conservation Measures: Keep mulch and buffers moist.

Scientific Name:
Cryptotrama asprata (Berk.) Redhead & Ginns

Common Name:
-

Order/Family:
Agaricales: Physalacriaceae



National Status: Critically Endangered (CR)

Habitat and Ecology: Grows on deadwood.

Distribution: Widely distributed in tropical regions of the world, including Australia, Brazil, China, Costa Rica, Japan, Malaysia, Mexico, New Zealand, Singapore, Sri Lanka (TYPE), Thailand, South Africa, United States of America.

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: It was found on a fallen twig hanging on some vines in Bukit Timah Nature Reserve, Fern Valley in 2018. The only specimen collected so far.

Conservation Measures: Substrate should not be removed from site.

Scientific Name:

Favolus eos (Corner) Zmitr.

Common Name:

-

Order/Family:

Polyporales: Polyporaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Grows on well-decomposed wood.

Distribution: Malaysia and Singapore (TYPE).

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Last reported in 1943 and rediscovered in 2015, only 3 known sites in Singapore, Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Upper Seletar Reservoir.

Conservation Measures: Substrate should not be removed from natural sites.

Photo: Serena Lee



Scientific Name:

Lentinus tuberregium (Fr.) Fr.

Common Name:

-

Order/Family:

Polyporales: Polyporaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: On the ground from large sclerotia (can be absent), on rotten wood, in forests and in the open.

Distribution: African continent, Ambon Island (TYPE), Australia, China, Malaysia, Papua New Guinea and Singapore, Solomon Islands, Thailand.

Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Last reported in 1981 and rediscovered in 2013, known from Bukit Timah Nature Reserve (1939) and the other from Singapore Botanic Gardens (Rainforest), 1965.

Conservation Measures: Conservation of forest habitat, particularly old growth tropical lowland forest.

Scientific Name:

Lactifluus bicolor (Massee)
Verbeken,

Common Name:

-

Order/Family:

Russulales: Russulaceae

National Status: Critically Endangered (CR)

Habitat and Ecology: Solitary, growing on exposed roots.

Distribution: Malaysia and Singapore (TYPE).



Threats: Loss of suitable habitat.

Scientific Interest and Potential Value: Last collected in 1916 from Singapore Botanic Gardens

(Rainforest), rediscovered in Bukit Timah Nature Reserve in 2018.

Conservation Measures: Conservation of forest habitat, particularly coastal hill dipterocarp forest.

Scientific Name:

Pisolithus albus (Cooke & Massee)
Priest

Common Name:

-

Order/Family:

Boletales: Sclerodermataceae

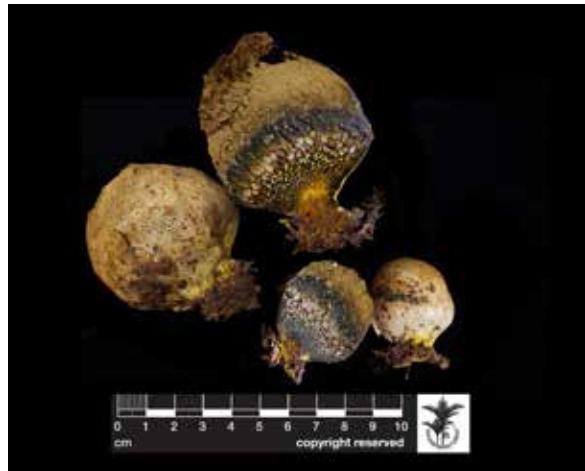
National Status: Critically Endangered (CR)

Habitat and Ecology: Coastal sand, near Acacia (*Acacia auriculiformis*) trees.

Distribution: Australia (TYPE), Benin, Colombia, Italy, Madagascar, New Zealand, Nigeria, Singapore, Thailand.

Threats: Loss of suitable habitat.

Photo: Serena Lee



Scientific Interest and Potential Value: New record, found so far only on Lazarus Island, Pulau Tekukor in 2019.

Conservation Measures: Conservation of coastal rocky shore and coastal forest habitats.

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FAUNA : INVERTEBRATES

Porifera – Sponges

LIM SWEE CHENG

The state of Porifera in Singapore

There are some 250 distinct sponge species that has been documented across various habitats, including man-made structures, inter-tidal flats, coral reefs, deep seafloor at 200 m depths in the “Singapore Deeps” over the last three decades (see Hooper et al., 2000; Lim & Tan, 2008; De Voogd & Cleary, 2009; Lim et al., 2008 and 2009; Lim et al., 2012). Among these species, 131 species are included in this edition of the Singapore Red Data Book while the remaining half could only be determined to genus level and distinct Operational taxonomic unit (OTU), and hence are excluded from the list. Further taxonomic studies and revisions are required to clarify the systematics before they can be named with certainty. Nevertheless, this list serves as a crucial baseline of sponge biodiversity fauna that could inform us of changes of the fauna due to environmental factors in the future.

Notably, most of these species were recorded after large-scale land reclamations began in the 1960s. Most of these species seem to be well adapted to turbid and sedimented environments. Sponge species which are sensitive to sediments could have disappeared from Singapore waters during the decades of land reclamations before they were recorded. In this current Red List, only the Neptune’s Cup Sponge (*Cliona patera*) is classified as Critically Endangered (CR: D). Historical records from 200 years ago, as documented by John Crawfurd, the second British Resident of Singapore, depict its once-abundant presence in Singaporean waters (see Crawfurd, 1830).

However, there had been no record of the sponge in Singapore waters since 1908 (Hanitsch, 1908) for over a hundred years, until its recent rediscovery (Lim et al., 2012). The reasons for the disappearance were unknown but the reclamations of Telok Ayer Bay in 1887 and Telok Ayer Basin in the early 1900s probably played a part to their demise as sponges are sessile and filter-feeding animals which are adversely affected by increased sediment load in the environment. Unfortunately, only a few sponge species were recorded prior to these major changes in the environment, limiting our understanding. The comprehensive information presented in this edition of the Singapore Red Data Book would help better inform us of changes in sponge fauna in response to environmental shifts.

Scientific Name:
Cliona patera
(Hardwicke, 1820)

Common Name:
Neptune's Cup Sponge

Order/Family:
Clionidae/Clionaidae

National Status: Critically Endangered (CR)

Habitat and Ecology: *Cliona patera* is the largest sponge species in Singapore waters that can grow over 1 m in diameter and height. It has a bowl/wine-glass shaped upper body supported by a stalk with rooting processes that anchor the sponge to the seafloor with sandy and coral rubble substrate at around 10–30 m depth in Singapore waters.

Distribution: In Singapore, this species is restricted to the waters off several islands in the Singapore Strait. It has also been reported in the waters of Thailand, Cambodia, and waters off Darwin (Australia).

Threats: Habitat loss and modification, sedimentation, and predation by turtles.

Scientific Interest and Potential Value: *Cliona patera*, also widely known as the Neptune's Cup Sponge, was the one of the first animals described in

Photo: Karenne Tun



Singapore over two centuries ago. The sponge was abundant in Singapore waters according to the second British Resident of Singapore, John Crawfurd, when he was holding office in 1823–26 (Crawfurd, 1830). The sponge was very popular in the past; almost every major natural history museum in Europe has at least one specimen of the sponge. However, there had been no record of the sponge in Singapore waters since 1908 (Hanitsch, 1908) for over a hundred years until it was rediscovered in 2011 (Lim et al., 2012).

Conservation Measures: A few individuals have been transplanted to the Sisters' Island Marine Park for protection under maritime and conservation regulations, and they are being monitored regularly.

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Cnidaria (non-Scleractinia)

YAP WEI LIANG NICHOLAS, OH REN MIN, IFFAHIESA

Scientific Name:

Synpeachia temasek Yap, Fautin,
Ramos & Tan, 2014

Common Name:

Brown Peachia Anemone

Family:

Haloclavidae Verrill, 1899

National Status: Critically Endangered (CR)

Habitat and Ecology: A burrowing species that is encountered at the lower intertidal to subtidal zones of sandy shores. Because *S. temasek* has only ever been sighted and collected between evening and dawn, it is inferred to be nocturnal. During this time, the animal will extend itself from the substratum to presumably feed; when disturbed, it quickly retracts into the substratum. The larvae of *S. temasek* was inferred to be a parasite of the hydrozoan jellyfish, *Aequorea* sp.

Distribution: This is a rare species, encountered along the northern coastlines of Singapore and one locality in the Singapore Strait i.e. (Cyrene Reef). Globally, it has not been encountered anywhere else.

Threats: Habitat loss and modification, oil spills and extraction from its habitat.

Photo: Ria Tan



Scientific Interest and Potential Value: Due to the presence of a hand-shaped structure near the animal's mouth, and based on reports on closely related species (e.g., *Metapeachia* sp.), the larva of *S. temasek* is thought to be a parasite on jellyfish. Targeted research is needed to confirm this inference, and if true, to understand the impacts of this parasitic relationship on Singapore's marine ecosystem.

Conservation Measures: None have been undertaken yet. This species has not been sighted at its type locality (Changi Beach) since the publication of its formal description in 2014.

Scientific Name:

Cyptodendrum adhaesivum
Klunzinger, 1877

Common Name:

Pizza Anemone

Family:

Thalassianthidae Milne
Edwards & Haime, 1851

Photo: Yap Wei Liang Nicholas



National Status: Critically Endangered (CR)

Habitat and Ecology: Found at the lower intertidal to subtidal, individuals are tightly attached to narrow, rocky crevices of coral reefs and their fringes. While observations from elsewhere (i.e., Red Sea and Thailand) have reported *C. adhaesivum* to be symbiotically associated with clownfish and anemone shrimps, such relationships with the former were not observed in individuals from Singapore. *Cryptodendrum adhaesivum* harbors dinoflagellates in its tissues.

Distribution: This species is found throughout the Indo-West Pacific: from the Red Sea to Indian Ocean, along

the South China Sea from Australia to Japan, and in French Polynesia.

Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills, warming and extraction.

Scientific Interest and Potential Value: The neurotoxins produced by this species have been the target of pharmacological research elsewhere in the world.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Scientific Name:

Pelocoetes exul
(Annandale, 1907)

Common Name:

Branched Tentacle
Mangrove Anemone

Family:

Haliactiidae Carlgren, 1949

National Status: Critically Endangered (CR)

Habitat and Ecology: Found exclusively in the mangroves. While this species was encountered in mangroves along the northern coastline of mainland Singapore, it was not encountered in similar habitats around Pulau Ubin. Furthermore, *P. exul* does not appear to occur in mangroves of the Singapore Straits. This species burrows in the soft mud, with a preference to be positioned vertically as it extends out of the mud. It is rarely encountered during the day, only extending out of the soft substratum at night. When disturbed, it fires thread-like structures known as 'acanthia' that are loaded with stings to defend itself. This species does not harbor dinoflagellates in its tissue.

Distribution: Apart from Singapore, *P. exul* has only been reported from the West and East coasts of India.

Photo: Ria Tan



Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills, invasive displacement.

Scientific Interest and Potential Value: Not known.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Scientific Name:
Stichodactyla mertensii
Brandt, 1835

Common Name:
Merten's Carpet Anemone

Family:
Stichodactylidae Andres, 1883

National Status: Endangered (EN)

Habitat and Ecology: *Stichodactyla mertensii* inhabits the sandy benthos near coral reefs and is typically attached to a rock underneath the substratum. It is a symbiotic host to dinoflagellates, anemone fishes and shrimps. While up to eight species of anemone fishes have been reported to be associated with *S. mertensii* elsewhere, within the context of Singapore, only its relationship with *Amphiprion ocellaris* has been reported.

Distribution: This species has an extensive distribution, spanning across the Indo-West Pacific from the Pacific Islands in the East to the Comoro Islands at the West.

Scientific Name:
Heteractis doreensis
(Quoy & Gaimard, 1833)

Common Name:
Snaky Anemone,
Long Tentacle Anemone

Family:
Heteractidae Andres, 1883

National Status: Endangered (EN)

Habitat and Ecology: This species is often encountered in soft, sandy sediments or gravel benthos, with its pedal disc attached to a buried coral fragment or rock underneath the substratum. It is symbiotically associated with dinoflagellates, anemone fishes and shrimps. Elsewhere, up to four species of anemone fishes have been reported to inhabit *H. doreensis*, but in Singapore this relationship has not been observed.



Photo: Yap Wei Liang Nicholas



Photo: Yap Wei Liang Nicholas

Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills, warming and extraction.

Scientific Interest and Potential Value: Not known.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Distribution: This species occurs in across the Indo-West Pacific: from the south of Japan to the Great Barrier Reef, and along the eastern Indian Ocean.

Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills, warming, and extraction.

Scientific Interest and Potential Value: *Heteractis doreensis* is often marketed and sold to marine aqua hobbyists under the name 'Long Tentacle Anemone'.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Scientific Name:
Heteranthus verruculatus
 Klunzinger, 1877

Common Name:
 Sand Anemone

Family:
 Heteranthidae Carlgren,
 1900

National Status: Vulnerable (VU)

Habitat and Ecology: This species exists as two eco-morphotypes: as large, solitary individuals, or as small, clustering clonal ones. Those of the former eco-morphotype tend to be found in deep, rocky crevices, while those of the latter are mostly found extending from sandy substratum (e.g., seagrass meadows; typically found on the roots of seagrass). Clonal individuals reproduce by longitudinal fission; larger solitary individuals are inferred to reproduce sexually. Harbours dinoflagellates in its tissues.

Distribution: This species is distributed widely outside of Singapore: across the Indo-Pacific: from the Hawaii, the Indian Ocean to the Red Sea. It is unclear how abundance they may be in these areas; in Singapore



their distribution is patchy, only occurring in less than five sites along the Singapore Strait.

Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills and warming.

Scientific Interest and Potential Value: Not known.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Scientific Name:
Anthopleura buddemeieri
Fautin, 2005

Common Name:
Pink-spotted Bead Anemone

Family:
Actiniidae Rafinesque, 1815

National Status: Endangered (EN)

Habitat and Ecology: These are attached underneath rocks or in rocky crevices, at very high intertidal zones where it is drier, unusual for a soft-bodied animal that needs to stay moist. Although many individuals are encountered at a locality, they are not densely clustered. Areas where they are found are typically near root runoff from a terrestrial forest; rocks to which they are attached are reddish and clay-like, as with crevices. Inferred to reproduce sexually only, there is presently no evidence to support that it reproduces asexually or that it broods its young. Not associated with dinoflagellates.

Distribution: This species has also been encountered in Papua New Guinea, Fiji and Australia's eastern coastline. Singapore is the westernmost region where this species has been found to occur.



Threats: Habitat loss and modification and oil spills.

Scientific Interest and Potential Value: Not known.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Scientific Name:
Radianthus crista
**(Hemprich & Ehrenberg in
 Ehrenberg, 1834)**

Common Name:
Leathery Anemone

Family:
**Stichodactylidae Andres,
 1883**



National Status: Endangered (EN)

Habitat and Ecology: This species is found in rocky crevices of coral reefs, or in soft, sandy sediment with its column buried underneath the substratum. *Heteractis crispa* is also found among hard coral thickets (e.g., those of *Acropora* sp.), with its pedal disc usually attached to a coral branch or rubble. It harbors dinoflagellate in its tissues and has been reported to be the host of over 14 species of anemonefishes elsewhere, although the ones in Singapore are rarely found to be associated with any.

Distribution: *Heteractis crispa* can be found across the Indo-West Pacific, from the Red Sea to the French Polynesian islands.

Scientific Name:

Phyllorhiza punctata
von Lendenfeld, 1884

Common Name:

White-spotted Jellyfish

Family:

Mastigiidae Stiasny, 1920

National Status: Vulnerable (VU)

Habitat and Ecology: While this species is known to be an introduced species elsewhere in the world (i.e., Atlantic), it is native to the Indo-West Pacific. Despite concerns of it being introduced elsewhere, *P. punctata* is involved in many important symbiotic relationships with both micro and macrofauna. For example, it harbours dinoflagellates in its tissues, it is a host to brittle stars, and schools of juvenile fish have also been documented to swim close to this jellyfish for protection.

Distribution: Native to the Indo-West Pacific, this species has been introduced to the rest of the world. In Singapore, the occurrence of this jellyfish is rare.

Threats: Habitat loss and modification, declining water quality, sedimentation, oil spills, and warming.

Scientific Interest and Potential Value: Like *C. adhaesivum*, the neurotoxins produced by this species have been subjected to many pharmacological studies.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

Photo: Yap Wei Liang Nicholas



Threats: Declining water quality, sedimentation, oil spills, and warming.

Scientific Interest and Potential Value: The symbiotic relationships that this species is involved in could be further investigated.

Conservation Measures: As of writing, there are no conservation measures, either locally or globally, to protect this species.

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Cnidaria (Scleractinia) – Stony Corals

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Scleractinians (or stony corals) can be found in Singapore's shallow coastal waters, in both reef and non-reef habitats, including on urban structures such as marinas and seawalls. Collectively, they contribute habitat and provision resources for thousands of reef-associated species in Singapore's marine environment. Throughout much of Singapore's modern history, intensive coastal development and land reclamation have resulted in significant coral reef habitat loss and modification. Turbid conditions have been exacerbated, causing reduced light penetration in the water column and affecting the photosynthetic ability of the corals' algal symbionts. High sedimentation levels also cause smothering of these sessile organisms or increase the energy expenditure required to clear excess sediment. Corals are susceptible to climate change impacts, with declines in live cover caused by several mass bleaching episodes to date. The ongoing, synergistic risks of local and global stressors necessitate the implementation of active measures to protect all remaining coral species to ensure that reef ecosystem functioning is sustained. These include species recovery programmes for species in decline, habitat creation and restoration efforts to increase habitable spaces, and maritime regulation to reduce potential environmental impacts.

A total of 276 Indo-Pacific stony coral species have been assessed based on contemporary reef survey data, museum collections and literature reviews. Threat statuses for 142 species are proposed—one presumed Nationally Extinct (NEx), one Critically Endangered (CR), seven Endangered (EN), 20 Vulnerable (VU), 26 Near Threatened (NT), and 87 Least Concern (LC). The remaining 134 are considered Data Deficient (DD).

Scientific Name:
Acropora spp. (48 species)

Common Name:
Table corals and staghorn corals

Family:
Acroporidae Verrill, 1901

Both photos: Sam Shu Qin



Left: *Acropora millepora* on the reef crest at Pulau Satumu; Right: *Acropora millepora*, classified as Endangered in the current assessment.

National Status: 6 Endangered (EN), 2 Vulnerable (VU), 3 Least Concern (LC), 37 Data Deficient (DD)

Habitat and Ecology: The genus *Acropora* consists of a large number of species (more than 149 globally, 48 in Singapore) encompassing a variety of growth forms, including plates or corymbose structures. They thrive in shallow, well-lit environments such as at reef flats or upper reef slopes. While they can form major reef structures elsewhere, *Acropora* spp. are generally uncommon in Singapore, existing mainly on reefs that experience stronger currents and good water clarity.

Distribution: Tropical and subtropical shallow seas globally.

Threats: Habitat loss and modification, sedimentation,

climate change. Particularly affected by high turbidity and thermal stress.

Scientific Interest and Potential Value: *Acropora* spp. are generally fast-growing and provide a variety of microhabitats for small animals or juveniles of many reef species. They are also popular in the aquarium trade. As they are not found at many Singapore sites, assessments of population change are difficult. With the exception of three species classified as Least Concern, the general outlook for the genus remains poor.

Conservation Measures: Some species are being propagated in coral nurseries or are under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:
Montipora grisea Bernard, 1897

Common Name:

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Family:
Acroporidae Verrill, 1901

National Status: Vulnerable (VU)

Habitat and Ecology: Foliose or encrusting colonies. On upper reef slopes.

Distribution: Widely distributed in the Indo-Pacific region.

Photo: Lionel Ng



Montipora grisea recorded during a reef survey at Kusu Island.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Based on recent reef surveys between 2015 and 2019, this species makes up 0.42% of the total coral cover across sites in Singapore.

Scientific Name:

Leptoseris explanata Yabe & Sugiyama, 1941

Common Name:

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Family:

Agariciidae Gray, 1847

National Status: Vulnerable (VU)

Habitat and Ecology: Foliose colonies with white margins. On lower reef slopes.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Also found in mesophotic reefs elsewhere which indicates

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Photo: Huang Danwei



Fine skeletal features of *Leptoseris explanata* at Pulau Tekukor.

their tolerance to low light levels, *Leptoseris* corals are popular in the aquarium trade due to the variety of colour morphs.

Conservation Measures: Under protection by maritime regulations such as those at Pulau Satumu.

Scientific Name:

Pavona cactus (Forskål, 1775)

Common Name:

Cactus coral

Family:

Agariciidae Gray, 1847

Both Photos: Huang Danwei



National Status: Vulnerable (VU)

Habitat and Ecology: Foliose colonies bearing thin, contorted fronds. In turbid, wave-sheltered environments.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Spaces between fronds provide good habitat for small organisms, including a species of squat lobster described in the 1990s.



Pavona cactus at Pulau Subar Laut. The fronds are brittle and resemble potato chips.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:

Fimbriaphyllia divisa (Veron & Pichon, 1980)

Common Name:

Frogspawn coral

Family:

Euphylliidae Milne Edwards & Haime, 1857

National Status: Vulnerable (VU)

Habitat and Ecology: Flabello-meandroid, submassive colonies. Polyps are tubular with smaller tubular branches. In turbid environments.

Distribution: Tropical Central Indo-Pacific region.

Threats: Habitat loss and modification, climate change.

Scientific Interest and Potential Value: Corals of the genera *Euphyllia* and *Fimbriaphyllia* are especially

Photo: Huang Danwei



Fimbriaphyllia divisa at Pulau Subar Laut. Partially retracted polyps reveal its flabello-meandroid colony structure.

popular in the aquarium trade because of their fleshy and colourful tentacles. They can generally survive high sedimentation rates.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:

Polyphyllia talpina (Lamarck,
1801)

Common Name:

Mole mushroom coral

Family:

Fungiidae Dana, 1846

National Status: Vulnerable (VU)

Habitat and Ecology: Free-living, elongate colonies. Generally on reef crests and slopes but not found at many sites.

Distribution: Widely distributed in the Central Indo-Pacific region.

Threats: Habitat loss and modification.

Scientific Name:

Lobophyllia hataii Yabi,
Sugiyama & Eguchi, 1936

Common Name:

Lobed brain coral

Family:

Lobophylliidae Dai & Horng,
2009

National Status: Vulnerable (VU)

Habitat and Ecology: Flabello-meandroid, submassive colonies. On reef slopes.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Photo: Huang Danwei



Polyphyllia talpina at Pulau Subar Laut. Extended polyps give this free-living coral a furry appearance.

Scientific Interest and Potential Value: Tested as bone implant material in sheep. Known to host small snails, copepods, gall crabs and barnacles. Can generally survive in turbid conditions.

Conservation Measures: Under protection by maritime and conservation regulations such as those at the Sisters' Islands Marine Park.

Photo: Huang Danwei



Lobophyllia hataii off the waters of southwest Pulau Semakau.

Scientific Interest and Potential Value: Based on recent reef surveys between 2015 and 2019, this species makes up 0.05% of the total coral cover across sites in Singapore.

Conservation Measures: None known.

Scientific Name:*Dipsastraea pallida* (Dana, 1846)**Common Name:**

Knob coral

Family:

Merulinidae Milne Edwards & Haime, 1857

Both Photos: Huang Danwei

*Dipsastraea pallida* off the waters of southwest Lazarus Island.**National Status:** Vulnerable (VU)

Habitat and Ecology: Massive or encrusting colonies.
All reef environments.

Distribution: Widespread in the tropical Indian and Pacific Oceans.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Population has declined significantly.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:*Favites flexuosa* (Dana, 1846)**Common Name:**

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Family:

Merulinidae Milne Edwards & Haime, 1857

Photo: Huang Danwei

*Favites flexuosa* off the waters of Pulau Semakau.**National Status:** Vulnerable (VU)

Habitat and Ecology: Massive or encrusting colonies.
All reef environments.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Population decline significant.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:
Platygyra lamellina (Ehrenberg, 1834)

Common Name:
 Lesser valley coral

Family:
 Merulinidae Milne Edwards & Haime,
 1857

National Status: Vulnerable (VU)

Habitat and Ecology: Massive or encrusting colonies.
 All reef environments.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation,
 climate change.

Scientific Interest and Potential Value: Regains
 normal pigmentation relatively quickly after bleaching
 from thermal stress.

Conservation Measures: Under protection by
 maritime and conservation regulations such as those at
 Pulau Satumu and the Sisters' Islands Marine Park.



Platygyra lamellina in waters off Kusu Island.

Scientific Name:
Plerogyra sinuosa (Dana, 1846)

Common Name:
 Pearl bubble coral

Family:
 Plerogyridae Rowlett, 2020

National Status: Vulnerable (VU)

Habitat and Ecology: Flabello-meandroid, submassive
 colonies. Sheltered reef environments.

Distribution: Widely distributed in the Indo-Pacific region.



Plerogyra sinuosa with grape-like vesicles in the waters off Pulau Subar Laut.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: Population decline significant. Popular in the aquarium trade.

Scientific Name:

Scapophyllia cylindrica Milne Edwards & Haime, 1849

Common Name:

Columniform crust coral

Family:

Merulinidae Milne Edwards & Haime, 1857

National Status: Vulnerable (VU)

Habitat and Ecology: Columnar, submassive or encrusting colonies. On reef crests.

Distribution: Tropical Central Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Photo: Huang Danwei



Tall columns of *Scapophyllia cylindrica* at Pulau Satumu.

Scientific Interest and Potential Value: Population decline has been significant.

Conservation Measures: Under protection by maritime regulations such as those at Pulau Satumu.

Scientific Name:

Trachyphyllia geoffroyi (Audouin, 1826)

Common Name:

Open brain coral

Family:

Merulinidae Milne Edwards & Haime, 1857

National Status: Endangered (EN)

Habitat and Ecology: Flabello-meandroid and fleshy colonies. Free-living and can be found on sandy or silty substrate.

Photo: Huang Danwei



Free-living *Trachyphyllia geoffroyi* on the patch reef of Terumbu Pempang Tengah

Distribution: Widely distributed in the Central Indo-Pacific region.

Threats: Habitat loss and modification, climate change.

Scientific Interest and Potential Value: It is one of the few free-living non-fungiid species and is therefore

evolutionarily important. This brightly coloured species is also highly popular in the aquarium trade. Can generally survive high sedimentation rates.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

Scientific Name:
Seriatopora hystrix Dana, 1846

Common Name:
Thin bird's nest coral

Family:
Pocilloporidae Gray, 1840

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Branching colonies. Shallow reef environments.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change. While this species still persists in other parts of the region, it has not been detected in Singapore reefs for over half a century, suggesting that its disappearance is likely due to local environmental pressures.

Scientific Name:
Stylophora pistillata (Esper, 1792)

Common Name:
Smooth cauliflower coral

Family:
Pocilloporidae Gray, 1840

Photo: Huang Danwei



Seriatopora hystrix on a reef at Anilao, the Philippines.

Scientific Interest and Potential Value: Its persistence in neighboring countries presents an opportunity to further investigate its disappearance from local waters and examine whether it can reestablish if conditions improve.

Conservation Measures: None known

Photo: Karenne Tun



Stylophora pistillata on the reef at Pulau Satumu in 2010.

National Status: Critically Endangered (CR)

Habitat and Ecology: Branching colonies. Shallow reef environments.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change. The last standing colony has perished since the mass bleaching event in 2010. However, given that it is still present in neighboring countries,

the possibility that it can return via immigration of propagules remains.

Scientific Interest and Potential Value: Its persistence in neighboring countries presents an opportunity to further investigate its disappearance from local waters and examine whether it can reestablish if conditions improve.

Conservation Measures: None known

Scientific Name:

Porites cylindrica Dana, 1846

Common Name:

Yellow finger coral

Family:

Poritidae Gray, 1840

National Status: Vulnerable (VU)

Habitat and Ecology: Branching or encrusting colonies.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Scientific Interest and Potential Value: While feeding can increase in turbid conditions, tissue biomass has also been observed to decrease.

Conservation Measures: None known

Photo: Huang Darwei



Porites cylindrica on the reef crest at Pulau Hantu.

Scientific Name:

***Psammocora nierstraszi* Van der Horst, 1921**

Common Name:

Boulder sandpaper coral

Family:

Psammocoridae Chevalier & L. Beauvais, 1987

National Status: Vulnerable (VU)

Habitat and Ecology: Submassive or encrusting colonies.

Distribution: Widely distributed in the Indo-Pacific region.

Threats: Habitat loss and modification, sedimentation, climate change.

Photo: Huang Danwei



Fine skeletal features of *Psammocora nierstraszi* on the reef off Pulau Semakau.

Scientific Interest and Potential Value: Based on recent reef surveys between 2015 and 2019, this species makes up 0.07% of the total coral cover across sites in Singapore.

Conservation Measures: Under protection by maritime and conservation regulations such as those at Pulau Satumu and the Sisters' Islands Marine Park.

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Polycladida – Flatworms

SAMANTHA J.W. TONG, RENE S.L. ONG

Marine flatworms are unsegmented worms from the phylum Platyhelminthes, *platy-* meaning 'flat' and *helminth-* meaning 'worm'. Many free-living marine flatworms found on Singapore's shores are from the order Polycladida. Polyclads can be found within coral reefs, rocky shores, mudflats, seagrass habitats and among seaweed patches. There is an estimated 128 species of polyclad flatworms recorded in Singapore so far. Despite this relatively high diversity, much information on the ecology of polyclads in Singapore is limited because of a general lack of regular, systematic surveys. This number is also clearly an underrepresentation of the actual polyclad diversity. Many species were sighted less than ten times over the past 20 years, and some were even possibly new to science. Polyclad sightings are largely dependent on the accessibility of the location (e.g. less likely to sample restricted areas or areas that require a permit to enter) and suitable low tides for intertidal sampling. More sampling would yield a better idea of polyclad distribution and abundance in the waters of Singapore.

The lack of continuous sampling efforts hinders building our knowledge on these beautiful marine flatworms. Singapore's shores face many challenges such as coastal developments, high rates of sedimentation and pollution. These may result in the degradation of marine habitats that puts marine lives, including the polyclads, at risk. Although polyclad diets are poorly studied, cotylean diversity is usually higher in areas with higher abundances of ascidians and sponges. Damage to marine habitats in general would also affect the food sources of polyclads. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles given the high rate of coastal urbanisation in Singapore.

Scientific Name:
Pseudobiceros flowersi Newman & Cannon, 1997

Common Name:
 Olive flatworm

Order/Family:
 Polycladida/Pseudocerotidae

National Status: Data Deficient (DD)

Habitat and Ecology: Subtidal region

Distribution: In Singapore, this species has only ever been recorded at Pulau Semakau. Sightings of this species so far are just that handful in Ong & Tong (2018).

Threats: Habitat loss, habitat modification, oil spills and warming are some typical threats to polyclad flatworms. Furthermore, Singapore's shores face many challenges such as coastal developments, high sedimentation and pollution. These may result in degradation of marine habitats that puts marine lives, including the polyclads, at risk.

Photo: Rene Ong



Scientific Interest and Potential Value: Although polyclad ecology and their diets are poorly studied, cotelomate diversity is usually higher in areas with higher abundances of ascidians and sponges. It is reasonable to presume that they play key roles in regulating population dynamics and nutrient cycling.

Conservation Measures: Conservation measures should include area protection, species recovery programme, habitat restoration and habitat creation. Many species were sighted less than ten times over the past 20 years, and some could even be new to science. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles before they are lost to any anthropogenic harm

Scientific Name:
Pseudoceros microcelis Prudhoe, 1989

Common Name:

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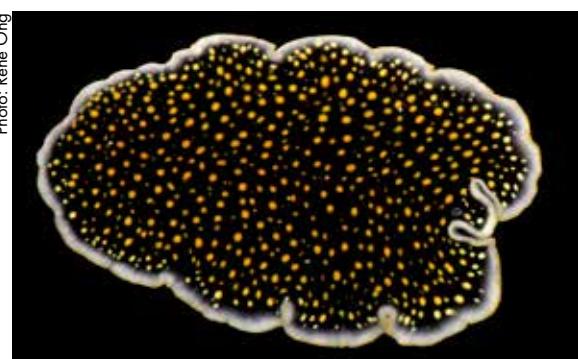
Order/Family:
 Polycladida/Pseudocerotidae

National Status: Data Deficient (DD)

Habitat and Ecology: Subtidal region

Distribution: In Singapore, this species has only been sighted at Big Sister's Island, Pulau Biola, Pulau Hantu, Pulau Tekukor and Pulau Jong.

Photo: Rene Ong



Threats: Habitat loss, habitat modification, oil spills and warming are some typical threats to polyclad flatworms. Furthermore, Singapore's shores face many challenges such as coastal developments, high sedimentation and pollution. These may result in degradation of marine habitats that puts marine lives, including the polyclads, at risk.

Scientific Interest and Potential Value: This species record in Singapore might be the first record from beyond the type locality at Inhaca Island, Mozambique (Ong et al., 2018). Despite the high diversity of an estimated 128 species of polyclad flatworms recorded in Singapore so far, this number is clearly an underrepresentation of the actual polyclad diversity. Much information on the ecology of polyclads in Singapore is limited because of a general lack of regular, systematic surveys. Polyclad sightings are also largely dependent on the accessibility of the location. More sampling will yield a better idea of polyclad distribution and abundance in our waters.

Conservation Measures: Conservation measures should include area protection, species recovery programme, habitat restoration and habitat creation. Many species were sighted less than ten times over the past 20 years, and some could even be new to science. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles before they are lost to any anthropogenic harm.

Scientific Name:

Pseudoceros paralaticlavus Newman & Cannon, 1994

Common Name:

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Order/Family:

Polycladida/Pseudocerotidae

National Status: Data Deficient (DD)

Habitat and Ecology: Only found at the subtidal zone in Singapore

Distribution: In Singapore, this species has only been sighted at Big Sister's Island and Terumbu Pempang Tengah.

Threats: Habitat loss, habitat modification, oil spills and warming are some typical threats to polyclad flatworms. Furthermore, Singapore's shores face many challenges such as coastal developments, high sedimentation and pollution. These may result in degradation of marine habitats that puts marine lives, including the polyclads, at risk.

Photo: Rene Ong



Scientific Interest and Potential Value: Although polyclad ecology and their diets are poorly studied, cotelomate diversity is usually higher in areas with higher abundances of ascidians and sponges. It is reasonable to presume that they play key roles in regulating population dynamics and nutrient cycling.

Conservation Measures: Conservation measures should include area protection, species recovery programme, habitat restoration and habitat creation. Many species were sighted less than ten times over the past 20 years, and some could even be new to science. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles before they are lost to any anthropogenic harm.

Scientific Name:
Thysanozoon nigrum Girard, 1851

Common Name:
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Order/Family:
 Polycladida/Pseudocerotidae

National Status: Data Deficient (DD)

Habitat and Ecology: Subtidal region

Distribution: In Singapore, this species has only been sighted at Pulau Hantu, Pulau Salu, Pulau Semakau and Pulau Senang.

Threats: Habitat loss, habitat modification, oil spills and warming are some typical threats to polyclad flatworms. Furthermore, Singapore's shores face many challenges such as coastal developments, high sedimentation and pollution. These may result in degradation of marine habitats that puts marine lives, including the polyclads, at risk.

Scientific Interest and Potential Value: First record of this species in the Indo-Pacific (Ong et al., 2018). Despite the high diversity of an estimated 128 species



of polyclad flatworms recorded in Singapore so far, this number is clearly an underrepresentation of the actual polyclad diversity. More sampling will yield a better idea of polyclad distribution and abundance in our waters, and even discover more new records.

Conservation Measures: Conservation measures should include area protection, species recovery programme, habitat restoration and habitat creation. Many species were sighted less than ten times over the past 20 years, and some could even be new to science. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles before they are lost to any anthropogenic harm.

Scientific Name:
Pericelis byerleyana
 (Collingwood, 1876)

Common Name:
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Order/Family:
 Polycladida/Pericelidae

National Status: Data Deficient (DD)

Habitat and Ecology: Subtidal region, among corals



Distribution: This species is rarely sighted in Singapore and was only recorded at Pulau Jong in Ong & Tong (2018). They were sighted once again in October 2020 at Raffles Lighthouse, Kusu Island and Sisters' Islands.

Threats: Habitat loss, habitat modification, oil spills and warming are some typical threats to polyclad flatworms. Furthermore, Singapore's shores face many challenges such as coastal developments, high sedimentation and pollution. These may result in degradation of marine habitats that puts marine lives, including the polyclads, at risk.

Scientific Interest and Potential Value: Although polyclad ecology and their diets are poorly studied, coteloid diversity is usually higher in areas with higher abundances of ascidians and sponges. It is reasonable

to presume that they play key roles in regulating population dynamics and nutrient cycling.

Conservation Measures: Conservation measures should include area protection, species recovery programme, habitat restoration and habitat creation. Many species were sighted less than ten times over the past 20 years, and some could even be new to science. There is an urgent need to protect these habitats, to describe new polyclad species, and to learn more about their biology and ecological roles before they are lost to any anthropogenic harm.

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Marine Annelida – Segmented Worms

LEE YEN-LING, ANG HWEE PENG, CHUAR CHEAH HOAY,
GAYATHRI D/O SIVANANTHAN

Scientific Name:

Chaetopterus appendiculatus

Common Name:

Fairy Tubeworm

Order/Family:

Annelida/Chaetopteridae

National Status: Near Threatened (NT)

Habitat and Ecology: The worm prefers shallow waters and muddy shores.

Distribution: In Singapore, this species has been found in the waters off Changi, at Chek Jawa and also from several islands in the Singapore Straits such as Semakau, St John's and Lazarus. It has an almost cosmopolitan distribution across the world.

Threats: The shallow water localities that they are found face hazards from boating activities, high sedimentation, and potential coastal development.

Scientific Interest and Potential Value: Previously, this worm was referred to as *C. variopedatus* and its "Endangered" status was given based on the species'

Photo: Tan Heok Hui



cosmopolitan distribution in the world but limited occurrence in Singapore. During the Comprehensive Marine Biodiversity Survey (conducted between 2010 till 2016) and other ad hoc sampling trips spanning 2008 till 2015, a number of specimens were obtained across several islands and reefs in the Singapore Straits particularly Semakau and also in the silt-covered shores at the eastern part of Singapore. It is likely that more individuals are present in the wild but due to the silty environment where they are usually found, they may be less visited intertidally or spotted in dives, resulting in sporadic encounters. They do not form dense aggregations and are estimated to have low numbers in the wild. It is now assessed as NT in this RDB3.

Conservation Measures: Key areas where the worm occurs in good numbers should be identified and steps taken to conserve them.

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Mollusca – Molluscs

TAN SIONG KIAT, TAN KOH SIANG

Scientific Name:

Limopsis excancellata Sacco,
1898

Common Name:

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Order/Family:

Bivalvia (Arcida): Limopsidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Presumably infaunal in muddy substrates subtidally. Shell small, usually less than 6 mm, but sizes of more than 1 cm have been reported for shells from elsewhere.

Distribution: Southeast Asia. In Singapore, this species has been collected from the Seletar area in 1933.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Name:

Amusium pleuronectes (Linnaeus,
1758)

Common Name:

Asian moon scallop, Sun and
moon scallop

Order/Family:

Bivalvia (Pectinidae): Pectinidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Subtidal on sand and mud sediments. Shell length up to around 8 cm.

Distribution: Indo-West Pacific. In Singapore, it has

Photo: Tan Siong Kiat



Limopsis excancellata from Seletar.

Scientific Interest and Potential Value: This species was first described from Singapore by Reeve (1843 as *Pectunculus cancellata* [non Michelotti, 1839]). *Limopsis excancellata* is a replacement name.

Conservation Measures: This species has not been documented in surveys carried out in the past few decades, thus it is presumed to be nationally extinct. Surveys are needed to determine if it still occurs at any sites, which would then need to be protected from urbanisation and disturbance.

Photo: Tan Siong Kiat



Amusium pleuronectes from Siglap.

only been found in the area around the present-day East Coast Park prior to the large-scale reclamation works in the 1970s.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Very common and commercially exploited in some countries. Often available in the markets of Southeast Asia.

Conservation Measures: This species has not been documented in surveys carried out in the past few

decades thus it is presumed nationally extinct. It is likely that this species was never common, and it was noted to be rare by Chuang (1973). Surveys are needed to determine any sites of occurrence, which would need to be protected from urbanisation and disturbance.

Scientific Name:

Hippopus hippopus (Linnaeus, 1758)

Common Name:

Horse's hoof clam, Bear paw clam,
Siput lupat

Order/Family:

Bivalvia (Cardiida): Cardiidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Shell length often reaching around 20 cm, but large ones may attain lengths of more than 40 cm.

Distribution: Indo-Pacific. In Singapore, this species was recorded from several of the southern and western islands including, but not limited to, Pulau Pawai, Pulau Senang, and Pulau Satumu.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Collected for food, and/or the aquarium and shell trade in some countries.

Conservation Measures: This species has not been documented in surveys carried out in the past few decades thus it is presumed nationally extinct. It is likely that this species was never common. Surveys are needed to determine any sites of occurrence, which would need to be protected from urbanisation and disturbance.

Photo: Tan Siong Kat



Hippopus hippopus from Pulau Senang.

Scientific Name:
Tridacna crocea Lamarck, 1819

Common Name:
Crocus giant clam, Boring giant clam

Order/Family:
Bivalvia (Cardiida): Cardiidae

National Status: Endangered (EN)

Habitat and Ecology: Boring in coral heads, coral rocks and boulders, on reef flats and coral reefs. Shell length reaching a maximum of around 15 cm.

Distribution: Indo-Pacific. In Singapore, this species has been recorded from many of the southern and western islands.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Photo: Neo Mei Lin



Tridacna crocea at Pulau Semakau.

Scientific Interest and Potential Value: Collected for food, and/or the aquarium and shell trade in some countries.

Conservation Measures: This species has been observed sporadically in surveys over the last few decades although always in small numbers fewer than five individuals per occasion. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
Tridacna gigas (Linnaeus, 1758)

Common Name:
True giant clam

Order/Family:
Bivalvia (Cardiida): Cardiidae

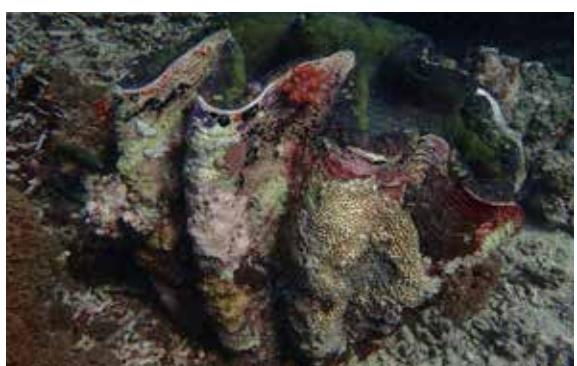
National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Usually free-living on either sand or hard reef substrata on coral reefs. May reach more than a metre in shell length, and massive ones are very thick and heavy.

Distribution: Indo-Pacific. Anecdotal reports are available but there are no verifiable records from Singapore.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Photo: Neo Mei Lin



Tridacna gigas in the waters of Sipadan, Sabah, Malaysia.

Scientific Interest and Potential Value: Collected for food, and/or the aquarium and shell trade in some countries.

Conservation Measures: This species has not been documented in surveys carried out in the past few decades thus it is presumed nationally extinct. It is likely that this species was never common. Surveys are needed to determine any sites of occurrence, which would need to be protected from urbanisation and disturbance.

Scientific Name:***Tridacna maxima* (Röding, 1798)****Common Name:****Elongate giant clam, Small giant clam****Order/Family:****Bivalvia (Cardiida): Cardiidae****National Status:** Critically Endangered (CR)

Habitat and Ecology: Usually nestled or partially embedded in and amongst coral heads, coral rocks and boulders on coral reefs. Shell length may reach more than 15 cm, but are usually smaller.

Distribution: Indo-Pacific. In Singapore, this species has only been recorded from Pulau Satumu and Terumbu Bemban.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Collected for food, and/or the aquarium and shell trade in some countries.

Conservation Measures: This species only has two confirmed sightings from surveys over the last few decades, suggesting that this species likely was never common. The species is assessed as critically endangered because of its rarity. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:***Tridacna squamosa* Lamarck, 1819****Common Name:****Fluted giant clam, Scaly giant clam,
Siput kima****Order/Family:****Bivalvia (Cardiida): Cardiidae**

Photo: Tan Siong Kat

*Tridacna maxima* from the Philippines.

Photo: Tan Siong Kat

*Tridacna squamosa* at Pulau Satumu.

National Status: Critically Endangered (CR)

Habitat and Ecology: Usually nestled amongst coral and rocks on coral reefs. Shell length may reach more than 40 cm.

Distribution: Indo-Pacific. In Singapore, this species has been recorded from many of the southern and western islands.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Name:

Dallitellina rostrata (Linnaeus, 1758)

Common Name:

Rostrate tellin

Order/Family:

Bivalvia (Cardiida): Tellinidae

National Status: Vulnerable (VU)

Habitat and Ecology: Burrowing in soft sandy or muddy substrates, in which they frequently lie somewhat horizontally with the left valve on top. Shell length may reach more than 7 cm.

Distribution: Indo-West Pacific. In Singapore, it has thus far been recorded from Bedok, Changi, and Pulau Hantu, but is likely to be more widespread.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Collected for food and for its attractive shell in some countries.

Scientific Interest and Potential Value: Collected for food, and/or the aquarium and shell trade in some countries.

Conservation Measures: This species has been observed sporadically in surveys over the last few decades although always in small numbers fewer than five individuals per occasion. Conservation of sufficiently healthy coastal habitats will be beneficial.

Photo: Tan Siong Kit



Dallitellina rostrata from Changi.

Conservation Measures: Although this species was reported from Singapore since the 1800s, there are very few records in the literature and in the LKCNHM. This species is assessed as vulnerable because of its apparent rarity. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
Potamocorbula nimbosa
(Hanley, 1843)

Common Name:
-

Order/Family:
Bivalvia (Myida): Corbulidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Presumably in sand, mud and clay sediments of estuaries and mudflats from the intertidal to shallow subtidal zones. Shell length up to around 3 cm.

Distribution: South China Sea, Japan, and to the Cocos (Keeling) Islands in the eastern Indian Ocean.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value:
This species was described from Singapore as *Corbula nimbosa* by Hanley (1843). Incidentally, the synonyms *Corbula ustulata* and *C. labiata* described by Reeve (1844 [in 1843–1844]) were also based on specimens from Singapore.

Photo: Tan Siong Kiat



Potamocorbula nimbosa from Singapore.

Conservation Measures: There have been no original records of this species from Singapore in the past century. It is thus presumed to be nationally extinct. Surveys are needed to determine any sites of occurrence, which would need to be protected from urbanisation and disturbances.

Scientific Name:
Barnea manilensis (Philippi, 1847)

Common Name:
Manila piddock

Order/Family:
Bivalvia (Myida): Pholadidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Boring in clay and soft rocks, from the intertidal zone to depths of about 20 m. Shell length may reach more than 7 cm.

Photo: Tan Siong Kiat



Barnea manilensis from Tanjong Gul.

Distribution: Indo-Pacific. In Singapore, this species was recorded from Telok Ayer and Tanjong Gul, both since reclaimed.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Collected for food and sometimes offered in the markets of Southeast Asia.

Conservation Measures: Two lots of this species in the LKCNHM, collected from Telok Ayer in 1900 and Tanjong Gul in 1968, are the only examples we know of this species. It has not been subsequently collected nor reported from Singapore thus presumed to be nationally extinct. Surveys are needed to determine any sites of occurrence, which would need to be protected from urbanisation and disturbance.

Scientific Name:
Verpa penis (Linnaeus, 1758)

Common Name:
Common watering pot shell

Order/Family:
Bivalvia (Anomalodesmata):
Penicillidae

National Status: Vulnerable (VU)

Habitat and Ecology: In muddy sand sediment, from areas exposed during the lowest spring tides to the shallow subtidal depths. Buried vertically with only the posterior part of its tube showing above the substrate. Jets of water forced periodically through the perforations of its anterior disc is thought to aid burrowing and the fringes of the disc could possibly serve to stabilise the shell to prevent dislodging. Shell length may reach more than 12 cm.

Distribution: Indo-West Pacific. In Singapore, most records are from the eastern coasts from Pasir Ris to East Coast Park.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.



Verpa penis from Changi.

Scientific Interest and Potential Value: This species is generally regarded to be rare because of their cryptic habits. This species appears to be relatively common in Singapore where specimens were first collected by Hugh Cuming who was in Singapore in 1836 and from 1839–1840. Studies on its biology were also carried out by Purchon (1956; 1960) based on specimens collected here.

Conservation Measures: Previously presumed to be nationally extinct, live specimens have since been found around the eastern side of Singapore. It is assessed to be vulnerable because of its perceived rarity. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
Tectus pyramis (Born, 1778)

Common Name:
Pyramid top, Pyram top

Order/Family:
Gastropoda (Trochida): Tegulidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Amongst rocks on coral reefs and rocky shores. Shell length usually up to around 8 cm.

Distribution: Indo-Pacific. In Singapore, it has been recorded from Pulau Hantu, Pulau Subar Laut, and Pulau Satumu.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.



Tectus pyramis from Pulau Sakijang.

Scientific Interest and Potential Value: Collected for food and for its attractive shell in some countries. Shells often polished and used in shell craft.

Conservation Measures: Although there is no evidence to suggest that this species was abundant or even common in the past, there were records of this species on the reefs of the southern and western islands up to the mid-1960s. There have been no documented sightings in the past decades. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:
Turbo petholatus Linnaeus, 1758

Common Name:
Tapestry turban

Order/Family:
Gastropoda (Trochida): Turbinidae

National Status: Vulnerable (VU)

Habitat and Ecology: Coral reefs and rocky shores, subtidal. Shell length may reach more than 6cm.

Distribution: Indo-Pacific. In Singapore, this species has been recorded from Pulau Jong, Kusu, Pulau Hantu, Terumbu Pempang Tengah, and Pulau Satumu.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Collected for food and for its colourful shell in some countries.



Turbo petholatus at Pulau Satumu.

Its operculum is often used in shell craft and costume jewellery.

Conservation Measures: This species is assessed as vulnerable because of its rarity and apparent restriction to coral reef habitats. This species is only very rarely encountered during intertidal surveys, but it has been observed to be moderately common on the subtidal reefs at Pulau Satumu. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:***Cerithium nodulosum* Bruguière, 1792****Common Name:****Giant knobbed cerith****Order/Family:****Gastropoda (Caenogastropoda):****Cerithiidae****National Status:** Vulnerable (VU)

Habitat and Ecology: Sandy and rubbly areas of intertidal reef flats, and coral reefs. Shell length may reach more than 10 cm.

Distribution: Indo-Pacific. In Singapore, this species has thus far been recorded from Pulau Satumu, Pulau Pawai, and Pulau Hantu.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Commonly collected for food and shell trade in some countries.

Photo: Rene S.L. Ong



Cerithium nodulosum from Pulau Satumu.

Conservation Measures: This species is assessed as vulnerable because of its present rarity in Singapore and apparent restriction to coral reef habitats. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:***Rhinoclavis aspera* (Linnaeus, 1758)****Common Name:****Rough vertagus****Order/Family:****Gastropoda (Caenogastropoda):****Cerithiidae****National Status:** Endangered (EN)

Habitat and Ecology: In sand of sand flats and sand pockets of coral reef areas, from the low intertidal to shallow subtidal depths. Shell length may reach more than 5 cm.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from Pulau Salu, Sentosa, Pulau Semakau, Cyrene Reef, and Terumbu Raya.

Photo: Rene S.L. Ong



Rhinoclavis aspera from Pulau Semakau.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Very common and often collected for shell craft in some countries.

Conservation Measures: This species can be locally abundant where found, but living specimens have not

been reported nor encountered in recent surveys in the past couple of decades. It is thus provisionally assessed to be endangered. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:

Rhinoclavis vertagus (Linnaeus, 1767)

Common Name:

Common *vertagus*

Order/Family:

Gastropoda (Caenogastropoda):

Cerithiidae

National Status: Endangered (EN)

Habitat and Ecology: In sand and muddy sand substrates on reef flats, seagrass meadows, and coral reefs.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from Pulau Senang, Pulau Hantu, and Pulau Semakau. Shell length may reach more than 5 cm.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Very common, and often collected for the shell trade and occasionally as food in some countries.

Conservation Measures: This species is provisionally assessed to be endangered although there is no evidence to suggest that this species was ever common in Singapore. It can be locally abundant where found, but no living specimens have been reported or encountered in surveys carried out in the past few decades. Further surveys are needed to identify the sites of occurrence in Singapore for a reassessment in the future. Conservation of sufficiently healthy coastal habitats will be beneficial.

Photo: Rene S.L. Ong



Rhinoclavis vertagus from Pulau Semakau.

Scientific Name:
***Terebralia palustris* (Linnaeus, 1767)**

Common Name:
Mud creeper, Mangrove whelk

Order/Family:
Gastropoda (Caenogastropoda):
Potamididae

National Status: Endangered (EN)

Habitat and Ecology: On sandy mud and mud in and near mangroves and estuaries. Appears to prefer more open high energy mangroves and has thus far not been reported from the estuarine mangroves of the Johor Strait. Shell length may reach more than 15 cm.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from Pandan, Pulau Semakau, and Marina East.

Threats: Habitat loss, habitat modification, oil spills, overcollection.

Scientific Interest and Potential Value: Collected for food in many Southeast Asian countries and commonly available in markets.

Photo: Tan Siang Kiat



Terebralia palustris from Pulau Semakau.

Conservation Measures: This species was documented quite early in the history of Singapore although there is no evidence to suggest that it was ever common. It is assessed to be endangered because of its restricted distribution in Singapore. Currently, the only known site where a sizable population occurs is at Pulau Semakau. Surveys are needed to determine whether the species occurs in other areas, especially in the mangrove forests of the southern and western islands. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
***Cypraea tigris* Linnaeus, 1758**

Common Name:
Tiger cowrie

Order/Family:
Gastropoda (Littorinimorpha):
Cypraeidae

National Status: Vulnerable (VU)

Habitat and Ecology: On sand, and on and amongst rocky rubble or corals in coral reef areas, intertidal to shallow subtidal depths. Shell length may reach more than 10 cm, but usually smaller.

Photo: Rene S.L. Ong



Cypraea tigris from Singapore.

Distribution: Indo-Pacific. In Singapore, it has been documented from several of the southern and western islands.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Collected for food and for its attractive shell in many countries. Largest member of its family in Singapore.

Scientific Name:
Monetaria annulus (Linnaeus, 1758)

Common Name:
Gold-ring cowrie

Order/Family:
Gastropoda (Littorinimorpha):
Cypraeidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Amongst rocks and rubble on reef flats and reef slope, intertidal to shallow subtidal depths. Shell length usually between 2 to 3 cm.

Distribution: Indo-Pacific. In Singapore, this species has been recorded from Lazarus Island.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Once used as currency, this species is very common in some countries and large numbers are collected for the shell trade, mainly for shell craft.

Conservation Measures: This species was documented quite early in the history of Singapore, but there is no evidence to suggest that it was ever common. It appears to be very rare in Singapore today and there has been no documented sightings in the past few decades. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Conservation Measures: This species has been observed sporadically in surveys over the last few decades although always in small numbers fewer than five individuals per occasion. It is assessed to be vulnerable due to its apparent rarity in Singapore and restriction to coral reef habitats. Conservation of sufficiently healthy coastal habitats will be beneficial.

Photo: Rene S.L. Ong



Monetaria annulus from Lazarus Island.

Scientific Name:
***Monetaria moneta* (Linnaeus, 1758)**

Common Name:
Money cowrie

Order/Family:
Gastropoda (Littorinimorpha):
Cypraeidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Amongst rocks and rubble on reef flats and reef slope, intertidal to shallow subtidal depths. Shell length usually between 2 to 3 cm.

Distribution: Indo-Pacific. In Singapore, this species has been recently sighted at Lazarus Island and Cyrene Reef.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Once used as currency, this species is very common in some countries and large numbers are collected for the shell trade, mainly for shell craft.

Photo: Tan Siong Kiat



Monetaria moneta from Cyrene Reef.

Conservation Measures: This species was documented quite early in the history of Singapore although there is no evidence to suggest that it was ever common. There has been no documented sightings in the past few decades until quite recently, and it appears to be very rare in Singapore today. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:
Truncatella guerinii
A. Villa & J.B. Villa, 1841

Common Name:
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Order/Family:
Gastropoda (Littorinimorpha):
Truncatellidae

National Status: Endangered (EN)

Habitat and Ecology: In vegetation, leaf litter, under rocks and debris at the supralittoral zone near beaches, coastal cliffs, coastal woodlands. Shell length typically around 7 to 8 mm.

Photo: Tan Siong Kiat



Truncatella guerinii from Changi.

Distribution: Indo-West Pacific. In Singapore, the only known living population was at Changi. Empty shells found amongst the debris along the strandline at beaches elsewhere.

Threats: Habitat loss, habitat modification.

Scientific Interest and Potential Value: Not known.

Conservation Measures: Provisionally assessed to be endangered, but further surveys are needed to determine the sites of occurrence and their abundance in Singapore for a future reassessment. This species is largely dependent on the availability of suitable coastal forest habitats. It has not been found alive since the only population known to us was extirpated in a location that was developed in 2007. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:

Volema myristica Röding, 1798

Common Name:

Nutmeg melongena

Order/Family:

Gastropoda (Neogastropoda):
Melongenidae

National Status: Vulnerable (VU)

Habitat and Ecology: Sand or muddy sand areas near mangroves, and in seagrass meadows and reef flats. Shell length usually around 5 to 6 cm and seldom exceeding 8 cm.

Distribution: Southeast Asia, Western Pacific. In Singapore, this species has been recorded from Tanah Merah, Pulau Hantu, Pulau Semakau, Pulau Pawai, and Pulau Senang.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Scientific Interest and Potential Value: Collected for food in many parts of Southeast Asia.

Photo: Rene S.L. Ong



Volema myristica from Pulau Semakau.

Conservation Measures: An uncommon species assessed to be vulnerable because of its current low numbers. The number of historical records suggest that it was more common on the shores of Singapore in the past. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
Murex ternispina Lamarck, 1822

Common Name:
Black-spined murex

Order/Family:
Gastropoda (Littorinimorpha):
Cypraeidae

National Status: Vulnerable (VU)

Habitat and Ecology: Subtidal on soft, muddy to sandy sediments. Shell length usually to around 9 cm.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from Kusu, Pulau Pawai, Pulau Sudong, and the eastern and south-eastern coasts that have since been reclaimed.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Photo: Tan Heok Hui



Murex ternispina from Pulau Sudong.

Scientific Interest and Potential Value: Collected for food and shell trade in some countries.

Conservation Measures: An uncommon species, it is assessed to be vulnerable because of its current low numbers. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:
Melo melo ([Lightfoot], 1786)

Common Name:
Indian volute, Bailer shell

Order/Family:
Gastropoda (Neogastropoda):
Volutidae

National Status: Vulnerable (VU)

Habitat and Ecology: On muddy sand sediments from the littoral to shallow sublittoral zones. Shell length commonly exceeding 20 cm.

Distribution: On muddy sand sediments from the littoral to shallow sublittoral zones.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills.

Photo: Tan Sióng Kit



Melo melo from Changi.

Scientific Interest and Potential Value: Collected for food in many Southeast Asian countries and commonly available in markets. Shells used as decorative items, or as scoops.

Conservation Measures: Although not particularly uncommon, this species is assessed to be vulnerable because of its perceived low numbers, and likelihood of exploitation for food. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:
Oliva miniacea (Röding, 1798)

Common Name:
Red-mouthed olive,
Orange-mouthed olive

Order/Family:
Gastropoda (Neogastropoda):
Olividae

National Status: Vulnerable (VU)

Habitat and Ecology: Burrowing in sand of sandy flats, and sandy areas in and near coral reefs from the intertidal to shallow subtidal zones. Shell length usually up to around 8 cm.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from Cyrene Reef, East Coast Park, Changi, Pulau Hantu, and Sisters Islands.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Collected both for its large, colourful shell, and for food in many



Oliva miniacea from Changi.

Scientific Name:
Conus consors G.B. Sowerby I, 1833

Common Name:
Consort cone

Order/Family:
Gastropoda (Neogastropoda):
Conidae



Conus consors from Cyrene Reef.

National Status: Vulnerable (VU)

Habitat and Ecology: In sand, and under and amongst stones and rocks in coral reef areas, intertidal to shallow sublittoral zones. Shell length usually up to around 7 or 8 cm and rarely exceeding 10.

Distribution: Indo-West Pacific. In Singapore, it has been documented from the southern and western islands, and recent sightings include, but are not limited to, Terumbu Pempang Laut, Terumbu Bemban, Pulau Jong, and St. John's Island.

Threats: Habitat loss, habitat modification, declining water quality, sedimentation, oil spills, overcollection.

Scientific Interest and Potential Value: Collected for the shell trade. Many larger species of the family, including this species, are occasionally collected for food in some countries.

Conservation Measures: An uncommon species assessed to be vulnerable because of its current low numbers. This species was reportedly very common prior to the 1970s, but encounters have become exceedingly rare until the past decade where there has been a marked increase in sightings and reports, which suggest that the species is re-establishing itself. Conservation of sufficiently healthy coastal habitats will be beneficial.

Scientific Name:

Ellobium scheepmakeri (Petit de la Saussaye, 1850)

Common Name:

Malchus' ear shell

Order/Family:

Gastropoda (Ellobiidae): Ellobiidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Mangrove forests, amongst wood debris and on plants in the back mangroves. Shell length up to around 7 cm.

Distribution: Southeast Asia. In Singapore, Mandai is the only site where a healthy population has been documented.

Threats: Habitat loss, habitat modification, declining water quality, oil spills, overcollection.

Scientific Interest and Potential Value: This species often occurs sympatrically with the larger *Ellobium aurismidae* (Linnaeus, 1758), but may be naturally less common throughout most of its distributional range. Both species are sometimes collected for food in some countries. Broken shells around fire pits are sometimes encountered in the mangroves of Singapore.

Photo: Tan Siang Kiat



Ellobium scheepmakeri from Mandai.

Conservation Measures: This species was documented quite early in the history of Singapore although there is no evidence to suggest that it was common or widespread. It is assessed to be critically endangered because of its highly restricted distribution in Singapore. Suitable sites need to be designated as nature areas to be protected from urbanisation and disturbances.

Scientific Name:***Pythia scarabaeus* (Linnaeus, 1758)****Common Name:****Common pythia, Scarab pythia****Order/Family:****Gastropoda (Ellobiida): Ellobiidae****National Status:** Vulnerable (VU)

Habitat and Ecology: In debris and leaf litter at the supralittoral zone of coastal forests and mangroves. Shell length usually around 2 cm or more.

Distribution: Indo-West Pacific. In Singapore, this species has been recorded from only Changi and Punggol.

Threats: Habitat loss, habitat modification.

Scientific Interest and Potential Value: Not known.

Conservation Measures: Provisionally assessed to be vulnerable, but further surveys are needed to determine the sites of occurrence and their abundance

Photo: Tan Siong Kiat

*Pythia scarabaeus* at Changi.

in Singapore for a future reassessment. This species is largely dependent on the availability of suitable coastal forest habitats of which very few are left in Singapore, and populations have not been found in recent surveys. Surveys are needed to determine the sites of occurrence, which need to be protected from urbanisation and disturbances.

Scientific Name:***Amphidromus inversus* (Müller, 1774)****Common Name:****Inverse amphidromus,
Brown tree snail****Order/Family:****Gastropoda (Stylommatophora):
Camaenidae****National Status:** Critically Endangered (CR)

Habitat and Ecology: Largely arboreal, and rarely found on the ground. They have been observed to lay eggs in clusters under loose bark and in small cavities. Shell length up to around 5 cm.

Photo: Tan Siong Kiat

*Amphidromus inversus* at the Singapore Botanic Gardens.

Distribution: Southeast Asia. In Singapore, this species appears to be restricted to the Singapore Botanic Gardens (SBG) and its immediate vicinity.

Threats: Habitat loss, habitat modification, indiscriminate use of pesticides, introduction of alien predators.

Scientific Interest and Potential Value: Occasionally collected for the shell trade in some countries. Several recognisable subspecies and forms are known. Whether the SBG population is an

introduced or a remnant population remains unclear and will be an interesting topic for future research.

Conservation Measures: Although not exceedingly rare at the SBG, the small and restricted population may be easily affected by pesticides or inadvertent introduction of predators. However, the introduction of this species to existing forested areas where other native snails thrive should not be attempted without careful consideration. Continued conservation of the forested area in the SBG will be beneficial.

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Blattodea – Termites and Cockroaches

FOO MAOSHENG

Termites and cockroaches tend to be viewed as pests due to the notoriety of the handful of globally invasive species such as the American cockroach (*Periplaneta americana*) and the Asian subterranean termite (*Coptotermes gestroi*). However, the pest species do not represent the majority of the species under Blattodea. In fact, both termites and cockroaches have major roles in the leaf litter ecosystem, with some cockroach species also known to assist in flower pollination.

There are at least 67 species of termites, and at least 50 species of cockroaches found in Singapore but most species are still poorly known, and some are still undescribed scientifically. Hence, the conservation status for most species cannot be determined without additional data. Most species inhabit old secondary or primary forests, with some species in back mangrove forests. The loss and fragmentation of habitats, altering or removal of the ground soil and usage of heavy machinery, can threaten their survival in general.

In this section, the focus will be on termites as they have a major role in decomposition, the carbon mineralisation process as well as in the nitrogen and phosphorous cycle. The activity of the termites does have an influence on both soil properties and structure, from which the trees and vegetation grow on. The following detailed writeup will look into the different feeding groups of termites namely: the fungus growers, epiphyte feeders and soil feeders.

Scientific Name:
Macrotermes carbonarius
(Hagen, 1858)

Common Name:
 -

Order/Family:
Blattodea / Termitidae

National Status: Least Concern (LC)

Habitat and Ecology: They are found in old secondary forests and primary forests, and sometimes in maturing secondary forests or the back mangroves. The termite mounds are sometimes visible above ground level, going as high as 1.3m on Pulau Ubin. They are also a food source for the local Sunda Pangolin.

Distribution: Found throughout Southeast Asia

Threats: Development and degradation of forest habitats

Scientific Interest and Potential Value: It is one of the fungus-growing termites that have a symbiotic relationship with the fungus, *Termitomyces* spp., cultivated within the mounds. Moreover, termite mounds form a nutrient rich area due to the feeding and construction habits of the termite workers. These mounds are created by the deposition of organically rich faecal matter mixed with soil and their saliva, having higher levels of nitrogen and phosphorus (plant macronutrients). The subsequent erosion of such mounds leads to enrichment of the topsoil in surrounding areas. In addition, the constant foraging and construction activity of the termite workers significantly improves the soil physical properties such as better infiltration of water into the ground.

Conservation Measures: Conservation of our remaining forests will ensure their survival.

Photo: Foo Maosheng



Macrotermes carbonarius.

Photo: Foo Maosheng



Macrotermes carbonarius alate.

Scientific Name:
Dicuspiditermes nemorous
(Haviland, 1898)

Common Name:
 -

Order/Family:
Blattodea / Termitidae

National Status: Data Deficient (DD)

Habitat and Ecology: Old-growth secondary forests and primary forests. Their nests tend to be found near or at the base of large trees. The termite mounds can be between 30 to 40cm in height.

Distribution: Found across Malaysia, Singapore, and Indonesia.

Threats: Development and degradation of forest habitats, compaction of ground soil.

Scientific Interest and Potential Value: Presence of this soil-humus feeding termites indicates the soil in the area has a high proportion of organic matter. The nutrient-rich topsoil provides better conditions for plants to grow on. Moreover, the feeding activity of these termites can further improve soil quality such as buffering



Dicuspiditermes nemorous – queen



Left Image: Nest. Right image: soldier.

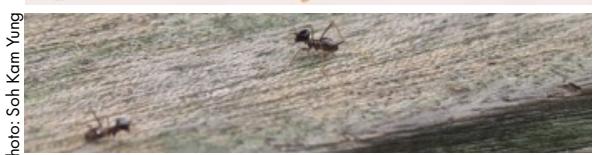
the pH level to optimise the nutrients availability for plants.

Conservation Measures: Due to the specificity of their habitat preference to larger trees in nutrient-rich topsoil area, their current distribution within Singapore is unknown and likely to be restricted to certain forest fragments within Bukit Timah and Central Catchment nature reserves.

Scientific Name:
Hospitalitermes umbrinus
(Haviland, 1898)

Common Name:
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Order/Family:
Blattodea / Termitidae



Hospitalitermes umbrinus soldier.

National Status: Least Concern (LC)

Habitat and Ecology: Found in regenerating secondary forests to primary forests. These termites are often seen on the forest floor, foraging in the open instead of under mud galleries or through dead wood, forming long foraging lines between the nest and foraging site. They are often mistaken as ants due to their black coloration. Their nests are usually black or dark in colour, at the base of large trees, and serve as an alternative food source for the Sunda Pangolin and other ground insectivores. At other times, the nest may be above ground, occupying a crevice in the tree.

Distribution: Found across Malaysia, Singapore, and Indonesia.

Threats: Development and degradation of forest habitats.

Scientific Interest and Potential Value: They are one of the few termite species that feed mainly on bryophytes and micro-epiphytes such as lichen, instead of dead wood, found on tree trunks and in the tree canopies. Their nest may be shared with other termites such as *Termitidae* spp. or termite inquilines such as staphylinid beetles (*Neotermitosocius* sp. and *Coptotermocola* sp.)

Conservation Measures: Increasing the awareness of the public to such a species, along with conserving our remaining forests will ensure the survival of this genus/species.

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Coleoptera – Beetles

CHEONG LOONG FAH, WAN F.A. JUSOH, ONG XIN RUI, SEAN YAP

Scientific Name:

Parena nigrolineata
(Chaudoir, 1852)

Common Name:

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Order/Family:

Coleoptera: Carabidae

National Status: Data Deficient (DD)

Habitat and Ecology: Species of this genus (e. g. *P. perforata* (Hondo, 2003)) are reported as specialist predators of Tiger Moth at both the adult and larval stages and play an important role in regulating the Tiger Moth population. Similar associations might apply to this species.

Distribution: India, Sri Lanka, Burma, Vietnam, Japan, China, Andaman Islands, Singapore, Krakatoa. Found in the Bukit Timah Nature Reserve.

Threats: Coextinction risk might exist for this species, but without detailed knowledge of its ecology we can

Scientific Name:

Stenaptinus occipitalis (Macleay,
1825)

Common Name:

-

Order/Family:

Coleoptera: Carabidae

Photo: Cheong Loong Fah



only assign the status as DD. So far, there is only a sole 2015 record for this species from the Bukit Timah Nature Reserve. There is no doubt the arboreal habit of this species contributes to the scarcity of its records.

Scientific Interest and Potential Value: *Parena* species could play important roles in regulating the Tiger Moth or other moths during years of peak population.

Conservation Measures: The known locality in Singapore is a protected area. Knowledge for the local *Parena* is poor but protection of the entire forest ecosystem should help.

Photo: Cheong Loong Fah



Stenaptinus occipitalis specimen in LKCNHM.

National Status: Critically Endangered (CR)

Habitat and Ecology: Known as the 'Bombardier beetles' as they release a defensive gland secretion which is extremely hot. *Stenaptinus* species are said to feed on mole crickets and their eggs (Frank et al., 2009), but they also may eat other crickets, other small insects, and worms. During the daytime they hide in earth cracks, in grass, under debris, and under stones.

Distribution: China, Japan, Taiwan, Sri Lanka, India, Myanmar, Malaysia, Indonesia, Borneo, Philippines, Singapore. Found in the Nee Soon Swamp Forest.

Threats: Only two records in Singapore. The first was a 1918 record from Katong, probably still a coastal area then. Despite extensive works in the coastal habitats by D.H. Murphy, there is no further record from the coastal areas. Its prey (various species of mole crickets) are

mostly under threat (pp 55-56, Tan, 2012) and this might have led to the disappearance of this species from the coastal habitats. The second *Stenaptinus occipitalis* specimen was collected from Nee Soon swamp forest around 1990.

Scientific Interest and Potential Value: It has potential as a charismatic flagship species, due to its infamous ability to synthesize and release rapid bursts of stinky, burning-hot liquid from their rear ends.

Conservation Measures: The only recent locality in Singapore is within a protected area. A predatory habit increases the extinction risk, which is consistent with the fact that, in general, predators are more imperiled than prey. In this case, protection of the prey mole crickets would probably help the survival of *Stenaptinus occipitalis*.

Scientific Name:

Cryptocephalomorpha gaverei
Ritsema, 1875

Common Name:

-

Order/Family:

Coleoptera: Carabidae

National Status: Data Deficient (DD)

Habitat and Ecology: Known larvae are physogastric due to their myrmecophilous habit. They dig holes in the ground around ant nests, and prey on ants in a similar manner to the larvae of Cicindelinae. Very few adult specimens of the majority of species in this genus have ever been captured, with most samples attracted to light. It is therefore not established where the species of this genus actually live and whether they are regularly tree-living or not. Similarly, their mode of reproduction is unknown.

Distribution: Laos, Singapore, Indonesia, Borneo, Philippines. In Singapore, it is known from Bukit Timah Nature Reserve and Central Catchment Nature Reserve.

Threats: Only two records in Singapore, both collected from lights: a 1967 record at Bukit Timah and a 1986

Photo: Cheong Loong Fah



Cryptocephalomorpha gaverei specimen in LKCNHM.

record at Central Catchment Nature Reserve. The scarcity of records is no doubt due to the fact that the identity of the host ant species is as yet unknown.

Scientific Interest and Potential Value: *Cryptocephalomorpha* species are characterized by a unique facies with an almost completely oval body, and are not recognizable as carabid beetles at first glance. Their morphology is assumed to be related to a myrmecophilous lifestyle, but little biological data exist to confirm their associations with ants, nor is much known about the degree of acceptance and integration in their host ant colony.

Conservation Measures: The two known localities are both within protected areas. We lack sufficient knowledge of the biology of *Cryptocephalomorpha gaverei* to be able to say anything concrete about the conservation of this species.

Scientific Name:

Catascopus cupripennis Thomson,
1858

Common Name:

-

Order/Family:

Coleoptera: Carabidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: The species of the genus *Catascopus* are semi-nocturnal in their habits, never flying except at night. Most species and individuals from this genus are found under the decaying bark of fallen trees. Larger species like *Catascopus cupripennis* are usually seen coursing along the surface of some immense fallen trees.

Distribution: Malaysia, Singapore, Indonesia, Borneo.

Threats: With the loss of over-mature old trees, dead-wood development is restricted to the die-off of typically small diameter trees, producing less diverse dead wood. Decreasing quantity of fallen big tree trunks that provide long term habitat probably contributes to its demise.

Scientific Interest and Potential Value: The type locality is in Singapore; there is thus scientific interest



in protecting the "typical place" from which the species was described.

Conservation Measures: Big forest trees provide potential habitat in the protected nature reserves. Dead trees should be left, as much as possible, in their original assorted conditions of standing and fallen states, subject to a range of different abiotic conditions. This will increase the diversity of available dead wood microhabitats and microclimates necessary to ensure the long-term stability and preservation of the saproxylic community. For big old trees that have fallen on or near forest trails, consider, wherever possible, rerouting the trail or even closing off access to the tree with fencing or other barriers. These big old dead trees are often referred to as "habitat trees" or "keystone structures," which are particularly important as they contain slowly developing microhabitats, such as cavities.

Scientific Name:

Therates fleutiauxi Horn, 1898

Common Name:

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Order/Family:

Cicindelidae



Therates fleutiauxi specimen in LKCNHM.

National Status: Critically Endangered (CR)

Habitat and Ecology: *Therates* adults prefer moist, shady places at the edge of pristine forest streams. They hunt on low foliage, but also on the forest floor or on stones in the stream bed. Larval stages usually occur in a narrower range of microhabitats than adults and appear to tolerate less variation of many physical factors, especially soil moisture, soil composition and temperature.

Distribution: Malaysia, Singapore. In Singapore, found in Bukit Timah Nature Reserve.

Threats: Not only has there been an outright loss of habitat, but there has been substantial alteration in the microclimatic conditions of forest interior too. In particular, soil humidity decreases and air temperature increases with increasing fragmentation. Tiger beetle larvae are sensitive to these changes. The last recorded

location of this species is at Taban valley (in 1976), where the drying is particularly obvious on the outward facing slope of the valley. There might also be increased mortality due to widespread fumigation in the adjacent condominiums and predators like Tiger Beetles catch preys weakened by insecticides. A change in abundance of predators like Long-legged Flies in this sector of the reserve has also been reported (Grootaert, pers. comm.).

Scientific Interest and Potential Value: As *Therates* species are sensitive to environmental changes, they are well-suited as bioindicators of the riverine ecosystems. Tiger beetles are also popular with many amateurs and can be considered as flagship species.

Conservation Measures: The known locality in Singapore is within a legally protected nature reserve. Knowledge of *Therates* is poor but protection and restoration of riverine habitats in forest interior may help.

Scientific Name:

Lophyra fuliginosa (Dejean, 1826)

Common Name:

-

Order/Family:

Coleoptera: Cicindelidae

National Status: Vulnerable (VU)

Habitat and Ecology: They are found on sandy shores near ocean, and sandy areas bordering rivers. Attracted to lights.

Distribution: Sri Lanka, Burma, Thailand, Laos, Vietnam, Cambodia, Southern China, Malaysia, Singapore, Indonesia, Borneo. Found on the sandy shores of the southern islands in Singapore, but historically recorded from Changi coast (1916) and possibly from the sandy coasts of inland rivers too.

Threats: Though *L. fuliginosa* has been lost from some localities (e.g. Changi coast, the sandy coasts of inland



rivers) in the past, there is no evidence of a continuing decline into the modern period. However, the long-term effects of climate change on the remaining sandy shore habitats in the southern islands cannot yet be foreseen and require careful monitoring.

Scientific Interest and Potential Value: This sand-dwelling species could be considered as a bioindicator to evaluate the quality of sandy shore ecosystems, in the face of threats such as climate change and further anthropogenic pressure.

Conservation Measures: This is a vulnerable species requiring robust protection of its remaining sites (the sandy shores of the southern islands) from development pressures and from coastal engineering (e.g. in response

to climate change), as well as ongoing sympathetic habitat management and management of recreational pressures.

Scientific Name:
Agrilus lancifer Deyrolle, 1864

Common Name:
-

Order/Family:
Coleoptera: Buprestidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Of the 3000+ species (worldwide) in the hyperdiverse genus *Agrilus*, only 22% have at least one host plant recorded, mostly for species in the Palaearctic and Nearctic region (Jendek and Poláková, 2014). We are ignorant of the true causes of the *Agrilus* diversity. What we do know is that the vast majority of saproxylic beetles cannot digest lignin or cellulose, the main constituents of wood; they can only derive nutrition from wood after fungi have begun the decay process. In contrast, *Agrilus* species are able to steal a march on the fungi and feed on fresh wood, albeit they seem to be restricted to trunks or branches that are already stressed by drought, shading or physical damage.

Distribution: Borneo, Singapore.

Threats: Wallace collected a relatively large number of *Agrilus* species in a short two-month period in the



Agrilus lancifer holotype in Muséum national d'Histoire naturelle (MNHN), Paris.

1850s, including 15 holotypes and 2 paratypes from Singapore; this suggests that the *Agrilus* species have been much more widespread in the past. The fact there are no subsequent records by C.F. Baker and C.J. Saunders in the 1920s and 1930s suggests that there is a substantial decline between the two periods and there is no reason to think that this decline is not continuing to the recent few decades. Of the 15 holotypes, 13 of them have not been recorded since the 1850s. It must mean that many formerly abundant *Agrilus* species are greatly reduced in number or even already extinct in Singapore due to the loss of forest habitat.

Scientific Interest and Potential Value: Type locality of the synonym *Agrilus dajakorum* Obenberger 1924 is Singapore.

Conservation Measures: We need to gather sufficient knowledge of these beetles' biology to determine exactly what measures will be most beneficial.

Scientific Name:
Endelus baumi Obenberger, 1929

Common Name:
-

Order/Family:
Coleoptera: Buprestidae



Endelus baumi holotype in Prague Museum.

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: There is a general impression, perhaps only anecdotal, that species of *Endelus* are associated with ferns. The author (CLF) has also collected various *Endelus* species from different fern hosts.

Distribution: Singapore.

Threats: The sole record is the specimen collected by J. Baum in 1929. With the loss of many shade-loving fern species due to the clearing of the original forests,

coextinction risk might be a cause for the demise of this *Endelus* species which depends on these shade-loving ferns.

Scientific Interest and Potential Value: The type locality for this species is Singapore.

Conservation Measures: We need to gather sufficient knowledge of these beetles' biology like their host association to determine exactly what measures will be most beneficial.

Scientific Name:

Chrysobothris nigripennis Deyrolle,
1864

Common Name:

-

Order/Family:

Coleoptera: Buprestidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: *Chrysobothris* species are considered to be secondary attackers of trees that have been stressed by age, fire, and water and are often collected on recently cut or injured plants. Many *Chrysobothris* species as adults are rather elusive, very quick to escape, and probably most of the tropical forest species are usually arboreal unless when coming down to fallen trees for oviposition. Malaise and upper canopy traps have been shown to be good methods in collecting these large buprestids as *Chrysobothris* can be active at both the ground and upper canopy levels.

Distribution: Singapore, Indonesia, Malaysia.

Threats: While many *Chrysobothris* species are possibly arboreal, very quick to escape, and thus might have escaped detection by visual means, even substantial Malaise trap surveys in the post-2000 period failed to rediscover *Chrysobothris nigripennis*. Likely case of its demise is a long-term, continuing decline in quality of microhabitat due to fragmentation resulting in lower dead wood connectivity and drier microhabitat, loss of habitat and possibly its suitable tree hosts.

Photo: Cheong Loong Fah



Chrysobothris nigripennis specimen in Prague Museum.

Scientific Interest and Potential Value: Many *Chrysobothris* species are colourful and can be considered as flagship species.

Conservation Measures: Increased effort on targeted survey for these charismatic species is recommended, with optimally designed traps set up with the objective of capturing these Buprestids in mind.

Scientific Name:
Anthaxia (Merocratus) miranda
Deyrolle, 1864

Common Name:
 -

Order/Family:
Coleoptera: Buprestidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Some *Anthaxia* species are inhabitants of canopy, while the rest are flower visitors. For the subgenus *Merocratus*, almost nothing is known about their bionomy; adults are flower-visitors often collected on flowers of *Castanopsis* (Fagaceae).

Distribution: Singapore, Malaysia, Borneo.

Threats: No further record in Singapore since the two specimens collected by Wallace. In the neighbouring countries, this species still seems to be occasionally collected in large number (Bily & Plachetka, 2019: 9 specimens from Johor in 2001, 9 specimens from Kalimantan in 2018). Likely extirpated in Singapore, or at least in severe decline.



Anthaxia (Merocratus) miranda holotype in Muséum national d'Histoire naturelle (MNHN), Paris.

9 specimens from Johor in 2001, 9 specimens from Kalimantan in 2018). Likely extirpated in Singapore, or at least in severe decline.

Scientific Interest and Potential Value: The type locality for this species is Singapore.

Conservation Measures: We need to gather sufficient knowledge of these beetles' biology to determine exactly what measures will be most beneficial.

Scientific Name:
Megaloxantha hemixantha
(Vollenhoven, 1864)

Common Name:
 -

Order/Family:
Coleoptera: Buprestidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: There appears to be little published information on habitats used by this species. In Malaysia, it was commonly seen during the early months of the year (Tung, 1983). According to Baudon (1966), the imagines of the Laotian species *Megaloxantha mouhoti* (Saunders) are most frequently found very high on trees of *Bombax albicum* Gagn.



Megaloxantha hemixantha specimens from the Milanowek collection, Poland.

and *B. cambodiense* P., being well-known to the local population and sought every year for food.

Distribution: Malay Peninsula, Sumatra, Nias, Bangka Is., Singapore.

Threats: The sole Singapore record was collected from Mandai area in 1912.

Scientific Interest and Potential Value: In this genus belongs the largest jewel beetle (females of *Megaloxantha bicolor gigantea*, approaching 80mm in length).

Conservation Measures: We need to gather sufficient knowledge of these beetles' biology to determine exactly what measures will be most beneficial.

Scientific Name:
Glenea pulchella Pascoe 1858

Common Name:

-

Order/Family:
Coleoptera: Cerambycidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: *Glenea* species are diurnal; they need to undergo maturation feeding and to chew the host plant in preparation for oviposition.

Distribution: Malaysia, Singapore, Indonesia, Borneo, Philippines.

Threats: *Glenea* as a group has been in severe decline, based on these observations: (1) *Glenea* species must have been rather common in the 1850s, so much so that Wallace collected 21 *Glenea* species in a two-month period. Of the 24 *Glenea* species recorded in Singapore in the 19th century, only five have been recorded in the past few decades! (2) *Glenea* species are diurnal, mostly eye-catching with colorful pattern. Thus it is unlikely that so many of them would have been missed if still present. The main threat facing these saproxylic beetles is the loss of host tree species, in particular trees from the Dipterocarpaceae family, with the result that most native dipterocarp trees are critically

Photo: Cheong Loong Fah



Glenea pulchella specimen in Muséum national d'Histoire naturelle (MNHN), Paris.

endangered (Chong et al., 2009). The resultant loss of habitat continuity and spatial dead-wood connectivity mean that the beetles are not able to find an alternative habitat within their reach at the right time.

Scientific Interest and Potential Value: Many *Glenea* species are colourful and can be considered as flagship species. Hopefully, the extant *Glenea* species can contribute to education of the public in the conservation process.

Conservation Measures: Dead trees should not be removed from the forest and should be left, as much as possible, in their original assorted conditions of standing and fallen states, with a range of different abiotic conditions such as different branch thickness (not sawn into small stockpiles). This will increase the diversity of available dead wood for the *Glenea* species.

Scientific Name:
***Aegolipton marginale* (Fabricius, 1775)**

Common Name:
 -

Order/Family:
Coleoptera: Cerambycidae

National Status: Presumed Nationally Extinct (NEx)

Habitat and Ecology: Members of the Prioninae (prionines) are characteristically sedentary: newly emerged females need not disperse in search of food (because they do not feed) or to find males (because they can attract males with a pheromone). They are thus often disinclined to fly or even incapable of flight. As adults do not feed, their lifespan is not long, and the time available for dispersal may be short, further limiting their ability to disperse.

Distribution: India, Taiwan, China, Bangladesh, Indochina, Borneo, Singapore, Indonesia, Philippines.

Threats: While many saproxylic insect species are able to track dead wood, as they are naturally adapted to search for their ephemeral resources, there are specialized insect species with low mobility, such as some associated with tree hollows or those whose adult



Aegolipton marginale specimen from FRIM, Malaysia.

stage does not feed, including many prionines. They might be sensitive to an interruption of habitat continuity because they are not able to find an alternative habitat within the reach in their distribution range in a timely manner. Furthermore, the large larvae may require very large host trees, and such trees are increasingly uncommon. Lastly, as some prionine adults are attracted to light, pervasive artificial lights at night constitute a further threat, acting as an ecological trap.

Scientific Interest and Potential Value: Due to their great size and popular appeal, the prionine species can be a tool to educate the public about the conservation process.

Conservation Measures: We need to gather sufficient knowledge of these beetles' biology to determine exactly what measures will be most beneficial. With knowledge of host associations, it may then become possible to "reintroduce" these beetles.

Scientific Name:
***Luciola singapura* Jusoh & Ballantyne, 2021**

Common Name:
Singapore Firefly (Kunang-kunang Singapura)

Order/Family:
Coleoptera: Lampyridae



Luciola singapura.

National Status: Critically Endangered (CR)

Habitat and Ecology: Only known from the type locality – the Nee Soon Swamp Forest (NSSF), in Central Catchment Nature Reserve. The habitat is a freshwater swamp forest adjacent to the water pipeline system with dense vegetation, damp leaf litter, and high soil moisture. At night, a few adult fireflies of this species were observed flying around or perching on ferns.

Distribution: Possibly endemic to Singapore.

Threats: Habitat destruction and water pollution might threaten this rare and small population of *L. singapura* if the forest and water catchment are not maintained and managed well.

Scientific Interest and Potential Value: *Luciola singapura* was described in 2021 based on a handful of specimens collected from three different time series:

1989–90, 2008–9 and 2018–19. It was the first time since 1909 that a new species of luminous firefly was described from Singapore. The discovery emphasizes the significance of natural history collections. It also highlights the need for continued biodiversity research, even in small, relatively well-studied, and highly developed countries like Singapore.

Conservation Measures: *Luciola singapura* is a rare species that can be found only in the Nee Soon Swamp Forest (NSSF), the last remnant of Singapore's freshwater swamp forest. The population size and the habitat of *L. singapura* are constrained within a small area in NSSF. The legal status of NSSF within the nature reserve has directly protected the habitat from being encroached, thus allowing the species to thrive. However, this species' long-term protection still requires a deeper understanding of its ecology and distribution, particularly its immature life stage which is not yet known.

Scientific Name:

Pteroptyx bearni Olivier, 1909

Common Name:

The Comtesse's Bent-winged Firefly

Order/Family:

Coleoptera: Lampyridae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Estuarine mangrove zones. Adult fireflies of this species gather in a high number of individuals on selected mangrove plants at night and flash non-synchronously.

Distribution: Exclusive to mangrove estuaries in Peninsular Malaysia and Borneo. Singapore's record is based on museum specimens collected in 1908.

Threats: Habitat loss, light pollution

Photo: Wan FA Jusoh



Pteroptyx bearni specimen in Muséum national d'Histoire naturelle (MNHN), Paris.

Scientific Interest and Potential Value: A lectotype male and a non-type female specimen of *Pteroptyx bearni* from Singapore are deposited in Muséum National d'Histoire Naturelle (MNHN), Paris and they are the only known evidence of the presence of this species in Singapore. The specimens were collected from Singapore in 1908 by E. Cordier during an expedition funded by Comtesse de Béarn. Based on two nationwide surveys on fireflies in Singapore (2008–2009 and 2001–2022), the Comtesse's firefly is no longer sighted, which means that the last time this species was sighted was over 100 years ago.

Conservation Measures: *Pteroptyx bearni* was once a native species in Singapore. This species is still a common sight in many parts of the east coast of Malaysia, such as in Sg Pendas, Johor, which is just a few kilometres away from Singapore. Species re-

introduction might be an option to bring a population of the Comtesse's firefly back to Singapore. However, prior to that, it is more critical and urgent that future scientific studies focus on a deeper understanding of the habitat requirements of fireflies in mangrove forests.

Scientific Name:
Pteroptyx valida Olivier, 1909

Common Name:
Non-synchronous Bent-winged Firefly

Order/Family:
Coleoptera: Lampyridae

National Status: Endangered (EN)

Habitat and Ecology: Commonly observed flashing non-synchronously while congregating on trees along mangrove intertidal zones and other trees in swampy areas such as *Ficus* sp. This firefly species can be easily recognised by the slower flash frequency (about a 6-second flash interval).

Distribution: This species has been reported to occur in Malaysia, Thailand, Indonesia, and Singapore.

Threats: Habitat loss, pesticide use, light pollution



Scientific Interest and Potential Value: Based on recent field observations, the population of *P. valida* is not restricted to only mangrove habitats but can extend to other swampy areas in Singapore. Further studies should focus on understanding of life cycle and habitat requirement of each stage of this firefly species.

Conservation Measures: *Pteroptyx valida* is the only firefly species evaluated under the previous Red Data Book. The population is severely fragmented, and population reduction is suspected based on the apparent decrease in the number of individuals spotted in several sites using direct observations. Habitat enhancement and long-term monitoring are helpful to ensure the survival of this species in Singapore.

Scientific Name:
Catharsius renaudpauliani Ochi & Kon, 1996

Common Name:

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Order/Family:
Coleoptera: Scarabaeidae



Catharsius renaudpauliani, dorsal.

National Status: Near Threatened (NT)

Habitat and Ecology: *Catharsius* adults are classified as large nocturnal tunnellers under the common dung beetle functional clades that group species by time of activity and mode of dung removal. As tunnellers, they remove dung from the forest floor by burying dung directly below source dung pats. Males possess horns on the head and thorax that are used in male-male competition over access to mates. Females tunnel deep beneath the ground to construct brood chambers, where they deposit eggs in brood balls made from dung within which the larvae will hatch and develop, feeding upon the provisioned dung.

Distribution: Peninsular Malaysia, Borneo, Singapore.

Threats: This species is sensitive to habitat loss, as well as decreases in mammal abundance and diversity. Even though *Catharsius* appears to be a generalist in terms of dung preference, being attracted to omnivore and herbivore dung in local survey efforts, their relatively large size may make them more sensitive to dung abundance and the decrease of mammal biomass. In 2009, this species was thought to have been extirpated from Bukit Timah Nature Reserve (Lee et al., 2009), but subsequent survey efforts in 2013 (Ong et al., 2013) and 2018-present have found them in adjacent forests in decent numbers. Resurveys of BTNR have not been conducted at this time.

Scientific Interest and Potential Value: Dung beetles are sensitive to environmental changes and changes in the diversity and abundance of mammals, the source of dung that the beetles rely upon. For these reasons, they are commonly used as bioindicators of forest disturbance and as a proxy in mammal monitoring. *Catharsius renaudpauliani* has recently even been used as a model for mammalian DNA detection via iDNA (invertebrate-derived DNA) sequencing of dung beetle gut contents (Drinkwater et al., 2021), and currently similar trials are being conducted with *C. renaudpauliani* in Singapore. Even among Southeast Asian dung beetles, *Catharsius* beetles are known to contribute disproportionately to the dung removal process in tropical rainforests, being a potential keystone group with regards to this ecosystem service (Slade et al., 2011). Dung beetles are also popular with many amateurs due to their impressive horn morphology and interesting behaviour and can be considered as flagship species. In past literature, *Catharsius* individuals from Singapore have been identified as *Catharsius molossus*, but recent DNA barcoding evidence has confirmed that individuals from Singapore belong to the same species as *C. renaudpauliani* from Peninsular Malaysia and Borneo.

Conservation Measures: Protection of forest habitats and mammal diversity, especially larger mammal species, are likely to help protect this species.

Scientific Name:

Onthophagus deliensis Lansberge,
1885

Common Name:

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Order/Family:

Coleoptera: Scarabaeidae

Photo: TEE Lab



Onthophagus deliensis dorsal.

1 mm

National Status: Near Threatened (NT)

Habitat and Ecology: *Onthophagus* adults are classified as small diurnal tunnellers under the common dung beetle functional clades that group species by time of activity and mode of dung removal. As tunnellers, they remove dung from the forest floor by burying dung directly below source dung pats. While males of many *Onthophagus* species possess horns on the head and/or thorax that are used in male-male competition over access to mates, some species such as *O. deliensis* are monomorphic, with indistinguishable males and females. Females tunnel deep beneath the ground to construct brood chambers, where they deposit eggs in brood balls made from dung within which the larvae will hatch and develop, feeding upon the provisioned dung. In general, *Onthophagus* take about a month to develop from larvae to adult. *O. deliensis* differs from other local *Onthophagus* in its arboreal lifestyle. A recent study in Singapore examining the niche partitioning of local dung beetles between ground and canopy strata found that *O. deliensis* was a major contributor to the community level differences between strata, being the dominant species at the canopy level while rarely being found at the ground level (Abdul Rahman et al., 2021). Further analysis of their physical traits found that compared to other *Onthophagus*, *O. deliensis* had significantly larger wing loading, larger exposed eye area, and longer legs, traits associated with unique dung manipulation behaviour in arboreal dung beetle species (Davis et al. 1997). This evidence supports the notion that *O. deliensis* is an arboreal specialist dung beetle that may exploit dung resources in the canopy.

Distribution: Peninsular Malaysia, Borneo, Singapore.

Threats: This species is sensitive to habitat loss, as well as decreases in mammal abundance and diversity. In particular, this species may have a tighter correlation with arboreal mammal diversity and abundance, and the protection of arboreal mammal species is likely to be beneficial for *O. deliensis*. In 2009, this species was thought to have been extirpated from Bukit Timah Nature Reserve (Lee et al., 2009), but recent survey efforts have found them in decent numbers from canopy traps (Abdul Rahman et al., 2021), which Lee et al did not deploy in their study. It is likely that previous surveys have underestimated the abundance of this species due to the lack of canopy surveys. Resurveys of BTNR have not been conducted at this time.

Scientific Interest and Potential Value: Dung beetles are sensitive to environmental changes and changes in the diversity and abundance of mammals, the source of dung that the beetles rely upon. For these reasons, they are commonly used as bioindicators of forest disturbance and as a proxy in mammal monitoring. As the only arboreal specialist detected thus far in local dung beetle surveys, *O. deliensis* may play an important role in the dung removal, seed dispersal and nutrient recycling ecosystem functions especially pertaining to dung of arboreal mammals.

Conservation Measures: Bukit Timah Nature Reserve is legally protected.

Scientific Name:

Paragymnopleurus maurus
(Sharp, 1875)

Common Name:

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Order/Family:

Coleoptera: Scarabaeidae



Paragymnopleurus maurus, rolling a dung ball.

National Status: Near Threatened (NT)

Habitat and Ecology: *Paragymnopleurus* adults are classified as diurnal rollers under the common dung beetle functional clades that group species by time of activity and mode of dung removal. As rollers, they remove dung from the forest floor by carving out balls of dung from dung pats and rolling them some distance away before eventually burying them. *Paragymnopleurus maurus* is the only “roller” dung beetle left in Singapore and appears to be restricted to the forests in the Central Catchment area.

Distribution: Peninsular Malaysia, Borneo, Singapore.

Threats: This species is sensitive to habitat loss, as well as decreases in mammal abundance and diversity. The rolling behaviour of this species may imply a larger foraging/dispersal range, and that larger continuous/connected forested areas may be important for the survival of this species.

Scientific Interest and Potential Value: Dung beetles are sensitive to environmental changes and changes in the diversity and abundance of mammals, the source of dung that the beetles rely upon. For these reasons, they are commonly used as bioindicators of forest disturbance and as a proxy in mammal monitoring. *Paragymnopleurus maurus* is the only “roller” dung beetle left in Singapore, since *Sisyphus thoracicus* is nationally extinct, with only known records from the time of Wallace. The persistence of *Paragymnopleurus*

Scientific Name:
Chalcosoma atlas (Linnaeus, 1758)

Common Name:
Atlas Beetle

Order/Family:
Coleoptera: Scarabaeidae

Photo: TEE Lab



Paragymnopleurus maurus, dorsal.

in Singapore despite the extirpation of *Sisyphus* is interesting, since the latter is usually considered the more resilient genus, being present in many disturbed forests in Malaysia where *Paragymnopleurus* is often absent, while *Sisyphus* is often still detected in areas where *Paragymnopleurus* occur. The persistence of *P. maurus* in local mature forests may thus have implications for the importance of old growth forests as strongholds of diversity in Singapore. As a relatively large species (and the only local species) that exhibits the famous dung ball rolling behaviour associated with dung beetles in media that is often perceived as “cute”, *P. maurus* has good potential as a flagship species for insect conservation in the local context.

Conservation Measures: Protection of mature forest habitats and mammal diversity as can be found in the Central Catchment Nature Reserve are likely to help protect this species.

Photo: Sean Yap



Chalcosoma atlas specimen from LKCNHM, lateral.

National Status: Critically Endangered (CR)

Habitat and Ecology: *Chalcosoma atlas* belongs to the rhinoceros beetle subfamily Dynastinae and is one of the most famous representatives of the group. Like most rhinoceros beetles, this species is strongly sexually dimorphic, with males possessing an impressive set of horns – one on the head and two on the thorax. These work together to create a grappling, pincer-like motion that males use in intrasexual competitions over access to females in the canopy. Males are also separated into two morphs – majors and minors, with major morph males possessing much longer horns than the minor males. The lifespan of this species lasts about a year. Adult Atlas Beetles are known to feed on tree sap, fruits and leaves, while the larvae feed on rotting wood and decaying plant material. Though mostly restricted to forested habitats, they are considered minor crop pests of oil palm in Indonesia (Pradana et al., 2020).

Distribution: Most of Southeast Asia.

Threats: This species is sensitive to habitat loss. Poaching may also play a large role in population declines of this species, as its charismatic appearance makes it popular among collectors and exotic pet breeders.

Scientific Interest and Potential Value: Apart from various accounts in oral history, the existence of this species in Singapore is only known from three

museum specimens. Two specimens collected by Ridley are housed in the London NHM, a female collected in 1899, and a male in 1904. The third specimen is housed in LKCNHM ZRC, from Murphy student collection 1981. However, the Murphy specimen lacks a collector name and specific location, the only location label being "Singapore". Assuming the Murphy specimen was really collected in Singapore, no official records have been made since 1981 (40 years ago). Based on the technicality of IUCN definitions, this species is thus listed as "critically endangered" but is likely to be locally extinct. The likely extinction of this species makes *Xylotrupes gideon* the largest extant rhinoceros beetle in Singapore. *Chalcosoma atlas* and *X. gideon* are known to have similar behaviours, life history and host plants, often overlapping in the same habitats in Malaysia, so it is unclear why *C. atlas* has declined while *X. gideon* persists, though based on anecdotal accounts *X. gideon* is also less abundant now as compared to the past. The larger size of *C. atlas* may imply a larger suitable habitat area requirement, while also making it easier to be collected/poached. In terms of conservation interest/value, this species is famous worldwide and a good candidate as a flagship for insect conservation, and potentially for reintroduction efforts.

Conservation Measures: The Central Catchment Nature Reserve provides protected habitat, should the species recolonise.

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Diptera – Flies

ANG YUCHEN

Scientific Name:

Heligmonevra fuscinalonga
Tomasovic & Grootaert, 2008

Common Name:

Assassin fly

Order/Family:

Diptera: Asilidae

National Status: Vulnerable (VU)

Habitat and Ecology: This is a large, robust predator that actively hunts for prey in flight. It likely has specific ecological requirements to thrive, thus far less than 5 specimens have been found in the more undisturbed terrestrial forests in Singapore.

Distribution: This species is described from Singapore and has only been found in Nee Soon Swamp Forest and Bukit Timah Nature Reserve. Some specimens have also been collected in Cambodia at one locality.

Threats: Loss, scarcity and changes/degradation of our more pristine nature reserves, especially Nee Soon Swamp Forest (e.g., the general drying up of the

Scientific Name:

Allocanace gibba Munari 2018

Common Name:

Gibba beach fly

Order/Family:

Diptera: Canacidae

Photo: Maimon Hussin



habitat), where the majority of specimens have been found. Due to its large size, and as one of the (insect) apex predators, its survival is also dependent on a healthy insect ecosystem to support its population.

Scientific Interest and Potential Value: As an apex insect predator, it can be considered a keystone species that indicates the general health of the insect community in an area.

Conservation Measures: Conservation and monitoring of the remaining terrestrial forested areas will be important for the survival of this species.

Photo: Maimon Hussin



National Status: Endangered (EN)

Habitat and Ecology: First collected in 2012, this very rare monotypic species has only been found in old-growth mangroves (none found in newer mangroves), and likely an obligate mangrove habitat specialist, where larvae are likely microbial grazers in mangrove microhabitats.

Distribution: It has only been found in low numbers on Pulau Semakau's old mangroves and is endemic to Singapore. Extensive surveys on other mangroves in Singapore have not revealed this species.

Threats: Overall, loss and scarcity of the original mangrove habitats in Pulau Semakau. More specifically, while there are no immediate threats to the mangrove

site in Semakau, it is not under any legal protection to protect it from any potential future developments.

Scientific Interest and Potential Value: This species is described within a new monotypic genus, which is itself from another rare monotypic subtribe Canacina, previously only distributed from the Mediterranean and Northeastern Atlantic Coast. It has highly derived features which are not found in other canacids, which makes it even more valuable as a species for morphological and evolutionary research in this taxon.

Conservation Measures: Conservation and monitoring of the old mangrove sites on Pulau Semakau is crucial to this species, and some form of legal/official protection should be considered as well.

Scientific Name:
Sigaloethina phaia Munari, 2004

Common Name:
Phaia beach fly

Order/Family:
Diptera: Canacidae

National Status: Vulnerable (VU)

Habitat and Ecology: First collected in 2012, this very rare monotypic species has only been found in old-growth mangroves (none found in newer mangroves), and likely an obligate mangrove habitat specialist, where larvae are likely microbial grazers in mangrove microhabitats.

Distribution: This is a rare species was known to be limited to Australasia; it was more recently found specimen from Chek Jawa Mangroves (Pulau Ubin, Singapore) representing a new Oriental record. This species is not found in any other Singaporean mangrove despite extensive surveys.

Threats: Loss, scarcity and changes/degradation of mangrove habitats within Pulau Ubin.

Photo: Maimon Husin



Scientific Interest and Potential Value: This species represents a new genus and species record to the Oriental region, having previously only been recorded in Australasia. It is of research interest for investigating biogeography patterns in mangrove/coastal insects.

Conservation Measures: Conservation of mangrove habitats is crucial for this and many other mangrove specialist species.

Scientific Name:
***Coelopa orientalis* Macquart,
 1843**

Common Name:
Oriental kelp fly

Order/Family:
Diptera: Coelopidae

National Status: Endangered (EN)

Habitat and Ecology: Oriental kelp flies are large, hairy flies whose larvae breed exclusively on beach-stranded kelp (Phaeophyceae). Adults are cursorial and disinclined to fly, preferring to burrow into kelp wracks when disturbed. Life within decaying kelp is the likely reason for the robust and streamlined build of the adults. This allows ease to burrow into kelp and also resist strong winds to cling on to substrates.

Distribution: This is an Oriental species. In Singapore, they are only recorded very infrequently from small kelp wracks that have escaped the clearing by workers on beaches in Labrador Park and Pulau Semakau since the 2000s.

Threats: This species is extremely reliant on kelp wracks for feeding and breeding. As most beaches are regularly maintained, kelp wracks are constantly removed, thus resulting in the loss of the resources and habitat required for the survival of these flies.

Scientific Name:
***Corethrella calathicola*
 Edwards, 1930**

Common Name:
Frog-biting midge

Order/Family:
Diptera: Corethrellidae

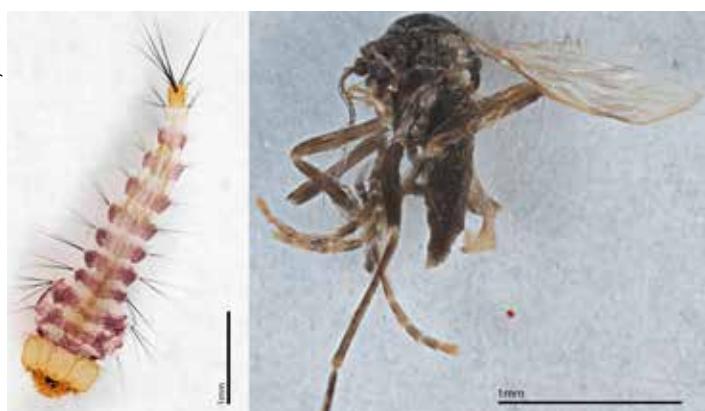
Photo: Miteshavrin S/O Ravindran



Scientific Interest and Potential Value: Kelp flies are important decomposers of kelp wracks and aid in nutrient cycling in the ecosystem; due to their large size, they are known to be important food sources for other animals such as birds and reptiles. They are also model organisms for sexual selection studies due to their large intraspecific size variability which is linked to a chromosomal inversion system, and their mating behaviour is well studied in a number of species.

Conservation Measures: Measures can be taken to preserve sections of beaches where kelp wracks are allowed to accumulate, albeit away from the general public. While they are not attracted to synanthropic trash and food sources and are not known and unlikely to be zoonotic vectors, they may on occasion be a nuisance to beach visitors by their presence.

Photo: Robyn Y Lim



Larva (left) and Adult Female (right) *Corethrella calathicola*.

National Status: Vulnerable (VU)

Habitat and Ecology: This species, like most corethrellids, are tiny midges with specific ecological niches. Larvae are aquatic inquiline predators in *Nepenthes* pitchers, largely preying on smaller-sized mites and other insect larvae. Adults require a blood meal to acquire enough protein from eggs, and specialise in feeding on anurans, locating them through their calls. They are largely found in more undisturbed mature forested areas where more *Nepenthes* and anurans can be found.

Distribution: This is an Oriental species. In Singapore, records are only from Nee Soon Swamp Forest and Kent Ridge.

Scientific Name:

Teleopsis dalmanni
(Wiedemann, 1830)

Common Name:

Malayan stalk-eyed fly

Order/Family:

Diptera: Diopsidae

National Status: Vulnerable (VU)

Habitat and Ecology: These large, elegant flies are restricted to undisturbed forests, especially around forest streams, where they hang on root threads overhanging the streams or resting on low herbage. The eye-stalks are sexually-dimorphic. Males have much longer eye-stalks and they are used in mating competitions. They have a lekking system where a dominant male will defend a desirable root thread and females form harems around the male. Both adults and larvae are saprophagous.

Distribution: Widespread in Southeast Asia. In Singapore they are uncommon and are restricted to more undisturbed forest with moving waterbodies – these habitats are largely within and surrounding the Central Catchment area.

Threats: This species is reliant on two other hosts for survival: *Nepenthes* for larval habitats and anurans for adult blood-feeding. Any harm to either host groups would result in a threat to the survival of this species in Singapore.

Scientific Interest and Potential Value: Being reliant on two host groups for survival, this species can function as a highly sensitive indicator to the general health of the forest ecosystem.

Conservation Measures: The continued monitoring and conservation of existing forest habitats in Singapore.

Photo: Su Yanle



Threats: This uncommon species requires more pristine forest habitats (specifically those with streams) and are sensitive and adversely affected by changes in the environment (e.g. drying of habitats).

Scientific Interest and Potential Value: This large and unique-looking species can be used as an indicator for the health of inland forests, and they are an important model organism for studies in sexual selection and sex-linked morphological evolution. Note that this species was inaccurately named as *Achias maculipennis* in the second edition Red Data Book (RDB2), which is an obsolete name for another species in the Peacock fly family (Tephritidae).

Conservation Measures: Continued monitoring and conservation of existing inland forest habitats.

Scientific Name:
***Ngirhaphium caeruleum* Evenhuis & Grootaert, 2002**

Common Name:
Cerulean long-legged fly

Order/Family:
Diptera: Dolichopodidae

National Status: Endangered (EN)

Habitat and Ecology: An obligate mangrove habitat specialist, they are closely associated with the muddy substrate of mangrove floors and are often found perching on shoots and roots of mangrove trees at low tide to search for small invertebrate prey on the mangrove mud surface.

Distribution: This species has two allopatric populations of colour morphs: the normative 'blue' morph (which lends its name to 'caeruleum') is found in abundance but only in the mangroves of Pulau Semakau. A small population of 'green' morphs were found in the mangroves of Pulau Ubin. Additional populations of the green morph have also been found in the mangroves of Brunei.

Threats: Loss, scarcity and changes/degradation of mangrove habitats, especially the reduction of muddy



Green morph



Blue morph

microhabitats in the mangroves. Furthermore, the blue morph is endemic to Pulau Semakau, which has no legal protection to protect this habitat from any potential future developments.

Scientific Interest and Potential Value: This large and charismatic species can be used as an indicator species for the health of mangrove habitats, specifically the muddy microhabitats. Its allopatric populations of different colour morphs are also of interest to research in biogeographical patterns and potential incipient speciation.

Conservation Measures: Conservation and monitoring of the mangrove habitats on Pulau Semakau and Pulau Ubin is crucial to this species, and some form of legal/official protection should be considered as well.

Scientific Name:

Ngirhaphium murphyi Evenhuis & Grootaert, 2002

Common Name:

Murphy's long-legged fly

Order/Family:

Diptera: Dolichopodidae

National Status: Endangered (EN)

Habitat and Ecology: This rare species was first collected by Professor D.H. Murphy, from Mandai mangrove, in 1978. Subsequently, it was found in several mangroves along Singapore's northern coastline. An obligate mangrove habitat specialist, they are closely associated with the muddy substrate of mangrove floors and are often found perching on shoots and roots of mangrove trees at low tide to search for small invertebrate prey on the mangrove mud surface.

Distribution: This Singaporean-endemic species is only found in the mangroves of Singapore's northern coastline.

Threats: While it is found in several mangroves along Singapore's northern coastline, only one site (Sungei Buloh Wetland Reserve) is under legal protection from future developments. Furthermore, since its inclusion in the previous, second edition Red Data Book (then assessed with a category of threat status of Vulnerable), subsequent surveys show them turning up in declining numbers. This is likely due to changes in the mangrove habitats, especially the observed reduction of muddy microhabitats in Sungei Buloh, which is probably applying more pressure on this Singaporean endemic species.

Photo: Jayanthi Puniamoorthy & Yuchen Ang



Scientific Interest and Potential Value: This large and charismatic species can be used as an indicator species for the health of mangrove habitats, specifically the muddy microhabitats.

Conservation Measures: Conservation and monitoring of the mangrove habitats (especially the muddy microhabitats) Singapore's northern coastal mangroves. Legal protection from future developments should also be considered for the other mangroves on the northern coast other than those in Sungei Buloh.

Scientific Name:
***Thinophilus superbus* Grootaert,**
2018

Common Name:
Superb long-legged fly

Order/Family:
Diptera: Dolichopodidae

National Status: Endangered (EN)

Habitat and Ecology: A relatively rare front mangrove specialist, where adults prowl the sandier mudflats during low tide for invertebrate prey. They are found in low numbers throughout the year.

Distribution: This relatively rare species was described from and is only recorded in the mangroves of Pulau Semakau within Singapore. It has subsequently been recorded in low numbers in Southern Thailand.

Threats: Loss, scarcity and changes/degradation of mangrove habitats on Pulau Semakau.

Scientific Interest and Potential Value: This large and charismatic species can be used as an indicator species for the health of front mangrove habitats. Given its beauty, this species has the potential to be

Photo: Jayanthi Puniamirthy & Yuchen Ang



an ambassador for mangrove biodiversity for science communication purposes.

Conservation Measures: Conservation and monitoring of the mangroves on Pulau Semakau is crucial to this species, and some form of legal/official protection should be considered as well.

Scientific Name:
***Elaphropeza bakau* Grootaert &**
Shamshev 2015

Common Name:
Bakau dance fly

Order/Family:
Diptera: Hybotidae

National Status: Vulnerable (VU)

Habitat and Ecology: These Singaporean-endemic species are tiny, active hunters than can be found prowling on the leaves and branches of mangrove trees hunting for other smaller invertebrate prey.

Photo: Igor Shamshev



Distribution: This relatively abundant species was described from and is only recorded within the mangroves of Pulau Semakau, Singapore.

Threats: While relatively abundant, this species is endemic to the mangroves of Pulau Semakau; extensive surveys in other mangroves failed to reveal this species. As such, the loss, scarcity and changes/degradation of mangrove habitats here could have drastic effects on the survival of this species.

Scientific Interest and Potential Value: While most *Elaphropeza* species have a strong preference for terrestrial habitats, a small group of species represented by *E. bakau* seem to be mangrove specialists. The comparative study of these species can yield important insights into habitat adaptations within a taxon.

Conservation Measures: Conservation and monitoring of the mangroves on Pulau Semakau is crucial to this species, and some form of legal/official protection should be considered as well.

Scientific Name:
Xenoplatyura beaveri Matile,
1979

Common Name:
Nepenthes predatory fungus gnat

Order/Family:
Diptera: Keroplatidae

National Status: Vulnerable (VU)

Habitat and Ecology: While most fungus gnats feed on fungi, this species is a specialised inquiline predator in Nepenthes pitchers. Larvae spin sticky webs over the entrance of a pitcher to trap other inquiline prey that emerge from pitcher fluid (usually, mosquitoes). Adults are likely reverting back to more stereotypical fungus-feeding behaviours.

Distribution: This species is known throughout Southeast Asia. Within Singapore, they are only found in Nepenthes pitchers within the Nee Soon Swamp Forest.

Threats: This species is reliant on Nepenthes for larval habitats, and it is likely that the adults require more pristine habitats for the fungi that they would feed on. Any damage to the host plant population as well as



(A: Larval web woven by *X. beaveri* larva within *Nepenthes ampullaria* pitcher,
B: Larva, C: Pupa, D: Adult male)

changes in the locality habitat would result in a threat to the survival of this species in Singapore.

Scientific Interest and Potential Value: This species can likely be utilized as an easy indicator of ecosystem health, as larval webs on pitchers can be easily recorded. They also perform regulating ecosystem services in controlling mosquito populations that may breed within Nepenthes pitchers.

Conservation Measures: The continued monitoring and conservation of existing forest habitats in Singapore.

Scientific Name:
***Sepsis silvicola* Iwasa 2011**

Common Name:
Mangal sepsid fly

Order/Family:
Diptera: Sepsidae

National Status: Vulnerable (VU)

Habitat and Ecology: This species was first collected from Changi Mangrove in 1976, which has since been severely impacted; subsequent surveys failed to reveal any more specimens. However, this species has very recently been found in the mangroves of Pulau Ubin. They are closely associated to mangrove habitats, and they are likely feeding and breeding on wild boar and macaque dung.

Distribution: This species was previously collected from Changi Mangroves, but now can only be found in Pulau Ubin. It has also been recorded from the mangroves of Southern Vietnam.

Threats: Loss and degradation of mangrove habitats. The reduction in populations of macaques and wild boars can also reduce the quantity of dung which the species feeds/breeds on.



Photo: Maimon Hussin

Scientific Interest and Potential Value: This species was collected by Professor Murphy in 1976, who recognised it as a new species and genus, but did not publish its description. In 2011, this species was also found in Vietnam and described under an existing genus *Sepsis*. However, its morphology suggests it being an entirely new and monotypic genus (as recognised by Prof. Murphy), which will be revised subsequently. Morphological and molecular analysis of this species could then be important in resolving some phylogenetic instabilities in the systematics of Sepsidae.

Conservation Measures: Preservation and monitoring of mangrove sites in Pulau Ubin is important. Monitoring the populations of Eurasian wild boars and Long-tailed macaques will also be important for safeguarding the survival of this species.

Scientific Name:
***Eosmalla singularis* (Walker, 1857)**

Common Name:
Singular flower fly

Order/Family:
Diptera: Syrphidae



Photo: Rene Ong Sheue Ling

National Status: Vulnerable (VU)

Habitat and Ecology: This extremely rare species was known from two female specimens from Singapore (1857) and Sabah (1913). They remained undetected until another specimen was collected from Bukit Timah Nature Reserve in 2019. Their life history is largely unknown, but they seem to be associated with more undisturbed lowland rainforests.

Distribution: This extremely rare species has thus only been found in Bukit Timah Nature Reserve. They have also been recorded in pristine forest plots in Sabah, Malaysia.

Threats: Lack of life-history data for this species makes it hard to determine what threats it faces, but changes

in habitats that the species might be reliant upon within Bukit Timah Nature Reserve might be a threat.

Scientific Interest and Potential Value: This species has been studied for its hornet mimicry. It is also a large, charismatic species that has been featured prominently on Singapore's national news media, which could play a role as an ambassador species for Singapore's insect biodiversity.

Conservation Measures: This extremely rare species is only known from Bukit Timah Nature Reserve, which is a lowland rainforest habitat for which it is very likely associated with. Other than habitat monitoring and preservation, more research into their life history is needed to determine what kind of specific conservation measures should be applied.

Scientific Name:
Milesia vespoides Walker 1857

Common Name:
Hornet-mimicking hover fly

Order/Family:
Diptera: Syrphidae

National Status: Vulnerable (VU)

Habitat and Ecology: This species was first collected in Singapore by A.R. Wallace in the early 1850s and remained undetected in Singapore until 2019 when a second specimen was collected in Pulau Ubin. Subsequently, a few other specimens have been recorded in and around urban parks. It is unclear why specimens are only starting to turn up in observable numbers after >150 years of non-detection. While not much is known about their life history, these large flies are excellent mimics of the Greater Banded Hornet *Vespa tropica*.

Distribution: This rarely recorded species has thus far been found in and around urban parks in Sentosa, Admiralty, Bukit Batok and Bukit Timah. It is also rarely collected around the Oriental region, usually in forested areas.

Threats: This is a rare fly which was not found for >150 years but is now being recorded in urban parks.

Photo: Joseph Lin



However, due to its rarity and ephemerality, it would be prudent to assign it a Vulnerable category of threat status. More targeted life-history research can provide data for a more accurate assessment.

Scientific Interest and Potential Value: This species has been studied for its hornet mimicry. It is also a large, charismatic species that has been featured prominently on Singapore's national news media, which could play a role as an ambassador species for Singapore's insect biodiversity.

Conservation Measures: A puzzling question is why this species, that had apparently 'disappeared' for over a century, is now suddenly turning up again, in urban

parks. More research into their life history is needed to further determine its national status and what kind of conservation measures should be applied.

Scientific Name:
Themara ampla Walker, 1857

Common Name:
Hammerhead peacock fly

Order/Family:
Diptera: Tephritidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: A few species of hammerhead peacock flies are known to occur in Singapore, most of them confined to dense, more undisturbed forest areas where they require fermenting logs to breed on. Males have enlarged 'hammerheads' which they use for displaying and fighting off other males from prime breeding spots on a rotting log. This species is easily distinguishable from the others by the absence of a clear spot near the tip of the wing (see *T. maculipennis*).

Distribution: This is an Oriental species. The lectotype of this species is a Singaporean specimen collected by naturalist Alfred Russell Wallace in the 1850s and remains the only known Singaporean specimen. It likely had a similar distribution pattern within Singapore i.e., in the forested regions of Singapore. Despite targeted samplings in modern times since 1960s, only specimens of other species (e.g., *T. maculipennis*) have been found. As such it is likely that this species is extirpated from Singapore.



Lectotype female *Themara ampla* specimen with associated labels.

Threats: It is likely that the loss of forest habitat and subsequent loss of suitable host species of tree (for breeding) to have caused its extirpation locally.

Scientific Interest and Potential Value: The mating behavioural ecology of hammerhead flies and other peacock flies are relatively well-studied, and some serve as models for investigating mating systems such as leks. Their specific requirements for breeding also means that they can function as an indicator for forest health.

Conservation Measures: More studies may need to be done to perhaps figure out the specific requirements (e.g., fermenting rot of a tree species) for breeding in this species, where a reintroduction of the putative host tree species may induce a revival of the species.

Scientific Name:
Themara maculipennis
(Westwood, 1847)

Common Name:
Hammerhead peacock fly

Order/Family:
Diptera: Tephritidae



Adult male *Themara maculipennis*, dorsal profile.

National Status: Vulnerable (VU)

Habitat and Ecology: A few species of hammerhead peacock flies occur in Singapore. Most are confined to dense forest where they require fermenting logs to breed on. Males have enlarged 'hammerheads' which they use for displaying and for fighting off other males from prime breeding spots on a log. This species is easily recognised by a clear wing spot near the tip of the wing.

Distribution: This is an Oriental species. In Singapore, records are only from the Bukit Timah and Central Catchment Nature Reserve. They are rarely collected in malaise traps. However, they can be found in relatively high numbers where there are rotting tree logs at a specific stage of fermentation.

Threats: Loss of forest habitat leading to the loss of suitable host tree species required for breeding.

Scientific Interest and Potential Value: The mating behavioural ecology of hammerhead flies and other peacock flies are relatively well-studied, and some serve as models for investigating mating systems such as leks. Their specific requirements for breeding means that they are very ephemeral and can function as indicators of forest health.

Conservation Measures: Continued conservation of forested areas.

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Hemiptera – Freshwater Aquatic Bugs

TRAN ANH DUC, CHOO RUISHENG, MARC CHANG JIA JIN, HWANG WEI SONG

Scientific Name:

Hebrus mangrovensis

Common Name:

Mangrove velvet bug

Order/Family:

Hemiptera/Hebridae

National Status: Vulnerable (VU)

Habitat and Ecology: This species is known to inhabit logs in mangrove swamps, and likely to be adapted to be fully submerged during high tide.

Distribution: This species is only known from Kranji mangroves in Singapore and nowhere else in the world.

Threats: Coastal mangroves are one of the most threatened habitats in Singapore, with a fragmented and much reduced area coverage. Given its highly limited distribution and mangrove habitat requirements, this species is vulnerable from any perturbations to its local environment, especially since Kranji mangrove is not within a nature reserve.

Scientific Interest and Potential Value: This species belongs to the velvet bug family (Hebridae) which is one of the smallest types of aquatic bugs in the world. It is one of only four velvet bugs species that are known to occur in Singapore. It is also one of the first two velvet bug species that were recorded to inhabit mangrove swamps, instead of the usual freshwater or moist terrestrial habitats. Both males and females of this species have very reduced wings (micropterous), which means they are flightless, a rare phenomenon for this

Photo: Tran Anh Duc



Preserved specimen of *Hebrus mangrovensis*.

group of velvet bugs. Given its strong association to the mangrove ecosystem and limited dispersal ability, this is a potential bioindicator species for environmental assessments.

Conservation Measures: Information about this species is poor due to the general inaccessibility of its mangrove habitat, its cryptic microhabitat in rotting logs, and its tiny size. Species information is only so far derived from the original specimens collected between 1985 and 1986. No recent records of this species are available since then and an update is sorely needed to assess its current status.

Scientific Name:
Ventidius malayensis

Common Name:
-

Order/Family:
Hemiptera/Gerridae

National Status: Vulnerable (VU)

Habitat and Ecology: This species is a semi-aquatic insect that skims on the water surface in freshwater streams. Its preferred habitat is slower-flowing streams in hilly or lowland areas. It is only recorded in Nee Soon Freshwater Swamp within Singapore. It is a predatory insect that hunts and scavenge small insects that fall onto the water surface.

Distribution: This species has a relatively widespread distribution that includes Thailand, Peninsular Malaysia, Singapore and Borneo.

Threats: Given its restricted range within Nee Soon Freshwater Swamp locally, this species is likely to be highly sensitive to microclimatic conditions such as water and food availability. Any habitat modification or loss will significantly impact the already limited local population further.

Scientific Interest and Potential Value: This species is one of three species of water striders from the genus *Ventidius* present in Singapore. Each species resides in a slightly different microhabitat in the local freshwater

Photo: Yang Chang Man



Preserved specimen of *Ventidius malayensis* (front legs obscured). Live colouration is black and green, turning yellow upon death.

ecosystem, with *Ventidius harrisoni* slightly overlapping with *Ventidius malayensis* within the Central Catchment Nature Reserve. Its preference for shaded forested water bodies such as lakes and streamlets suggest it can be a useful bioindicator species.

Conservation Measures: The last specimen record for this species dates back to 1984 and is in need of an update on its current status within the Nee Soon Freshwater Swamp forest.

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Hemiptera (Reduviidae) – Assassin Bugs

HWANG WEI SONG, CHOO RUISHENG, YEO HUIQING

Scientific Name:
Acanthaspis signifera

Common Name:
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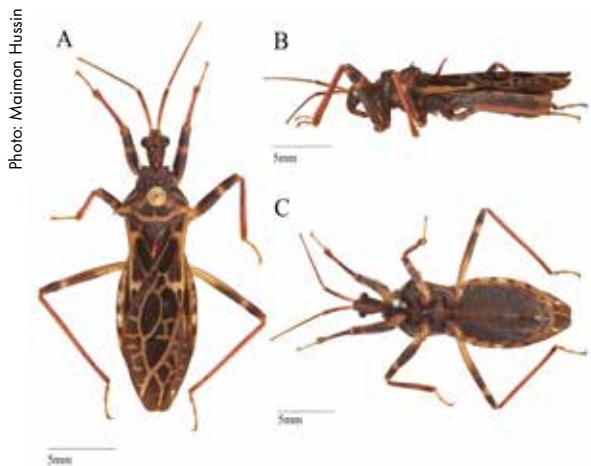
Order/Family:
Hemiptera: Reduviidae

National Status: Vulnerable (VU)

Habitat and Ecology: This species is nocturnal and has a corticolous lifestyle (associated with tree-bark living). Any specific host plant association is unknown, but it is found only on large, mature trees with rough, scaly, or fissured bark where it can hide within crevices in the day. During the night, they can be seen hunting for prey on the tree trunk, which are most likely to be exclusively certain species of ants and termites. Immatures exhibit camouflaging behavior using debris and sometimes prey carcasses.

Distribution: Known to occur in Malacca, Malaysia and Java, Indonesia as well.

Threats: The species is only found in Central Catchment Nature Reserve within Singapore, where there are old growth primary rainforests or mature secondary forests. The species is likely restricted to mature forests based on its preferred microhabitat and specialized prey availability. Given its restricted diet and microhabitat requirements, the species is vulnerable from any perturbations to its environment. Being at a higher trophic level as an insect predator, their numbers are also relatively less abundant and more sensitive to disturbances.



Scientific Interest and Potential Value: Information about this species is practically unknown besides its formal scientific description. Ecological and behavioral information are limited and partially inferred by known attributes of close relatives, with slight variations to be expected. Given its strong association to a functional forest ecosystem, this is a potential bioindicator species for environmental assessments.

Conservation Measures: Given its known restriction within the Central Catchment Nature Reserve within Singapore, continued protection of the existing forests, and proper management towards forest recovery will help ensure its survival locally. Availability of suitable habitats outside of the Central Catchment Nature Reserve in time may allow expansion of the species range to other areas in Singapore.

Scientific Name:
Acanthaspis signifera

Common Name:
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Order/Family:
Hemiptera: Reduviidae

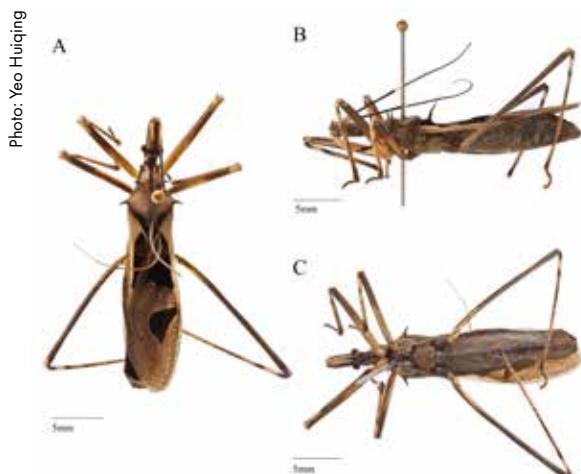
National Status: Vulnerable (VU)

Habitat and Ecology: This species is nocturnal and found usually on low-lying vegetation in forested areas. Its specific habitat and ecology is not well-studied, but it is presumed to be a mature forest-specific species and a generalist predator that feeds on a variety of nocturnal arthropods. It has been documented to feed on various orthopterans (crickets and grasshoppers), and molecular gut analysis shows it feeds on spiders too.

Distribution: This species is recorded to occur in Peninsular Malaysia, Myanmar, and Northern India (Sikkim).

Threats: Given its restricted range within Central Catchment Nature Area locally, this species is likely to be highly sensitive to microclimatic conditions and prey availability. Any habitat modification or loss will significantly impact the already diminished local population further.

Scientific Interest and Potential Value: This species is the largest assassin bug species present in



Photoplate for *Canthesancus gulo*.

Singapore, and potentially plays a significant role as a micro-predator in a functional forest ecosystem. Given its relatively large size and ease of identification, it can potentially be a useful bioindicator species for forest monitoring purposes. The venom that it injects to subdue prey has never been studied and houses potential pharmaceutical value.

Conservation Measures: This species is only known to occur in the Central Catchment Nature Reserve within Singapore, which suggests this species may not survive in more fragmented forests and require a larger contiguous mature rainforest with sufficient prey availability. Any disturbances that might affect the microclimatic conditions and prey availability within the nature reserve is likely to impact the species rapidly.

Scientific Name:
Cosmolestes picticeps

Common Name:
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Order/Family:
Hemiptera: Reduviidae

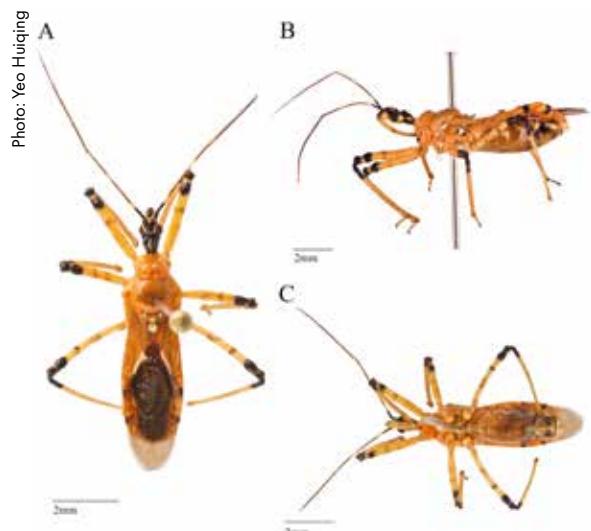
National Status: Least Concern (LC)

Habitat and Ecology: This species is usually found on low-lying vegetation with fair amount of sunlight exposure. They are generalist predators, that feeds on a variety of insect prey including beetles, wasps, flies and moths.

Distribution: This species is recorded to occur in Penang, Java, Borneo, and Sumatra.

Threats: This species appears to be adapting well to the urban environment, with sightings in both urban parks and nature reserves. It is still more commonly observed in forested areas so its adaptation to urban environments has its limits. Prey availability and suitable microhabitats for egg-laying and nymphal development are likely ecological determinants.

Scientific Interest and Potential Value: This species is likely to be the most conspicuous and most commonly



Photoplates for *Cosmolestes picticeps*.

encountered assassin bug in Singapore, given its diurnal nature on low-lying vegetation and its bright colouration. Its relatively common occurrence throughout the island suggests a suite of traits adapted for urban greenery living and may be a suitable candidate to consider as a native natural enemy for urban gardens/farming due to its appetite for lepidopteran prey.

Conservation Measures: This species appears to be doing relatively well in urban greenscapes. Further greening and natural corridors established is likely to help this species thrive locally.

Scientific Name:
Gardena melinarthrum

Common Name:
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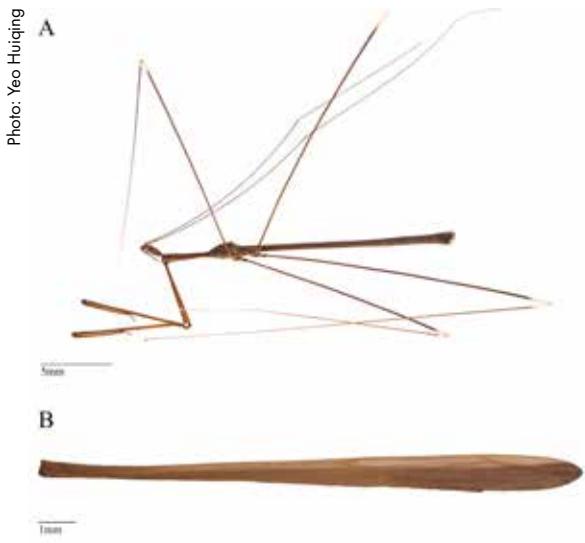
Order/Family:
Hemiptera: Reduviidae

National Status: Vulnerable (VU)

Habitat and Ecology: This species is usually found on the forest floor, leaf litter, or on lower parts of tree trunks. It is found thus far only in Central Catchment Nature Reserve, Bukit Timah Nature Reserve and Dairy Farm Nature Park, suggesting that it requires primary or mature secondary rainforests to survive. It is nocturnal and specializes in hunting small spiders such as Pholcidae species, in leaf litter or on understorey vegetation.

Distribution: This species has a widespread distribution, recorded to be present in Sri Lanka, India, Philippines, Lombok island, Sumatra, Java, Formosa, China, Australia and Japan.

Threats: This species appears to be limited by the availability of suitable mature secondary forests locally, and likely present only in Central Catchment Nature Reserve, Bukit Timah Nature Reserve and the adjacent buffer parks. Microhabitat conditions and prey availability are likely to contribute to its limited range. More severe dry spells or greater exposure to sunlight that affect the understorey conditions in our nature reserves are likely to have a detrimental impact on the existing population. Insecticides that leave long-term residuals in the soil that doesn't breakdown naturally are likely to impact this and other leaf litter species long after cessation of application.



Scientific Interest and Potential Value: This species is the largest of the thread-legged assassin bugs subfamily in Singapore. This group of assassin bugs have evolved innovative, specialized spider hunting strategies that include aggressive mimicry and the ability to cut through spider webs undetected. It is not known how this species captures its prey and if different types of spiders require different strategies.

Conservation Measures: This species represents one of the key micropredators in the leaf litter community in our rainforests, an assemblage of species that is severely understudied. Measures that can help ensure the long-term maintenance of our forest ecosystem with minimal disturbance will contribute to its sustained survival locally.

Scientific Name:
Inara flavopicta

Common Name:
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Order/Family:
Hemiptera: Reduviidae

National Status: Least Concern (LC)

Habitat and Ecology: The immature stage of this species is better known than the adult. The immatures are predominantly ant specialists, piling the ant carcasses on their backs after feeding, presumably as a form of camouflage against predators and also prey. The immatures feed mostly on *Dolichoderus* ants and are active at night. This species is most often found in forest understorey vegetation and appears to be doing well in urban forests outside of the nature reserves.

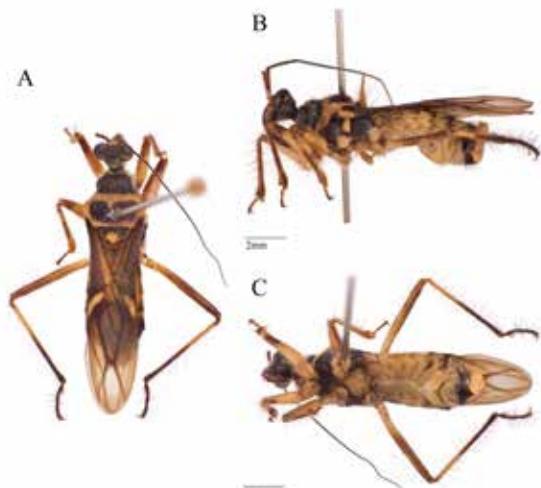
Distribution: This species is also recorded in Penang and Sarawak, Malaysia.

Threats: This species appears to be adapting well to urban forests environment, due to the availability of prey species and suitable microhabitats. Due to its prey specialization, any disturbances that can affect prey availability will have a knock-on effect on this species. One potential threat at forest fringes close to residential areas will be the application of insecticides with a long residual effect.

Scientific Interest and Potential Value: The immature of this species is known for its peculiar carcass-piling behavior that is almost exclusively ants. How the immature constructs the ant carcass pile is being studied, together with the potential of aggressive mimicry use to hunt for prey undetected. Given its reliance on a forest habitat, but with the ability to adapt to certain disturbances, it can be used as a bioindicator species as well.

Conservation Measures: This species appears to be adjusting well to urban forest environments. More efforts in creating green corridors and forest habitats will allow this species to expand its current range and promote better population connectivity.

Photo: Yeo Huiqing



Photoplates for *Inara flavopicta*.

Photo: Hwang Wei Song



Inara flavopicta nymph with ant carcass pile.

Scientific Name:
Lisarda erecta

Common Name:
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Order/Family:
Hemiptera: Reduviidae

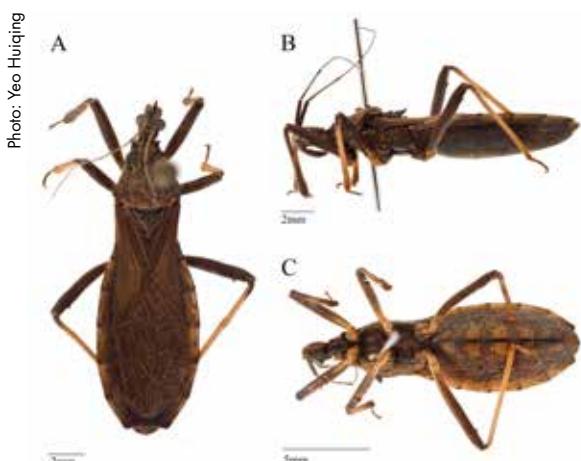
National Status: Endangered (EN)

Habitat and Ecology: This species is found on the forest floor, on leaf litter, or low-lying vegetation in secondary regrowth forests. Feeds exclusively on termites. Only known in Singapore from Chek Jawa forest, Pulau Ubin.

Distribution: This species was originally described from Myanmar.

Threats: Habitat loss due to human development is the likely cause of this very restricted range.

Scientific Interest and Potential Value: This species and other congeners specialize on forest termite species. While other species are relatively abundant in mainland Singapore, this species has a very limited range on Pulau Ubin island and has so far not been



found on the main island. There is interest in the hunting behavior that this group of species performs to capture termite prey, given formidable termite defenses against predators. This includes the venom they inject, which may have potential applications.

Conservation Measures: While ongoing efforts to find additional populations of this species is ongoing, its only known range within the small Chek Jawa forest is vulnerable to any major disturbances.

Scientific Name:
Triatoma rubrofasciata

Common Name:
Kissing Bug

Order/Family:
Hemiptera: Reduviidae

National Status: Data Deficient (DD)

Habitat and Ecology: This is the only known blood-feeding Triatominae species known to occur in Singapore. Previously considered to be abundant in local settlements (kampungs) and even built-up urban areas in the early 1970s, this species has apparently disappeared into obscurity. It is capable of feeding on different blood hosts, including peridomestic animals such as chickens, dogs and humans. Its preferred host is likely to be rats. They are usually found living near to their hosts, among piles of dead wood, or in tight crevices where they can shelter in the day and emerge at night to feed. They are attracted to artificial light when sourcing for new hosts.

Distribution: This species is tropicopolitan.

Threats: This human-associated species appears not as adaptive to highly built-up urban living environments, although the rat population is still highly abundant. Hence it is unknown whether the local population has drastically declined due to habitat loss or has adapted to a more reclusive lifestyle.



Photoplates for *Triatoma rubrofasciata*.

Scientific Interest and Potential Value: Although this species does not carry the protozoan parasite *Trypanosoma cruzi*, which causes Chagas Disease in the Americas, they can harbor other endemic trypanosomes that can cause sickness in other wildlife such as the long-tailed macaques.

Conservation Measures: Although not a significant player, this species should be part of our insect vector biosurveillance for any potential zoonotic disease spread. More data on its presence and distribution locally required before further recommendations can be put forth.

Scientific Name:
Velitra rubropicta

Common Name:
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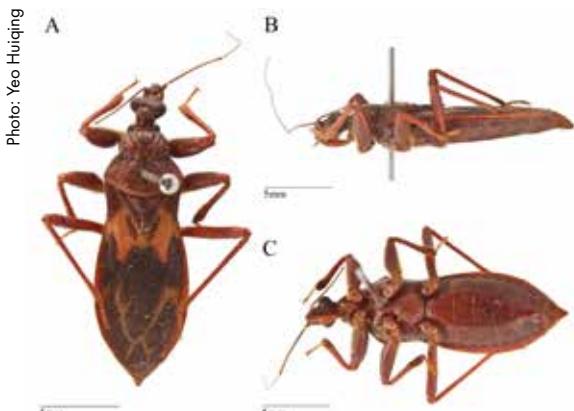
Order/Family:
Hemiptera: Reduviidae

National Status: Endangered (EN)

Habitat and Ecology: This species is only found in mature secondary or primary forests where there are suitably large trees present for it to seek shelter under tree bark. Its cryptic lifestyle makes further study on this species challenging. It presumably feeds on other bark-living arthropods given it is rarely seen elsewhere. Museum records showed a wider distribution in the past, but now it is likely present only in the nature reserves in small numbers.

Distribution: This species is widespread in Southeast Asia and known to occur in Java, Sumatra, Borneo, Indochina, Malacca, Philippines and China.

Threats: This species requires a rare resource in our forests: mature old-growth trees with suitable tree bark for it to hide under. Lack of such trees locally due to historical clearing of local forests and logging activities has reduced the availability of this ecological niche.



Photoplates for *Velitra rubropicta*.

Scientific Interest and Potential Value: This species represents a unique clade of assassin bugs that are dorso-ventrally flattened and associated with tree bark-living. This group is predominantly found in Southeast Asian forest ecosystems and serves as a useful bioindicator of old growth forests. Given its relatively large size for an assassin bug, its venom has research potential.

Conservation Measures: Further protection of existing old growth trees in the nature reserves will help with the continued survival of this species. It will take decades or centuries to significantly increase the number of old growth trees to a substantial amount that can further boost this species population, hence its fate remains precarious.

Scientific Name:
Vesbius purpureus

Common Name:
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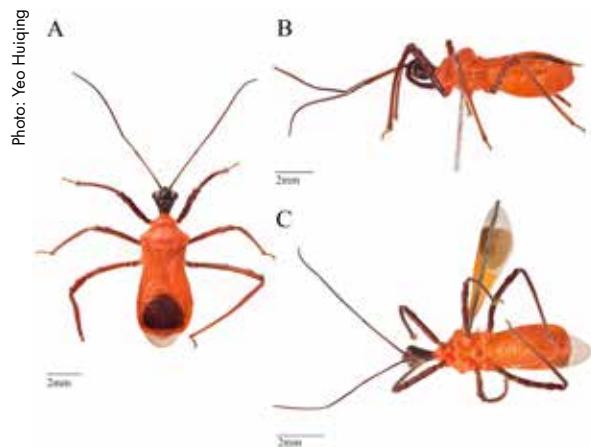
Order/Family:
Hemiptera: Reduviidae

National Status: Data Deficient (DD)

Habitat and Ecology: This species is commonly found in village houses elsewhere in Southeast Asia, and presumably present in local kampungs before resettlement began. The village houses provide similar shelter that this species prefers, such as hollowed tree trunks, caves and cliff crevices, and similar types of prey. It is considered to be a generalist predator, capable of feeding on ants, small moths and flies. It has been found outside of nature reserves in Singapore in the past, but no recent records have been documented.

Distribution: This species is known to occur in Peninsular Malaysia, Papua New Guinea, Myanmar, Sri Lanka, Bangladesh and China.

Threats: This species is not uncommon in other countries, adapting well to human dwellings and urban



Photoplates for *Vesbius purpureus*.

environments, but do not appear to thrive as well in Singapore's built-up space. Further studies are needed to determine if there is a healthy population within the protected nature reserves or urban parks.

Scientific Interest and Potential Value: Given its adaptability to selected human environments, this species can serve as a useful biological control agent in plant nurseries, urban farms and gardens.

Conservation Measures: Further understanding of suitable local natural environment is needed.

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Hymenoptera – Bees and Wasps

ZESTIN W.W. SOH, JOHN X.Q. LEE, JOHN S. ASCHER

Bees and wasps of the order Hymenoptera are diverse insects that play pivotal ecological functions in maintaining the health and stability of ecosystems. Bees are highly effective pollinators, and a high proportion of native Southeast Asian flora have co-evolved to rely on their visitation for reproduction and survival (Orr et al., 2021; Corlett, 2004; Kato et al., 1996; Momose et al. 1998). Wasps are major regulators of arthropod populations through predation and parasitism, and are also pollinators for particular plants (Brock et al., 2021; Corlett, 2004). Given the importance of bees and wasps and their ecological interactions in natural and managed ecosystems, it is imperative that there are efforts to monitor and conserve the native fauna by researchers and citizen scientists (Lim et al., 2024; Warrit et al., 2023). The bees of Singapore comprise about 142 species (including distinct morphospecies pending further integrative taxonomic review, and two recently detected exotic species) in four families. Their conservation statuses have been assessed and summarized in a country checklist (Ascher et al., 2022), which considered each taxon's habitat usage, distribution, and last verified record, compiled through surveys and citizen science databases (e.g. Ascher et al., 2019; Liow et al., 2001; Soh & Ngiam, 2013). The wasps, a paraphyletic group far exceeding bees in species diversity, are not as well understood in Singapore (Ascher & Lee, 2024). Work is underway to resolve the taxonomy of wasp families and assess their statuses, starting with the aculeate wasps, such as the social vespids and the thread-waisted wasps of family Sphecidae (Lee et al., 2023; Ascher et al., in press). In the following accounts, we highlight the species requiring the most attention for local conservation monitoring. In addition, we list a few key examples of species with inadequate data that may be concluded as threatened with further research.

Scientific Name:
***Lipotriches (Austronomia) goniognatha* (Cockerell, 1919)**

Common Name:
Angle-jawed Austral-Nomia

Family:
Halictidae

National Status: Data Deficient (DD)

Habitat and Ecology: Solitary bee that putatively builds underground nests. Little is known about its ecology but it may be associated with freshwater marshland.

Distribution: Thai-Malay Peninsula, Singapore, Cambodia, Myanmar, Indonesia and Philippines.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: This species is only known from two records at Kranji in the last 50 years. C.F. Baker first recorded the visually distinctive male of this species in Singapore in 1918. It was later rediscovered in 2009 through malaise trapping in the Kranji area. After another gap in records, it was observed in 2023 at Kranji Coastal

Photo: Zeslin Soh



Male *Lipotriches goniognatha* resting on a sedge in Kranji Coastal Nature Park, Singapore.

Nature Park foraging on wetland-associated sedges (Cyperaceae) along the fringe of a freshwater marshy pond, indicating a possible association with this specific habitat. We have provisionally listed it as Data Deficient as knowledge of this species locally remains limited and it may be overlooked.

Conservation Measures: Preservation and restoration of high-quality wetland habitat, particularly at Kranji, the only site where it is currently known to occur. Seek to establish information on population distribution and habitat usage through recording by researchers and citizen scientists.

Scientific Name:
***Lipotriches (Austronomia) takauensis* (Friese, 1910)**

Common Name:
Takau Austral-Nomia

Family:
Halictidae

National Status: Near Threatened (NT)

Habitat and Ecology: Solitary bee that putatively builds underground nests. Found along edges of mature forests.

Photo: Zeslin Soh



Female *Lipotriches takauensis* visiting *Uraria crinita* at Dairy Farm Nature Park, Singapore.

Distribution: Thailand, Malay Peninsula, Singapore, Vietnam, South China (Hainan, Hong Kong), and Java.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: D.H. Murphy collected specimens of this species in 1961 at Changi Mangrove and in 1976 at Linden Drive. Recent records are from transitional habitats in the vicinity of

mature forests, such as Dairy Farm, Bukit Timah, Rifle Range, and Pulau Ubin.

Conservation Measures: Preservation and restoration of high-quality forest patches as well as adjacent transitional habitats, as they are likely used by this species for foraging and/or nesting. Restoration of native flora in degraded or urbanised habitats located near forests. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Nomia (Maculonomia) apicalis
Smith, 1857

Common Name:

Black-tipped Forest-Nomia

Family:

Halictidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests. Known to forage for pollen from *Melastoma malabathricum*.

Distribution: Malay Peninsula (Johor), Singapore, and Sumatra. Records from elsewhere including Thailand may pertain to other taxa in this complex.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: A.R. Wallace collected the male holotype of this species in Singapore around 1854. Subsequent observations in Singapore span until 1976, when recorded at Dairy Farm, and 1999 when last observed nationally at Nee Soon. All recent records from 2008 onward of

Photo: Zeslin Soh



Female *Nomia apicalis* visiting *Melastoma malabathricum* in Johor, Malaysia.

bees bearing close resemblance pertain to a related, undescribed *Nomia (Maculonomia)* species. The true *Nomia apicalis* appears restricted to old-growth forests in the vicinity of the Central Catchment Nature Reserve and Bukit Timah, while the similar morphospecies exhibits broader habitat tolerances and is much more widespread locally.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around the Central Catchment Nature Reserve, where it occurs. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Nomia (Maculonomia) fuscipennis
 Smith, 1875

Common Name:
Dusky-winged Forest-Nomia

Family:
Halictidae

National Status: Near Threatened (NT)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests. Often found foraging from *Melastoma malabathricum*.

Distribution: Malay Peninsula, Singapore, Sumatra, Borneo, and Java.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: This species occurs in forested sites mainly in and around the Central Catchment Nature Reserve and Bukit Timah Nature Reserve. Where it occurs it can be a frequent visitor to *Melastoma malabathricum* and *Leea* spp.

Photo: Zeslin Soh



Female *Nomia fuscipennis* visiting *Melastoma malabathricum*.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around the sites where it occurs, such as the Central Catchment Nature Reserve, Bukit Timah Nature Reserve, and their surrounding nature parks. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Nomia (Maculonomia) elegans
 Smith, 1857

Common Name:
Elegant Forest-Nomia

Family:
Halictidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests.

Distribution: In Singapore, this species is reported from Seletar historically. Elsewhere it occurs in the Malay Peninsula, Java, and Borneo.

Photo: Zeslin Soh



Male *Nomia fuscipennis* visiting *Asystagia gangetica* in Temburong District, Brunei.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: This species was first described from specimens collected by A.R. Wallace from Malacca, and subsequently redescribed from Singapore as *Nomia tuberculifrons* Cockerell, 1920, based on specimens of both sexes collected at Seletar in 1911. There are no subsequent country records.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve.

Scientific Name:
Nomia (Maculonomia) penangensis
Cockerell, 1920

Common Name:
Penang Forest-Nomia

Family:
Halictidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests. Recorded foraging from various Melastomataceae and Asteraceae in Malaysia.

Distribution: Thai-Malay Peninsula and Singapore to Indochina and Southern China including Hong Kong.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: The historical presence of this species in Singapore was recently established based on a male specimen collected by C.F. Baker, most likely around 1918, deposited in the entomological collection of the Smithsonian National Museum of Natural History. It has not been observed locally since.

Photo: Zeslin Soh



Female *Nomia penangensis* visiting *Asystasia gangetica* in Negeri Sembilan, Malaysia.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve. Protection of large forest trees used for nesting and resin gathering.

Scientific Name:
Ceylalictus (Ceylalictus)
communis (Blüthgen, 1934)

Common Name:
Kuala Lumpur Steppe Bee

Family:
Halictidae

National Status: Data Deficient (DD)

Habitat and Ecology: Solitary bee that builds underground nests in beach sand. Known to visit the native coastal shrub *Pluchea indica*, albeit infrequently.

Distribution: Thai-Malay Peninsula, Singapore.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: This diminutive species has been intermittently documented from 2015 to 2021. Nesting aggregations were recently discovered in manmade sand pits within parks at Katong and along the Southern Ridges, indicating a probable preference for natural sandy shores for nesting. Moreover, although large numbers of nesting

Photo: Zeslin Soh



Female *Ceylalictus communis* at a sandy nesting site in Kent Ridge Park, Singapore.

found at the sites, bees are very seldom observed at flowers, hence information on their foraging behaviour and ecology is limited. Focused surveys conducted in coastal habitats across Singapore could offer insights into its pollen hosts, preferred nesting sites, and current status.

Conservation Measures: Preservation of known nesting aggregations at Katong and the Southern Ridges. Seek to establish information on the species' natural history and population through monitoring and recording by researchers and citizen scientists.

Scientific Name:
Lasioglossum (Ctenonomia)
halictoides (Smith, 1858)

Common Name:
Beach Combed-Sweat Bee

Family:
Halictidae

National Status: Near Threatened (NT)

Habitat and Ecology: Solitary or primitively eusocial, ground-nesting bee. Found in coastal habitats in association with their preferred pollen source, the

Photo: Zeslin Soh



Female *Lasioglossum halictoides* visiting *Ipomoea pes-caprae* in Pulau Ubin, Singapore.

Beach Morning Glory (*Ipomoea pes-caprae*). Likely to nest in sandy substrate.

Distribution: Malay Peninsula, Taiwan, Philippines, Indonesia, Borneo, and Papua New Guinea.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: In Singapore this species is confined to coastal areas, including sandy beaches and coastal scrub, especially where its predominant native food plant *Ipomoea pes-caprae* occurs. It has been recorded on mainland

Singapore near Pasir Ris, as well as on offshore islands such as St John's, Lazarus, and Pulau Ubin.

Conservation Measures: Preservation and restoration of *Ipomoea pes-caprae*, *Melanthera biflora* and other native coastal flora at natural beaches and other coastal sites across Singapore. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Lasioglossum (Ctenonomia) semirussatum (Cockerell, 1920)

Common Name:

Singapore Combed-Sweat Bee

Family:

Halictidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Solitary or primitively eusocial, ground-nesting bee. Known only from primary hill dipterocarp forest.

Distribution: Singapore (Bukit Timah)

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: This species is known globally only from Bukit Timah, Singapore. The male holotype from Singapore was collected around 1917-1918 by C.F. Baker. It was later rediscovered in 1976 at Bukit Timah by D. H. Murphy. There have been

Photo: Matthew Kveskin



Specimen of a male *Lasioglossum semirussatum* from Singapore, stored in the Smithsonian United States National Museum.

no subsequent records of this distinctively coloured bee from any location.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists at the Bukit Timah Nature Reserve and its surrounding nature parks. Preservation and restoration of high-quality forest patches and native flora in those sites.

Scientific Name:

Patellapis (Pachyhalictus) intricata
(Vachal, 1895)

Common Name:

Vachal's Reticulate-Furrow Bee

Family:

Halictidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests. Known to forage for pollen from *Melastoma malabathricum*.

Distribution: Eastern India, Myanmar, Yunnan (China), Thailand, Malay Peninsula (Johor), Singapore, Java, and (reportedly) Sulawesi.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: D.H. Murphy last recorded this species in Singapore at Bukit Timah and Rifle Range Road in 1975 and 1976 respectively.

Scientific Name:

Anthidiellum (Pycnanthidium) smithii smithii (Ritsema, 1874)

Common Name:

Smith's Rotund-Resin Bee

Family:

Megachilidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest with plant resin. Found in mature secondary forests and parks.

Distribution: Thailand, Malay Peninsula, Singapore, Borneo, and the Philippines (Palawan), with another subspecies occurring east in Indonesia to Ambon.

Photo: Zeslin Soh



Female *Patellapis intricata* visiting *Melastoma malabathricum* in Johor, Malaysia.

It has a distinctively lamellate pronotum and is therefore readily identified. Notably, all recent specimens of *Patellapis (Pachyhalictus)* found in Singapore pertain to the locally common and widespread *P. murbanus*.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists at potential sites, such as the nature reserves. Preservation and restoration of high-quality forest patches and native flora in those sites.

Photo: Zeslin Soh



Female *Anthidiellum smithii smithii* constructing its nest with plant resin in a nesting block at HortPark, Singapore.

Threats: Habitat loss and associated declines in suitable nesting sites, resin sources and forage plants.

Scientific Interest and Potential Value: The sole representative of its genus in Singapore, this species was first documented locally in 2014 in forested areas at Dairy Farm and Bukit Timah. It was subsequently recorded in HortPark in 2019, where it uses the nesting blocks set up for solitary bees, and later found visiting

non-native *Pittosporum pentandrum* on Pulau Ubin in 2022. Its native host plants are unknown.

Conservation Measures: Preservation and restoration of quality forest patches across Singapore. Increasing availability of nesting sites in parks through setting up of artificial nesting blocks. Monitoring of extant populations and discovery of its native host plants by researchers and citizen scientists.

Scientific Name:

Megachile (Aethomegachile) ramera
Cockerell, 1918

Common Name:

Singapore Leafcutter

Family:

Megachilidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest with pieces of leaves cut from particular plants. Found in mature secondary and primary forest. Known to forage from *Cratoxylum cochinchinense*.

Distribution: Malay Peninsula, Singapore, and possibly Borneo (identity uncertain).

Threats: Habitat loss and associated declines in suitable nesting sites, sources of nesting material, and forage plants.

Scientific Interest and Potential Value: The type specimen of this species was collected in Singapore by C.F. Baker around 1918. Presently, all documented

Photo: Zeslin Soh



Female *Megachile ramera* from the Central Catchment Nature Reserve, Singapore.

records of this species are limited to forested sites within and around the Bukit Timah Nature Reserve and the Central Catchment Nature Reserve. While it has been observing nesting in a cavity in Thomson Nature Park in 2020, the species of plants that it relies on for nesting resources that it relies on are still unknown.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Bukit Timah Nature Reserve, the Central Catchment Nature Reserve, and their surrounding nature parks. Monitoring of extant populations and discovery of its nesting resources and poorly known male by researchers and citizen scientists.

Scientific Name:
**Megachile (Callomegachile)
indonesia (Engel & Schwarz, 2011)**

Common Name:
Indonesian Resin Bee

Family:
Megachilidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest with plant resin. Found in and around mature secondary forests.

Distribution: Singapore, Sumatra and Java.

Threats: Habitat loss and associated declines in suitable nesting sites, sources of nesting material, and forage plants.

Scientific Interest and Potential Value: This species was first documented in Singapore in 2014 during the widespread flowering of Tiger Orchids (*Grammatophyllum speciosum*) at sites within and near the Bukit Timah Nature Reserve and Central Catchment Nature Reserve. It potentially serves as a pollinator for these orchids as it has been observed carrying their pollinia. This species has subsequently been observed



Female *Megachile indonesica* carrying pollinia from a tiger orchid, *Grammatophyllum speciosum* in the vicinity of the Central Catchment Nature Reserve, Singapore.

in 2017 at the Singapore Botanic Gardens foraging for nectar from *Teijsmanniodendron pteropodum*, but its native pollen hosts are still unknown. This species belongs to a locally occurring mimicry ring that comprises at least five *Megachile* species that share similar coloration of black body and orange wings tipped with black.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Bukit Timah Nature Reserve, the Central Catchment Nature Reserve, and their surrounding nature parks. Monitoring of extant populations and discovery of its native host plants by researchers and citizen scientists.

Scientific Name:
**Megachile (Callomegachile)
ornata Smith, 1853**

Common Name:
Ornate Resin Bee

Family:
Megachilidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest with plant resin. Found in and around mature secondary forests.



Female *Megachile ornata* from the vicinity of the Central Catchment Nature Reserve, Singapore.

Distribution: Nepal, Thailand, Malay Peninsula, Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in suitable nesting sites, sources of nesting material, and forage plants.

Scientific Interest and Potential Value: This species has only been documented for Singapore once, in 2014, when it was found visiting flowering Tiger Orchids (*Grammatophyllum speciosum*) at sites within and near the Bukit Timah Nature Reserve and Central Catchment

Nature Reserve. Based on known records globally it appears that this species relies on high-quality forests, although its biology remains poorly understood. For example, its native pollen hosts are still unknown.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it likely occurs, such as the Bukit Timah Nature Reserve, the Central Catchment Nature Reserve, and their surrounding nature parks. Monitoring of extant populations and discovery of its native host plants by researchers and citizen scientists.

Scientific Name:

Megachile (Callomegachile s.l.) tuberculata Smith, 1857

Common Name:

Tuberculate Resin Bee

Family:

Megachilidae

National Status: Near Threatened (NT)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest using resin gathered from plants. Found in and around mature secondary and primary forests. Known to forage from various Fabaceae.

Distribution: Malay Peninsula, Singapore, Sumatra, Borneo, and Java.

Threats: Habitat loss and associated declines in suitable nesting sites, sources of nesting material or forage plants.

Scientific Interest and Potential Value: Among the largest representatives of the family Megachilidae in the Sundaic region and distinctive with impressively long mandibles used for gathering resin. This species is associated with mature forest sites in and around the

Photo: Zeslin Soh



Female *Megachile tuberculata* from the Southern Ridges, Singapore.

Bukit Timah Nature Reserve and Central Catchment Nature Reserve (including Nee Soon Swamp Forest), but recent findings have extended its presence to other sites. Notably, it has been observed in a community garden near Zhenghua Nature Park, and at HortPark, a semi-urban park along the Southern Ridges. These observations attest to its ability to forage on floral resources situated at considerable distances from forests. However, its native pollen hosts are still unknown.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it likely occurs, such as the Bukit Timah Nature Reserve, the Central Catchment Nature Reserve, and their surrounding nature parks. Monitoring of extant populations and discovery of its native host plants by researchers and citizen scientists.

Scientific Name:
Megachile (Carinula) butteli
Friese, 1918

Common Name:
Buttel-Reepen's Resin Bee

Family:
Megachilidae

National Status: Data Deficient (DD)

Habitat and Ecology: Solitary, cavity-nesting bee that builds its nest using resin gathered from plants.

Distribution: Thai-Malay Peninsula, Singapore, Borneo (Sarawak).

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: Described from Perak, Malaysia, this is an enigmatic species that has been documented only twice in Singapore. The first

Photo: Zeslin Soh



Male *Megachile butteli* from the Central Catchment Nature Reserve, Singapore.

was a male foraging on *Cratoxylum cochinchinense* at Upper Peirce Reservoir Park in 2012. Subsequently, a specimen of the distinctive female was found at the Sungei Buloh Wetland Reserve in 2021. While it is likely associated with mature forests, additional observations of this diminutive species are necessary to confirm its distribution.

Conservation Measures: Preservation and restoration of high-quality forest patches. Seek to establish information on natural history and population distribution through monitoring and recording by researchers and citizen scientists.

Scientific Name:
Xylocopa (Biluna) iridipennis
Lepeletier, 1841

Common Name:
Purple-winged Bamboo-Carpenter

Family:
Apidae

National Status: Data Deficient (DD)

Habitat and Ecology: Subsocial or solitary carpenter bee that excavates nests in dead bamboo. Found in forests with mature bamboo stands.

Distribution: Singapore (and potentially the broader Thai-Malay Peninsula).

Photo: Zeslin Soh



Male *Xylocopa iridipennis* from the Singapore Botanic Gardens.

Threats: Habitat loss and associated declines in bamboo stands that provide suitable nesting sites.

Scientific Interest and Potential Value: Species of the subgenus *Biluna* utilise bamboo internodes for nesting, entering from a hole they create with their mandibles. This species has been noted in the previous edition of the Red Data Book as the “Parasitic Carpenter Bee”, but this and all other *Xylocopa* are in fact non-parasitic pollen collectors. This bee has at least one historical record from Singapore in 1929, and has more recently been observed at Kent Ridge, one-north Park, the Singapore Botanic Gardens’ Eco Garden, and Pulau

Ubin, but sightings are rare. Targeted searches at and adjacent to bamboo patches in Singapore would clarify its status. *Xylocopa iridipennis* has been treated by most recent authors as a subspecies of *Xylocopa auripennis*, but considerable DNA sequence divergence between these forms suggests that these are specifically distinct.

Conservation Measures: Seek to establish detailed information on population distribution through monitoring by researchers and citizen scientists.

Scientific Name:
Xylocopa (Zonohirsuta) dejeanii
penangensis Cockerell, 1918

Common Name:
 Collared Carpenter

Family:
 Apidae

National Status: Endangered (EN)

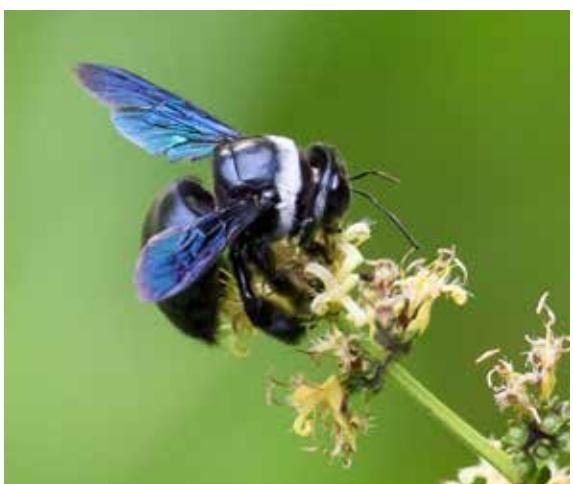
Habitat and Ecology: Solitary or subsocial carpenter bee that excavates its nests in dead wood, such as fallen logs. Found in mature secondary and primary forests. Known to forage for pollen from *Melastoma malabathricum* and *Dillenia suffruticosa*.

Distribution: Thai-Malay Peninsula and Singapore (ssp. *penangensis*), with other subspecies occurring from Eastern India, Indochina, and China south to the Philippines (Palawan), Sumatra, Borneo, and Java.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: Despite its notable size and distinctive appearance, recent field surveys in Singapore have not yielded any sightings of this bee. Earlier records of this species around 1918 by

Photo: Zestin Soh



Female *Xylocopa dejeanii* in Temburong District, Brunei.

C.F. Baker and a specimen collected by D.H. Murphy in 1962 from MacRitchie confirm its historical presence in Singapore. An online video taken in 2014 in Singapore (without specific location information) suggests that it may persist here, but if so it is likely to be highly localised.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it may still persist, such as the Central Catchment Nature Reserve. Seek to establish information on population distribution through monitoring by researchers and citizen scientists.

Scientific Name:
Ceratina (Lioceratina) ridleyi
Cockerell, 1910

Common Name:
Ridley's Small Carpenter

Family:
Apidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary or subsocial bee that excavates its nest in a dead pithy stem. Found in mature secondary and primary forests, often in the semi-shaded understory. Known to forage from *Ophiorrhiza singapurensis* (Rubiaceae).

Distribution: Thai-Malay Peninsula and Singapore.

Threats: Habitat loss and associated declines in suitable nest sites or forage plants.

Scientific Interest and Potential Value: The type specimen was collected in Singapore around 1895 by



Female *Ceratina ridleyi* visiting *Asystasia gangetica*.

H.N. Ridley, and named after him. This rare species has more recently been found visiting flowering shrubs in the shaded understorey of MacRitchie Forest, Nee Soon Swamp Forest, and the Bukit Timah Nature Reserve.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Bukit Timah Nature Reserve and its surrounding nature parks. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Ceratina (Xanthoceratina) fuliginosa Cockerell, 1916

Common Name:
Dusky-winged Small Carpenter

Family:
Apidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary or subsocial bee that excavates its nest in a dead pithy stem. Found in mature secondary and primary forests.

Distribution: Singapore, Thailand, Indochina, Philippines (Palawan), Java, Sumatra, and Borneo.



Female *Ceratina fuliginosa* visiting *Bidens* from the vicinity of Dairy Farm Nature Park, Singapore.

Threats: Habitat loss and associated declines in suitable nest sites or forage plants.

Scientific Interest and Potential Value: This species is locally known from sites located in and around the Bukit Timah Nature Reserve and the Central Catchment Nature Reserve. An uncommon form of this species displays a dark body with diminished yellow markings and a heart-shaped yellow blotch on its thorax.

Scientific Name:

Ceratina (Xanthoceratina) metaria Cockerell, 1920

Common Name:

Banded Small Carpenter

Family:

Apidae

National Status: Data Deficient (DD)

Habitat and Ecology: Solitary or subsocial bee that excavates its nest in a dead pithy stem. Found in mature secondary and primary forests.

Distribution: Thai-Malay Peninsula, Singapore.

Threats: Habitat loss and associated declines in suitable nesting sites or forage plants.

Scientific Interest and Potential Value: First described from Penang, this distinctive small carpenter bee has been exclusively found locally in the Central

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Central Catchment Nature Reserve and its surrounding nature parks. Monitoring of extant populations by researchers and citizen scientists.

Photo: Zestin Soh



Female *Ceratina metaria* visiting starfruit, *Averrhoa carambola* in Pulau Ubin, Singapore.

Catchment Nature Reserve and Pulau Ubin, suggesting its likely association with mature forest habitats (which is typical of its subgenus). Its small size might result in potential oversight, leading to its classification as Data Deficient.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Central Catchment Nature Reserve and its surrounding nature parks, as well as on Pulau Ubin. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Nomada malayana Cameron, 1909

Common Name:

Malay Nomad

Family:

Apidae

Photo: Insect Diversity Lab, NUS



Female specimen of *Nomada malayana*.

National Status: Vulnerable (VU)

Habitat and Ecology: Nest cleptoparasite whose hosts are ground-nesting bees, putatively of the tribe Halictini. Found in mature forest habitat.

Distribution: Malay Peninsula, Singapore, Borneo (Sarawak).

Threats: Habitat loss and associated declines in populations of their hosts.

Scientific Interest and Potential Value: Described from Kuching in Borneo, this species is known for Singapore based on specimens collected from Bukit Timah in 1976 and from a remnant forest patch in Sentosa in 2014.

Conservation Measures: Preservation and restoration of high-quality forest patches across Singapore, and planting of native flora in degraded or urbanised habitats. Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists at potential sites.

Scientific Name:

***Nomada penangensis* Cockerell,
1920**

Common Name:
Penang Nomad

Family:
Apidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Nest cleptoparasite whose hosts are ground-nesting bees, putatively of the tribe Halictini. Found in mature forest habitat.

Distribution: Malay Peninsula (Penang) and Singapore.

Threats: Habitat loss and associated declines in populations of their hosts.

Scientific Interest and Potential Value: Described from Penang, this species has only been recorded in Singapore from the Alumni Car Park Garden of the old

Photo: Insect Diversity Lab, NUS



Female specimen of *Nomada penangensis*.

National University of Singapore Campus (near the Singapore Botanic Gardens) in 1975. This and other species of the *furva* group of *Nomada* are presumed to be cleptoparasites of *Lasioglossum*.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Bukit Timah Nature Reserve and its surrounding nature parks. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
***Nomada sandacana* Cockerell,
 1920**

Common Name:
Sandakan Nomad

Family:
Apidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Nest cleptoparasite whose hosts are ground-nesting bees, putatively of the tribe Halictini. Found in mature forest habitat.

Distribution: Borneo (Sabah) and Singapore.

Threats: Habitat loss and associated declines in populations of their hosts.

Scientific Interest and Potential Value: This species was described from Sandakan in Sabah, Malaysian Borneo, and unreported in Singapore until specimens in LKCNHM were tentatively identified as this species.

Photo: Insect Diversity Lab, NUS



Female specimen of *Nomada sandacana*.

One specimen was collected in 1975, at the Alumni Car Park Garden of the old National University of Singapore Campus (near Singapore Botanic Gardens).

Conservation Measures: Preservation and restoration of high-quality forest patches across Singapore, and planting of native flora in degraded or urbanised habitats. Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists.

Scientific Name:
***Amegilla (Glossamegilla) insularis* (Smith, 1857)**

Common Name:
Island Forest-Digger

Family:
Apidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary, ground-nesting bee found in mature secondary and primary forests, often in semi-shaded understorey. Known to forage from *Melastoma malabathricum* and other understorey shrubs.

Photo: Zestin Soh



Male *Amegilla insularis* visiting *Alpinia zerumbet* at Bukit Batok Nature Park, Singapore.

Distribution: Malay Peninsula, Myanmar, Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in suitable nest sites or forage plants.

Scientific Interest and Potential Value: This relatively large, swift-flying bee is found in forested sites in and around the Bukit Timah Nature Reserve, Central Catchment Nature Reserve, and at the Sungei Buloh Wetland Reserve. Existing records are scattered and typically single individuals, suggesting small population sizes. It is likely a pollinator of forest understorey shrubs with long floral tubes, including gingers. This species is

the most likely local host for the rare cuckoo bee *Thyreus abdominalis rostratus*.

Conservation Measures: Preservation of high-quality forest patches across Singapore. Restoration of native flora in degraded habitats or urbanised areas. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Thyreus abdominalis rostratus
(Friese, 1905)

Common Name:

Beaked Cloak-and-Dagger Bee

Family:

Apidae

National Status: Endangered (EN)

Habitat and Ecology: Nest cleptoparasite whose putative hosts are large digger bees, such as *Amegilla insularis*. Found in mature secondary and primary forests.

Distribution: Eastern India, Myanmar, Malay Peninsula, Singapore, Sumatra, and Borneo, with additional subspecies occurring in China and Indonesia (including Flores and Sumatra).

Threats: Habitat loss and associated declines in associated populations of their hosts.

Scientific Interest and Potential Value: The largest member of its genus in Singapore, this impressive species was recorded by H.N. Ridley in 1901, and at

Photo: Zeslin Soh



Thyreus abdominalis rostratus visiting *Asystasia gangetica* in Johor, Malaysia.

Ulu Pandan in 1920 by an unknown collector. More recently, it was rediscovered in Singapore at Nee Soon Swamp Forest in 2015 using malaise traps. M.A. Lieftinck documented this bee as a probable cleptoparasite of the large digger bee *Amegilla elephas*, but as this particular host species is not found in Singapore, it is assumed that its host here is *Amegilla insularis*. The bright blue in the setae of this genus is a structural colour produced by the scattering of light.

Conservation Measures: Preservation and restoration of high-quality forest patches in and around forested sites where it occurs, such as the Central Catchment Nature Reserve. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
***Thyreus novae-hollandiae signatus* (Meyer, 1921)**

Common Name:
Diamond-waisted Cloak-and-dagger Bee

Family:
Apidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Nest cleptoparasite of digger bees (putatively *Amegilla* subgenus *Zonamegilla* spp.). Found in mature secondary and primary forests.

Distribution: Eastern India (West Bengal), Myanmar, Laos, Thai-Malay Peninsula, and Singapore (ssp. *signatus*). Other subspecies are widespread in Indonesia.

Threats: Habitat loss and associated declines in populations of their hosts.

Scientific Interest and Potential Value: This subspecies was recorded for Singapore by F.N. Chasen in November 1932, and by D.H. Murphy in 1976. There have been no further country records. The specific epithet for this species is misleading since

Photo: Ian Dugdale



Thyreus novae-hollandiae signatus visiting a *Cosmos* in Phetchaburi, Thailand.

the type specimens were likely collected in the Lesser Sunda Islands of Indonesia, particularly Timor, rather than in Australia (the published incorrect location is "Nouvelle-Hollande"), where no verified records exist. Its local host is potentially the small-bodied *Amegilla korotoniensis*, which is relatively uncommon here.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the nature reserves. Establishing the identity of its hosts through recording by researchers and citizen scientists in countries where the species still persists.

Scientific Name:
***Geniotrigona thoracica* (Smith, 1857)**

Common Name:
Long-chinned Stingless Bee

Family:
Apidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Eusocial stingless bee that builds its hive using plant resin within tree cavities. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Photo: Zeslin Soh



Geniotrigona thoracica visiting starfruit, *Averrhoa carambola* in Negeri Sembilan, Malaysia.

Distribution: Myanmar, Thailand, Malay Peninsula, Singapore, Sumatra, and Borneo.

Threats: Loss of habitat, including nesting sites or host plants for pollen and nectar. Potentially loss of resin sources for nest building.

Scientific Interest and Potential Value: A.R. Wallace collected the type worker of this species from Singapore around 1854. The most recent records of this species in Singapore date back to 1976 in Taban Valley at Bukit Timah. Given that it is the largest stingless bee in the region, with distinctive coloration and nest entrance structure, it seems improbable that it

would have been overlooked by researchers if it were still present here. Consequently, it is probable that this species has been locally extirpated. In the region, hives of this species are employed in meliponiculture for their honey and hive products.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve. Protection of large forest trees used for nesting and resin gathering.

Scientific Name:

Heterotrigona (Sundatrigona) moorei (Schwarz, 1937)

Common Name:

Moore's Stingless Bee

Family:

Apidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Obligately myrmecophilous eusocial stingless bee that builds its hive within active arboreal carton nests of *Crematogaster* ants. Found in mature secondary and primary forests.

Distribution: Thai-Malay Peninsula and Singapore to Indochina and Southern China including Hong Kong.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: Known for Singapore based on the type of *Trigona (Tetragona) matsumurai* (Sakagami, 1959). There have been no subsequent local sightings.

Photo: Chui Shao Xiong



Specimen of *Heterotrigona moorei* (not from Singapore).

Conservation Measures: Seek rediscovery of extant populations and information on its local ant associations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve.

Scientific Name:
***Homotrigona (Homotrigona) fimbriata* (Smith, 1857)**

Common Name:
Bristle-faced Stingless Bee

Family:
Apidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Eusocial stingless bee that builds its hive within tree cavities using resin gathered from plants. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Distribution: Continental Asia from Myanmar, Yunnan, China and Laos south through Thailand and the Malay Peninsula to Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: A.R. Wallace collected the type specimen of this species in Singapore, possibly near the Bukit Timah area, around 1854. There have been no subsequent local sightings. Considering its significant size and distinctive features, it appears unlikely that this species went unnoticed in

Scientific Name:
***Homotrigona (Lophotrigona) canifrons* (Smith, 1857)**

Common Name:
Woolly Stingless Bee

Family:
Apidae

Photo: Zeslin Soh



Homotrigona fimbriata tending to a pot of resin in its nest in Negeri Sembilan, Malaysia.

subsequent studies of stingless bees in Singapore. Within the region, hives of this species are harvested from trees and used in meliponiculture for their honey and hive products.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve. Protection of large forest trees used for nesting and resin gathering.

Photo: Zeslin Soh



Lophotrigona canifrons visiting *Antigonon leptopus* in Negeri Sembilan, Malaysia.

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Eusocial stingless bee that builds its hive within tree cavities using resin gathered from plants. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Distribution: Thai-Malay Peninsula, Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: This species was recorded in Singapore at Bukit Timah in 1911, likely

by C.F. Baker, but has not been recorded locally since. This stingless bee species is notably aggressive and has a tendency to bite intruders in the vicinity of its nest. Within the region, hives of this species are harvested from trees and used in meliponiculture for their honey and hive products.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve. Protection of large forest trees used for nesting and resin gathering.

Scientific Name:

*Homotrigona (Tetrigona)
apicalis* (Smith, 1857)

Common Name:

Milky-tipped Stingless Bee

Family:

Apidae

National Status: Near Threatened (NT)

Habitat and Ecology: Eusocial stingless bee that builds its hives within tree cavities using resin gathered from plants. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Distribution: Myanmar, Thailand, and Indochina south to Singapore, Sumatra, Borneo, and Java.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: This is the largest extant stingless bee in Singapore. It appears restricted to sites at and within the Bukit Timah Nature Reserve, the Central Catchment Nature Reserve, and the Singapore Botanic Gardens. It is potentially dependent on dipterocarps for resin. Like many stingless

Photo: Zestin Sch



Homotrigona apicalis visiting *Baccaurea* in the Central Catchment Nature Reserve, Singapore.

bees, it relies on large, mature trees with cavities for nesting sites. Within the region, hives of this species are harvested from trees and used in meliponiculture for their honey and hive products.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs. Protection of known nests, which are long-lived, as well as large forest trees used for nesting and resin gathering. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Lepidotrigona latipes
(Friese, 1900)

Common Name:
Broad-legged Stingless Bee

Family:
Apidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Eusocial stingless bee that builds its hive within tree cavities using resin gathered from plants. Found in mature forests.

Distribution: Singapore, Indonesia (Sumatra) and Peninsular Malaysia.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: Both the taxonomic status and the type locality of this species have been controversial, with authors such as Herbert F. Schwarz treating it as a synonym or subspecies of *Lepidotrigona nitidiventris* (Smith, 1857). Indeed the principal reported difference between the two species is in their coloration: *L. nitidiventris* having brown tegulae and black abdominal tergites, whereas they are yellowish and reddish brown, respectively, in *L. latipes*. Notwithstanding the need for further revisionary studies



A nest of *Lepidotrigona nitidiventris* from Negeri Sembilan, Malaysia, a species closely related to *Lepidotrigona latipes* and differs mainly in colour of the tegulae and abdominal tergites.

for the *L. nitidiventris* species group, we interpret the collection locality of the type specimen (from 1890) to be from Singapore based on its label. No member of this species group has been recorded in Singapore since 1890. As photographs of the *L. latipes* type specimen are not available, an image of *L. nitidiventris* is featured below.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the nature reserves. Protection of large forest trees used for nesting and resin gathering.

Scientific Name:
Lepidotrigona terminata
(Smith, 1878)

Common Name:
Gold-margined Stingless Bee

Family:
Apidae



Lepidotrigona terminata at their nest.

National Status: Vulnerable (VU)

Habitat and Ecology: Eusocial stingless bee that builds its hive within tree cavities using resin gathered from plants. Found in mature forests, including mangroves.

Distribution: Myanmar, Thailand, Indochina, and Yunnan (China) south to Singapore, Sumatra, Java, and Borneo.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: This species is best known in Singapore from Chek Jawa, where

it was first recorded for Singapore in 2015 visiting the inflorescences of *Nypa fruticans*. Sightings have since extended to other areas of Pulau Ubin as well as on Pulau Tekong. A recent mainland occurrence in Sembawang in northern Singapore is considered to be from a translocated nest rather than a natural population.

Conservation Measures: Preservation and restoration of high-quality forest patches, including mangroves, in and around areas where it occurs, such as on Pulau Ubin. Protection of known nests, which are long-lived, and large forest trees used for nesting and resin gathering. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Tetragonula (Tetragonilla) atripes (Smith, 1857)

Common Name:

Orange-and-black Stingless Bee

Family:

Apidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Eusocial stingless bee that builds its hive at the base of trees using resin gathered from plants. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Distribution: Thai-Malay Peninsula, southern Myanmar, Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: This species was last recorded in Singapore at Bukit Timah by D.H. Murphy in 1965, but has not been found locally since.

Photo: Zestin Soh



Tetragonula atripes visiting a Heliconia in Penang, Malaysia.

This species is easily identifiable by its distinctive and striking coloration.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as the Central Catchment Nature Reserve and its nature parks. Protection of large forest trees used for nesting and resin gathering.

Scientific Name:

Tetragonula (Tetragonula) geissleri (Cockerell, 1918)

Common Name:

Geissler's Stingless Bee

Family:

Apidae

National Status: Near Threatened (NT)

Habitat and Ecology: Eusocial stingless bee that builds its hive at the base of trees and termite mounds, using resin gathered from plants. Found in mature secondary and primary forests.

Distribution: Thai-Malay Peninsula, Singapore, Sumatra, and Borneo.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: First recorded at Mandai in 1922, this species appears to be largely restricted to sites at and within the Bukit Timah Nature Reserve, the Central Catchment Nature

Photo: Zeslin Soh



Tetragonula geissleri at their nest entrance in the Singapore Botanic Gardens.

Reserve, and the Singapore Botanic Gardens. Hives are often constructed in active mounds of the termite *Hospitalitermes umbrinus* at the base of trees. Workers have been observed foraging from extrafloral nectaries of plants locally.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs. Protection of known nests and large forest trees used for nesting and resin gathering. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Tetragonula (Tetragonula) laeviceps (Smith, 1857)

Common Name:

Smooth-headed Stingless Bee

Family:

Apidae

National Status: Near Threatened (NT)

Habitat and Ecology: Eusocial stingless bee that builds its nest in tree cavities using resin gathered from plants. Found in mature secondary and primary forests, and is likely dependent on particular trees (e.g. dipterocarps) for resin sources.

Photo: Zeslin Soh



Tetragonula laeviceps, alternatively known by its synonym *T. pagdeniformis*, visiting *Melastoma malabathricum* in the Central Catchment Nature Reserve.

Distribution: Thai-Malay Peninsula, Singapore, Borneo, and possibly Sumatra, Java, and Bali.

Threats: Habitat loss and associated declines in trees that provide suitable nesting sites and resin.

Scientific Interest and Potential Value: The type series and a neotype designated for this species was discovered by A.R. Wallace in Singapore. Currently all available country records are from forested sites within and around the Bukit Timah Nature Reserve and Central Catchment Nature Reserve. This species has a complicated taxonomic history and is alternatively known by its synonym *T. pagdeniformis* (Sakagami, 1978). Notably it should not be confused with *T. valdezi*, the most common stingless bee in Singapore, which is larger, has weaker thorax hair bands and a redder

abdomen, and has also previously been referred to by the same name.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Central Catchment Nature Reserve and its surrounding nature parks. Protection of large forest trees used for nesting and resin gathering. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Vespa multimaculata
 Pérez, 1910

Common Name:
Many-banded Hornet

Family:
Vespidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Eusocial wasp that builds subterranean nests under the roots of trees. Found only in mature secondary and primary forests.

Distribution: Brunei, Laos, Malaysia (Peninsular Malaysia, Sabah, Sarawak), Thailand, Indonesia (Kalimantan, Sumatra), Singapore.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: As the smallest hornet recorded from Singapore, this species is readily identifiable by its size and distinctive coloration. Although it was documented by Dover in 1929,

Photo: Mike Hooper



Female *Vespa multimaculata* visiting a palm inflorescence in Selangor, Malaysia.

there have been no subsequent sightings even after comprehensive surveys for Hymenoptera in likely areas and habitats, including the Bukit Timah Nature Reserve.

Conservation Measures: Seek rediscovery of extant populations through biodiversity monitoring by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around where extant populations would occur (if they exist), such as in the nature reserves. Protection of any rediscovered nests that do not pose a public safety risk.

Scientific Name:
***Polistes meadeanus* (von Schulthess, 1913)**

Common Name:
Meade-Waldo's Paper Wasp

Family:
Vespidae

National Status: Vulnerable (VU)

Habitat and Ecology: Eusocial wasp that builds its nest under a leaf. Found in mature forest habitat, typically observed in shaded understorey.

Distribution: Indonesia, Singapore, Malaysia, Vietnam and Borneo.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: In Singapore this species appears confined to the Central Catchment Nature Reserve and surrounding forested parks. Its cocoon caps are distinctively bright green and

Photo: Khew Sin Khoon



Polistes meadeanus at their nest in the Central Catchment Nature Reserve, Singapore.

gradually transition to a pale yellow as they mature. The species closely resembles *Polybioides raphigastera* in coloration and general body shape.

Conservation Measures: Preservation and restoration of high-quality forest patches at and around sites where it occurs, such as the Central Catchment Nature Reserve, Bukit Timah Nature Reserve and their surrounding nature parks. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Polistes tenebricosus
Lepeletier, 1836

Common Name:
Dark-winged Paper Wasp

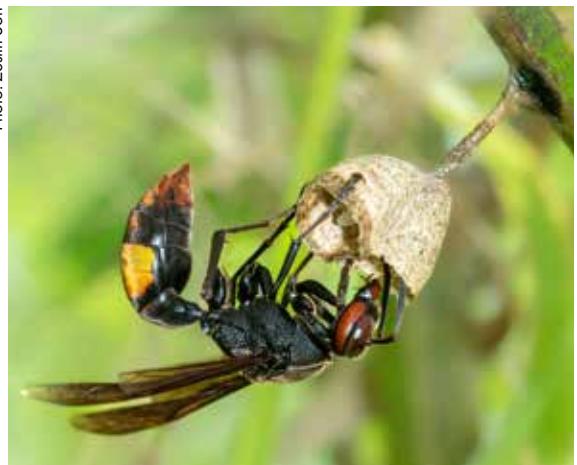
Family:
Vespidae

National Status: Vulnerable (VU)

Habitat and Ecology: Eusocial wasp that builds its nest under leaves and sheltered areas. Prefers mature forest including mangroves.

Distribution: Singapore, Malaysia, Indonesia, Myanmar, Vietnam, Philippines, Taiwan.

Photo: Zetlin Soh



Female *Polistes tenebricosus* constructing a nest in Johor, Malaysia.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: Apart from one isolated record in the Sungei Buloh Wetland Reserve, all recent records appear to be limited to Pulau Ubin. Where it does occur, it may nest within manmade structures.

Conservation Measures: Preservation and restoration of high-quality forest patches in and around areas where the species is known to occur. Refraining from removing nests that do not pose a risk to public safety. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Polybioides raphigastra (de Saussure, 1854)

Common Name:

Needle-tailed Paper Wasp

Family:

Vespidae

National Status: Data Deficient (DD)

Habitat and Ecology: Eusocial wasp that builds a pear-shaped nest in the hollows of trees or in small caves, using plant materials. Found in and around mature forests.

Distribution: Malay Peninsula, Singapore, Borneo.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: This species was documented in Singapore in 1902 by P. Cameron at Bukit Timah (as *Icaria sulciscutis*), and subsequently



Polybioides raphigastra visiting *Melastoma malabathricum* in Johor, Malaysia.

from Geylang in 1980. There have been no local records since. Its diminutive size and well-camouflaged nests could contribute to the possibility of being overlooked, hence it is categorized as Data Deficient.

Conservation Measures: Seek to establish information on population distribution and habitat usage through recording by researchers and citizen scientists. Preservation and restoration of high-quality forest patches across Singapore. Refraining from removing nests that do not pose a risk to public safety.

Scientific Name:

Ropalidia flavopicta (Smith 1857)

Common Name:

Yellow-painted Paper Wasp

Family:

Vespidae



A nest of *Ropalidia flavopicta* on a tree trunk in the Central Catchment Nature Reserve, Singapore.

National Status: Data Deficient (DD)

Habitat and Ecology: Eusocial wasp that gathers plant fibres to build nests that comprise combs covered by a flat envelope. Nests are built on a broad solid surface, such as tree bark or rock.

Distribution: Singapore, Vietnam, Malay Peninsula, Borneo, Sumatra.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: Recorded in sites in or around the Central Catchment Nature

Reserve and surrounding forested parks. Its small size and well-camouflaged nests could contribute to the possibility of being overlooked, hence it is categorized as Data Deficient.

Conservation Measures: Seek to establish information on population distribution and habitat usage through recording by researchers and citizen scientists. Preservation and restoration of high-quality forest patches in and around the Central Catchment Nature Reserve and surrounding nature parks. Refraining from removing nests that do not pose a risk to public safety.

Scientific Name:

Metischnogaster drewseni (de Saussure, 1857)

Common Name:

Drewsen's Hover Wasp

Family:

Vespidae

National Status: Data Deficient (DD)

Habitat and Ecology: Primitively eusocial wasp which builds long nests suspended on aerial horsehair-like fungal rhizomorphs.

Distribution: Singapore, Malaysia (Peninsular, Sarawak), Indonesia, Philippines (Palawan).

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: Currently known from only two documented occurrences in

Photo: John XQ Lee



A specimen of *Metischnogaster drewseni* from Singapore.

Singapore, specifically in Mandai and Bukit Kalang. It is likely to be restricted to mature forest.

Conservation Measures: Seek to establish information on population distribution and habitat usage through recording by researchers and citizen scientists. Preservation and restoration of high-quality patches of forest across Singapore. Refraining from removing nests that do not pose a risk to public safety.

Scientific Name:
Sphex argentatus
Fabricius, 1787

Common Name:
Silver Digger Wasp

Family:
Sphecidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary wasp that builds an underground nest. It specializes in hunting Orthoptera, typically katydids (Tettigoniidae), as provisions for its larvae. Occurs in coastal forests.

Distribution: Singapore, Indonesia, New Guinea, India, Japan, Taiwan, Philippines, China, Australia, Spain, Democratic Republic of Congo, Kenya, South Africa, Sudan.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: In Singapore this species seems to be associated with the coast, being recorded exclusively at Semakau and Changi. Due to its distinct visual characteristics, it is unlikely to be missed during observations.

Scientific Name:
Chlorion lobatum
(Fabricius, 1775)

Common Name:
Emerald Cricket-Hunter

Family:
Sphecidae

Photo: Adrian Nebbett



Sphex argentatus visiting a Celosia in Malaysia.

Conservation Measures: Preservation and restoration of coastal forest and natural beach habitats in and around sites where it is known to occur. Monitoring of extant populations by researchers and citizen scientists.

Photo: Bruce Svales



Female *Chlorion lobatum* at Coney Island, Singapore.

National Status: Near Threatened (NT)

Habitat and Ecology: Solitary wasp that builds an underground nest. It specializes in hunting Orthoptera, typically crickets (Gryllidae), as provisions for its larvae. Occurs in coastal forest.

Distribution: Singapore, Malaysia, Indonesia (Sumatra), Vietnam, China, India, Nepal, Bangladesh, Myanmar, West Indies.

Threats: Habitat loss and associated declines in suitable nesting sites.

Scientific Interest and Potential Value: This distinctive species is mainly associated with coastal forest sites, and in Singapore is largely known from Coney Island, Pulau Ubin and Changi Beach, although it may also occur at mature forests further inland such as at MacRitchie.

Conservation Measures: Preservation and restoration of high-quality coastal forest and natural beach habitats at and around areas where it is known to occur. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:

Bembix melancholica
Smith, 1858

Common Name:

Melancholic Sand Wasp

Family:

Crabronidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary wasp that occurs in and around the sandy areas of mangroves and coastal forest. Specializes in hunting large flies (Diptera). Nectars from native flowering shrubs such as *Leea indica*.

Distribution: Thai-Malay Peninsula, Singapore, and Borneo.

Threats: Habitat loss and associated declines in suitable hosts.

Scientific Interest and Potential Value: In Singapore, this large and distinctively marked wasp is

Photo: Zeslin Soh



Male *Bembix melancholica* from Chek Jawa, Pulau Ubin.

found predominantly at Pulau Ubin, such as at Chek Jawa, and on the nearby mainland including Coney Island.

Conservation Measures: Preservation and restoration of high-quality habitats, including mangroves and coastal forest, particularly at sites where it is known to occur. Monitoring of extant populations by researchers and citizen scientists.

Scientific Name:
Megascolia procer procer
(Illiger, 1802)

Common Name:
Atlas Mammoth Wasp

Family:
Scoliidae

National Status: Vulnerable (VU)

Habitat and Ecology: Solitary wasp that digs in the ground or decaying wood in search of their hosts, the larvae of large scarab beetles. Mainly occurs in and around mature mangroves and forests. Nectars from native flowering shrubs such as *Premna serratifolia*.

Distribution: Thai-Malay Peninsula, Singapore, Sumatra and Borneo.

Threats: Habitat loss and associated declines in suitable hosts.

Scientific Interest and Potential Value: This wasp is the largest representative of its family and one of the largest wasps in the world. Despite its conspicuous size and markings, it is rarely observed locally. Country records are predominantly from the Sungei Buloh Wetland Reserve and Admiralty Park, but have also recently been extended to the Singapore Botanic

Photo: Meena Vathyam



Male *Megascolia procer* in the vicinity of Admiralty Park, Singapore.

Gardens. Its occurrence is likely restricted by habitat association and the presence of suitable beetle hosts, one of which is reported to be the locally rare Atlas Beetle (*Chalcosoma atlas*).

Conservation Measures: Preservation and restoration of high-quality habitats, including mangroves and coastal forest, particularly at sites where it is known to occur. Monitoring of extant populations by researchers and citizen scientists.

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Hymenoptera (Formicidae) – Ants

WENDY Y. WANG

Scientific Name:

Eurhopalothrix heliscata
Wilson & Brown, 1985

Common Name:

-

Order/Family:

Hymenoptera: Formicidae

National Status: Endangered (EN)

Habitat and Ecology: This species is associated with primary or old/mature secondary forests in Singapore. Nests are usually found in soil within or under rotting wood or fallen logs. The ants are known to be generalized termite feeders, though they have also been observed to hunt other insects occasionally. Unlike many more prominent ant species, *E. heliscata* are solitary huntresses that do not engage in mass hunting raids.

Distribution: Malaysia, Singapore, Thailand

Threats: Anthropogenic development and habitat conversion or destruction.

Scientific Name:

Harpegnathos venator
(Smith, 1858)

Common Name:

-

Order/Family:

Hymenoptera: Formicidae

Photo: Wendy Y. Wang



Full face of *Eurhopalothrix heliscata*.

Scientific Interest and Potential Value: The species was originally discovered in and described from Singapore. Their cryptic habits and reduced behavioural repertoire distinguish it from most other ants of the same subfamily. The ants are unique in their slow movements even while hunting, tendencies for prolonged periods of rest away from the brood, and atypical defensive strategies such as cryptic colouration and feigning death.

Conservation Measures: The Bukit Timah and Central Catchment Nature Reserves provides protected and managed habitat.

Photo: Wendy Y. Wang



Profile of *Harpegnathos venator*.

National Status: Critically Endangered (CR)

Habitat and Ecology: This species is associated with primary or mature secondary forests in Singapore, typically found in fringe forest or near forest edges. Individuals have been found foraging on the forest floor. Nests have been observed to be underground in soil with funnel entrances.

Distribution: Bangladesh, Borneo, China (southern), India, Indonesia, Laos, Malaysia (Peninsular), Myanmar, Singapore, Thailand.

Threats: Anthropogenic development and habitat conversion or destruction. Also human disturbance or poaching for the pet trade.

Scientific Interest and Potential Value: Nest structures of *H. venator* are known to be as unusually complex as are those of its sibling species *H. saltator*. For mature colonies of both species, the nest comprises stacked chambers that form a rounded structure, topped off with a thick vaulted roof, and kept apart from surrounding substrate by an empty space. This nest design has been postulated to be a countermeasure against periodic floods – the empty space may help divert or drain flood water from the nest (Peeters et al. 1994).

Conservation Measures: The Central Catchment Nature Reserve provides protected and managed habitat.

Scientific Name:

Odontomachus litoralis Wang,
Yamada & Yamane, 2020

Common Name:

–

Order/Family:

Hymenoptera: Formicidae

National Status: Vulnerable (VU)

Habitat and Ecology: This large maritime trap-jaw ant is found exclusively in the mangroves. The ants usually nest in abandoned mud lobster (*Thalassina* sp.) mounds, which are either partially or fully submerged in seawater during high tides. Nests have also been reported from soil mounds among roots of uprooted trees. Workers of this species forage on mud and debris in and around mangrove back forests during low tide. The ants are believed to feed mostly on small invertebrates such as crabs and isopods that co-exist in the mangroves.

Distribution: Borneo, Peninsular Malaysia, Singapore.

Threats: Coastal habitat conversion and destruction.



Left image: Full face of *Odontomachus litoralis* – Worker. Right image: Full face of *Odontomachus litoralis* – Male.

Scientific Interest and Potential Value: This species was originally described from Singapore. The type series – comprising a colony of workers, queens, and males – of *O. litoralis* was collected from Sungei Buloh Wetland Reserve. *Odontomachus litoralis* is one of two known trap-jaw ant species in the world – the other being *O. malignus* Smith, 1859 – which nest in intertidal coastal zones. Both species have been recorded from Singapore, but they seem to occupy different niches. *Odontomachus malignus* has been found near coral rubble along coastlines, while *O. litoralis* appears to be predominant in local mangroves.

Conservation Measures: The continued protection and management of Sungei Buloh Wetland Reserve should provide protected and managed habitat.

Scientific Name:
Pheidole sexspinosa
 Mayr, 1870

Common Name:
 -

Order/Family:
Hymenoptera: Formicidae

National Status: Vulnerable (VU)

Habitat and Ecology: In Singapore, this species appears associated exclusively with mangroves. The ants have been found nesting in abandoned mud lobster (*Thalassina* sp.) mounds, also in cable roots of mangrove trees such as *Excoecaria agallocha* L., and in decayed or living stems of *Rhizophora* above tide immersion levels. In other parts of the world, namely islands in Oceania, *P. sexspinosa* has been recorded from more inland forests.

Distribution: Singapore, Oceania (most major islands).

Threats: Coastal habitat conversion and destruction.

Scientific Interest and Potential Value: The first and currently the only record of this species in the Oriental region – outside of Oceania and Australasia – is from Singapore. The discovery of *P. sexspinosa* in Singapore

Photo: Aiki Yamada



Profile of *Pheidole sexspinosa* - Worker.

challenges the hypothesis that the species originated in New Guinea and colonized eastward to most of the remote Pacific, rather than westward to Sundaland (Eonomo et al. 2015, Wang et al. 2018). The unusually broad distribution of *P. sexspinosa* may have occurred by means of 1) human-mediated dispersal, or 2) dispersal via seasonal circulatory currents between the west Pacific Ocean and the South China and Java Seas. Viviparous seeds of *E. agallocha* – a mangrove tree species known to house *P. sexspinosa* colonies – can be transported over long distances by ocean currents.

Conservation Measures: The continued protection and management of Sungei Buloh Wetland Reserve should provide protected and managed habitat.

Scientific Name:
Rhopalomastix glabricephala
 Wang, Yong & Jaitrong, 2018

Common Name:
 -

Order/Family:
Hymenoptera: Formicidae

Photo: Wendy Y. Wong



Profile of *Rhopalomastix glabricephala* - Worker.

National Status: Critically Endangered (CR)

Habitat and Ecology: The type series was found in mature native-dominated secondary forest – the ants were nesting in bark of a large Tembusu tree (*Cyrtophyllum fragrans*). Like other congeners, *R. glabricephala* live with armoured scale insects (Diaspididae) in bark tunnels/cavities. The ants provide the diaspidids with protection and shelter, in exchange for the waxy secretions of the latter – a protein-rich food source for the ants.

Nests of *Rhopalomastix* ants in general can usually be detected by the presence of “frass” on the external bark surface. Frass comprises trails of powdered wood debris or residue generated and “pushed” through bark fissures when the ants chew tunnels through inner bark layers.

Distribution: Singapore

Threats: Anthropogenic development and habitat conversion or destruction.

Scientific Interest and Potential Value: This species is only known from its type series collected from a single locality in Singapore. *Rhopalomastix glabricephala* resembles the more widespread (but still uncommon) *R. murphyi* but can be differentiated mainly by head shape and the presence of decumbent hairs on the anterior petiolar face (hairs absent in *R. murphyi*)..

Conservation Measures: The type (and globally the only) locality for the species is close to Central Catchment Nature Reserve and may need additional protection.

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Lepidoptera – Butterflies

KHEW SIN KHOON, HORACE TAN, TEA YI-KAI, AARON SOH, JONATHAN SOONG

Scientific Name:

Troides helena cerberus
(C. & R. Felder, 1865)

Common Name:

Common Birdwing

Family:

Papilionidae

National Status: Vulnerable (VU)

Habitat and Ecology: The Common Birdwing survives in a variety of habitats but is essentially a forest species. It is more regularly observed where its caterpillar host plant, *Aristolochia acuminata*, can be found. The species has a large flight range and is usually seen flying at treetop level but often seen feeding at flowering plants in parks and gardens.

Distribution: The species is widely distributed from northern India to Hong Kong, through Thailand, Malaysia and Singapore to the Indonesian islands.

Photo: Khew Sin Khoon



Threats: This species is listed in CITES Appendix II and is sought after by collectors. It is vulnerable as it depends on the availability of its caterpillar host plant, which is considered a non-native plant.

Scientific Interest and Potential Value: It is a large and attractive butterfly and easily noticeable as it flutters around in parks and gardens.

Conservation Measures: This species is highly dependent on the availability of its caterpillar host plant, *Aristolochia acuminata* for its survival in Singapore. The cultivation of its non-native host plant is key to the overall conservation strategy to maintaining a sustainable population of the Common Birdwing in Singapore.

Scientific Name:

Papilio demolion demolion
(Cramer, 1776)

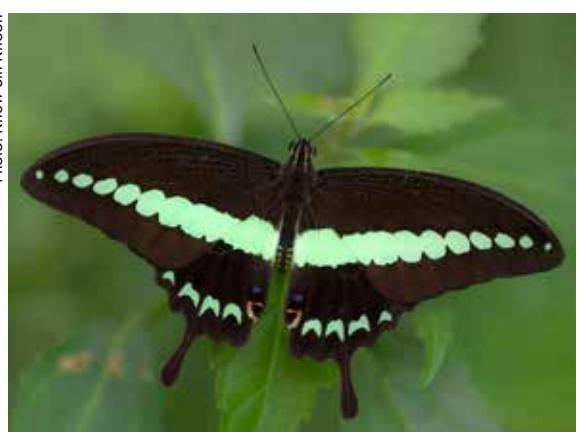
Common Name:

Banded Swallowtail

Family:

Papilionidae

Photo: Khew Sin Khoon



National Status: Endangered (EN)

Habitat and Ecology: The Banded Swallowtail is a fast-flying species that was previously widely distributed across urban and forested habitats in Singapore. In the past 10 years, its population has dwindled, and field sightings are limited to the western forest edges of Singapore. Although its caterpillars are polyphagous and one of the host plants is a common *Citrus* sp., the butterfly is becoming endangered locally.

Distribution: The species is distributed from Myanmar across Southeast Asia and Indonesia. In Singapore, sightings of this species are declining and limited to the western parts of Singapore.

Scientific Name:

Papilio memnon agenor
(Linnaeus, 1758)

Common Name:

Great Mormon

Family:

Papilionidae

National Status: Vulnerable (VU)

Habitat and Ecology: The Great Mormon is a large butterfly and is a noteworthy species in that the females are polymorphic. The species is an excellent case study for mimicry as each form of the female mimics a distasteful counterpart.

Distribution: The species is widely distributed from south Japan to India and throughout the Sunda subregion.

Threats: Loss of habitat and caterpillar host plants. Its population has been declining since the publication of the Red Data Book 2008, hence its uplisting from Near Threatened to Vulnerable status. This may be because its preferred caterpillar host plant, the Pomelo (*Citrus grandis*) is no longer as commonly found as before.

Threats: Its declining status is cause for concern, although the threats to its existence are unknown.

Scientific Interest and Potential Value: Given its recent decline in population, and its potential extirpation in Singapore, this species is of significant conservation interest in species recovery programmes and conservation initiatives.

Conservation Measures: This species may benefit from the careful curation of nature corridors to aid its movements towards other areas of Singapore from its current limited range within the western forested areas.



Scientific Interest and Potential Value: It is a large and noticeable butterfly and is remarkable for its polymorphism in the females.

Conservation Measures: Although the caterpillar of the Great Mormon is known to be able to feed on several species of *Citrus*, there is still a preference for the Pomelo. Conservation measures should include the cultivation of the Pomelo in our nature parks and park connectors to allow this species to thrive again in Singapore.

Scientific Name:

Eurema brigitta senna (C. & R. Felder, 1865)

Common Name:

No Brand Grass Yellow

Family:

Pieridae

National Status: Critically Endangered (CR)

Habitat and Ecology: The No Brand Grass Yellow is one of six extant species of the genus *Eurema* found in Singapore. It was re-discovered in 2006 at a site cleared for development. Its caterpillars appear to only feed on a single host plant, *Cassia mimosoides* which tends to grow wild in open secondary forests or sites cleared for future development.

Distribution: The species is widely distributed from tropical Africa to South East Asia.

Threats: The species is highly dependent on the

Photo: Khew Sin Khoon



availability of its caterpillar host plant which is rare in Singapore.

Scientific Interest and Potential Value: When it was re-discovered in 2006, the No Brand Grass Yellow had not been seen for at least four decades, although it was listed as extant in Singapore in early references.

Conservation Measures: This species is highly dependent on the availability of its caterpillar host plant, *Cassia mimosoides*, for its survival. The cultivation, and long-term sustainable source of this host plant is critical to the survival of this species, without which it is likely to be tipped into extirpation in Singapore.

Scientific Name:

Idea stollii logani (Moore, 1883)

Common Name:

Common Tree Nymph

Family:

Nymphalidae (subfamily Danainae)

National Status: Critically Endangered (CR)

Habitat and Ecology: The Common Tree Nymph is a forest-dependent species which typically flies within Singapore's nature reserves. It was regularly seen, gliding gracefully at treetop level and feeding at flowering trees within the nature reserves.

Distribution: The species is distributed across south Thailand, Malaysia, Singapore and Indonesia.

Photo: Khew Sin Khoon



Threats: Reduction of its forest habitats and decline of its caterpillar host plant availability.

Scientific Interest and Potential Value: The Common Tree Nymph was previously classified as Near Threatened in the Red Data Book second edition (2008) but it was last observed in 2014 and has not been seen for nearly ten years. Its sudden and abrupt disappearance justifies its status elevation to Critically Endangered.

Conservation Measures: The Common Tree Nymph may potentially be extirpated from Singapore if its habitats and hitherto unknown caterpillar host plant

population declines. Whilst it was moderately common in the past two decades, it is now absent from our forests.

Scientific Name:
Idea leuconoe chersonesia
(Fruhstorfer, 1898)

Common Name:
Mangrove Tree Nymph

Family:
Nymphalidae (subfamily Danainae)



National Status: Critically Endangered (CR)

Habitat and Ecology: The Mangrove Tree Nymph is a seashore species and inhabits mangrove areas. It flies in a very localized area on Pulau Tekong and very rarely, on Pulau Ubin.

Distribution: Widely distributed from Taiwan across Thailand, Southeast Asia and Indonesia.

Threats: Loss of mangrove habitats, including by coastal erosion, and depletion of its caterpillar host

plant usually found within the mangrove and back-mangrove environments.

Scientific Interest and Potential Value: Of specific interest as a mangrove habitat-dependent species.

Conservation Measures: Conservation of mangrove habitats in Singapore, particularly at the source location on Pulau Tekong. Potential to be translocated to other mangrove habitats in Singapore if the caterpillar host plant is identified and cultivated at other locations.

Scientific Name:
Euploea eyndhovii gardineri
(Fruhstorfer, 1898)

Common Name:
Striped Black Crow

Family:
Nymphalidae (subfamily Danainae)



National Status: Endangered (EN)

Habitat and Ecology: The Striped Black Crow is usually observed singly at forest edges, park connectors and nature parks, usually looking for flowering plants to feed on.

Distribution: The species is distributed from south Myanmar, south Vietnam, Thailand, Malaysia and Singapore to the Indonesian islands.

Threats: Loss of forest habitats and its caterpillar host plant.

Scientific Interest and Potential Value: It is the typical model for Batesian mimicry by the Malayan Eggfly (*Hypolimnas anomala anomala*).

Scientific Name:
Euploea radamanthus radamanthus
(Fabricius, 1793)

Common Name:
Magpie Crow

Family:
Nymphalidae (subfamily Danainae)

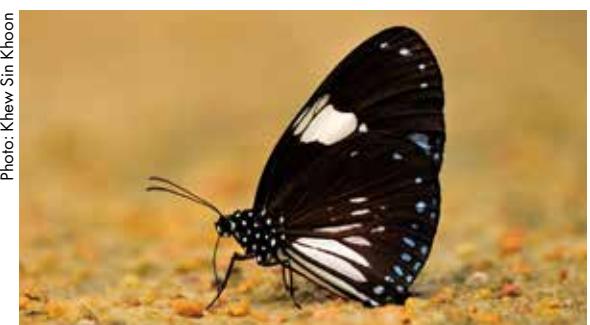
National Status: Critically Endangered (CR)

Habitat and Ecology: The Magpie Crow is a forest-dependent species that is usually found along forest trails and foraging along the open forest-edge vegetation. It can also be observed puddling at muddy footpaths and streambanks.

Distribution: The species occurs from southern Thailand to Malaysia, Singapore and Indonesia.

Threats: Loss of forest habitats and its caterpillar host plant.

Conservation Measures: As a forest-dependent species, the conservation of Singapore's forest habitats is critical to its survival. Its caterpillar host plant needs to be identified and conserved.



Scientific Name:
Euploea camaralzeman malayica
(Butler, 1878)

Common Name:
Malayan Crow

Family:
Nymphalidae (subfamily Danainae)

Scientific Interest and Potential Value: It is typical example of Batesian mimicry in which it is mimicked by the two female forms of the nymphaline Courtesan (*Euripus nyctelius eupleoides*). Female forms of the papilionid Great Blue Mime (*Papilio paradoxus aenigma*) also mimic the Magpie Crow.

Conservation Measures: Although the Magpie Crow was once moderately common in Singapore, its sudden and abrupt disappearance is also cause for concern. Conservation of pristine forests and its host plant is critical to its survival in Singapore.



National Status: Critically Endangered (CR)

Habitat and Ecology: The Malayan Crow is a forest-dependent species and usually seen singly within Singapore's forested nature reserves. It was last spotted in 2012 at the Dairy Farm Nature Park.

Distribution: The species occurs from Myanmar, Thailand, Malaysia and Singapore.

Threats: Loss of forest habitats and its caterpillar host plants (believed to be species of the Apocynaceae family).

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and may already be potentially extirpated as it has not been seen for over ten years.

Conservation Measures: Conservation of forest habitats and cultivation of its documented caterpillar host plants in Singapore's buffer parks to the nature reserves.

Scientific Name:

Mycalesis orseis nautilus
(Butler, 1867)

Common Name:

Purple Bush Brown

Family:

Nymphalidae (subfamily Satyrinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Purple Bush Brown is the least commonly seen amongst the five extant species of the genus *Mycalesis* found in Singapore. It is a forest-dependent species and rarely strays out of the forested nature reserves in Singapore. It typically flies around shaded grassy areas along forest edges.

Distribution: The species is distributed from southern Thailand to Malaysia, Singapore and Indonesia.

Photo: Khew Sin Khoon



Threats: Loss of shaded forest habitats and its caterpillar host plant, likely to be one of the grasses (Poaceae).

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and its declining population should be studied and monitored for any further reduction.

Conservation Measures: Identification and conservation of the species' preferred forest habitats and conditions where it prefers. Ensuring that its caterpillar host plant is also available at such locations.

Scientific Name:

Ypthima pandocus corticaria
(Butler, 1879)

Common Name:

Common Three Ring

Family:

Nymphalidae (subfamily Satyrinae)

Photo: Khew Sin Khoon



National Status: Vulnerable (VU)

Habitat and Ecology: The Common Three Ring flies in open grassy areas along forest edges within the nature reserves of Singapore. Ironically, contemporary literature puts it as “the commonest butterfly in the Malay Peninsula”. However, its existence in Singapore is severely threatened and its population has declined significantly over the years.

Distribution: The species is widely distributed from southern Thailand, Malaysia, Singapore, Indonesia and the Philippines.

Scientific Name:

Thaumantis noureddin Noureddin
(Westwood, 1851)

Common Name:

Dark Jungle Glory

Family:

Nymphalidae (subfamily Satyrinae)

National Status: Endangered (EN)

Habitat and Ecology: The Dark Jungle Glory was a re-discovery where a colony of the species exists on the western side of Singapore. It flies in heavily shaded forest understorey where palms, bamboos and rattans are abundant.

Distribution: The species is widely distributed from northern India through Thailand, Malaysia and Singapore to Indonesia.

Threats: Loss of habitats and host plants.

Scientific Interest and Potential Value: The Dark Jungle Glory is a good example of how a species can

Threats: Loss of forest habitats and reduction of its caterpillar host plant, *Ischaemum muticum* (Poaceae) in the vicinity of its preferred habitats.

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and its rapidly declining population should be studied and monitored for any further reduction.

Conservation Measures: Conservation of forest habitats and open grassy areas where the remaining colonies of this species are known to survive.



camouflage itself with its cryptic underside patterns. It frequents bamboo and rattan thickets and is a typical forest-dependent low-flying species.

Conservation Measures: This species requires heavily shaded forest habitats where palms, bamboos and rattans thrive and these conditions should be conserved in the locations where this species is known to survive. Nature corridor connectors should be planned such that this species can spread to other parts of Singapore.

Scientific Name:
Discophora sondaica despoliata
(Stichel 1902)

Common Name:
Common Duffer

Family:
Nymphalidae (subfamily Satyrinae)

National Status: Endangered (EN)

Habitat and Ecology: The Common Duffer frequents heavily vegetated areas in the vicinity of bamboo thickets. A species of bamboo is the caterpillar host plant of this butterfly. It is crepuscular in habit and is usually active in the late hours of the day.

Distribution: The species is widely distributed from northern India to south China, through Thailand, Malaysia and Singapore to the Indonesian islands and the Philippines.

Threats: Loss of habitats and caterpillar host plants.

Scientific Name:
Cethosia hypsea hypsina
(C. & R. Felder 1865)

Common Name:
Malay Lacewing

Family:
Nymphalidae (subfamily Heliconiinae)

National Status: Critically Endangered (CR)

Habitat and Ecology: The Malay Lacewing is a forest-dependent species and usually flies within Singapore's nature reserves. It is also found on Pulau Ubin.

Distribution: The species is distributed from south Myanmar through Thailand, Malaysia and Singapore to the Indonesian islands.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: Of scientific interest as part of a small group of bamboo-feeding butterfly fauna. Part of Singapore's biodiversity and natural heritage.

Conservation Measures: The conservation of its habitats and preferred species of bamboo that its caterpillars feed on. Possibility of using nature corridors to allow the species to spread to alternative sites within the nature reserves.

Photo: Khew Sin Khoon



Threats: This species status has been elevated to Critically Endangered as its population has experienced severe decline over the past decade. Whereas it was moderately common in the nature reserves, sightings of this species are few and far between in the last five years.

Scientific Interest and Potential Value: The genus *Cethosia* which the Malay Lacewing belongs to, includes some of the most beautiful butterflies in the region. The delicate patterns and bright colours on the wings are attractive and is a welcome addition to Singapore's butterfly biodiversity.

Conservation Measures: It is critical to conserve its forest habitats and cultivation of its caterpillar host plant, *Adenia macrophylla* var. *singaporeana*, a species of Passifloraceae.

Scientific Name:
Cirrochroa orissa orissa
(C. & R. Felder 1860)

Common Name:
Banded Yeoman

Family:
Nymphalidae (subfamily Heliconiinae)

National Status: Endangered (EN)

Habitat and Ecology: The Banded Yeoman is a forest-dependent species that is found in a very local area within the Central Catchment Nature Reserves.

Distribution: The species occurs in South Myanmar, through South Thailand, Malaysia and Singapore to the Indonesian islands of Sumatra and Borneo.

Threats: Loss of forest habitats and availability of its caterpillar host plant.

Scientific Name:
Cirrochroa emalea emalea
(Guérin-Méneville, 1843)

Common Name:
Malay Yeoman

Family:
Nymphalidae (subfamily Heliconiinae)



Scientific Interest and Potential Value: A forest specialist, this species reflects the health of our forests and the diversity of plant species.

Conservation Measures: The species requires the conservation of Singapore's remaining pristine forested nature reserves and the cultivation of its rather uncommon caterpillar host plant, *Ryparosa scortechinii* (Achariaceae).



National Status: Endangered (EN)

Habitat and Ecology: The Malay Yeoman is closely related to the Banded Yeoman and frequents the forested areas in Singapore. However, it is more widely distributed within the Central Catchment Nature Reserves. It was only recently re-discovered in 2013 and sightings of this species has been more regular since then.

Distribution: The species is mainly restricted to South Thailand, Malaysia and Singapore.

Threats: Loss of forest habitats and its caterpillar host plant.

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and its recent re-discovery in Singapore after many years of absence is a good justification to conserve this species amongst our butterfly fauna.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the species' caterpillar host plant for cultivation.

Scientific Name:

Chersonesia peraka peraka
(Distant, 1884)

Common Name:

Little Maplet

Family:

Nymphalidae (subfamily Cyrestinae)

National Status: Vulnerable (VU)

Habitat and Ecology: This species frequents the forested areas within Singapore's nature reserves and is quite well distributed across the Central Catchment Nature Reserves. Its appearance is erratic and often seasonal.

Distribution: The species occurs in South Thailand, Malaysia and Singapore across to the Indonesian islands.

Threats: Loss of forest habitats and availability of its caterpillar host plant.

Scientific Interest and Potential Value: A forest specialist, this species reflects the health of our forests and the diversity of plant species.

Photo: Khew Sin Khoon



Conservation Measures: The species requires the conservation of Singapore's remaining pristine forested nature reserves and the cultivation of its caterpillar host plant, *Ficus punctata* (Moraceae).

Scientific Name:***Euthalia merta merta* (Moore, 1859)****Common Name:****White Tipped Baron****Family:****Nymphalidae (subfamily Limetidinae)****National Status:** Endangered (EN)

Habitat and Ecology: The White Tipped Baron is a forest-dependent species and is mainly observed in shaded forest understorey within the Central Catchment Nature Reserves. They prefer to forage amongst leaf litter and sometimes seen feeding on overripe fruits on the forest floor.

Distribution: South Thailand, Malaysia, Singapore to the Philippines.

Threats: Loss of forest habitats and its currently unknown caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: The conservation of its preferred forested habitats and discovery and cultivation of its hitherto unknown caterpillar host plant would be critical to this species' sustainable survival in Singapore.

Scientific Name:***Euripus nyctelius euploeooides*
(C. & R. Felder 1867)****Common Name:****Courtesan****Family:****Nymphalidae (subfamily Apaturinae)****National Status:** Critically Endangered (CR)

Habitat and Ecology: The Courtesan is another forest-dependent species but has also been spotted at the Southern Ridges Parks before. After a short period in the Mandai Forest when it was relatively common for a few months in 2013, the species mysteriously disappeared and has not been seen since then.

Distribution: The species occurs throughout Thailand, Malaysia and Singapore to the Indonesian islands and Philippines.

Photo: Khew Sin Khoon



Threats: Loss of forest habitats and availability of its' caterpillar host plants.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts. Of particular interest is that the two female forms of this species mimic the distasteful Magpie Crow for protection against predators.

Conservation Measures: The species requires the conservation of Singapore's remaining pristine forested nature reserves and the cultivation of its caterpillar

host plants, *Trema tomentosum* and *Trema cannabina* (Cannabaceae).

Scientific Name:

Taxila haquinus haquinus
(Fabricius, 1793)

Common Name:
Harlequin

Family:
Riodinidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Harlequin is a forest-dependent species and prefers heavily shaded forest understorey habitats. A small colony of the species was discovered in a forested patch at the Nanyang Avenue area. Efforts to translocate the species met with limited success until recently when a colony established itself at Sungei Buloh Wetland Reserve.

Distribution: The species is distributed from Assam to South Thailand, Malaysia and Singapore.

Threats: Loss of forest habitats and its caterpillar host plant.

Scientific Name:

Poritia philota philota
(Hewitson, 1874)

Common Name:
Malay Gem

Family:
Lycaenidae (subfamily Poritiniae)

Photo: Kheow Sin Khoon



Scientific Interest and Potential Value: The Harlequin is the target species of a Species Recovery Programme, where the butterfly and caterpillars were translocated to alternative habitats around Singapore to attempt to save the species from extirpation.

Conservation Measures: Conservation of Singapore's forested reserves and continued cultivation of its caterpillar host plant, *Ardisia elliptica* should be part of the management initiative to help sustain a population of this species in Singapore.

Photo: Kheow Sin Khoon



National Status: Endangered (EN)

Habitat and Ecology: The Malay Gem is a forest-dependent species that prefers the shady understorey of heavily shaded forest habitats. Its distribution is thus far limited to the Central Catchment Area in Singapore.

Distribution: Northeast India to Thailand, Malaysia, Singapore to the Philippines.

Threats: Loss of pristine forest habitats and availability of its currently unknown caterpillar host plant.

Scientific Name:

Everes lacturnus rileyi (Godfrey, 1916)

Common Name:

Indian Cupid

Family:

Lycaenidae (subfamily Polyommatinae)

National Status: Endangered (EN)

Habitat and Ecology: This diminutive species is erratic in appearance and flies amongst open grassy areas at forest edges and sometimes in urban areas. However, there are some years when it is absent and not observed.

Distribution: The species is found throughout the Oriental Region and reaches Australia.

Threats: Loss of its preferred habitats and its caterpillar host plant, a species of *Trifolium* or *Desmodium* (Leguminosae).

Scientific Interest and Potential Value: A forest specialist, this species is an indicator of the health of our forests and the diversity of plant species.

Conservation Measures: The species requires the conservation of Singapore's remaining pristine forested nature reserves and further research into its caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and its recent re-discovery in Singapore after many years of absence is a good justification to conserve this species amongst our butterfly fauna.

Conservation Measures: Further research is needed into its caterpillar host plant and the biology of the butterfly to understand why its occurrence in Singapore is sporadic and unpredictable.

Scientific Name:

Catochrysops strabo strabo
(Fabricius, 1793)

Common Name:

Forget Me Not

Family:

Lycaenidae (subfamily Polyommatinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Forget Me Not prefers open grassy habitats and flies close to the ground. It is often confused with a similar looking species, the Silver Forget Me Not (*Catochrysops panormus exiguus*) which is more common.

Distribution: The species occurs in Sri Lanka and India through Southeast Asia and Indonesia.

Threats: Loss of forest habitats and availability of its caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: The declining population of the Forget Me Not is of concern and of interest in establishing the habitats and conditions in which the species is able to be able to sustain a population.

Conservation Measures: Further research into its caterpillar host plant, *Grona heterocarpus*, and the myrmecophilic relationship with ants is needed to improve the knowledge about this species and how to conserve it.

Scientific Name:

Jamides caeruleus caeruleus (H Druce, 1873)

Common Name:

Sky Blue

Family:

Lycaenidae (subfamily Polyommatinae)

Photo: Khew Sin Khoon

**National Status:** Critically Endangered (CR)

Habitat and Ecology: The Sky Blue is rarely observed but where it occurs, it flies erratically at low levels amongst shrubbery and usually in the shaded forest understorey.

Distribution: The species is mainly restricted to South Thailand, Malaysia and Singapore.

Threats: Loss of its preferred habitats and its caterpillar host plant, the flowers of *Saraca cauliflora* (Fabaceae).

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage.

Conservation Measures: Further research into its preferred habitats and understanding of its biology and its caterpillars' preference for the flowers of *Saraca cauliflora*.

Scientific Name:
Nacaduba pavana singapura
(Butler, 1879)

Common Name:
Singapore Fourline Blue

Family:
Lycaenidae (subfamily Polyommatinae)

National Status: Endangered (EN)

Habitat and Ecology: The Singapore Fourline Blue is regularly found in back-mangrove and mangrove habitats and can sometimes be locally common. It flies erratically and rapidly amongst shrubbery.

Distribution: The species is restricted to Malaysia and Singapore to Indonesia.

Threats: Loss of mangrove and back-mangrove habitats and availability of its caterpillar host plants.



Photo: Low Jian Kai

Scientific Interest and Potential Value: A mangrove specialist, this species has the distinction of carrying the "singapura" subspecies name and is reported as more commonly seen in Singapore than elsewhere.

Conservation Measures: The species requires the conservation of Singapore's mangrove habitats which it appears to prefer, and the cultivation of its caterpillar host plants, *Derris trifoliata* and *Andira inermis* (Fabaceae) and *Allophylus cobbe* (Sapindaceae).

Scientific Name:
Arhopala muta maranda
(Guérin-Méneville, 1843)

Common Name:
Mutal Oakblue

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The genus *Arhopala* comprises over 100 distinct species, many of which are very similar and difficult to identify with confidence. These species prefer to lurk in heavily shaded forested areas and many are very rare.

Distribution: The species is distributed from south Myanmar to Neomalaya, Java and Nias.

Threats: Loss of pristine forest habitats and its caterpillar host plant.



Photo: Khew Sin Khoon

Scientific Interest and Potential Value: The cryptic *Arhopala* species certainly requires extensive and in-depth research to establish their biology and ecological needs in Singapore. There is likely to be several more undiscovered species to be recorded in Singapore.

Conservation Measures: Conservation of Singapore's forested reserves and the species' caterpillar host plant, *Lithocarpus bennettii* (Fagaceae).

Scientific Name:

Arhopala alitaeus pardena
(Corbet, 1941)

Common Name:

Purple Broken-Band Oakblue

Family:

Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The Purple Broken-Band Oakblue is found in heavily shaded forested areas like Bukit Timah Nature Reserve.

Distribution: The species is distributed from south Myanmar to Neomalaya, Philippines and Sulawesi.

Threats: Loss of pristine forests in the nature reserves of Singapore, and its caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: One of the several rare *Arhopala* species which requires the forested nature reserves for its continued survival.

Conservation Measures: The species requires the conservation of Singapore's forested nature reserves which includes Central Catchment Nature Reserve and Bukit Timah Nature Reserve, and the continued availability of its caterpillar host plant, *Vatica pauciflora* (Dipterocarpaceae).

Scientific Name:

Arhopala myrzala lammas
(Corbet, 1941)

Common Name:

Malayan Oakblue

Family:

Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Malayan Oakblue is another uncommon species that is restricted to the heavily shaded forests of the Central Catchment Nature Reserves. It displays a purple sheen on its wings when viewed in a side light.

Distribution: The species is distributed from Malaysia and Singapore to the Philippines.

Threats: Loss of pristine forest habitats and its hitherto unknown caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and further research into its biology and ecological preferences to aid its continued existence in Singapore.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the species' caterpillar host plant for cultivation.

Scientific Name:
Arhopala silhentensis adorea
(de Niceville, 1890)

Common Name:
Sylhet Oakblue

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Sylhet Oakblue was re-discovered in 2008 and is restricted to a few local sites within the Central Catchment Nature Reserve. Its life history requires the symbiotic relationship with the ant species *Polyrhachis armata*.

Distribution: The species is found from Northeast India through Myanmar, Thailand and Southeast Asia to the Philippines.

Photo: Khew Sin Khoon



Threats: Loss of pristine forested areas and availability of its caterpillar host plants.

Scientific Interest and Potential Value: An interesting subject of study would be its caterpillars myrmecophelic relationship with the *Polyrhachis* ant species.

Conservation Measures: The species requires the conservation of Singapore's pristine forested nature reserves and the cultivation of its caterpillar host plant, a species of *Syzygium* (Myrtaceae).

Scientific Name:
***Arhopala aurea* (Hewitson, 1862)**

Common Name:
Golden Green Oakblue

Family:
Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: This species is another forest-dependent butterfly and is restricted to very local sites within the Central Catchment Nature Reserves. It prefers heavily shaded forest habitat. It is one of the few *Arhopala* species in which males have a bright iridescent green upperside.

Distribution: The species' distribution appears to be mainly restricted to Malaysia and Singapore.

Threats: Loss of forest habitats and its caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage and its recent re-discovery in Singapore after many years of absence is a good justification to conserve this species amongst our butterfly fauna.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the species' caterpillar host plant for cultivation.

Scientific Name:
***Arhopala trogon* (Distant, 1884)**

Common Name:
Green Suffused Oakblue

Family:
Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The Green Suffused Oakblue is a forest-dependent species and its distribution is restricted to the heavily-shaded forest habitats within the Central Catchment and Bukit Timah Nature Reserves.

Distribution: The species is restricted to Malaysia and Singapore to Indonesia.



Threats: Loss of pristine forest habitats and its caterpillar host plant.

Scientific Interest and Potential Value: A rare forest-dependent species that should be conserved as part of Singapore's valuable natural heritage.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the species' caterpillar host plant for cultivation.

Scientific Name:
Arhopala ammon ammon
(Hewitson, 1862)

Common Name:
Lesser Malayan Oakblue

Family:
Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The Lesser Malayan Oakblue prefers the deep shade of pristine forested habitats and is limited to a few sites within the nature reserves of Singapore.

Distribution: The species is mainly restricted to South Thailand, Malaysia and Singapore.

Threats: Loss of forest habitats and its caterpillar host plant.



Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage. The species' appearance is exceedingly erratic, although it has been spotted at the Labrador Nature Reserve and further research should be conducted to understand its preferred habitats.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the species' caterpillar host plant for cultivation.

Scientific Name:
Drupadia rufotaenia rufotaenia
(Fruhstorfer, 1912)

Common Name:
Pygmy Posy

Family:
Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The Pygmy Posy is a small butterfly that is forest dependent. In Singapore, it is limited to certain locations in the Central Catchment Nature Reserves.

Distribution: The species is distributed from Myanmar through Thailand, Malaysia and Singapore to the Philippines.

Threats: Loss of pristine forest habitats and availability of its hitherto unknown caterpillar host plant.



Scientific Interest and Potential Value: An attractive butterfly species, the Pygmy Posy is part of Singapore's biodiversity and natural heritage and should be carefully studied and conserved.

Conservation Measures: Conservation of Singapore's remaining forested nature reserves and further research to ascertain the unknown caterpillar host plant for this species.

Scientific Name:
Drupadia theda thesmia
(Hewitson, 1863)

Common Name:
Dark Posy

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Dark Posy is usually seen in the shaded forest understorey of our nature reserves. It is quite widespread but remains within the sanctuary of the Central Catchment Nature Reserve and Bukit Timah Nature Reserve and surrounding nature parks.

Distribution: The species is distributed from south Myanmar across to Thailand, Malaysia, Singapore to the Philippines and Sulawesi.



Threats: Loss of forest habitats and its caterpillar host plants, *Combretum sundaicum* (Combretaceae) and *Ixora congesta* (Rubiaceae).

Scientific Interest and Potential Value: The population decline of the Dark Posy over the past three decades should be of conservation interest and research should be done to ascertain this phenomenon.

Conservation Measures: Conservation of Singapore's forested reserves and further research to establish the habitats and conditions under which

this species is able to sustain a viable population in Singapore.

Scientific Name:
Horaga onyx sardonyx
(Fruhstorfer, 1914)

Common Name:
Common Onyx

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Common Onyx is seen most often along the nature parks of the Southern Ridges and on Pulau Ubin, but is often confused with the Ambon Onyx, which is the commoner of the two species. It flies in open areas amongst shrubbery and often seen at treetop level.

Distribution: The species is distributed from Sri Lanka to Taiwan and through Southeast Asia to New Guinea.

Threats: Loss of its' preferred habitats.



Scientific Name:
Horaga syrinx maenala
(Hewitson, 1869)

Common Name:
Ambon Onyx

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Ambon Onyx is widely distributed across Singapore and has been observed from the Southern Ridges to the Central Catchment Nature Reserves.

Scientific Interest and Potential Value: The Common Onyx is a recent re-discovery and is part of Singapore's biodiversity and natural heritage. It should be studied further for conservation interest.

Conservation Measures: The species has been bred on the young shoots of the common tree, the *Saga* (*Adenanthera pavonina*) (Leguminosae), and *Guioa pubersens* (Sapindaceae). Conservation of these host plants and its' preferred habitats should be studied further.



Distribution: The species is distributed from Sikkim across Southeast Asia to New Guinea.

Threats: Loss of its preferred forest habitats and the caterpillars' host plants.

National Status: Vulnerable (VU)

Habitat and Ecology: The Ambon Onyx is widely distributed across Singapore and has been observed from the Southern Ridges to the Central Catchment Nature Reserves.

Distribution: The species is distributed from Sikkim across Southeast Asia to New Guinea.

Threats: Loss of its preferred forest habitats and the caterpillars' host plants.

Scientific Name:

Pratapa deva relata
(Distant, 1884)

Common Name:

White Royal

Family:

Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The White Royal is one of a number of Lycaenidae species that depend solely on the existence of parasitic and hemiparasitic host plants for its early stages. The species is seen across the island where its caterpillar host plants are found, but it is rare.

Distribution: The species is restricted to Malaysia and Singapore to Indonesia.

Threats: Loss of its preferred habitats and availability of its caterpillar host plant, *Scurrula ferruginea* (Loranthaceae).

Scientific Interest and Potential Value: It is part of Singapore's biodiversity and natural heritage. Its population decline over the past decade is of particular concern and interest.

Conservation Measures: Conservation of the species' preferred habitats and caterpillar host plants, *Citrus spp.* (Rutaceae) and *Ixora javanica* (Rubiaceae).

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: A recent re-discovery in 2007, the White Royal is of scientific interest as one of several species of rare Lycaenidae whose caterpillars feed on Mistletoes.

Conservation Measures: This species' conservation is critically dependent on the availability of its parasitic caterpillar host plant, The Rusty Mistletoe (*Scurrula ferruginea*) (Loranthaceae). Parks management should be careful in not removing these parasitic plants from the vegetation within our parks, gardens and nature reserves.

Scientific Name:

Rachana jalindra burbona
(Hewitson, 1878)

Common Name:

Banded Royal

Family:

Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Banded Royal can be found across the island in both urban and forested habitats but is rare. It is another species of Lycaenidae that depends solely on the parasitic host plant for its survival.

Distribution: The species is distributed from India across to Thailand, Malaysia and Singapore to the Philippines.

Threats: Loss of its caterpillar host plant, a hemiparasitic plant, *Macrosolen cochinchinensis* (Loranthaceae).

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: Although widespread in distribution in Singapore, its decline and potential extirpation is critically dependent on the availability of its hemiparasitic caterpillar host plant. The ecology of this Mistletoe should be studied for better knowledge of how to maintain this 'unwanted' plant.

Conservation Measures: This species' conservation is critically dependent on the availability of its hemiparasitic caterpillar host plant, The Common Chinese Mistletoe (*Macrosolen cochinchinensis*) (Loranthaceae).

Scientific Name:

Neocheritra amrita amrita
(C & R Felder, 1860)

Common Name:

Grand Imperial

Family:

Lycaenidae (subfamily Theclinae)

Photo: Khew Sin Khoon



National Status: Critically Endangered (CR)

Habitat and Ecology: The Grand Imperial is restricted in its distribution to very limited areas within the Central Catchment Nature Reserves and around the Nee Soon Swamp Forest. It is a forest-dependent species and stays within the nature reserves. A population has also been observed on Pulau Tekong in the early 2000's.

Distribution: The species is distributed from South Myanmar, South Thailand, Malaysia, Singapore and Borneo.

Threats: Loss of pristine forest habitats and availability of its hitherto unknown caterpillar host plant.

Scientific Interest and Potential Value: A spectacular butterfly with long tails and attractive colours, the Grand Imperial is a part of Singapore's butterfly biodiversity and is of great scientific interest.

Conservation Measures: Conservation of Singapore's remaining forested nature reserves and further research to ascertain the unknown caterpillar host plant for this species.

Scientific Name:
Pseudotajuria donatana donatana
(de Niceville, 1889)

Common Name:
Golden Royal

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Golden Royal is rare but widely distributed across forest habitats and also nature parks. In recent years, it has been regularly observed in the Southern Ridges Parks.

Distribution: The species is distributed from South Thailand, Malaysia and Singapore to the Philippines.

Threats: Loss of its caterpillar host plant, the Oval Leafed Mistletoe (*Viscum ovalifolium*) (Santalaceae).

Scientific Name:
Ancema blanka blanka
(de Niceville, 1894)

Common Name:
Silver Royal

Family:
Lycaenidae (subfamily Theclinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Silver Royal is widely distributed across various habitats but is most often observed at the Southern Ridges Parks. It is largely a treetop dweller but descends to the forested areas to feed or oviposit on its caterpillar host plant.

Distribution: The species is distributed from India to Thailand, Malaysia, Singapore and Borneo.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: Although widespread in distribution in Singapore, its decline and potential extirpation is critically dependent on the management of its parasitic caterpillar host plant.

Conservation Measures: This species' conservation is critically dependent on the sensitive management of its parasitic caterpillar host plant, Oval Leafed Mistletoe (*Viscum ovalifolium*) (Santalaceae).

Photo: Khew Sin Khoon



Threats: Loss of its caterpillar host plant, the Oval Leafed Mistletoe (*Viscum ovalifolium*) (Santalaceae).

Scientific Interest and Potential Value: Although widespread in distribution in Singapore, its decline and potential extirpation is critically dependent on the management of its parasitic caterpillar host plant.

Conservation Measures: This species' conservation is critically dependent on the sensitive management of its parasitic caterpillar host plant, Oval Leafed Mistletoe (*Viscum ovalifolium*) (Santalaceae).

Scientific Name:

Virachola kessuma deliochus
(Hewitson, 1874)

Common Name:

Pitcher Blue

Family:

Lycaenidae (subfamily Theclinae)

National Status: Endangered (EN)

Habitat and Ecology: The Pitcher Blue is widely distributed in Singapore from forested nature reserves to nature parks but requires the presence of pitcher plants for its sustainable existence.

Distribution: The species is distributed from South Thailand, Malaysia and Singapore to the Philippines.

Threats: Loss of its caterpillar host plant, the Pitcher Plants *Nepenthes gracilis* and *Nepenthes rafflesiana* (Nepenthaceae).

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: The species is of scientific interest in that its early stages depend on the seed pods of Pitcher Plants for its continued existence.

Conservation Measures: This species' conservation is critically dependent on the availability of its caterpillar host plants, *Nepenthes gracilis* and *Nepenthes rafflesiana* (Nepenthaceae).

Scientific Name:

Celaenorhinus asmara asmara
(Butler, 1879)

Common Name:

White Banded Flat

Family:

Hesperiidae (subfamily Pyrginae)

Photo: Khew Sin Khoon

**National Status:** Critically Endangered (EN)

Habitat and Ecology: The White Banded Flat is a recent re-discovery and has been observed at a very local site on Pulau Ubin. Subsequent sightings of this species have also been only on Pulau Ubin thus far.

Distribution: The species is distributed from Thailand to Malaysia, Singapore and Indonesia.

Threats: Loss of its caterpillar host plants, currently recorded beyond Singapore as *Clerodendron chinense* (Lamiaceae), *Justicia gendarussa* (Acanthaceae) and *Jasminum nervosum* (Oleaceae).

Scientific Interest and Potential Value: This species has been sighted only on Pulau Ubin and it is important to establish the viability of the colony and whether its caterpillar host plants are available for its continued existence in Singapore.

Conservation Measures: It is critical to conserve the area on Pulau Ubin which the species can be found with minimal development interventions. Its caterpillar host

plants, recorded from other countries, should also be ascertained and conserved on Pulau Ubin.

Scientific Name:

Halpe ormenes vilasina
(Fruhstorfer, 1911)

Common Name:
Dark Banded Ace

Family:
Hesperiidae (subfamily Hesperiinae)

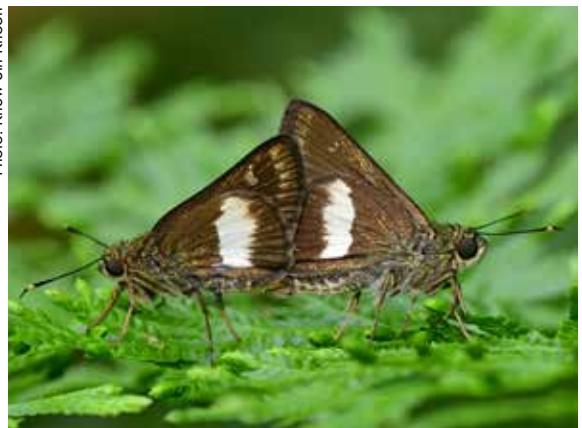
National Status: Vulnerable (VU)

Habitat and Ecology: The Dark Banded Ace frequents forested habitats in the nature reserves of Singapore. It prefers to stay close to bamboo thickets and where its caterpillar host plants are found.

Distribution: The species is distributed from Myanmar, Thailand, Malaysia, Singapore, Sumatra, Java, Borneo and Palawan.

Threats: Loss of pristine forest habitats and availability of its caterpillar host plant, *Bambusa vulgaris* 'Wamin' (Poaceae).

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: This species, whose caterpillars feed on various species of bamboo is of particular interest and further research should be conducted to ascertain the species' continued survival in Singapore.

Conservation Measures: Conservation of forested areas within the nature reserves and nature parks and the cultivation of its preferred bamboo species that its caterpillars feed on.

Scientific Name:

Plastingia pellonia
(Fruhstorfer, 1909)

Common Name:
Yellow Chequered Lancer

Family:
Hesperiidae (subfamily Hesperiinae)

Photo: Khew Sin Khoon



National Status: Vulnerable (VU)

Habitat and Ecology: This species is a forest-dependent butterfly that prefers heavily-shaded forested areas within the Central Catchment and Bukit Timah Nature Reserves.

Distribution: The species is distributed from Northeast India to Thailand, Malaysia, Singapore to Indonesia, the Philippines and Sulawesi.

Threats: Loss of pristine forest habitats and its hitherto unknown caterpillar host plant.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to researchers and nature enthusiasts.

Conservation Measures: The conservation of Singapore's pristine forests and its caterpillar host plant should be ascertained for cultivation in its preferred habitats.

Scientific Name:
Pemara pugnans (de Nicéville, 1891)

Common Name:
Pugnacious Lancer

Family:
Hesperiidae (subfamily Hesperiinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Pugnacious Lancer frequents the forested nature reserves and the forest edges of Singapore's nature parks.

Distribution: The species is distributed from South Myanmar to Thailand, Malaysia and Singapore.

Threats: Loss of pristine forest habitats and its hitherto unknown caterpillar host plant.



Scientific Interest and Potential Value: The species is part of Singapore's indigenous biological heritage and of general educational value and interest to researchers and nature enthusiasts.

Conservation Measures: The conservation of Singapore's pristine forests and its caterpillar host plant should be ascertained for cultivation in its preferred habitats.

Scientific Name:
Gangara lebadea lebadea
(Hewitson, 1868)

Common Name:
Banded Redeye

Family:
Hesperiidae (subfamily Hesperiinae)



National Status: Endangered (EN)

Habitat and Ecology: The Banded Redeye is a forest-dependent species that is restricted to the shaded forest understorey of the Central Catchment and Bukit Timah Nature Reserves.

Distribution: The species is distributed from India and Sri Lanka to Thailand, Malaysia, Singapore and the Philippines and Sulawesi.

Threats: Loss of pristine forest habitats and its hitherto unknown caterpillar host plant.

Scientific Interest and Potential Value: Although it is limited in its range within Singapore's forested nature reserves, its decline and potential extirpation is critically dependent on the discovery and management of its caterpillar host plant.

Conservation Measures: The conservation of Singapore's pristine forests and its caterpillar host plant should be ascertained for cultivation in its preferred habitats.

Scientific Name:

Taractrocera ardonia lamia
(Evans, 1934)

Common Name:

Spotted Grass Dart

Family:

Hesperiidae (subfamily Hesperiinae)

National Status: Vulnerable (VU)

Habitat and Ecology: The Spotted Grass Dart is a tiny skipper butterfly and was a recent re-discovery in Singapore. It is very restricted to a few sites within the Central Catchment Nature Reserves.

Distribution: The species is distributed from Malaysia, Singapore to Borneo and Sulawesi.

Threats: Loss of pristine forest habitats and its hitherto unknown caterpillar host plant.

Photo: Khew Sin Khoon



Scientific Interest and Potential Value: Its rediscovery and recent decline in population in its preferred sites is of concern. Further research to establish its caterpillar host plant should be carried out to ensure the species' continued existence in Singapore.

Conservation Measures: The conservation of Singapore's pristine forests and its caterpillar host plant should be ascertained for cultivation in its preferred habitats.

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Lepidoptera – Moths

ANUJ JAIN, JEROME CHUA, GAN CHEONG WEEI

Scientific Name:

Avitta guttulosa

Common Name:

-

Order/Family:

Lepidoptera: Erebidae

National Status: Vulnerable (VU)

Habitat and Ecology: Records of this species are restricted to the Central and Western Catchments and areas abutting it. The genus heavily utilises Menispermaceae. With the type species *A. subsignans* being reared on plants of genus *Stephania* and *Cyclea* and the locality habits of *A. guttulosa* taken into account, it is reasonable to assume that *A. guttulosa* also utilises *Stephania capitata* and *Cyclea laxiflora*, both of which are native and critically endangered (Lindsay et al. 2022) in Singapore. So far, these plant species are only known from Bukit Timah and Nee Soon forests. However, the occurrence of the moth in Western Catchment alludes to the potential existence of the above host plant species here as well.



Distribution: Indonesia, Malaysia, Singapore.

Threats: Likely rare due to rarity of the larval host plants that may have suffered from early deforestation prior to the 1950s. Increasing light pollution due to urban development also likely impacts the species.

Scientific Interest and Potential Value: Not yet ascertained.

Conservation Measures: Bukit Timah and Central Catchment Nature Reserves are legally protected. The species would benefit from targeted planting of larval host plants in restoration programs around the island.

Scientific Name:

Borbotana nivifascia

Common Name:

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Order/Family:

Lepidoptera: Noctuidae

National Status: Vulnerable (VU)

Habitat and Ecology: Ecology poorly understood but the distribution in Singapore seems to be close to fresh and/or saltwater bodies.

Photo: Alexey Yakovlev



Distribution: The species is widely distributed globally from the North-East Himalayas to Sundaland.

Threats: Rare and occurring in managed and only partially protected areas. Substantial loss of water-dependent and riparian habitat in the past.

Scientific Interest and Potential Value: Under the precondition of quality habitat, Noctuids usually represent the bulk of Noctuoidea biodiversity at light sampling activities. Conversely, they are usually the first to take statistical drops by course of human development, experiencing untimely expirations at

a rate which far exceeds their reproduction ability. Species that manage to adapt become adapted to background light pollution, rendering light sampling as a means of monitoring biodiversity and population density ineffective in the long run.

Conservation Measures: Water bodies have largely been kept pollution free which should benefit the larval host plants and the herbivores dependent on it. Protection of other water bodies, and to ensure the native riparian vegetation is accorded protection as well. Additionally, there is a harrowing need for light control.

Scientific Name:
Chrysocraspeda phlogea

Common Name:
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Order/Family:
Lepidoptera: Geometridae

National Status: Vulnerable (VU)

Habitat and Ecology: Young secondary and old growth forest; known to feed on Combretaceae, Myrtaceae - Syzygium, Terminalia. Highly polyphagous genus.

Distribution: In Singapore it is known from the central forested area and from some unprotected localities in western Singapore.

Threats: Likely rare due to the rarity of the larval host plant that may have suffered from early deforestation prior to 1950s. Increasing light pollution due to urban development also likely impacts the species.

Scientific Interest and Potential Value: This hyper diverse genus is relatively well represented in Singapore, with at least 17 species recorded. At least half of these are moderately frequent in lowland biotopes. Several

Photo: Albert Kong



species appear to tolerate heavy background light pollution. A number of these species are suspected either to be more loyal to specific hosts or to have a lower tolerance to light.

Conservation Measures: No targeted interventions known. At the habitat level, site protection in Upper Seletar has led to safeguarding of populations at least at one site. Protection of unprotected sites in Mandai and Bukit Batok area. Species will benefit from life history documentation and targeted planting of larval host plants in restoration programs around the island.

Scientific Name:
Cultripalpa lunulifera

Common Name:
 -

Order/Family:
Lepidoptera: Erebidae

National Status: Vulnerable (VU)

Habitat and Ecology: Old growth forest; host plant in Singapore unknown. In Borneo, it is known from old growth forest, coastal and secondary forest.

Distribution: This species ranges from India to Australia but is rare across its range.

Threats: This species is infrequent at light throughout its range. Likely rare due to the rarity of the larval host plant that may have suffered from early deforestation prior to 1950s. Distribution includes one partially protected site



which is subject to potential risk of clearing, leading to habitat loss.

Scientific Interest and Potential Value: Not yet ascertained.

Conservation Measures: No species-targeted interventions have been undertaken. Species will benefit from life history documentation and planting of larval host plants in restoration programs around the island. Targeted moth surveys may find that the species may be known from more localities particularly in Bukit Batok and Bukit Timah areas.

Scientific Name:
Cultripalpa partita

Common Name:
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Order/Family:
Lepidoptera: Erebidae

National Status: Endangered (EN)

Habitat and Ecology: Closely associated with coastal and mangrove forests where they may appear to be locally abundant; occasionally individuals can be observed congregating around taller isolated treelets by the dozens at night.

Distribution: The Sunda region.

Threats: Likely rare due to habitat preference towards coastal and mangrove habitats and rarity of host plant in that habitat. Distribution includes two clusters



(western Singapore and Pulau Ubin), and it is found in two partially protected or unprotected sites that are at the risk of clearing, leading to habitat loss and with it the loss of larval host plants.

Scientific Interest and Potential Value: Not yet ascertained.

Conservation Measures: Protection of mangrove habitat at the sites. The species will benefit from life history documentation and targeted planting of larval host plants in restoration programs at other mangrove

sites in Singapore. Surveys may find that the species may be known from more localities particularly in Sungei Buloh and Pasir Ris areas.

Scientific Name:
Elibia dolichus

Common Name:
Large Banded Hawkmoth

Order/Family:
Lepidoptera: Sphingidae

National Status: Endangered (EN)

Habitat and Ecology: Coastal and mangrove habitats.

Distribution: The species has a wide distribution in Asia from southern China to southeast Asia including Sundaland. Given the limited distribution in Singapore, it is hypothesized that the species is associated with mangroves or associated vegetation.

Threats: Likely rare due to habitat preference towards coastal and mangrove habitats and rarity of host plant in that habitat. Increasing light pollution due to urban development also likely impacts the species. In Singapore it is only known from Pulau Ubin, which is currently managed as a natural area.

Scientific Interest and Potential Value: First found in Singapore by A.R. Wallace in 1854. Across its range, the larvae are known to feed on plants of the family Vitaceae (*Leea*, *Cayratia*, *Tetrastigma*) but the exact larval host plants in Singapore remain unknown.

Photo: Lena Chow



Four species of *Cayratia* are known from Singapore – all threatened. Similarly, four species of *Tetrastigma* are known from Singapore – all listed as Critically Endangered. Four species of *Leea* occur in Singapore – 2 threatened, 1 common and another (*Leea indica*) commonly planted in landscaping around Singapore. It appears unlikely that the moths use these *Leea* species as host plants in Singapore, despite various instances of the larvae utilising *L. indica* in Malaysia.

Conservation Measures: Species will benefit from life history documentation and targeted planting of larval host plants in restoration programs at other mangrove sites in Singapore. Surveys may find that the species occurs in more localities particularly other coastal/mangrove habitats in Singapore.

Scientific Name:
Eublemma ignefusa

Common Name:
-

Order/Family:
Lepidoptera: Erebidae

National Status: Endangered (EN)

Habitat and Ecology: In Singapore, only known from selected secondary forest patches; local larval host plant remains unknown. It is unclear why the species is missing from the Bukit Timah and Central Catchment forests.

Distribution: The species is known from east India to Thailand, Sumatra, Peninsular Malaysia, Singapore, Borneo. Sightings include mature and secondary forested habitats, forest edges.

Threats: Likely rare due to rarity of the larval host plant that may have suffered from early deforestation prior



to 1950s. Large scale habitat loss has ceased, but part of the current habitat is in an unprotected or partially protected site. Its clearance can lead to further declines. Increasing light pollution due to urban development also likely impacts the species.

Scientific Interest and Potential Value: Singapore is the type locality, from which it was described in 1910.

Conservation Measures: Species will benefit from life history documentation and the planting of larval host plants (once these are identified) in restoration programs around the island. Surveys might find the species in more localities, particularly in protected areas.

Scientific Name:
Nothomiza xanthocolona

Common Name:
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Order/Family:
Lepidoptera: Geometridae

National Status: Vulnerable (VU)

Habitat and Ecology: Lowland mature and secondary forest. In Borneo, the species has been infrequently recorded in lowland kerangas forest and in lower montane forest of Gunung Mulu and Gunung Api.

Distribution: The Sunda region.

Threats: Precise threats are unknown, but members of the tribe are highly susceptible to light pollution. Another reason could be the rarity of a larval host plant that



may have suffered from early deforestation prior to the 1950s.

Scientific Interest and Potential Value: This species is rarely taken at lights; most individuals are taken opportunistically under mid-canopy. Outside Singapore, the closely related species *N. formosa* has been successfully reared on several species of *Ilex*, though it may use host plants beyond Aquifoliaceae for congeneric taxa. Adults are known to visit the inflorescences of *Syzygium formosum* (syn. *pseudoformosum*), *S. paraiense* (syn. *filiforme*) and *S. singaporense*.

Conservation Measures: In Singapore it is known from Mandai, Bukit Timah Nature Reserve and environs of Bukit Panjang. The species would benefit from the protection of sites, life history documentation and, once

the host plant can be identified, targeted planting of larval host plants in restoration programs around the island.

Scientific Name:
Psaphis camadeva

Common Name:

-

Order/Family:
Lepidoptera: Zygaenidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Primary forests, with a preference for hill dipterocarp forests. Members of this genus are hilly canopy dwellers, rarely descending to the understorey.

Distribution: Distributed through Sundaland in Indonesia, Malaysia and Singapore. Locally known only from Bukit Timah Nature Reserve where it was last recorded in 2007.

Threats: Likely rare due to affinity to old growth forest which significantly declined from early deforestation prior to 1950s. Large scale loss of old growth forest has ceased but these patches continue to be disturbed through anthropogenic pressure from trails, surrounding urban development and highways that bring light and sound.

Scientific Interest and Potential Value: In Singapore, first collected by A.R. Wallace.

Photo: Cheong Weng Chun



Conservation Measures: Disturbance to the nature reserve should be minimized. Surveys may find that the species may be known from more localities (such as the primary forest patches in the Central Catchment). The species would benefit from life history documentation and possibly from planting of larval host plants if these can be identified.

Scientific Name:
Tamba basiscipta

Common Name:
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Order/Family:
Lepidoptera: Erebidae

National Status: Vulnerable (VU)

Habitat and Ecology: Known from lowland forests, maturing secondary forest, dry forest as well as coastal forest.

Distribution: Cambodia, Indonesia, Philippines, Singapore and Thailand. In Singapore known only from Pulau Ubin and the vicinity of the Central Catchment.

Threats: Species of the genus *Tamba* are known from a variety of habitats, so direct habitat loss does not appear to be a key factor of decline. The species is likely rare due to rarity of the larval host plant, whatever it may be, that has likely suffered from early deforestation. Increasing light pollution due to urban development also likely impacts the species but most *Tamba* species appear to be accustomed to heavy background light pollution.

Scientific Interest and Potential Value: The genus is relatively well represented in Singapore with

Photo: Gan Cheong Wee



ten known species, at least half of them moderately frequent in lowland biotopes. *Tamba* is known outside Singapore to be a polyphagous genus, with congeners utilising *Barringtonia* (Lecythidaceae), *Aporosa* (Phyllanthaceae), *Sandoricum* (Meliaceae) and *Sympherema* (Lamiaceae). Larval host plants for *Tamba basiscipta* are not known from Singapore but are hypothesized to be rare. Except for *Barringtonia* species that are planted in parks for landscaping purposes, all other plant species in genus *Barringtonia*, *Aporosa*, *Sandoricum* and *Sympherema* are threatened.

Conservation Measures: Recorded from Pulau Ubin (Outward Bound Singapore area) which is managed as a nature area, Bukit Timah Nature Reserve which is legally protected, and surrounding unprotected locations in Bukit Panjang. Surveys may find that the species occurs in more localities. The species would benefit from life history documentation and targeted planting of larval host plants in restoration programs around the island.

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Odonata – Dragonflies and Damselflies

ROBIN NGIAM WEN JIANG, MARCUS F.C. NG

Scientific Name:

Agriocnemis nana (Laidlaw, 1914)

Common Name:

Dwarf Wisp

Order/Family:

Odonata: Coenagrionidae

National Status: Endangered (EN)

Habitat and Ecology: Found around small streams, shallow, weedy ponds and open grassy marshes close to forests. May occur in disturbed habitats. Minuscule damselfly that is possibly overlooked due to its inconspicuous size and habits. Perches very low amid dense waterside vegetation.

Distribution: Western end of MacRitchie Reservoir in Central Catchment Nature Reserve, but also recorded in the Singapore Botanic Gardens in 2011.

Scientific Name:

Archibasis rebeccaae Kemp, 1989

Common Name:

Rebecca's Sprite

Order/Family:

Odonata: Coenagrionidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs at small, shaded forest streams with bottoms of fine sand and silt. When active, it usually flies low along the stream bank. At rest, typically perches at leaf tips in sunlit spots whereby it will fly rapidly upwards to a higher perch when disturbed.

Photo: Robin Ngiam Wen Jiang



Threats: Restricted and Very Rare. Habitat disturbance from overzealous removal of marsh-edge vegetation.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Continued protection of CCNR and appropriate habitat management whereby grassy vegetation along the reservoir is pruned sparingly.

Photo: Marcus F.C. Ng



Distribution: Found only in Central Catchment Nature Reserve.

Threats: Restricted distribution and very rare. Hydrological change in streams resulting from climate change and developments outside protected areas which may adversely impact the waterways.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Continued protection of Central Catchment Nature Reserve and waterways in buffer parks.

Scientific Name:
Ceriagrion chaoi Schmidt, 1964

Common Name:
Fiery Coraltail

Order/Family:
Odonata: Coenagrionidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in ponds and slow flowing streams with rich aquatic submerged plants and dense vegetation surrounding the water body. Males are very conspicuous with fiery red abdomen, including appendages. Can be abundant where it occurs. During the hottest part of the day, females with males in tandem, may oviposit en masse into submerged plants.

Distribution: Known only from a few localities, including MacRitchie Reservoir, Windsor Nature Park, Ulu Sembawang and past records from a pond in Dover Forest. Stronghold population is in a forest off Turf Club Avenue. Previously recorded in Bishan-Ang Mo Kio Park, but the population has been extirpated following a change in its pond-management regime.

Photo: Zick Soh



Threats: Restricted distribution, and rare. Although its preferred habitat of weedy ponds and open streams are not uncommon in Singapore, it appears to be highly sensitive to habitat change brought about by human intervention.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Conservation of known sites with minimal human disturbance, example over-zealous removal to aquatic and waterside vegetation.

Scientific Name:
Mortonagrion aborensis (Laidlaw, 1914)

Common Name:
Blue Midget

Order/Family:
Odonata: Coenagrionidae

Photo: Marcus F.C. Ng



National Status: Critically Endangered (CR)

Habitat and Ecology: Found at shady pools in swampy forest, forages along sunny trails and clearings around midday whereby they actively glean prey from leaves. Has a habit of perching low in undergrowth inconspicuously. Retreats into dense vegetation or towards the canopy when disturbed. Females oviposit into floating vegetation like leaves or root mass.

Distribution: Currently known from a single site in the southern part of the island.

Threats: Restricted distribution within which it is rare. The site is not protected as a conservation area

hence it is vulnerable to development pressures and human disturbance.

Scientific Interest and Potential Value: Currently it appears there are two morphospecies in the region that are treated as *M. aborense*. This requires further investigation in addition to a review of the taxonomic relationship between the genera *Mortonagrion*, *Agriocnemis* and *Argiocnemis*.

Conservation Measures: Accord protected status to its only known site and implement habitat conservation management.

Scientific Name:
Mortonagrion arthuri Fraser, 1942

Common Name:
Arthur's Midget

Order/Family:
Odonata: Coenagrionidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in mangrove forests and creeks. Highly stenotopic species restricted to sheltered pools and rivulets in the landward zones of mangroves as well as nearby freshwater pools. Inconspicuous due to slim build and muted colours, but adults can be found perched low on tip of pneumatophores of mangrove trees that rise from the mud. Males, which are more visible due to their blue 'tail-lights', guard tiny muddy pools that are subject to tidal influence.

Distribution: Recorded in back mangrove habitats in Admiralty Park, Loyang Mangroves, Pulau Semakau, Pulau Tekong, Pulau Pawai and Pulau Ubin.

Photo: Robin Ngiam Wen Jiang



Threats: Restricted distribution within which it is rare. Habitat loss due to projected sea level rise from climate change.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Continued protection and climate change mitigations for the last few mangrove habitats in Singapore.

Scientific Name:

***Pseudagrion pruinosum* (Burmeister, 1839)**

Common Name:

Grey Sprite

Order/Family:

Odonata: Coenagrionidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found at fast-flowing streams and slower channels with grassy banks in open areas near forests. A stream dependent, open-country species that is fairly common in the region but less so in Singapore, where rural habitats are now scarce. Where present, it can be abundant. Males perch very close to the water and are conspicuous by their pruinosed colour as they dart about after prey or rivals. After copulation, pairs in tandem perch above the water and slowly crawl backwards to a depth of about 10cm. Male often remains in tandem as female oviposits by inserting eggs into aquatic vegetation.

Distribution: Recorded in suitable stream from Mandai, Bukit Brown, Nee Soon Swamp Forest, Tuas (an old record) and a few locations in the Central Catchment Nature Reserve.

Scientific Name:

***Tetracanthagyna plagiata* (Waterhouse, 1877)**

Common Name:

Giant Hawker

Order/Family:

Odonata: Aeshnidae

Photo: Robin Ngiam Wen Jiong



Threats: Restricted distribution within which it is common. Loss of habitat from climate change related prolonged drought, and human intervention when natural streams are converted into drains.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Protection of natural and naturalised streams in rural, open areas with appropriate riparian buffers. May be introduced into more urban areas with naturalisation of drains and vegetation restoration along stream banks.

Photo: Dillen Ng



National Status: Vulnerable (VU)

Habitat and Ecology: Found at forest streams and swampy forests. Forages at dawn or dusk high up in the canopy; perches in the shade of trees and shrubs by day. Females may be active throughout the day, seeking out suitable branches and logs overhanging or beside forest streams. When a suitable site is found, female uses her ventral spines to probe and pierce the wood before inserting an egg, repeating this action along the length of the branch. Larva is nocturnal and semiterrestrial. Older larvae emerging at night to cling to a twig just above the water from which they ambush prey. Faeces are projected forcefully out of water. When threatened, larva exhibits thanatosis (feigning death).

Distribution: Mostly recorded in the Central Catchment Nature Reserve. Occasionally occurring in buffer parks like Thomson and Rifle Range Nature Parks.

Threats: Restricted distribution within which it is uncommon. Hydrological change in forest streams resulting from climate change may cause habitat loss.

Scientific Interest and Potential Value: Adult female is one of the world's largest living true dragonflies by wingspan and weight. Larva was first described from Singapore.

Conservation Measures: Continued protection of conservations areas with appropriate climate change mitigation measures.

Scientific Name:

Vestalis gracilis (Rambur, 1842)

Common Name:

Plain Flashwing

Order/Family:

Odonata: Calopterygidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits clear, shaded and sluggish forest streams with ample bankside vegetation. Can be locally abundant. Males establish and defend territories by perching at leaves or branches overhanging suitable stream habitats. Individuals, especially females, can be found foraging along forest trails some distance away from streams.

Distribution: Recorded at a single and publicly restricted site in the northern part of the island, where it was first recorded in 2012 and is locally abundant.

Threats: Restricted distribution but within which it is common. Stream degradation due to potential developments in the surrounding environment.

Photo: Robin Ngiam Wen Jang



Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Stream protection with riparian buffer along the entire watercourse, with stringent oversight on potential developments in the vicinity.

Scientific Name:
Libellago aurantiaca (Selys, 1859)

Common Name:
Fiery Gem

Order/Family:
Odonata: Chlorocyphidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Found at sluggish streams with sandy or silty substrate, or quieter sections of swift, clear streams, in shaded forests. Males establish small territories and engage in spectacular aerial displays in sunlit spots whereby they display their iridescent apical wingspots but without making physical contact. During courtship, male flies before a female with his abdomen arched upwards to display his colours, while extending and shaking his legs to show off the pruinescent surfaces. Female oviposits on partially submerged branches and leaves, while the male guards against other males.

Distribution: Found only in Nee Soon Swamp Forest.

Scientific Name:
Devadatta argyoides (Selys, 1859)

Common Name:
Malayan Grisette

Order/Family:
Odonata: Devadattidae

National Status: Endangered (EN)

Habitat and Ecology: Found at well-shaded streams in dense, often hilly forests. Inconspicuous and usually perched very low. Males guard small cascading portions of forest streams, keeping very close to the water and mainly avoiding sunlit spots. Both sexes may also forage by gleaning passing prey at shaded parts of trails or around large fallen trunks not far from streams. Seldom flies far when disturbed, and often holds wings open for a short while right after landing.



Threats: Restricted distribution within which it is common. Hydrological change in Nee Soon Swamp Forest resulting from climate change.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Continued protection of Nee Soon Swamp Forest with climate change mitigation.



Distribution: Recorded mainly in Bukit Timah Nature Reserve and Dairy Farm Nature Park. Also found from Rifle Range and Windsor Nature Parks.

Threats: Prolonged droughts or wet season from climate change may drastically affect the hydrology of hill streams in Bukit Timah Nature Reserve.

Scientific Interest and Potential Value: Type specimens were collected in Singapore by Alfred Wallace.

Conservation Measures: Continued protection of conservation areas with climate change mitigation measures.

Scientific Name:
Leptogomphus risi Laidlaw, 1932

Common Name:
Ris' Clubtail

Order/Family:
Odonata: Gomphidae

National Status: Vulnerable (VU)

Habitat and Ecology: Occurs at forest streams. Adults are canopy dwelling, coming down to breeding sites very briefly on sunny days. On rare occasions can be encountered at sunlit spots along forest trails or in clearings but will fly straight up to canopy when disturbed. Larva lives buried quite deep in a substrate of sand and leaf litter, usually at swifter flowing sections of streams.

Distribution: Recorded in the Bukit Timah and Central Catchment Nature Reserves; also Dairy Farm Nature Park.

Threats: Restricted distribution within which it is rare. Soil erosion along waterways would degrade breeding sites with heavy sedimentation.



Scientific Name:
Paragomphus capricornis
(Förster, 1914)

Common Name:
Banded Hooktail

Order/Family:
Odonata: Gomphidae



National Status: Endangered (EN)

Habitat and Ecology: Found around clear, shallow, low-gradient streams with sandy or gravelly bottoms in semi-open country near forests. Also in denser forests with some open canopies if suitable streams exist. Towards midday, males come down to streams, resting on gravel beds or low rocks next to the water where their larvae are known to breed buried in sand. When not at breeding sites, forages from the canopy of nearby forest trees and occasionally lower at forest clearings.

Distribution: Recorded in the Bukit Timah and Central Catchment Nature Reserves, and the forest off Mandai Road.

Threats: Restricted distribution within which it is rare. Habitat degradation due to soil erosion arising from improper management or developments near waterways. Heavy sedimentation of stream is severely detrimental to larval survival.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Establish riparian buffers. Stringent stream management regime, and environmental management and monitoring of developments near waterways to prevent soil erosion.

Scientific Name:

***Brachygonia oculata* (Brauer, 1878)**

Common Name:

Pixie

Order/Family:

Odonata: Libellulidae

National Status: Endangered (EN)

Habitat and Ecology: Found around shaded or semi-shaded pools and very sluggish streams in swampy forests or forest edges. Males guard small territories at pools filled with leaf litter and other detritus, perching for long periods. Both sexes may also feed by forest trails near swampy areas.

Distribution: Currently known from two populations in the Western Catchment. Single vagrant male was recorded from swampy forested areas in Admiralty Park in 2015 and again in 2023.

Threats: Restricted distribution and uncommon. Lack of conservation oversight of known populations in Western Catchment may lead to unintended habitat loss.

Photo: Robin Ngiam Wen Jiang



Scientific Interest and Potential Value: If translocation project (see below) is successful, the best practices may be scalable to other threatened species. Larva of this genus is first described from Singapore.

Conservation Measures: Conservation of swamp habitats in Western Catchment. Species is part of NParks Species Recovery Programme to improve its threatened status by introducing the dragonfly to suitable locations that have protection status. Its appearance in Admiralty Park indicates the potential for successful translocation outside of its stronghold in Western Catchment.

Scientific Name:
Indothemis carnatica (Fabricius 1798)

Common Name:
White-tipped Demon

Order/Family:
Odonata: Libellulidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs at well-vegetated ponds, lakes and marshes in open country or near forests. Males active at breeding sites towards noon, flying rapidly over the water in pursuit of rivals, or perching on waterside vegetation. Females can be found foraging some distance away from water.

Distribution: First recorded on Pulau Ubin in 2018 but has since spread to a few other locations (see below) on mainland Singapore.

Threats: Restricted distribution, within which it is rare. Poor management of wetlands which may lead to habitat degradation or loss.

Scientific Name:
Lyriothemis cleis Brauer, 1868

Common Name:
Bombardier

Order/Family:
Odonata: Libellulidae

National Status: Endangered (EN)

Habitat and Ecology: Occurs in mature secondary and dipterocarp forests. Breeds in phytotelmata such as large bamboo stumps and buttress pans and cavities of large trees. Males guard such breeding sites religiously and mate with visiting females. Both sexes may be seen along forest trails close to areas with mature trees or bamboo groves.



Photo: Robin Ngiam Wen Jiang

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Assessed as critically endangered due to single location in Pulau Ubin. However, in late 2022 it rapidly established populations in East Coast Park and Rifle Range Nature Park. This species exemplifies how ecologically sensitive wetland creation and habitat management are crucial to the conservation of threatened species that are more adaptable to urban environment. Conservation of urban wetlands would greatly benefit species like White-tipped Demon.



Photo: Robin Ngiam Wen Jiang

Distribution: Bukit Timah and Central Catchment Nature Reserves, and adjacent nature parks such as Dairy Farm and Windsor Nature Parks.

Threats: Restricted distribution within which it is rare. As a stenotopic species which requires very specific breeding conditions, habitat loss is the most existential threat. For example, severe drought from climate change may vastly reduce the availability of phytotelmata.

Scientific Interest and Potential Value: It is a good candidate for applied research in the use of artificial phytotelmata.

Conservation Measures: Protection of big trees in nature reserves for water cavities. Also non-removal

of fallen trees or large branches to allow formation of natural water receptacles. Provision of artificial phytotelmata which has been successful (albeit serendipitously) for another cavity breeding dragonfly, *Cratilla metallica*.

Scientific Name:
Risiophlebia dohrni (Krüger, 1902)

Common Name:
Pot-bellied Elf

Order/Family:
Odonata: Libellulidae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits very dense inundated swampy forests where males guard small pools for long period under a dense canopy, illuminated by narrow shafts of sunlight. Females oviposit in these sites, guarded by males. Generally perches very low and due to small size, inconspicuously, on emergent vegetation. May occasionally bask at edges of swampy forests.

Distribution: Recorded regularly in Nee Soon Swamp Forest only. A single male sighting at Thomson Nature Park in 2016.

Threats: Restricted distribution within which it is rare. Prolonged drought in Nee Soon Swamp Forest resulting from climate change will cause loss of breeding habitats.



Scientific Interest and Potential Value: Larva of genus is still unknown to science. With sustained searching, it could be discovered in the known locality.

Conservation Measures: Continued protection of Nee Soon Swamp Forest with climate change mitigation. Conservation of swampy habitats in buffer parks may facilitate range extension so that the species is more widely distributed.

Scientific Name:
Macromia cincta Rambur, 1842

Common Name:
Stream Cruiser

Order/Family:
Odonata: Macromiidae



National Status: Endangered (EN)

Habitat and Ecology: Occurs at slow-flowing streams in swampy forests. Males patrol streams and shaded portions of trails and may also dart about over the canopy at high speeds, chasing rivals. During overcast weather both sexes may descend to perch sedentarily on lower vegetation. Individuals may hunt along shaded trails near swamps, flying in a regular loop. Females oviposit alone in shaded streams in swampy forests, hovering near the streambank while repeatedly stabbing the abdomen into the water to release batches of eggs. Larva is benthic and found amid decaying vegetation.

Distribution: Recorded in the Central Catchment Nature Reserve, Windsor and Dairy Farm Nature Parks.

Threats: Restricted distribution within which it is rare. Soil erosion along waterways would degrade breeding sites with heavy sedimentation.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.

Conservation Measures: Habitat rehabilitation of eroded streams. Stringent environmental and monitoring of developments in the vicinity of conservation areas to prevent sedimentation in forest streams.

Scientific Name:
Copera vittata (Selys, 1863)

Common Name:
Variable Featherlegs

Order/Family:
Odonata: Platycnemididae

National Status: Vulnerable (VU)

Habitat and Ecology: Found at sluggish channels and shallow pools in swampy forests. Younger 'ghost' forms may forage in undergrowth further from the water. Perches very low and keeps to the shade. Larvae live among detritus at bottom of swampy pools.

Distribution: Rare and local in Singapore. Recorded from swampy forests in the Western Catchment, Admiralty Park, Nee Soon Swamp Forest, Pulau Ubin and Pulau Tekong and a scattering of small remnant forests slated for development.

Threats: Restricted distribution, and rare. Development of unprotected remnant forests will result in habitat loss.

Scientific Interest and Potential Value: It is part of Singapore's indigenous biological heritage and of general educational value and interest to the public and nature enthusiasts.



Conservation Measures: Conservation and habitat rehabilitation of swampy forests in green spaces as part of development planning and design.

Scientific Name:
Prodasineura interrupta (Selys, 1860)

Common Name:
 Interrupted Threadtail

Order/Family:
 Odonata: Platycnemididae

National Status: Critically Endangered (CR)

Habitat and Ecology: Found at sluggish streams and rivulets in shaded swampy forests where the stream substrate is a mix of mud/sand with ample packs of leaf litter and detritus. Males guard small territories in sunlit spots. The females are very seldom encountered.

Distribution: Only in Nee Soon Swamp Forest where they are very localised.

Threats: Restricted distribution within which it is uncommon. Hydrological change in Nee Soon Swamp Forest resulting from climate change which may cause habitat disruption.



Scientific Interest and Potential Value: Type specimens collected by Alfred Wallace in Singapore, supposedly from Bukit Timah where it is no longer found.

Conservation Measures: Continued protection of Nee Soon Swamp Forest with climate change mitigation.

Scientific Name:
Drepanosticta quadrata (Selys, 1860)

Common Name:
 Singapore Shadowdamsel

Order/Family:
 Odonata: Platystictidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found at deeply shaded streams mainly in hilly forests but also swamp forests. As the name implies, prefers very dim spots by small streams and seepages, where it is inconspicuous except for the blue 'tail-light' on the abdomen. Perches very low, and when disturbed, hovers briefly before settling on vegetation nearby. Females have been observed ovipositing on twigs above fast-flowing, shaded streams. Larva found among plant debris or under stones in well-shaded small streams and seepages.



Distribution: Recorded in Bukit Timah and Central Catchment Nature Reserves, Dairy Farm and Windsor Nature Parks.

Threats: It has a restricted distribution within which it is common. Prolonged droughts or wet season from climate change may drastically affect the hydrology of hill streams in Bukit Timah Nature Reserve where the species is most commonly found.

Scientific Interest and Potential Value: Type specimens were collected in Singapore by Alfred Wallace. IUCN global red list status is Vulnerable as its recorded with certainty only from Singapore and Johor, Peninsula Malaysia.

Conservation Measures: Continued protection of conservation areas with climate change mitigation measures.

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Orthoptera – Crickets and Katydids

TAN MING KAI

Scientific Name:

Asiophlugis temasek Gorochov & Tan, 2011

Common Name:

Temasek Crystal Predatory Katydid

Order/Family:

Orthoptera: Tettigoniidae

National Status: Endangered (EN)

Habitat and Ecology: Recorded from lowland forest.

Distribution: Apparent endemic to Singapore. Found in the Bukit Timah Nature Reserve (BTNR), Dairy Farm Nature Park as well as the Central Catchment forest.

Threats: Loss of habitat and a restricted distribution.

Photo: Tan Ming Kai



Scientific Interest and Potential Value: This species was mentioned in the 2nd edition of the Singapore Red Data Book as the common relative of Missing Marvellous Katydid *Asiophlugis thaumasia* (Davison et. al., 2008), but it remained undescribed until 2011 (Gorochov & Tan, 2011; Tan, 2011). The males produce ultrasonic sounds reaching 57 kHz (Tan et al., 2018).

Conservation Measures: Forest conservation whereby damage to forest and loss of habitats is ceased will help.

Scientific Name:

Svitella chekjawa Tan & Robillard, 2013

Common Name:

Chek Jawa's Mangrove
Sword-tailed Cricket

Order/Family:

Orthoptera: Trigonidiidae

Photo: Tan Ming Kai



National Status: Critically Endangered (CR)

Habitat and Ecology: Recorded only from the canopy of mangrove forest.

Distribution: Apparent endemic to Singapore. Recorded from mangrove forests around Singapore.

Threats: Loss of habitat and a restricted distribution.

Scientific Interest and Potential Value: This species is an obligate mangrove species and appears to favour the leaves and stems of *Bruguiera cylindrica* (Tan, 2013).

Conservation Measures: Forest conservation whereby intact forest is protected as well as poaching prevention would be helpful.

Scientific Name:
Gryllotalpa fulvipes
(Saussure, 1877)

Common Name:
Yellow-legged Mole Cricket

Order/Family:
Orthoptera: Gryllotalpidae

National Status: Vulnerable (VU)

Habitat and Ecology: A soil burrower, recorded from and believed to be confined to primary forest. Specimens collected in 2011 at Dairy Farm Loop provided evidence that they also occur in secondary forest.

Distribution: Recorded from Peninsular Malaysia and Singapore. Found at Bukit Timah Nature Reserve (BTNR) as well as in the Central Catchment forest.

Threats: Habitat degradation.



Photo: Tan Ming Kai

Scientific Interest and Potential Value: This species was mentioned in the 2nd edition of the Singapore Red Data Book. The males, while hidden under ground, produce a low-frequency call to attract females only during a short period of time around dusk (and/or dawn) (Tan, 2012a; Tan & Kamaruddin, 2016). Human disturbance during this period may hinder mating opportunities and reproductive behaviours.

Conservation Measures: Forest conservation whereby intact forest is protected as well as poaching prevention would be helpful.

Scientific Name:
***Singapuriola separata* Gorochov**
& Tan 2012

Common Name:
Singapore's Feather-winged Cricket

Order/Family:
Orthoptera: Gryllidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in primary and secondary forest.

Distribution: Endemic from Singapore. Found in the Bukit Timah Nature Reserve (BTNR) and also from the Central Catchment forest.



Photo: Tan Ming Kai

Threats: Loss of habitat and a restricted distribution.

Scientific Interest and Potential Value: This monotypic genus is endemic to and named after Singapore. Males hide among dead leaves or hollow branches and call for females.

Conservation Measures: Forest conservation whereby damage to forest and loss of habitats is halted will help.

Scientific Name:*Glenophisis singapura* Tan, 2012**Common Name:**

Spectacular Spider-legged Katydid

Order/Family:

Orthoptera: Tettigoniidae

National Status: Critically Endangered (CR)**Habitat and Ecology:** Found in primary and secondary lowland forest.**Distribution:** Endemic to Singapore, recorded only from a few locations within the Central Catchment forest.**Threats:** Loss of habitat and a restricted distribution.**Scientific Interest and Potential Value:** This brightly coloured, endemic predatory species is very rarely encountered, with fewer than 10 specimens in

the LKCNHM (Tan, 2012b). There are only five species from this genus, all of them are found within a small distributional range of Indochina, Malay Peninsula, Sumatra and Borneo (Tan, 2012).

Conservation Measures: Forest conservation whereby damage to forest and loss of habitats is halted will help. Being charismatic, this katydid may be subject to disturbance by overzealous night macro-photographers.

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Phasmida – Stick Insects

FRANCIS SEOW-CHOEN

There is an urgent need to implement conservation measures in Singapore for the smaller less “loveable” or less charismatic creatures. Conservation measures can start by first understanding the ecology of these animals.

Tay and Seow-Choen (1996, pp. 181–190) were the first to discuss the relationships of plant families and stick-insects in Peninsular Malaysia and Singapore. This enabled the captive breeding and made possible the detailed observations of many species of stick-insects. The extinction of insect species carries consequences to humans. Insects are needed for the continued presence of a multitude of plant and animal species.

Even as the people in Singapore learn to live in harmony together and to work and play together for the common good, humans must learn to live in harmony with nature too. Our continued transformation into a City in Nature depends on the continued survival of insects as well.

Four books and numerous papers have been published on the stick insects of Singapore and Peninsular Malaysia to date (Brock 1999, Seow-Choen 2000, Seow-Choen 2005). Seow-Choen published two books (1997, 2017a) on stick insects of Singapore. Seow-Choen, Brock and Seow-En (1994) and Seow-Choen (1997a, 2011, 2012, 2019) published species lists or general write-ups on stick insects of Singapore.

Seow-Choen (2008) published a list of rare and threatened phasmids for Singapore in the second edition of the Singapore Red Data Book. It was stated in the introduction to the chapter that habitat destruction was a more severe threat to the survival of insects than that posed through collecting by hobbyists or even commercial collecting. The disturbance of primary forests, felling of trees, damming and concretisation of rivers as well as the introduction of alien invasive species such as rats have been well documented as major threats to phasmids and other wildlife.

Phasmids tend to be elusive and well-hidden even when they are abundant. Many species are nocturnal and are almost impossible to find during the day. Some species which are very specialised feeders on only a few plant species are rare because their host plants are also rare. Other phasmid species are rare as they are canopy dwellers or leaf-litter species and are therefore difficult to find unless they are actively searched for. The abundance or rarity of insects such as phasmids cannot be determined in the same way as for mammals or birds. The lifespan of all phasmid species is very short and is measured in terms of months. Some so-called common phasmid species in Singapore are sighted at most two or three times a year in some years and yet can appear in higher numbers in other years. Rare species may be seen as frequently as once in several years. Some species which have not been seen for at least 30 years are listed as presumed nationally extinct and brief mention has been made of these species below. For all practical purposes, most stick insects are rarely seen and there are only a few species which can be clearly listed as common. Some of the species which were listed as threatened by Seow-Choen (2008) have since been found to be more common and not threatened when their preferred habitats were uncovered. These common species are not dealt with in this chapter which is for threatened species.

As for presumed Nationally Extinct (NEx) stick insects, a recent review of the collection in the Sarawak Museum Department revealed a female of *Anarchodes annulipes* (Gray, 1835) labelled as having been collected in Singapore in May 1905. This beautiful species is common in the lowlands as well as the mid-montane regions of Peninsular Malaysia. *Calvisia* (*Calvisia*) *sangarius* (Westwood 1859) is only known from historical records. It is a very specialized feeder eating only the leaves of *Scorodocarpus borneensis*, a tree which is native to Singapore but is now Critically Endangered (this volume).

Seow-Choen (1997) published the finding of the first and only specimen of *Diacanthoidea diacanthos* (Haan 1842) in Singapore. No other individual has been seen or specimen collected since that time. A female *Diacanthoidea*

malaccensis (Kirby 1904), found at Ulu Pandan on 5 August 1920, is in the Naturalis Biodiversity Centre Netherlands (NBCN), Leiden. This species has not been recorded in Singapore since that time. In 1920 there would have been significant areas of swamp forest near Ulu Pandan but it now has only a remnant wooded regenerated forest called Clementi Woods.

There are two males of *Marmessoidea rosea* (Fabricius 1793) collected in Singapore deposited in the Natural History Museum, United Kingdom (NHMUK), London. The foodplant of this phasmid is plentiful in Singapore. The species therefore has potential to be successfully re-introduced back into Singapore.

The author has only ever seen two specimens of *Phobaeticus serratipes* (Gray 1835) in Singapore. A pilot experiment with NParks to re-introduce this species into the forests at Bukit Timah Hill did not meet with success as Long-tailed Macaques were observed to predate on the re-introduced individuals. No progeny was ever observed. Two specimens of the large and impressive *Heteropteryx dilatata* (Parkinson 1798) caught in Singapore were deposited in the Natural History Museum in Vienna. Seow-Choen (2017) suggested that they might have been feral. In any case this species is now thought to be extirpated in Singapore. Seow-Choen (2008), however, noted that photographs were taken subsequently of an adult male around MacRitchie Reservoir. No other sightings have been recorded since.

Scientific Name:
***Baculofractum insigne* (Brunner
1907)**

Common Name:
Broken Twig

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: The main threat must surely be the restriction of host-plants of this species and the degradation of their natural habitat. This species feeds on Ixora in captivity. This species is unusual because it is the only example in the subfamily Lonchodinae where the male possesses wings. All other genera within Lonchodinae lack wings in both sexes.

Distribution: Only a few specimens of this species have so far been found in a small patch of forest around the live-firing area of Mandai Track 7.

Threats: Habitat loss.

Scientific Interest and Potential Value: Commercial breeding as pets.

Photo: Francis Seow-Choen



Mating pair of *Baculofractum insigne*.

Conservation Measures: Habitat restoration is required.

Scientific Name:
***Calvisia (Conocalvisia) virbius
virbius* (Westwood 1859)**

Common Name:
Green Knob-Neck

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: The original host plant of this species is unknown. In captivity, this species feeds on *Mangifera indica*.

Photo: Francis Seow-Choen



Mating pair of *Calvisia (Conocalvisia) virbius virbius*.

Distribution: Two female individuals recorded at Mandai Track 7. Males have not been found so far.

Threats: Habitat loss.

Scientific Interest and Potential Value: This beautiful species is plentiful in the Tapah Hills, Perak, but rare in Singapore. Its ecology needs to be better elucidated.

Conservation Measures: Habitat restoration.

Scientific Name:
Diardia battak Redtenbacher
1908

Common Name:
Thin-Spine Neck Stick

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: The original host plant of this species is unknown. This species feeds on *Stachytarpheta indica* in captivity.

Distribution: Only a few female specimens had been sighted in 2011 near the live firing range of Nee Soon Swamp Forest. No males have been found so far in Singapore.



Adult female *Diardia battak*.

Threats: Habitat loss.

Scientific Interest and Potential Value: This beautiful species is common in Peninsular Malaysia and Sumatra but is rare in Singapore. Its ecology needs to be better elucidated.

Conservation Measures: Habitat restoration.

Scientific Name:
Lobonecroscia subflava Brock & Seow-Choen 2000

Common Name:
Lobe-legged Stick

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: Feeds on Rengas and therefore the survival of this species depends on the survival of this plant.

Distribution: Only a few specimens of this species had, so far, been found in a small patch of forests around the live-firing area of Mandai Track 7 as well as along MacRitchie Trail.



Mating pair of *Lobonecroscia subflava*.

Threats: Habitat loss.

Scientific Interest and Potential Value: Currently, almost nothing is known of its ecology.

Conservation Measures: Habitat restoration.

Scientific Name:
Phaenopharos struthioneus
(Westwood 1859)

Common Name:
Small-Red-Wings

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: Threats to this species is not known but the degradation of their natural habitat is thought to be important. This species is common in Peninsular Malaysia. In captivity, this species feeds on *Psidium guajava*, *Mangifera indica* and *Rubus moluccanus*.

Distribution: Only a few specimens have been encountered at Terentang Trail and at Mandai Track 7. The first specimen was rediscovered in 2015.



Adult female *Phaenopharos struthioneus*.

Threats: Habitat loss.

Scientific Interest and Potential Value: Commercial breeding as pets.

Conservation Measures: Habitat restoration.

Scientific Name:
***Planososibia tommykohi* Seow-**
Choen 2017

Common Name:
Tommy's Sosibia

Order/Family:
Phasmida / Lonchodidae

National Status: Critically Endangered

Habitat and Ecology: Only the female holotype and a male paratype of this species had ever been found.

Distribution: The female specimen was found in Nee Soon Swamp Forest. The male specimen was found in Upper Peirce Reservoir Road, next to Nee Soon Swamp Forest.

Threats: Habitat loss.



Adult female *Planososibia tommykohi*.

Scientific Interest and Potential Value: Nothing of its ecology is known currently.

Conservation Measures: Habitat restoration and research into this species.

Scientific Name:
Kerabistus (Kerabistus) murphyi
Seow-Choen 2017

Common Name:
Murphy's Kerabistus

Order/Family:
Phasmida / Aschiphasmatidae

National Status: Critically Endangered

Habitat and Ecology: Nothing is currently known of its ecology.

Distribution: Only a few individuals of this species have so far been found in Bukit Timah and the Upper Peirce area.

Threats: Habitat loss.

Scientific Name:
Haaniella mecheli macroptera
Hennemann, Conle, Brock & Seow-Choen 2016

Common Name:
Spiny Brown Stick

Order/Family:
Phasmida / Heteropterygidae

National Status: Critically Endangered

Habitat and Ecology: This bulky and spiny species lays eggs which the female pushes into damp soil. *Haaniella* species are very popular as pets in Europe and in the USA due to their very attractive spines and behaviour.

Distribution: This species is only found in and around Nee Soon Swamp Forest.

Threats: Habitat loss.

Scientific Interest and Potential Value: This species was first described as *Haaniella macroptera* Hennemann, Conle, Brock & Seow-Choen 2016.

Photo: Francis Seow-Choen



Mounted specimen of female *Kerabistus (Kerabistus) murphyi*.

Scientific Interest and Potential Value: Nothing of its ecology is known.

Conservation Measures: Habitat restoration and research into this species.

Photo: Francis Seow-Choen



A pair of *Haaniella mecheli macroptera*.

Seow-Choen (2020) showed that it is a subspecies of *Haaniella mecheli* (Redtenbacher 1906). Further study of its ecology is needed. This species has potential as a pet.

Conservation Measures: Habitat restoration.

Scientific Name:
Planispectrum bengalense
(Redtenbacher 1906)

Common Name:
Pygmy Stick

Order/Family:
Phasmida / Heteropterygidae

National Status: Vulnerable

Habitat and Ecology: Hardly anything is known about this species. It is currently thought that this species feeds on decaying leaves but this is still unconfirmed.

Distribution: Widely distributed from Peninsular Malaysia, Sumatra and Java.

Threats: Habitat loss.



Parthenogenetic female *Planispectrum bengalense*.

Scientific Interest and Potential Value: This seems to be a parthenogenetic species and males have never been found. Research into why and how this came about may help with understanding the issues that single sex species face.

Conservation Measures: Research into species ecology and on its rearing.

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Arachnida – Spiders

DAVID J. COURT

Scientific Name:
Agorius sp. A

Common Name:
Peanut Long-patella
Jumping Spider

Order/Family:
Araneae: Salticidae

National Status: Vulnerable (VU)

Habitat and Ecology: Known from swamp forest, in the foliage and leaf litter. In Singapore this habitat exists in only small areas, though collecting has not been sufficient to demonstrate whether it is exclusive to a single forest type.

Distribution: So far, known only from Singapore.

Threats: Loss of primary forest in the past might have been responsible for its rarity. Any further reduction in forest, particularly freshwater swamp forest, could be a threat.



Scientific Interest and Potential Value: Part of the freshwater swamp forest animal community, but the extent to which it uses dryland forest is unknown. Singapore is the only known locality to date.

Conservation Measures: Its key habitat within the Central Catchment Nature Reserve is fully protected.

Scientific Name:
Argiope mangal Koh, 1991

Common Name:
Mangrove Silver-faced Spider

Order/Family:
Araneae: Araneidae

National Status: Vulnerable (VU)

Habitat and Ecology: Confined to mangrove forest.

Distribution: Malaysia (Selangor, Perak), Brunei, and Singapore (Lim Chu Kang, Sungei Buloh, Pulau Ubin).



Threats: Any further reduction of, or fogging of, mangrove areas would constitute threats.

Scientific Interest and Potential Value: A mangrove specialist.

Conservation Measures: One known locality is within a nature reserve and other localities are within mangroves managed for conservation. It would be

good to reserve as much additional mangrove as is available and possible.

Scientific Name:

***Boagrius pumilus* Simon,
1893**

Common Name:

Dwarf Palp-footed Spider

Order/Family:

Araneae: Palpimanidae

National Status: Vulnerable (VU)

Habitat and Ecology: It is found in deep, moist leaf litter in forest.

Distribution: Peninsular Malaysia and Singapore.

Threats: No known direct threat other than the possible loss of forest or degradation of forest quality.

Drawing: M. Roberts in M&M 2000,
Malayan Nature Journal



Scientific Interest and Potential Value: The genus *Boagrius* is restricted to Southeast Asia and is seldom seen or collected. The *Boagrius* in Singapore need further taxonomic study in order to clarify the number of species present.

Conservation Measures: Suitable habitat is protected within the Bukit Timah Nature Reserve and Central Catchment Nature Reserve.

Scientific Name:

***Boagrius* sp.**

Common Name:

Goldfish Palp-footed Spider

Order/Family:

Araneae: Palpimanidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in deep, moist forest leaf litter in lowland forest.

Distribution: So far, only observed within Singapore.

Threats: No known direct threat other than the possible loss of forest, or degradation in forest quality.

Photo: James W.B. Koh



Scientific Interest and Potential Value: Recorded as *Boagrius pumilus* in Koh & Court 2017 but based on morphological details it is unlikely to be of that species.

Conservation Measures: Its known locality in Bukit Timah Nature Reserve is legally protected.

Scientific Name:
Calommata sundaica
(Doleschall, 1859)

Common Name:
Sunda Calommata

Order/Family:
Araneae: Atypidae

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Inhabits burrows amongst buttress roots of roadside trees. Burrows are reported to be vertical and lined with elastic, closely woven silk. Entrance surrounded by a sill of 1-2 mm., usually concealed by fallen leaves and closed by cottonwool-like silk. Abraham 1924 provided a figure of a burrow and its side branch (leading to the surface).

Distribution: Indonesia (Java, Sumatra) and Singapore.

Threats: Not known, but might include loss of microhabitat, and introduced predators such as centipedes, flatworms.

Scientific Interest and Potential Value: This species belongs to the Atypidae, an ancient family of the mygalomorph spiders. All species of this family are of particular phylogenetic interest. *Calommata* is a remarkably cryptic genus. It is renowned by arachnologists for being exceedingly difficult to detect in the field. It may well still exist in Singapore without being detected. If sufficient specimens are found the Southeast Asian species of this genus should undergo

Photo: Siti Maimon



Calommata sundaica specimen from Lee Kong Chian Natural History Museum.

a modern taxonomic review (to allow comparison with recently revised *Calommata*, e.g., Levy 2007 and later workers).

Conservation Measures: Suitable habitat is protected within the Bukit Timah Nature Reserve and Central Catchment Nature Reserve.

Scientific Name:
***Colopea malayana* Lehtinen,**
1982

Common Name:
Peninsular Diamond Carapace Spider

Order/Family:
Araneae: Stenochilidae

Photo: Paul Ng



National Status: Endangered (EN)

Habitat and Ecology: In Singapore it is confined to primary forest within the Bukit Timah Nature Reserve.

Distribution: Southern Thailand (the type locality), Peninsular Malaysia (Selangor) and Singapore.

Threats: Forest loss or degradation would threaten the species.

Scientific Interest and Potential Value: If sufficient *Colopea* specimens are found the species of this genus should undergo a modern taxonomic review.

Conservation Measures: Its only known locality within Singapore is legally protected.

Scientific Name:
Copocrossa sp.

Common Name:
Cigar Jumper

Order/Family:
Araneae: Salticidae

National Status: Vulnerable (VU)

Habitat and Ecology: Occurring on foliage in forests including secondary forests. Little else is known.

Distribution: Singapore (Admiralty Park, Thomson Nature Park, Windsor Park).

Threats: Currently unknown.

Scientific Interest and Potential Value: A rarely observed species, as yet undescribed and formally named. To date, all the mature examples observed have been males.

Conservation Measures: All the localities known so far are under the management of the National Parks Board as publicly accessible nature parks.

Photo: Melvyn Yeo



Scientific Name:
"Coremiocnemis" sp. A

Common Name:
Singapore Feather-duster Tarantula

Order/Family:
Araneae: Theraphosidae

National Status: Endangered (EN)

Habitat and Ecology: Occurs under rocks in moist parts of primary rain forest.

Distribution: So far only known from Singapore.

Threats: Collection for the pet trade is a potential threat.

Scientific Interest and Potential Value: Even the genus of this undescribed species is uncertain, and it is included here as an example of the challenges of conserving species whose basic characteristics are unknown.

Conservation Measures: The known locality is legally protected.



Scientific Name:
"Coremiocnemis" sp. B

Common Name:
Brown Feather-duster Tarantula

Order/Family:
Araneae: Theraphosidae

National Status: Endangered (EN)

Habitat and Ecology: Ground level in primary and maturing secondary forests.

Distribution: So far known from Singapore, but because of taxonomic uncertainty its complete distribution is not known.



Threats: Loss of forest in the past could have reduced the population. Collection for the pet trade is a potential threat.

Scientific Interest and Potential Value: The second edition of the Singapore Red Data Book listed this as *Coremiocnemis valida*.

Conservation Measures: It has been recorded close to but not within legally protected areas.

Scientific Name:
Cyrtarachne conica (O. Pickard Cambridge, 1901)

Common Name:
Conical Spider

Order/Family:
Araneae: Araneidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in low-growing shrubs at the edges of forest.

Distribution: Indonesia (Sumatra), Brunei and Singapore.

Threats: Habitat loss or degradation.

Scientific Interest and Potential Value: Of particular biological interest. Constructs a modified orb-web amongst low-lying shrubs or herbage at the edges of rainforests. The abdomen resembles the shell of a snail.



Scientific Name:
Desis martensi L. Koch, 1872

Common Name:
Von Martens' Reef Spider

Order/Family:
Araneae: Desidae

National Status: Vulnerable (VU)

Habitat and Ecology: Known from fewer than five localities, found between tidemarks and surviving immersion by remaining within a water-tight cocoon that is lodged in a crevice in the rocks or coral.

Conservation Measures: Most known localities are within the legally protected nature reserves. In the second edition of the Singapore Red Data Book, it was listed as Endangered, but a few individuals have been recorded since, justifying a downgrading of its threat status.



Distribution: Peninsular Malaysia and Singapore.

Threats: There has been some reduction in coastal habitat caused by reclamation projects. Marine pollution by oil spill or other chemical release (e.g. toxic antifouling chemicals, detergents) could occur. This could be caused by accident near petrochemical facilities, or collision between, or illegal discharge by, ships in the Malacca and Johor Straits.

Scientific Interest and Potential Value: One of the four intertidal spider species in Singapore. During low

tide, especially at night, the spiders leave their retreats to hunt for amphipods, small crabs, or marine scale worms and seize them in their powerful projecting mouthparts.

Conservation Measures: At least one of its known localities is within a legally protected nature reserve. Protection of natural intertidal habitats will be challenging in the face of sea level rise. Vigilance regarding coastal water quality; rapid clean-up task forces available on call; enforcement of anti-pollution laws as necessary.

Scientific Name:

Diplocanthopoda marina
Abraham, 1925

Common Name:
Marine Jumper

Order/Family:
Araneae: Salticidae

National Status: Vulnerable (VU)

Habitat and Ecology: Among rocks, coral rubble and oyster and barnacle beds.

Distribution: Peninsular Malaysia and Singapore.

Threats: There has been reduction of habitat through reclamation projects. Marine pollution by oil spill or other chemical release (e.g. toxic antifouling chemicals, detergents) could occur. This could be caused by accident near petrochemical facilities, or collision between, or illegal discharge by, ships in the Malacca and Johor Straits. Possible reclamation schemes might load water with sediment which then interferes with intertidal organisms.

Scientific Interest and Potential Value: One of the four intertidal spider species in Singapore. The spiders can sit, run, and even hop on the water surface. They forage for marine creatures (including intertidal flies) and hide in an underwater chamber sealed by thick silk during high tide. The chamber may be built between rock crevices, within dead barnacle shells or between

Photo: Chris Ang



the valves of dead oysters. Eggs are laid in the chamber which also acts as a nursery for the spiderlings before they disperse.

Conservation Measures: A few of its known localities are within legally protected or managed nature areas. The spider would be threatened by insensitive development (such as building a sea wall) to protect shorelines against sea level rise. Vigilance regarding coastal water quality; rapid clean-up task forces available on call; enforcement of anti-pollution laws as necessary.

Scientific Name:
Dolomedes sp. C

Common Name:
Wide-belted Fishing Spider

Order/Family:
Araneae: Pisauridae

National Status: Endangered (EN)

Habitat and Ecology: On aquatic plants or banks in open areas along the edges of reservoirs and natural water bodies.

Distribution: Peninsular Malaysia and Singapore.

Threats: A possible threat would, in some areas, include fogging for mosquitoes or other nuisance insects.

Scientific Interest and Potential Value: Not seen in Singapore since 1982. Taxonomic uncertainty in the genus *Dolomedes* limits current knowledge of habits, habitat and distribution.

Photo: Joseph K.H. Koh



Conservation Measures: The conservation of natural or semi-natural vegetation along water margins is likely to benefit the species. Several reservoirs are surrounded by legally protected nature reserves.

Scientific Name:
Epidius sp. A

Common Name:
Singapore Long-palped Crab Spider

Order/Family:
Araneae: Thomisidae

National Status: Vulnerable (VU)

Habitat and Ecology: Lowland forest, and possibly shrubs and trees in adjacent parkland.

Distribution: Because of taxonomic uncertainty, so far it is confirmed only from Singapore.

Threats: Loss of forest would have been a historical threat.

Photo: Chris Ang



Scientific Interest and Potential Value: Known from only one female specimen at one locality in Singapore.

Conservation Measures: The known locality is legally protected as a nature reserve, but other forested nature reserves may also provide suitable habitat.

Scientific Name:
Epidius sp. B

Common Name:
Masked Long-palped
Crab Spider

Order/Family:
Araneae: Thomisidae

Photo: David J. Court



National Status: Vulnerable (VU)

Habitat and Ecology: The known specimen was found in low growing vegetation near the margin of a secondary forest.

Distribution: Because of taxonomic uncertainty, so far it is confirmed only from Singapore.

Threats: Loss of forest would have been an historical threat.

Scientific Interest and Potential Value: Known from only one female specimen at one locality in Singapore. An effort should be made to recollect the species, especially the male, and increase our knowledge about the species. The possibility that *Epidius* sp. A and sp. B are conspecific needs to be investigated.

Conservation Measures: The known locality is legally protected as a nature reserve, but other forested nature reserves may also provide suitable habitat.

Scientific Name:
Henriksenia nepenthicola (Fage, 1928)

Common Name:
Singapore Pitcher-plant Crab Spider

Order/Family:
Araneae: Thomisidae

Photo: David J. Court



National Status: Vulnerable (VU)

Habitat and Ecology: Occurring within seral communities (swamps, vacant land, developing belukar forest) where suitable for growth of the pitcher plant *Nepenthes gracilis*. These are typically regrowth after clearance or landslides on steep, degraded, nutrient poor soils.

Distribution: Indonesia, Peninsular Malaysia and Singapore.

Threats: Land development might cause further reduction of seral communities (swamps, vacant land, developing belukar forest) suitable for *Nepenthes gracilis*. This would be deleterious for *H. nepenthicola*. After 30 to 50 years, belukar itself will become less suitable for *Nepenthes* (and hence for *H. nepenthicola*). Some swampy areas may be fogged for mosquito control.

Scientific Interest and Potential Value: As an obligate commensal, *H. nepenthicola* dwells inside either *Nepenthes gracilis* pitchers (*Nepenthes*

tobaica in Sumatra) or, much less often, in *Nepenthes rafflesiana* or *rafflesiana X gracilis* hybrids, growing in seral communities with poor nutrients, waterlogged or eroded soils. The spiders are remarkable for their ability to dive into and move about in the pitcher's enzyme-rich digestive fluid without coming to harm. A survey of *Nepenthes* pitchers throughout Singapore could obtain more data on the distribution and fecundity of both *Henriksenia nepenthicola* and *Thomisus nepenthophilus*.

Conservation Measures: Two known sites in Singapore are reserved, but they are elongated so that their margin/area ratio is high. *Nepenthes*-containing areas within the sites are relatively small.

Scientific Name:
Hitobia sp. D

Common Name:
Strong-armed Tapir
Ground Spider

Order/Family:
Araneae: Gnaphosidae

National Status: Vulnerable (VU)

Habitat and Ecology: Forest undergrowth

Distribution: So far known only from one site in Singapore.

Threats: Small remaining area of suitable habitat, and potential loss or degradation of forest.

Scientific Interest and Potential Value: Nothing is known about this species other than the fact that it, the female at least, has extraordinarily stout first pair of

Photo: David J. Court



legs. The pose it can take and actions that it makes are suggestive of an ant species. Within the Gnaphosidae, no other species has been described with such modified forelegs.

Conservation Measures: The single known locality is legally protected within a nature reserve.

Scientific Name:
Idioctis littoralis Abraham,
 1924

Common Name:
 Intertidal Brush-footed
 Spider

Order/Family:
 Araneae: Barychelidae

National Status: Vulnerable (VU)

Habitat and Ecology: Intertidal zone, mainly in mangroves. It lives in a tube retreat, often on the wall of mud lobster mounds, sometimes in mud between mangrove roots.

Distribution: Peninsular Malaysia, Singapore.

Threats: There has been historical reduction of habitat through reclamation projects. Marine pollution by oil spill or other chemical release (e.g. toxic antifouling chemicals, detergents) could occur. This could be caused by accident near petrochemical facilities, or collision between, or illegal discharge by, ships in the Malacca and Johor Straits. Possible reclamation schemes might load water with sediment which then interferes with intertidal organisms.



Photo: David J. Court

Scientific Interest and Potential Value: One of the four intertidal spider species in Singapore. The entrance of each burrow is made watertight with a wafer-like door made of fine debris bound together within by silk. Passing prey (small insects and crustaceans) alerts the spider, and it rapidly emerges to seize the prey directly. When disturbed the spider may hold tightly to the inside of its door or tube and keep it closed.

Conservation Measures: Its limited sites of occurrence are largely within protected and managed areas. Permanent protection of all mangroves that include mud lobsters (*Thalassina anomala*) would be beneficial. Vigilance is needed regarding coastal water quality. Rapid clean-up task forces available on call, and enforcement of anti-pollution laws as necessary.

Scientific Name:
Leucauge celebesiana
 (Walckenaer, 1841)

Common Name:
 Celebes Silver Orb
 Weaver

Order/Family:
 Araneae: Tetragnathidae

National Status: Vulnerable (VU)

Habitat and Ecology: Damp places such as edges of waterfalls, but occasionally among grasses in open areas fringing forests.



Photo: Joseph K.H. Koh

Distribution: Malaysia (Peninsula, Sabah), Singapore, Indonesia (Sulawesi - the type locality, West Papua, Sumatra), Brunei, Laos, the Philippines, parts of China, Japan and India.

Threats: Reduction of habitat area, especially of sheltered damp places.

Scientific Interest and Potential Value: In other countries this large *Leucauge* species is associated with lowland waterfalls as well as with misty habitats at altitudes above 1,000 metres. By comparison, in Singapore, such high humidity habitats are scarce and

this may limit the local population of *L. celebesiana*. If this is substantiated a population decline could indicate a relative drying of the forest ecosystem.

Conservation Measures: It occurs in the already legally protected nature reserves. Some currently unprotected damp areas might be enhanced and protected.

Scientific Name:

Leviaraneus noegeatus (Thorell, 1895)

Common Name:

Banner Orb Weaver

Order/Family:

Araneae: Araneidae

National Status: Vulnerable (VU)

Habitat and Ecology: Occurs in forest edges.

Distribution: Myanmar and Singapore.

Threats: The decline of this species might have been related to the past reduction in forest areas. Potential threats include further degradation or loss of forest and continued fogging.

Scientific Interest and Potential Value: Appears to be mostly an edge species, found on the fringes of forest.

Conservation Measures: The nature reserves are legally protected. Continuation of the management and maintenance of the Nature Reserves will be needed.

Photo: Joseph K.H. Koh



Scientific Name:
Macracantha arcuata
(Fabricius, 1793)

Common Name:
Longhorn Spiny Spider

Order/Family:
Araneae: Araneidae

National Status: Endangered (EN)

Habitat and Ecology: Shadier fringes of primary and secondary forest.

Distribution: Malaysia (Peninsula, Sabah, Sarawak), Singapore, Indonesia (Sumatra, Java, Maluku), Brunei, Thailand, Laos, Myanmar, the Philippines, and parts of China and India.

Threats: Previously it was listed as Vulnerable (VU). Its current status is likely due to the historical reduction in forest cover. The small size of the remaining forest, and the possibility of further reduction or degradation, are continuing threats.

Photo: Chris Ang



Scientific Interest and Potential Value: The female builds a large web up to a metre in diameter with an open hub between tall trees above eye level or among shrubs a metre or so above the ground. The spider hangs on the underside of the slightly inclined web with the median spines pointing downward.

Conservation Measures: Its known localities are legally protected within Bukit Timah and Central Catchment Nature Reserves.

Scientific Name:
***Milonia obtusa* Thorell, 1892**

Common Name:
Obtuse Leaf-rolling Orb Weaver

Order/Family:
Araneae: Araneidae

National Status: Endangered (EN)

Habitat and Ecology: Foliage in forests.

Distribution: Singapore and nearby parts of Malaysia (Johor) and Indonesia (Batam).

Photo: Chris Ang



Threats: Loss of primary forest in the past might have been responsible for its rarity. The small size of the remaining forest, and the possibility of further reduction or degradation, are continuing threats.

Scientific Interest and Potential Value: As in *Acusilas*, the female constructs a partial orb-web and hides in a rolled leaf retreat suspended in the web.

Conservation Measures: Some of its known localities are legally protected within Bukit Timah and Central Catchment Nature Reserves.

Scientific Name:
Monodontium bukittimah
 Raven, 2008

Common Name:
 Bukit Timah Brush-footed
 Trapdoor Spider

Order/Family:
 Araneae: Barychelidae

National Status: Vulnerable (VU)

Habitat and Ecology: Lowland rain forest

Distribution: Currently known only from Singapore.

Threats: Loss of primary forest in the past might have been responsible for its rarity, and further forest loss or degradation would threaten the species.

Scientific Interest and Potential Value: As in each of the four other *Monodontium* species in the region, it possesses biserrate claws. This apparent plesiomorphic trait hints that *Monodontium* is a phylogenetically relict taxon at the base of the Barychelidae.

Conservation Measures: The habitat in which individuals of this species are found is legally protected as a Nature Reserve.

Photo: David J. Court



Scientific Name:
Omothymus violaceopes
(Abraham, 1924)

Common Name:
Singapore Blue Tarantula

Order/Family:
Araneae: Theraphosidae

National Status: Endangered (EN)

Habitat and Ecology: On mature trees within lowland forest, where it is arboreal. It has been reported from holes and deep recesses in tree trunks in back mangroves (*Xylocarpus moluccensis*). Recently reported from secondary forests, less frequently from primary forest. Large specimens appear capable of catching and consuming large insects, smaller tree frogs and lizards, and perhaps even nestling birds.

Distribution: Singapore, with similar but possibly genetically distinct populations in neighbouring parts of Peninsular Malaysia and Indonesia (Sumatra). Until molecular evidence indicates the contrary, the Singaporean, Malaysian and Indonesian populations should be considered as distinct from one another.

Threats: Deforestation of both mangrove and dry land during land reclamation schemes. In addition, at least one of the spider's host tree species was extensively used for timber to construct houses and boats. Unsustainable poaching by pet traders and amateur collectors. The species has been offered for sale via on-line portals at high prices and it is likely that specimens are freshly caught from the wild. The species is arboreal and is threatened by any loss of suitable forest habitat, in particular the loss of trees bearing crevices suitable for the spiders' retreats (Young trees without crevices are completely unsuitable). The possible introduction of exotic crevice inhabiting organisms that would deter or out-compete *O. violaceopes* as well as spider-eating animals e.g., birds such as hornbills.

Photo: Lim Swee Cheng



Scientific Interest and Potential Value: This is one of the most charismatic spider species in Singapore and the world. Pet traders and their customers, attracted to this species because of its brilliant violet-blue colour and "temperamental attitude", report online that the life span for females in captivity is 13-15 years and for males, 3 to 7 years. These are likely only estimates. The life span of wild specimens may be significantly different.

Conservation Measures: Suitable policing patrols by park rangers to detect/deter poaching (both physically and by on-line monitoring), and appropriate public education. Special protection of old growth forest trees both in nature reserves and in other forested land and parks. Execute a research programme where the basic aspects of this spider's biology are studied including its natural prey, enemies, life cycle. This might include the setting up of artificial retreats in known *O. violaceopes* inhabited areas in the wild, to see if dispersing spiderlings can make use of them as "nest boxes" or permanent retreats. If successful, a captive breeding population could possibly be established.

Scientific Name:
Paraplectana sp. C

Common Name:
White-eyed Ladybird Spider

Order/Family:
Araneae: Araneidae

National Status: Vulnerable (VU)

Habitat and Ecology: Foliage in primary and secondary forests. No other data.

Distribution: Known from Singapore, and this or closely similar forms have been recorded from neighbouring countries in Southeast Asia.

Threats: Loss of primary forest in the past might have been responsible for its rarity. Additional forest loss or habitat degradation might threaten it further.



Scientific Interest and Potential Value: It is either conspecific with or closely related to one or some of a few species already reported in several other Southeast Asian countries.

Conservation Measures: The single known locality in Singapore is within a legally protected nature reserve.

Scientific Name:
Paratheuma armata
(Marples, 1964)

Common Name:
Can-opener Marine Spider

Order/Family:
Araneae: Dictynidae

National Status: Vulnerable (VU)

Habitat and Ecology: Coral rubble, shells of dead barnacles and other encrustations.

Distribution: *Paratheuma armata* ranges 9000km between Singapore and American Samoa in the Pacific (where Swains Is. is the type locality). In Singapore it has been recorded from one of the Southern Islands and may occur on others.



Threats: Marine pollution by oil spill or other chemical release (e.g. toxic antifouling chemicals, detergents) could occur. This could be caused by accident near petrochemical facilities, or collision between, or illegal discharge by, ships in the Malacca and Johor Straits. Possible reclamation schemes might load water with sediment which then interferes with intertidal organisms.

Scientific Interest and Potential Value: One of the four intertidal spider species in Singapore. It constructs a small funnel-like silk retreat that is submerged at high tide and within which the spider survives immersion in a water-tight cocoon. During low tide it emerges and roams about in search of prey.

Conservation Measures: Limited marine areas in Singapore are conserved, e.g. Sungei Buloh Wetland Reserve, Mandai, Chek Jawa Wetlands, but it is uncertain whether the species occurs there. Vigilance regarding coastal water quality; rapid clean-up task forces available on call; enforcement of anti-pollution laws as necessary.

Scientific Name:

Peng sp.

Common Name:

Box-headed Black Ant Mimic

Order/Family:

Araneae: Corinnidae

National Status: Vulnerable (VU)

Habitat and Ecology: Foliage in secondary forests.

Distribution: The Singapore male is not yet known, therefore the species is unidentified and its distribution uncertain. Named *Peng* species are known from Malaysia (Sabah, Sarawak); Myanmar; Sri Lanka.

Threats: Reduced habitat and hence, reduced population may be restricting the species' population (reduced fecundity).

Scientific Interest and Potential Value: This species is of great biological interest; it is one of the best ant

Photo: Joseph K.H. Koh



mimics among all Southeast Asian spiders. The deception is achieved by a constriction of the cephalothorax, mimicking the division between the head and thorax of a large black ant.

Conservation Measures: Continuation of the management and maintenance of the nature reserves and parks.

Scientific Name:

"*Philoponella*" *quadrituberculata*
(Thorell, 1892)

Common Name:

Mexican Hat Spider

Order/Family:

Araneae: Uloboridae

Photo: Joseph K.H. Koh



National Status: Endangered (EN)

Habitat and Ecology: On shrubs in open and sunny areas. The spider builds a web that resembles an upside-down Mexican hat: a horizontal orb web which is attached to a downward-pointing conical structure (a modified orb web with the hub at the apex of the cone).

Distribution: It has been recorded from the neighbouring countries of Malaysia (Johor), Indonesia (Central Java, Sulawesi), Brunei.

Threats: It is not understood why it has not been found recently in what would appear to be suitable habitat.

Scientific Interest and Potential Value: Workman (1896) claimed that this species was "not uncommon in Singapore", in association with pineapple plants. No recently collected specimens or recently taken images have been confirmed as belonging to this species.

Conservation Measures: The status EN has been applied rather than NEx because there are candidate specimens in the Singapore collections which have not been examined in detail. No conservation measures can be undertaken unless it can be re-located.

Scientific Name:

Phoroncidia lygeana
(Walckenaer, 1841)

Common Name:

Spiny Phoroncidia

Order/Family:

Araneae: Theridiidae

National Status: Endangered (EN)

Habitat and Ecology: Foliage in the understorey of forest.

Distribution: Indonesia (Java, Batam), Brunei and Singapore.

Threats: Loss of primary forest in the past might have been responsible for its rarity. In future any further forest reduction or degradation in quality would increase risk to the already reduced population.

Scientific Interest and Potential Value: Appears to be a mimic of a spiky and unpalatable caterpillar suspended on a silk strand.

Photo: Joseph K.H. Koh



Conservation Measures: The habitat in which individuals of this species are found is legally protected. To minimise further impact from the reduced area of forest habitat in Singapore, it is essential to maintain the integrity of the ecosystems in the Bukit Timah and Central Catchment Nature Reserves.

Scientific Name:***Piranthus api* Maddison, 2020****Common Name:****Orange Strong-armed Jumper****Order/Family:****Araneae: Salticidae****National Status:** Vulnerable (VU)**Habitat and Ecology:** Near mangroves, deep amongst tall grasses overhanging a moist ditch.**Distribution:** So far known only from Singapore.**Threats:** Loss of mangroves or other wetlands in the past might have been responsible for its rarity. The currently protected sites are fragmented and form only a small total area of habitat. Loss of mangrove and its moist inland edge would further threaten the species.**Scientific Interest and Potential Value:** First collected in 2019 and described in the following year, the species is limited to two known localities at Sungei Buloh and Jalan Bahar. Two other species of *Piranthus* have recently been found in Singapore. *P. mandai* Maddison 2020, like *P. api*, is a rare endemic and considered Vulnerable (VU). The other, *P. kohi* Maddison 2020, is found in Singapore, Malaysia and Brunei and is considered to be of Least Concern (LC).**Scientific Name:*****Platythomisus octomaculatus*
(C.L. Koch, 1845)****Common Name:****Eight-spotted Crab Spider****Order/Family:****Araneae: Thomisidae**

Photo: W.P. Maddison

**Conservation Measures:** One of the two known localities is legally protected as a nature reserve, while the other is not protected. The protection of other mangrove locations in Singapore including their landward fringes, and any other localities recorded for the species in future, would be beneficial.

Photo: Joseph K.H. Koh



National Status: Vulnerable (VU)

Habitat and Ecology: Mostly associated with and known from low or mid-level mangrove vegetation, although occasionally found in forest further inland. Constructs retreats by fastening 2-3 leaves together, often of the Sea hibiscus, *Hibiscus tiliaceus* L.

Distribution: Brunei, Indonesia, Malaysia and Singapore. In Singapore most of the known localities (e.g., Sungei Buloh, Mandai, Chek Jawa, Pulau Ubin) are coastal, in or near mangroves but it has also been found in abandoned rubber plantation.

Threats: Loss of primary forest in the past might have been responsible for its rarity. Any further reduction of mangrove and forest habitat, fogging against mosquitoes, or poaching for the pet trade (in which it occasionally appears) might represent additional threats.

Scientific Interest and Potential Value: Has been observed consuming large and dangerous prey such

as a mantid and a large wasp. Possesses some unusual body posturing and leg-shivering behaviour that would be worthy of study. May be a Mullerian mimic, that is, one that gains enhanced protection from would-be predators by possessing a colour pattern or other visually recognisable trait also exhibited by one or more other species, both, or all of which are venomous, toxic or otherwise noxious. Abraham was the first to notice that the colour pattern of *C. octomaculatus* matches with the pentatomid bug *Catacanthus incarnatus* of the Family Scutelleridae. The scutellardids *Cantao ocellatus* and *Calliphara nobilis* are also similar. These bugs are all found in "octomaculatus territory" and all can produce a toxic spray (likely derived from toxins in the sap of the plants upon which they feed).

Conservation Measures: Maintain the protection afforded by the reserves in which it is found, as well as to increase the protection status of ecologically similar but currently unreserved areas.

Scientific Name:
Platythomisus sp.

Common Name:
Three-spotted Crab Spider

Order/Family:
Araneae: Thomisidae

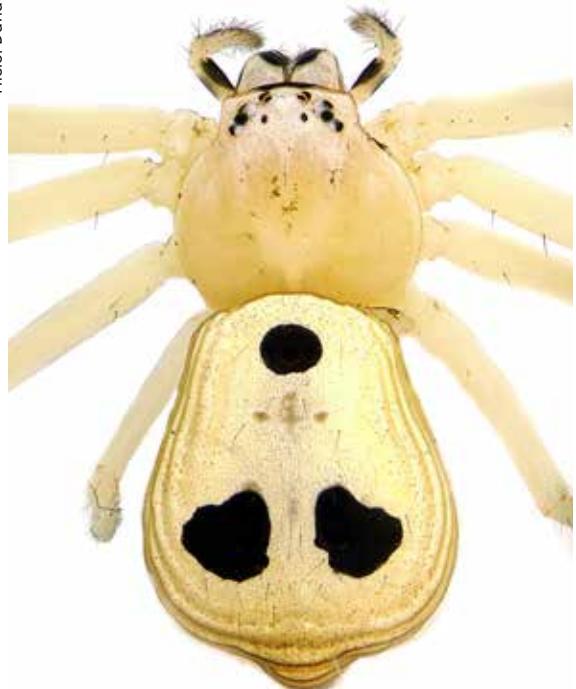
National Status: Endangered (EN)

Habitat and Ecology: On understorey leaves in freshwater swamp forest.

Distribution: Singapore, and possibly Sarawak.

Threats: Loss of swamp forest during the last century may have led to its current rarity. Deterioration in forest quality is a potential threat.

Photo: David J. Court



Female *Platythomisus* sp.

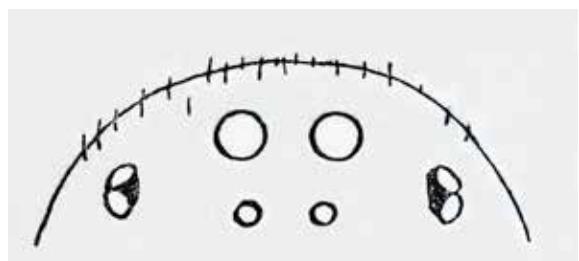
Scientific Interest and Potential Value: It is only known from a single example collected in 2013. The discovery of this species, smaller than the better-known *P. octomaculatus*, was a surprise. It is likely to be a new and undescribed species. A similar if not identical species has been recently (2021) observed and photographed in Sarawak, Malaysia.

Conservation Measures: The single known locality is protected within the Central Catchment Nature Reserve. It would be excellent if staff of the reserve or spider enthusiasts with access keep an eye out for further records of this visually distinctive spider so as to confirm its persistence.

Scientific Name:
Sarascelis raffrayi Simon, 1893

Common Name:
Raffray's Palp-footed Spider

Order/Family:
Araneae: Palpimanidae



Sarascelis sp. dorsal. Drawing: Simon, 1893 fig. 363

National Status: Nationally Extinct (NEx)

Habitat and Ecology: Most recently collected from leaf litter on the ground in primary lowland forest.

Distribution: Singapore, India

Threats: Loss of primary forest in the past might have been responsible for its rarity.

Scientific Interest and Potential Value: *Sarascelis raffrayi* is listed from Singapore and India. As reported by Simon, *Sarascelis* spp. are similar to *Boagrius*

spp. (also in the Palpimanidae) but are considerably larger. Simon considered a distinguishing character for *Sarascelis* to be the eye arrangement in dorsal view (see picture above, adapted from Simon's 1893 sketch). Other *Sarascelis* spp. are found in Africa and India.

Conservation Measures: The last record for Singapore was from Bukit Timah Nature Reserve in 1988. It is assumed to be a valid taxon, conceivably still existing in Singapore, but without being recently detected. Field workers are encouraged to be on alert for the possible re-discovery of this species so that appropriate conservation measures can be taken.

Scientific Name:
Selenocosmia sp.

Common Name:
Singapore Black Tarantula

Order/Family:
Araneae: Theraphosidae



Photo: Joseph K.H. Koh

National Status: Endangered (EN)

Habitat and Ecology: Occurring on the ground in lowland forest, occasionally extending into adjacent forest fringe habitats.

Distribution: Singapore. [A similar but not necessarily identical species has been seen in Malaysia (Johor)].

Threats: Loss of forest in the past might have been responsible for its rarity. If so, further clearing of forest would be an additional threat. Poaching for the pet trade or individually by amateur collectors. Introduction of invasive predator species of flatworms, centipedes or wasps.

Scientific Interest and Potential Value: A large selenocosmiine tarantula. This species is likely to be undescribed, with a range that may or may not extend beyond Singapore. Specimens from Singapore have previously been identified as *Selenocosmia javanensis* but do not match *Selenocosmia* species from Java, which is the type locality of *S. javanensis*. Predominantly lives in silk-lined burrows in moist ground near tree roots, sometimes also in nearby grassy patches. Likely to prey upon larger forest floor invertebrates, possibly small frogs and lizards. Males when mature leave their retreat to search for females. Females have been seen roaming the forest floor whilst carrying their egg sac.

Conservation Measures: The forest habitat in which individuals of this species are found is protected as nature reserves or managed in adjacent parks.

Scientific Name:

Stephanopis sp.

Common Name:

Thorny Crab Spider

Order/Family:

Araneae: Thomisidae

National Status: Vulnerable (VU)

Habitat and Ecology: Little known. On dead fronds of climbing ferns and leaves of other plants in the denser undergrowth of primary and secondary forests. It is well camouflaged: the body can become encrusted with soil particles and leaf-litter fragments, the legs and body carry numerous tiny warts, minute spines, and setae bearing microscopic Velcro-like hooks, all of which help to trap and hold the debris. Once photographed feeding upon a spider.

Distribution: Brunei, Malaysia (Sabah) and Singapore

Threats: Loss of primary forest in the past might have been responsible for its rarity. Current threats are not understood. Specimens have been found sporadically during beating or shaking of undergrowth. However,

Photo: David J. Court



it is often missing from apparently suitable habitat. Long term viability of *Stephanopis* populations may be dependent upon sufficient understorey ferns and climbers.

Scientific Interest and Potential Value: Other *Stephanopis* species are in two poorly defined groups with a less-usual geographic distribution: Group (A) occurring in Australasia and Southeast Asia to southern China; Group (B) in South America.

Conservation Measures: The habitat(s?) in which individuals of this species are found are largely protected as a Nature Reserve.

Scientific Name:
"Tarrocanus" sp.

Common Name:
Cone-eyed Crab Spider

Order/Family:
Araneae: Thomisidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Mangrove vegetation. Nothing further is known about this unique "cone-eyed" species.

Distribution: Singapore. Only a single specimen has been found, in 2016.

Threats: Loss of forest in the past, particularly of mangroves, might have been responsible for its rarity.

Scientific Interest and Potential Value: This undescribed species, superficially with similarities to the genus *Tarrocanus* from Sri Lanka, appears to belong to

Photo: Joseph K.H. Koh



an undescribed genus. Hence the name given above is placed in inverted commas.

Conservation Measures: The known habitat is in the established Pasir Ris Park. If sufficient living examples could be found, captive breeding and/or translocation to additional sites might be attempted.

Scientific Name:
Tetragnatha josephi
Okuma, 1988

Common Name:
Mangrove Long-jawed
Spider

Order/Family:
Araneae: Tetragnathidae

National Status: Vulnerable (VU)

Habitat and Ecology: Confined to mangroves

Distribution: Singapore, Brunei

Threats: Loss of mangrove forest in the past might have been responsible for its rarity. Additional losses of mangroves, whether to development or alteration of the coastline in response to sea level rise, represent further

Photo: Paul Ng



potential threats as well as accidental fogging (intended against mosquitoes) and marine pollution.

Scientific Interest and Potential Value: Lim Chu Kang mangroves represent the type locality and only known site, where it was first found in 1976. The time is now ripe for a research project into the detailed biology of this and other mangrove-inhabiting spider species, with attention to prey, life cycle etc.

Conservation Measures: It is present at a single site, Lim Chu Kang, which is now under management by the National Parks Board as parkland for conservation purposes, contiguous with the Sungei Buloh Wetland

Reserve. Prevention of fogging programmes and the enforcement of anti-marine pollution laws would be significant steps towards its long-term conservation.

Scientific Name:

Thomisus nepenthophilus
Fage, 1930

Common Name:

Pitcher-plant Horned
Crab Spider

Order/Family:

Araneae: Thomisidae

National Status: : Vulnerable (VU)

Habitat and Ecology: Likely to be an obligate commensal inside *Nepenthes gracilis* pitchers (*Nepenthes tobaica* in Sumatra) in seral communities such as "belukar", characterised with poor nutrients, waterlogging or eroded terrain.

Distribution: Indonesia (North Sumatra) and Singapore.

Threats: This species is much rarer than *Henriksenia nepenthicola* and occurs only in large patches of *Nepenthes*. There are not many such sites left in Singapore, and those that remain are threatened by development. Some swampy areas may be fogged for mosquito control. These same threats were present in the past and may still continue. There seems to be a time-lag, between when *Nepenthes* first establishes in

Photo: Joseph K.H. Koh



an area, and when the spider is able to colonise the pitchers. The fewer the pitchers are available, the longer the time lag is likely to be.

Scientific Interest and Potential Value: Unlike *Henriksenia nepenthicola*, they do not dive into and move about in the pitcher fluid. A survey of *Nepenthes* pitchers throughout Singapore should ascertain the distribution and fecundity of *Thomisus nepenthophilus* (and *Henriksenia nepenthicola*).

Conservation Measures: We would suggest a species recovery programme for this species: in large patches where this species can be found, the *Nepenthes* plants along with their spider inhabitants can be transplanted to certain parts of Pulau Ubin where their preferred habitats still exist.

Scientific Name:

Thomisus perspicillatus
(Thorell, 1890)

Common Name:

Buffalo Horn Crab Spider

Order/Family:

Araneae: Thomisidae

National Status: Endangered (EN)

Habitat and Ecology: Foliage on roadside and secondary forest.

Distribution: Singapore, Malaysia ("Borneo", Sabah, Sarawak)

Threats: This subtly coloured species would appear to require a particular kind of vegetation from which to prey (e.g., leaf colour, texture). The adventive plant

Photo: Marcus E.C. Ng



Female *Thomisus perspicillatus* on a leaf at a Nature Park.

species now tending to invade forest margins may be less suitable than those that are indigenous.

Scientific Interest and Potential Value: Fewer than ten specimens recorded by nature photographers in recent years. Specimens from Singapore not known in collections.

Conservation Measures: The locality in which this species has been observed is protected.

Scientific Name:

Xyphinus hystrix Simon,
1893

Common Name:

Porcupine Goblin Spider

Order/Family:

Araneae: Oonopidae

National Status: Vulnerable (VU)

Habitat and Ecology: In leaf litter in primary forest.

Distribution: Peninsular Malaysia (Pahang - Pulau Tioman) and Singapore.

Threats: Loss of forest cover over the last century could have caused its present rarity. As it is limited to a single site, Bukit Timah Nature Reserve, stochastic events as well as long-term decline in forest quality are potential threats to a small population.

Photo: David J. Court



Scientific Interest and Potential Value: An oonopid with a "charismatic" spiny appearance (both male and female exhibit four carapacial spines).

Conservation Measures: The habitats like those in which this species have been found are largely protected as nature reserves. Continued protection of the nature reserves is required.

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Miscellaneous Arthropoda and Onychophora

HWANG WEI SONG

The second edition Red Data Book listed a total of 27 species (excluding the Odonata) under the chapter of "Springtails, Peripatus and insects (to moths): Arthropoda". Some taxa to which a few of the 27 species belong to have since had scientists embark on studies resulting in an increase in the breadth and depth of species that could be assessed for a category of threat status in this edition of the Red Data Book. The taxa that have benefitted from increased study and assessment are the Diptera (Flies), Coleoptera (Beetles), Hymenoptera: Vespidae (Wasps), Hymenoptera: Formicidae (Ants), Lepidoptera: Pyralidae & Gracilariidae (Moths), Orthoptera (Katydid & Crickets) and Isoptera (Termites). Thirteen of the twenty seven species are now listed under their respective taxa chapter in this book. Of the fourteen species remaining, the *Eoperipatus sumatranaus* is no longer considered an Arthropod, but is now classified in its own phylum, Onychophora. A detailed writeup has been provided for it here as well as a species (*Dysdercus decussatus*) that has since been upgraded from Endangered in the second edition to Least Concern.

Scientific Name:
Dysdercus decussatus

Common Name:
-

Order/Family:
Hemiptera/Pyrrhocoridae

National Status: Least Concern (LC)

Habitat and Ecology: This species is known to feed exclusively on the seeds of Sea hibiscus (*Hibiscus tiliaceus*) and Portia tree (*Thespesia populnea*). Both adults and immatures aggregate in large numbers when the trees produce fruits and seeds.

Distribution: This species is found throughout the Oriental Region, including Singapore, from Sri Lanka to Papua New Guinea, as well as the Solomon Islands, Ryukyu islands, Taiwan island and Northern Australia.

Threats: The close association of this species with their preferred host plants means that their fate is directly affected by the prevalence and availability of their host plants. Currently the Sea hibiscus is much more widespread than the Portia tree in Singapore, which has a more limited distribution locally. The associated colour morphs of the cotton stainer bugs are currently skewed in representation in accordance to the host plant abundance. Ensuring the survival of the host plants will indirectly provide the long-term survival of this species in Singapore.

Scientific Interest and Potential Value: This species was previously assessed in the second edition of this book under the name *Dysdercus simon* (Taeuber, 1927), with an Endangered status assigned due to its host plant specificity to the Portia tree found only in back mangrove areas. This was done despite the taxonomic synonymy of *Dysdercus simon* to *Dysdercus decussatus* by Freeman in 1946, who regarded both (and a few others) to be the same species with intermediate forms across its wide-spanning native range. Suspicion that *Dysdercus simon* may be a distinct species due to non-overlapping host plants, lack of intermediate forms present in Singapore, and observed morphological differences, the previous assessors made the decision to recognize *Dysdercus simon* as a distinct species to



Photo: Dennis Murphy (from 2nd edition Singapore Red Data Book)

be featured in the second edition. Since then, there has been no formal taxonomic act published to resurrect the *Dysdercus simon* as a valid species nor new evidence presented. Therefore, we consider this taxonomic issue as unresolved at the moment, and we follow the valid species name *Dysdercus decussatus* for the combined populations that feed on both host plants, with the recognition that two distinct colour morphs exist (black headed vs. red headed), with possibly non-overlapping host plant preferences. Since the combined populations of the two colour morphs occur over a more widespread area within Singapore, due to the ubiquity of the Sea hibiscus plant that supports the red-headed cotton stainer bug more abundant in numbers, the Least Concern conservation status is assigned to reflect this updated condition.

Conservation Measures: Due to the host-plant specificity of this species, its long-term survivability is highly dependent on the availability of its host plant species.

Scientific Name:
Eoperipatus sp.

Common Name:
Velvet worm

Order/Family:
Onychophora/Peripatidae

National Status: Endangered (EN)

Habitat and Ecology: This species is entirely restricted to primary and secondary rainforest, where it lives in the leaf litter and forest understorey. It is a nocturnal predator that captures other terrestrial arthropods by secreting a sticky substance to ensnare them. The females are known to give birth to live young. Its cryptic lifestyle and sparse population density makes it a difficult organism to study

Distribution: This species distribution is currently unknown due to its uncertain taxonomic status.

Threats: The species is only found in Bukit Timah, Central Catchment Nature Reserve and Pulau Ubin within Singapore. The species is restricted to forest habitats with suitable prey availability. This species is vulnerable from any perturbations to its environment.

Photo: Leong Tzi Ming
(from 2nd edition Singapore Red Data Book)



Being at a higher trophic level as a predator, their numbers are also relatively less abundant and more sensitive to disturbances.

Scientific Interest and Potential Value: Velvet worms represent a very ancient lineage of terrestrial arthropods, with the genus *Eoperipatus* only present in Southeast Asia, with relatively low diversity of four known species so far. The previous identity of the *Eoperipatus* as *Eoperipatus sumatrana* in Singapore is no longer a valid name and the true species identity of the local species remains to be determined.

Conservation Measures: Due to the specificity of this species to forested areas especially old growth, mature rainforests, its long-term survivability is highly dependent on the protection of these habitats.

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Arthropoda – Tanaidacean Crustaceans

CHIM CHEE KONG

Scientific Name:

Phoxokalliapseudes singaporenensis
Drumm & Heard, 2011

Common Name:

-

Order/Family:

Tanaidacea / Kalliapseudidae

National Status: Least Concern (LC)

Habitat and Ecology: This suspension feeder is one of the most common tanaids in shallow subtidal soft bottom habitats (12–54 m depths) along the Singapore Strait (pers. obs.). Sites of occurrence include southeast of Pulau Tekong, Eastern Bunkering, southwest of Bedok Jetty, east of Lazarus Island Beach and southwest of Jurong Island. The biology of this local species is unknown but other species of kalliapseudids were found to feed on diatoms and crustaceans in Florida, U.S.A. (Drumm, 2005) and were prey for many benthic fishes in Brazil (Contente et al., 2009a, 2009b, 2012).

Photo: Chim Chee Kong



Distribution: Only known from Singapore, including the unknown shallow subtidal type locality where it was first collected in 1905–1907 (Drumm & Heard, 2011).

Threats: Unknown but possibly marine trash.

Scientific Interest and Potential Value: N.A.

Conservation Measures: Unpublished long-term quantitative data (2009 to 2020) showed that this species is quite common in at least two localities along the Singapore Strait with no obvious decline in numbers. Main conservation measures should include enforcing laws against illegal dumping of trash into the sea.

Scientific Name:

Xenosinelobus balanocolus
Chim & Tong, 2019

Common Name:

-

Order/Family:

Tanaidacea/Tanaididae

National Status: Data Deficient (DD)

Habitat and Ecology: This small tanaid appears to be confined to the inside of the empty shells of the volcano barnacle *Tetraclita*, which traps rainwater to

Photo: Chim Chee Kong



create a hyposaline environment (Chim et al., 2016). Other members of the subfamily Sinelobinae were also found in habitats with freshwater influx such as rivers and mangroves (Chim & Tong, 2019).

Distribution: Only known from the intertidal rocky shores and seawalls at Lazarus and St. John's Islands, Singapore, where it was originally described based on material collected in 2014. Even though no systematic survey has been conducted since then, a recent ad hoc sampling of about 100 *Tetraclita* shells in 2022 failed to collect any tanaids.

Threats: Loss and degradation of rocky shores in Singapore.

Scientific Interest and Potential Value: N.A.

Conservation Measures: Protection of existing rocky shores.

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Arthropoda – Freshwater Decapod Crustaceans

YIXIONG CAI, DANIEL J.J. NG, LYDIA X. GAN, ELYSIA X.P. TOH, DARREN C.J. YEO

The conservation status of the freshwater decapod fauna of Singapore is updated here based on the results of comprehensive freshwater habitat surveys conducted in the past 15 years. Twenty-five species were appraised, including six shrimp species that were assessed as Nationally Extinct, viz., *Macrobrachium rosenbergii*, *M. scabriculum*, *M. neglectum*, *M. idae*, *Caridina sumatrensis*, and *C. bruneiana*, representing 24% of the total native freshwater decapod fauna. All six species are amphidromous, producing numerous, small eggs and having pelagic larval stages that undergo development in downstream tidally influenced estuaries and/or coastal areas to complete their life cycles. Conversion of earthen streams to concrete storm drains together with barraging of river mouths to create reservoir impoundments in the last five decades could be a key factor in their loss. Of the 19 extant freshwater decapod species, six are crabs and 13 are shrimps. Three species of primary freshwater crabs, *Johora singaporensis*, *Parathelphusa reticulata* and *Irmengardia johnsoni*, are endemic to Singapore, with the first two assessed as nationally Endangered, being restricted to very small areas, and the third as nationally Vulnerable, having a relatively larger range. Of the 13 extant species of shrimps, two (*Macrobrachium platycheles* and *Caridina gracilipes*) are nationally Critically Endangered, and seven (*Macrobrachium equidens*, *M. pilimanus*, *Caridina gracilirostris*, *C. peninsularis*, *C. temasek*, *C. malayensis*, and *Potamalpheops amnicus*) are nationally Endangered. Singapore is highly urbanised, and freshwater habitats that support native freshwater decapods are relatively rare, especially for those with tidal influence to support amphidromous species. Conservation and research efforts, however, have been key in ensuring the persistence and survival of freshwater decapods, for example, research focus on the rare and endemic Singapore freshwater crab *J. singaporensis* has contributed significantly to understanding and protection of equally rare hill stream habitats. Updates in this third edition of the Singapore Red Data Book provide impetus and reference for further environmental attention and public feedback for supporting and informing conservation management of aquatic biodiversity.

Scientific Name:
Johora singaporensis Ng 1986

Common Name:
Singapore freshwater crab

Order/Family:
Decapoda: Potamidae

National Status: Endangered (EN)

Habitat and Ecology: Relatively undisturbed forest hill streams, often found under rocks or leaf litter on the stream bed. Has semi-terrestrial habits and will go on land to scavenge for food opportunistically and is largely active nocturnally.

Distribution: Known only from Bukit Timah Nature Reserve, and small populations in hill streams around Bukit Gombak and Bukit Batok.

Threats: Loss or degradation of habitat, water acidification.

Scientific Interest and Potential Value: Endemic to Singapore, this species was initially assumed to be an allied species *J. johorensis*. Since its discovery in 1986, the species has grown to become an icon of conservation in Singapore; highlighting how the highly urbanized



city-state can still harbour unique biodiversity not found anywhere else, and the importance of conservation of our existing natural environment. The species' stenotopic habits, however, also equate to a highly restricted distribution locally; for example, extirpation of the species at one locality, Jungle Fall Valley, meant a significant loss of the already small population.

Conservation Measures: A dedicated conservation strategy was established for *J. singaporensis* in 2015, aiming to further biological knowledge and ensure the conservation of the species through coherent and complementary efforts among multiple stakeholders, such as long-term monitoring and research, in-situ conservation of hill streams, and ex-situ breeding programmes. Continued protection of Bukit Timah Nature Reserve and hill stream habitats are essential for the survival of this stenotopic and rare species.

Scientific Name:
Parathelphusa reticulata Ng 1990

Common Name:
Swamp forest crab

Order/Family:
Decapoda: Gecarcinucidae

National Status: Endangered (EN)

Habitat and Ecology: Largely aquatic in habit. Found in well-shaded freshwater swamp forest with shallow water of low pH (5.0–5.5). Digs burrows by the side of muddy banks. Very secretive and only active



nocturnally. Feeds largely on plant matter and leaf litter but will scavenge for animal matter opportunistically.

Distribution: Only known from Nee Soon Swamp Forest. The species is endemic to Singapore.

Threats: Loss or degradation of habitat

Scientific Interest and Potential Value: One of three freshwater crab species endemic to Singapore, the species was discovered relatively recently in 1990. Previously confused with the more common *Parathelphusa maculata*, closer examination of specimens revealed key morphological differences and a distinctive, reticulated colour pattern in *P. reticulata*.

Conservation Measures: Since its discovery in 1990, the species has been known mostly from a 55-hectare area within Nee Soon Swamp forest, but it has been reported in drains and streams near the edge of the swamp forest. As Nee Soon Swamp Forest is the last substantial patch of freshwater swamp forest in Singapore, and the only habitat suitable for the species, continued protection of the swamp forest and surrounding buffer areas is essential. In addition, an ex-situ breeding programme for the species has been established.

Scientific Name:
Geosesarma nemesis Ng 1986

Common Name:
Little land crab

Order/Family:
Decapoda: Sesarmidae

National Status: Endangered (EN)

Habitat and Ecology: Semi-terrestrial habits and digs shallow burrows under rocks and vegetation next to small freshwater streams in well-shaded forests. Primarily herbivorous but will scavenge for animal matter opportunistically.

Distribution: In Singapore, found mainly in Bukit Timah Nature Reserve and in several streams in Bukit Batok and Bukit Gombak. Also occurs in southern Peninsular Malaysia.

Threats: Forest clearance and water pollution. The species used to be common at Bukit Timah Hill but the only intact populations now live on the reserve, and surprisingly, in several small streams across Upper Bukit Timah Road in the Bukit Batok and Bukit Gombak. Most other peripheral populations have been exterminated by indiscriminate use of chemical pesticides used to exterminate mosquito larvae. Such pesticides, which are often indiscriminately sprayed even on flowing streams and clean waters with small fishes where mosquito larvae are absent, are very harmful to freshwater life, and can exterminate whole communities of stream invertebrates.

Photo: Daniel Ng



Scientific Interest and Potential Value: This species was first described from Bukit Timah Hill in Singapore in 1986 after having long been mistaken for another species, *G. ocypoda*, originally described from Sumatra. This highland species can be tricky to differentiate superficially from its lowland counterpart in Singapore, *G. perracae*.

Conservation Measures: Conservation of good primary and late secondary forests. Properly and carefully planned and thought-out use of insecticides and other anti-mosquito measures near freshwater habitats.

Scientific Name:
Caridina gracilirostris
De Man 1892

Common Name:
 Needlenose caridina

Order/Family:
 Decapoda: Atyidae

National Status: Endangered (EN)

Habitat and Ecology: Only found in lower reaches of rivers and streams with tidal influence. Diet includes small animals, organic detritus and plankton. Produces numerous, small eggs that undergo typically prolonged larval development.

Distribution: In Singapore, found in coastal, tidal-influenced streams such as streams at Sembawang and Sungai Simpang. Has a widespread distribution across Southeast Asia and the Indo-West Pacific, including Malaysia, Indonesia, Thailand, Cambodia, Taiwan, Japan, Palau, the Philippines, Fiji, India and Madagascar.



Threats: Loss or degradation of habitat, impoundment of estuarine areas.

Scientific Interest and Potential Value: This species is popular within the aquarium trade, favoured for its unique and elongated red rostrum. In 2007, a taxonomic revision of *C. gracilirostris* led to the recognition of a new species group.

Conservation Measures: *Caridina gracilirostris* is rare in Singapore, probably due to the widespread impoundment and degradation of estuarine areas, limiting its access to coastal waters for completion of its life cycle. Preservation and careful management of such areas that remain is essential to ensuring that the species can continue to thrive in Singapore's waters.

Scientific Name:
Macrobrachium pilimanus
(De Man 1879)

Common Name:
 Muff river prawn

Order/Family:
 Decapoda: Palaemonidae

National Status: Endangered (EN)

Habitat and Ecology: Occurs in fast-flowing, rocky hill streams. Omnivorous diet, but prefers animal matter and can actively prey on other aquatic organisms. Produces relatively few large eggs that undergoes abbreviated larval development.



Distribution: In Singapore, only found in two hill streams, in the Bukit Gombak and Bukit Batok area. Also occurs in similar habitats in Malaysia, Indonesia, Brunei and Thailand.

Threats: Loss or degradation of habitat. Currently restricted to two streams in Singapore, making the population highly vulnerable to stochastic events that could impact the hill streams.

Scientific Interest and Potential Value:

Macrobrachium pilimanus recorded from Singapore in 1961 proved to be a misidentification. Close examination of the specimen, collected in 1956 from unexpected freshwater swamp habitat of Nee Soon Swamp Forest (but within an unusually fast-flowing portion), revealed it to belong to an allied but hitherto

undescribed species, *M. platycheles*, which was described in 1995. Nevertheless, the real *M. pilimanus* was discovered eventually in 2013, in Bukit Gombak in an isolated hill stream, a habitat type that is typical for the species.

Conservation Measures: Pilot efforts include managed translocation of *M. pilimanus* to evaluate its suitability for a species-targeted conservation strategy. The species was formally included as part of the National Parks Board's Species Recovery Programme in 2021.

Scientific Name:

Potamalpheops amnicus
Yeo & Ng 1997

Common Name:

Riverine alheid shrimp

Order/Family:

Decapoda: Alpheidae

National Status: Endangered (EN)

Habitat and Ecology: Found in forest streams. Often found clinging to root mats, submerged vegetation and overhangs near stream banks. The eggs are relatively few and large with larvae undergoing abbreviated development.

Distribution: In Singapore, occurs in Central Catchment Nature Reserve. Also occurs in Peninsular Malaysia, and Pulau Bintan (Indonesia).

Threats: Loss or degradation of habitat.

Scientific Interest and Potential Value: The description in 1997 of *P. amnicus* represents the first



record in Singapore of a freshwater snapping shrimp, although this primitive species lacks the distinctive snapping claws of its more advanced marine counterparts. Previously recorded from a single stream in the Central Catchment Nature Reserve, the species have since been found in more localities around Singapore, albeit in low numbers. This could be due to its cryptic behaviour.

Conservation Measures: Continued protection of the Central Catchment Nature Reserve will be necessary for the long-term survival of the species. There is also a heritage significance since the species was described first from Singapore.

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Horseshoe Crabs and Marine Decapod Crustaceans

JOSE CHRISTOPHER E. MENDOZA, BEE YAN LEE, PETER K.L. NG, DARREN C.J. YEO

Scientific Name:

Tachypleus gigas
(Müller, 1785)

Common Name:

Coastal horseshoe crab

Order/Family:

Xiphosurida/Limulidae

National Status: Vulnerable (VU)

Habitat and Ecology: Typically encountered in sandy to muddy shores near reefs, seagrass beds, and mangroves, when they come up from deeper water to breed; in Singapore they are usually seen singly or in mating pairs (amplexus) on the edge of the shore. Relatively more dispersive (not localised) and adapted to open-sea conditions, compared to the other species of horseshoe crab found in Singapore (viz. Tang et al., 2021). They feed on bottom-dwelling invertebrates, also scavenge on organic debris. They produce large numbers of eggs in the spawning season, which can be a valuable food source for shore birds and other animals.

Distribution: Throughout Indo-West Pacific region.

Threats: Loss of suitable sandy/muddy shore habitats from coastal reclamation, development, and pollution; also, mortality from accidental entanglement in abandoned fishing gear (ghost fishing).

Scientific Interest and Potential Value: Horseshoe crabs represent an ancient lineage of arthropods with high phylogenetic uniqueness. Studies also suggest

Photo: CMBS



that they are essential elements of the coastal and benthic food webs. They are of biomedical importance as their blood (hemolymph) is harvested and used to detect bacterial contamination in drugs and other pharmaceutical products and equipment. Elsewhere in Asia, they are sometimes consumed as food (gravid females) or may be dry-preserved and sold as curios or decorative items.

Conservation Measures: This species was previously listed as Endangered (EN) in RDB2 (Yeo et al., 2008). While still uncommon to rare in Singapore, there have been increased sightings in recent years since 2008. Recent population genetics studies suggest that local populations are panmictic and that Singapore has high potential for recolonisation from adjacent populations. Main conservation measures should include habitat protection and restoration as well as monitoring of populations.

Scientific Name:
Carcinoscorpius rotundicauda
 (Latreille, 1802)

Common Name:
Mangrove horseshoe crab

Order/Family:
Xiphosurida/Limulidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found only in mudflats and mangroves, where it feeds on benthic invertebrates, such as molluscs and polychaete worms. Significant numbers of juveniles have been observed seasonally, and studies have shown that there are patterns of high and low periods in breeding activity despite the horseshoe crabs breeding year-round.

Distribution: Throughout Indo-West Pacific region.

Threats: Loss of suitable mangrove and muddy shore habitats from coastal reclamation, development, and pollution; also, mortality from accidental entanglement in abandoned fishing gear (ghost fishing).

Scientific Interest and Potential Value: Horseshoe crabs represent an ancient lineage of arthropods with high phylogenetic uniqueness. Studies also suggest that they are essential elements of the coastal and benthic food webs. They are of biomedical importance as their blood (hemolymph) is harvested and used to

Photo: CMBS



detect bacterial contamination in drugs and other pharmaceutical products and equipment. Elsewhere in Asia, they are sometimes consumed as food (gravid females) or may be dry-preserved and sold as curios or decorative items.

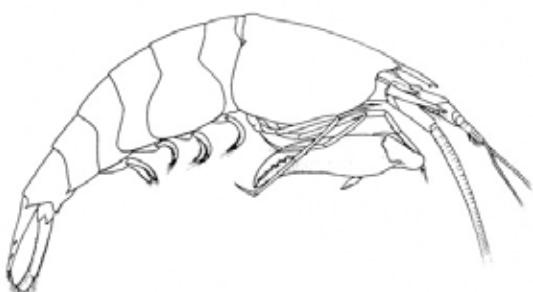
Conservation Measures: Although usually more commonly observed in Singapore than *Tachypleus gigas*, one study (Tang et al., 2021) has shown that local populations of *C. rotundicauda* are less dispersed in the region and have a lower genetic diversity, probably making them more vulnerable to extinction. Main conservation measures should include protection and restoration of mangrove and mudflat habitats, as well as monitoring of populations.

Scientific Name:
***Salmoneus singaporenensis* Anker, 2003**

Common Name:
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Order/Family:
Decapoda/Alpheidae

Line Drawing: From Anker (2003), RBZ



National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in mudflats, usually with soft and soggy mud, and possibly associated with burrows of other alpheid shrimps, such as *Alpheus rapacida* De Man, 1908; infaunal, occurring in the intertidal and also possibly subtidal.

Distribution: Presently known only from Singapore, and possibly also from Indonesia (Anker & De Grave, 2016).

Threats: Loss of suitable mudflat habitats, particularly soft and soggy mud substrates due to coastal reclamation and modification.

Scientific Interest and Potential Value: A rare and poorly known species, only known from the holotype

specimen, collected from intertidal mudflats of Tanjong Penjuru (now a reclaimed area in the Jurong district). It has not been found in Singapore since it was first collected in 1959, despite several surveys in similar localities. It was considered likely to be locally extinct by Anker & De Grave (2016) in their checklist of Singapore Caridea.

Conservation Measures: Protection and restoration of substantial mudflat areas, particularly those that can harbour burrowing or infaunal crustaceans and other animals, should be undertaken. Targeted surveys must also be undertaken to confirm the presence of this species in Singapore or elsewhere. Likewise, more research must be done to understand its biology, which would help guide conservation efforts.

Scientific Name:

Synalpheus stimpsoni
(De Man, 1888)

Common Name:

Crinoid snapping shrimp

Order/Family:

Decapoda/Alpheidae



National Status: Endangered (EN)

Habitat and Ecology: In coral reefs and similar rocky habitats with many crevices and attachments for crinoids; found always associated with crinoid feather stars, mainly of the family Comatulidae. Occurring in shallow subtidal depths to as deep as 155 m. The shrimp feeds on trapped food particles and mucus on the arms of its host. It avoids detection by predators through camouflage, matching the host's colouration; with an enlarged claw capable of producing powerful shockwaves for added protection.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable reef habitats for comatulid crinoids due to reclamation or habitat modification; also, sedimentation and declining water quality due to pollution.

Scientific Interest and Potential Value: The shrimp is an obligate symbiont of feather stars, and this pairing is of interest for research in evolution and behavioural biology. It may also likely be a species-complex, further taxonomic studies will be required to elucidate this matter. The presence of complex symbiotic relationships in reef ecosystems is usually an indicator of reef health, their absence usually indicating stress in these ecosystems.

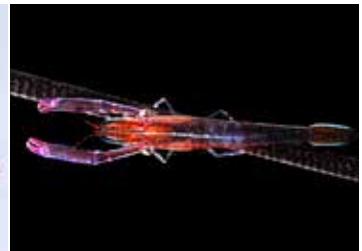
Conservation Measures: Conservation of these shrimps is dependent on the continued survival of its host feather star, which in turn depends on maintaining healthy reef habitats. Main conservation efforts should involve protection and restoration of coral reefs, and the maintenance of good water quality crucial for filter-feeding feather stars.

Scientific Name:
Cristimenes cristimanus
(Bruce, 1965)

Common Name:
Black urchin shrimp

Order/Family:
Decapoda/Palaemonidae

Photo: CMBS/A. Anker



National Status: Vulnerable (VU)

Habitat and Ecology: Occurs in coral reefs as an obligate symbiont of diadematid sea urchins, particularly *Diadema setosum* (Leske, 1778), and also, sometimes, *Echinothrix calamaris* (Pallas, 1774). It is usually observed clinging to the sea urchin's spines, and its colouration tends to match and blend in with these spines making it hard to detect. The biology of this shrimp is poorly known.

Distribution: Western Pacific region.

Threats: Loss of suitable reef habitats for the host sea urchins due to habitat destruction or modification; also sedimentation and deteriorating water quality due to pollution.

Scientific Interest and Potential Value: The shrimp is an obligate symbiont of diadematid sea urchins, which makes it an interesting subject for evolutionary and behavioural studies. The presence of complex symbiotic relationships in reef ecosystems is usually an indicator of reef health, their absence usually indicating stress in these ecosystems.

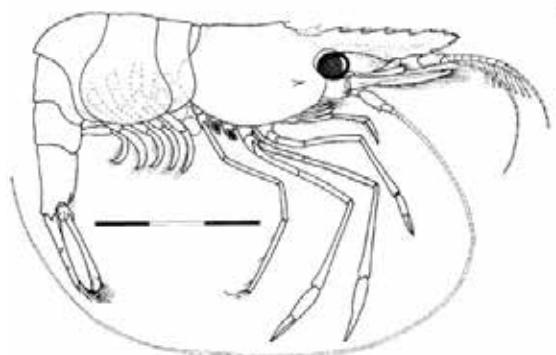
Conservation Measures: Conservation of these shrimps is dependent on the continued survival of its host sea urchins, which in turn depends on maintaining healthy reef habitats. Main conservation efforts should involve protection and restoration of coral reefs, and the maintenance of good water quality.

Scientific Name:
Cuapetes johnsoni (Bruce, 1987)

Common Name:
Seagrass shrimp

Order/Family:
Decapoda/Palaemonidae

Line Drawing: From Bruce [1987],
Indo-Malayan Zoology



National Status: Critically Endangered (CR)

Habitat and Ecology: Found in mangrove channels and seagrass beds. Very little else is known about this species.

Distribution: Singapore only

Threats: Loss of suitable habitat, such as mangrove channels and seagrass (*Enhalus*) beds, due to coastal reclamation and development.

Scientific Interest and Potential Value: Reportedly abundant in the 1960's in Jurong and in Jurong Strait, but these sites have been extensively modified via reclamation or construction of the Tuas Link since then. This species is now rare and poorly known as it has not been seen nor collected from the wild since 1966; this despite intensive collection efforts in or near the type locality and similar habitats around Singapore by the CMBS (2010–2015). It was considered likely to be locally extinct by Anker & De Grave (2016) in their checklist of Singapore Caridea.

Conservation Measures: Protection and restoration of mangroves, especially in a manner that promotes formation of channels; and seagrass beds, especially containing *Enhalus* species. This species may also likely occur in similar habitats in adjacent areas outside of Singapore. Restoration of such habitats may encourage re-colonisation.

Scientific Name:
Thalassina anomala (Herbst, 1804) *sensu lato*

Common Name:
Mud lobster

Order/Family:
Decapoda/Thalassinidae

National Status: Endangered (EN)

Habitat and Ecology: Found in mangroves where it builds large mounds. Adults highly tolerant of the anoxic/hypoxic conditions in the mud; extensive and deep burrowers, extracting organic matter from ingested mud. Burrowing activity and mound building brings organic matter to the surface contributing to nutrient cycling, and mounds also provide habitats for other mangrove species.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable mangrove habitats from coastal reclamation, development, and pollution.

Scientific Interest and Potential Value: *Thalassina anomala* is a mangrove keystone species due to its important ecological roles. The genus *Thalassina* was revised by Ngoc-Ho & de Saint Laurent (2009), and five species were recorded from Singapore, i.e., *Thalassina anomala* (Herbst, 1804), *T. gracilis* Dana, 1852, *T. krempfi* Ngoc-Ho & de Saint Laurent, 2009, *T. spinirostris* Ngoc-Ho & de Saint Laurent, 2009 and *T. squamifera* De Man, 1915. A sixth species *T. kelanang* Moh & Chong, 2009, has also been reported. Many of



these species are not well studied and, with the possible exception of *T. gracilis*, may have been confused with *T. anomala* in museum and historical records.

Conservation Measures: The survival of the mud lobsters is important for a healthy mangrove, as many other mangrove species are closely associated with and dependent on them. Main conservation methods should include protection and restoration of mangrove habitats.

Scientific Name:
Porcellanella triloba
White, 1851

Common Name:
Painted porcelain crab

Order/Family:
Decapoda/Porcellanidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found in lower intertidal to subtidal depths in open estuaries, on sandy to muddy substrates. This porcelain crab is always found associated with pennatulid sea pens such as *Pteroeides* Herklots, 1858. One sea pen can harbour one to several individuals at once, with the porcelain crabs nestled among the wide branches, probably feeding on trapped food particles and mucus. Not much else is known about the biology of this species.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable deep intertidal to sublittoral sandy-muddy habitats suitable for the host sea pens; also deteriorating water quality due to sedimentation and pollution.

Photo: A. Anker



Scientific Interest and Potential Value: This species has also been referred to in the scientific literature as *Porcellanella picta* Stimpson, 1858 (junior synonym). The biology of this species is poorly known and needs more detailed study. As an obligate symbiont of sea pens, it would make an interesting subject for evolutionary, behavioural, and ecological studies.

Conservation Measures: Protection and restoration of sandy-muddy sublittoral habitats suitable for the cnidarian hosts will be necessary for the survival of this uncommon porcelain crab. Also important would be the maintenance of good water quality necessary for the survival of the filter-feeding hosts.

Scientific Name:
***Pseudoporcellanella manoliensis* Sankarankutty, 1961**

Common Name:
False porcelain crab

Order/Family:
Decapoda/Porcellanidae

Photo: Yeo et al. (2008) RDB2



National Status: Endangered (EN)

Habitat and Ecology: Found in lower intertidal to subtidal waters of open estuaries, on soft muddy substrates. The first record from Singapore (Johnson, 1967) indicated that it was an obligate symbiont of the virgulid sea pen, *Scytilium* sp., although it has subsequently been observed on soft corals and sea whips. Little else is known about the biology of this species.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable deep intertidal to subtidal habitats harbouring the cnidarian hosts of this porcellanid crab due to coastal reclamation and development, and also, degradation of water quality due to pollution.

Scientific Interest and Potential Value: This is a rare species of porcelain crab and very little is known of its biology, and this warrants further study of thriving populations in Singapore. As an obligate symbiont of certain octocorallian cnidarians such as sea whips, it will be an interesting subject for evolutionary, behavioral, and ecological studies.

Scientific Name:
Coenobita lila Rahayu,
Shih & Ng, 2016

Common Name:
Land hermit crab

Order/Family:
Decapoda/Coenobitidae

National Status: Near Threatened (NT)

Habitat and Ecology: This hermit crab can be found mostly on the upper intertidal zone of sandy beaches and rocky shores, extending up to 100 m inland, where it forages for food consisting of plant and animal matter. It sometimes forms large groups in supralittoral grassy patches or under rocks during the day. It is typically found near reef habitats but may also occur at the edge of mangroves and estuaries. Unlike its aquatic relatives,



Photo: Johnson (1967) J. Zool.

Conservation Measures: Previously listed as Vulnerable (VU) in RDB2 (Yeo et al., 2008), it is uplisted here to Endangered (EN) due to its rarity in museum collections. Protection and restoration of muddy benthic habitats suitable for the cnidarian hosts will be necessary for the survival of this rare porcelain crab. Also important would be the maintenance of good water quality necessary for the survival of the filter-feeding hosts.



Photo: CMBS

it is well suited for terrestrial life, foremost among its adaptations being its modified gill chambers that allow it to breathe air.

Distribution: Singapore, Malaysia, and Indonesia.

Threats: Loss of suitable supralittoral habitats due to reclamation and coastal development and deforestation. Also, excessive beach clean-ups for aesthetic purposes may deprive this hermit crab of organic debris which it can use as food or shelter. Land hermit crabs have become popular as pets, and this species may be targeted for the pet trade as well.

Scientific Interest and Potential Value: This species was recently described by Rahayu et al. (2016) from Singapore and adjacent areas in Malaysia and Indonesia, and distinguished from the similar *C. cavipes* Stimpson, 1858 and *C. violascens* Heller, 1862 using morphological and DNA characters. They also clarified that *C. lila* is the only species of land hermit crab known from Singapore currently, so previous records of other *Coenobita* spp. Should be referred to this species. The biology of this hermit crab is not well known.



Photo: CMBS

Conservation Measures: Protection of suitable stretches of coastal habitat (beaches and rocky shores) and keeping them in a natural state. Practice selective beach clean-ups targeting plastics and other anthropogenic debris only.

Scientific Name:
Elamena globosa
Chuang & Ng, 1991

Common Name:
False spider crab

Order/Family:
Decapoda/Hymenosomatidae

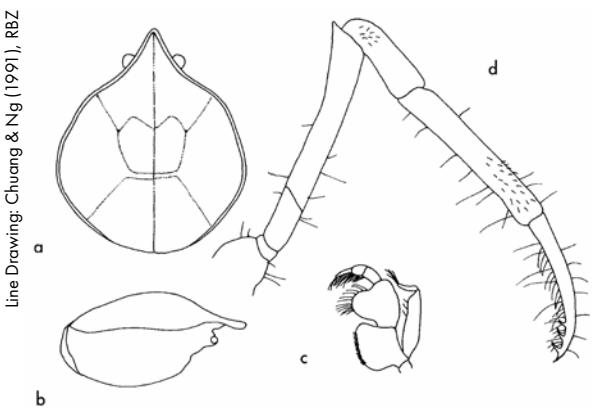
National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in gravelly to sandy habitats in shallow subtidal depths, on or near reefs.

Distribution: Singapore only.

Threats: Loss of suitable subtidal habitats due to coastal reclamation, development, and pollution.

Scientific Interest and Potential Value: *Elamena globosa* was described in 1991 based on one male specimen, which was collected from southern Singapore in 1986. It has not been recorded since. Little else is known about this species.



Conservation Measures: This species was previously listed as Vulnerable (VU) in RDB2 (Yeo et al., 2008). It is, however, quite rare and currently known only from Singapore. The type locality, Pulau Ayer Chawan, has undergone extensive reclamation works and has been incorporated into the larger Jurong Island. The crab may still occur in other similar habitats in Singapore and adjacent areas. Conservation measures should include protection and restoration of suitable subtidal habitats.

Scientific Name:
Neorhynchoplax venusta
Ng, 2015

Common Name:
False spider crab

Order/Family:
Decapoda/Hymenosomatidae

National Status: Endangered (EN)

Habitat and Ecology: This species occurs in the intertidal zone, in seagrass beds with sandy-muddy substrate and some stones, inside burrows. Two other hymenosomatid crab species found in similar habitat types are, *Crustaenia palawanensis* (Serène, 1971) and *Halicarcinus coralicola* (Rathbun, 1909). *Neorhynchoplax venusta* is morphologically closely related to *N. mangalis* (Ng, 1988), but the latter is only known from mangroves.

Distribution: Singapore only.

Threats: Loss of suitable habitats (intertidal seagrass



beds) from coastal reclamation, development, and pollution.

Scientific Interest and Potential Value: This species was described in 2015 based on one female specimen, collected from Pulau Sekudu, off Pulau Ubin, northern Singapore. Little else is known of this species.

Conservation Measures: This species has not been previously evaluated. Although known from only one female specimen, its cryptic infaunal habits suggest that it is just under-collected. Main conservation measures should include protection and restoration of suitable seagrass habitats.

Scientific Name:
***Favus granulatus* Lanchester, 1900**

Common Name:
Rubble crab/Singapore rubble crab

Order/Family:
Decapoda/Leucosiidae

National Status: Endangered (EN)

Habitat and Ecology: Found in intertidal and sublittoral coral rubble and gravel; its appearance mimics the abundant coral rubble in its habitat, serving as protective camouflage.

Distribution: Singapore only.



Threats: Loss of intertidal coral reefs and rubble zones and associated sublittoral habitats due to coastal development, sedimentation, and pollution.

Scientific Interest and Potential Value: This species was discovered in 1900 and described as a new genus and new species, and it is, thus far, only known from Singapore. As such, it has high heritage value. This species is a coral rubble mimic, where its morphology resembles pieces of dead and eroded coral, similar to two other leucosiids species that had been previously reported from Singapore, *Alox somphos* Tan & Ng,

1995, and *Nursia toiae* Ng & Komatsu, 2016. Both species face similar conservation problems as *Favus granulatus*.

Conservation Measures: Protection and restoration of sufficient tracts of coral reef and associated rubble zones.

Scientific Name:
Paranursia abbreviata (Bell, 1855)

Common Name:
Pebble crab

Order/Family:
Decapoda/Leucosiidae

National Status: Near Threatened (NT)

Habitat and Ecology: Found in mangrove habitats, typically buried in mud.

Distribution: Indo-West Pacific region.

Threats: Loss of mangrove habitats from coastal reclamation, development, and pollution.

Scientific Interest and Potential Value: *Paranursia abbreviata* was recorded for the first time in Singapore only in 2014, despite intensive collecting efforts in

Photo: BY Lee



mangroves since the late 1980s. This suggests that collecting methods must include techniques that target species with cryptic behaviours and unusual microhabitats. Little else is known about this species.

Conservation Measures: Previously listed as Not Evaluated (NE) in RDB2 (Yeo et al., 2008). Main conservation measures should include protection and restoration of mangroves and adjacent mudflats.

Scientific Name:
Daldorfia horrida (Linnaeus, 1758)

Common Name:
Horrid elbow crab

Order/Family:
Decapoda/Parthenopidae

Photo: CMBS/R. Ong



National Status: Critically Endangered (CR)

Habitat and Ecology: This species occurs subtidally in reefs, among large rocks and boulders, where there is an abundance of hard substrate and crevices in which to hide; it will also venture out onto the sandy or silty seabed in search for food. The morphology of its large asymmetric chelipeds suggests a diet of gastropod molluscs. It has a cryptic form and colouration, helping it blend better into its rocky environment. Reports indicate that it may be mildly toxic probably as a result of its diet.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable reef habitat due to reclamation and coastal development.

Scientific Interest and Potential Value: This species was first reported from Singapore in 1912, and would not be recorded in the following century, so much so that it was listed as Presumed Nationally Extinct (NEx) in the RDB2 (Yeo et al., 2008). The subsequent rediscovery of a large, mature female from Kusu Island in 2013 confirms its survival in Singapore, although it is quite rare. The presence of such large crabs indicates that local reef habitats are healthy enough to support them.

Conservation Measures: Protection and restoration of large areas of suitable reef habitat, especially those with a mixture of large rocks and sandy-silty substrate.

Scientific Name:
Harrovia longipes Lanchester, 1900

Common Name:
Feather star crab

Order/Family:
Decapoda/Pilumnidae

National Status: Vulnerable (VU)

Habitat and Ecology: This crab is found in coral reefs and is an obligate symbiont of crinoid feather stars, and in Singapore particularly on comatulids such as *Phanogenia gracilis* (Hartlaub, 1890) and *Comaster multifidus* (Müller, 1841). The crab is typically found on the oral disc of these filter-feeding echinoderms, where it probably feeds on trapped food particles and mucus. Sometimes, a breeding pair may be found on one feather star. Little else is known about the biology of this crab.

Distribution: Southeast Asia, Australia, New Caledonia, and Papua New Guinea.

Threats: Loss of suitable reef habitat for the host feather stars, due to coastal development, sedimentation, and pollution.

Photo: CMBS/R. Ong



Scientific Interest and Potential Value: *Harrovia longipes* was first discovered and described from Singapore in 1900. Its biology is still poorly known, and its being in a symbiotic relationship with comatulid feather stars (as with the shrimp, *Synalpheus stimpsoni*) makes it an interesting subject for evolutionary, behavioural, and ecological studies.

Conservation Measures: This species was previously listed as Critically Endangered (CR) in RDB2 (Yeo et al., 2008). Recent surveys and museum holdings, however, show that they are more abundant than previously thought, although still quite uncommon. Nonetheless, effort must be put in ensuring the long-term viability of coral reef habitats and the quality of the surrounding waters that will be capable of supporting healthy populations of the host feather stars.

Scientific Name:
Lupocyclus rotundatus Adams
& White, 1849

Common Name:
Swimming crab

Order/Family:
Decapoda/Portunidae

National Status: Endangered (EN)

Habitat and Ecology: Subtidal, more saline waters, on sand or rubble substrate with some mud. Active swimmer and predator of invertebrates and small fishes. May sometimes be seen associated with sea anemones. Little else is known about the biology of this crab.

Distribution: Indo-West Pacific region.

Threats: Loss of suitable sublittoral habitats with sandy to silty substrate due to coastal development and sedimentation.

Scientific Interest and Potential Value: The biology of this swimming crab is poorly known and warrants further study. The genus is in need of a taxonomic revision, and more species may be recognised.

Conservation Measures: This species was listed as Presumed Nationally Extinct (NEx) in RDB2 (Yeo et al., 2008). Recent surveys (CMBS), however, have found

Photo: CMBS



a few specimens in the southern islands of Singapore, although this species is still considered rare. Conservation measures should include the protection and restoration of sublittoral habitats in southern Singapore with sandy to muddy substrate.

Scientific Name:
Palapedia valentini Ng, 1993

Common Name:
Rock crab

Order/Family:
Decapoda/Xanthidae

Photo: JCE Mendoza



National Status: Endangered (EN)

Habitat and Ecology: Intertidal to subtidal, on coral reef habitats with rubble, rocks and sand. Often found underneath large rocks. They have been observed to rapidly burrow backwards at an angle into the sand using the upcurved tips of their legs to push the sand forward and over the narrow carapace. Very little is known about the biology of this crab.

Distribution: Singapore only.

Threats: Loss of suitable coral reef habitats, with coral rubble and sand, due to coastal development, sedimentation, and pollution.

Scientific Interest and Potential Value: *Palapedia valentini* was first described from Singapore in 1993 and is also the type species of its genus. It is rare in Singapore and has not yet been reported elsewhere. It has only been found in three southern localities so far. Its cryptic habits may be partly responsible for its rarity.

Conservation Measures: This species was listed as Vulnerable (VU) in RDB2 (Yeo et al., 2008). It was first collected in 1933 and last seen in the wild in 1992, since then it has not been observed even during intensive surveys. Conservation measures should include protection and restoration of coral reef habitats and their rubble zones.

Scientific Name:

Tuerkayana hirtipes (Dana, 1852)

Common Name:

Hairy-legged land crab

Order/Family:

Decapoda/Gecarcinidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Terrestrial crab, frequenting forested coastal areas with limestone karst formations. It digs burrows for shelter in the soft ground around or between the harder limestone outcrops, and forages for food usually at night. It is herbivorous, feeding on fallen leaves and other plant matter. Its gill chambers have been modified for air-breathing. Females return to sea to spawn.

Distribution: Western Pacific region

Threats: Habitat loss due to coastal development.

Photo: HH Tan



Scientific Interest and Potential Value: This species of land crab was first recorded in Singapore in 1938 (from Paya Lebar), and again only recently (from St. John's Island), there have been no other records. Ng & Ng (2021) opine that the presence of scattered limestone areas on the coast of St. John's Island may enable this species to become established there and in nearby similar areas.

Conservation Measures: This land crab is quite rare in Singapore, with only two specimens recorded since 1938. The absence of extensive karst areas in Singapore may explain their rarity. Nevertheless, conservation measures should include protection of coastal limestone areas that can serve as suitable habitat for these crabs.

Scientific Name:
Sesarmoides borneensis
(Tweedie, 1950)

Common Name:
-

Order/Family:
Decapoda/Sesarmidae

National Status: Endangered (EN)

Habitat and Ecology: Usually found in mangroves and estuaries. This crab's long legs are adapted to climbing and scampering over tree trunks and branches. Not much else is known about the biology of this crab.

Distribution: Southeast Asia and northern Australia.

Threats: Habitat loss from destruction and deforestation of mangroves.

Photo: CMBS



Scientific Interest and Potential Value: This crab was first described in 1950 using specimens from Labuan and Singapore. As the biology of this crab is still not well understood, it will be a good subject for various studies, particularly those concerning mangrove-dependent species.

Conservation Measures: This species is rare in Singapore, having been recorded in only two localities thus far. Conservation measures should involve protection and restoration of mangroves, to provide suitable habitats for this crab.

The contributors for the Horseshoe Crabs and Marine Decapod Crustaceans chapter wish to thank the following for their assistance: Martyn E.Y. Low, Muhammad Dzaki bin Safaruan & Tashfia Raquib.

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Arthropoda – Marine Insects

MARC CHANG JIA JIN, LANNA CHENG, TRAN ANH DUC, HWANG WEI SONG

Scientific Name:

Pontomyia pacifica Tokunaga,
1932

Common Name:

Marine midge

Order/Family:

Diptera: Chironomidae

National Status: Least Concern (LC)

Habitat and Ecology: This suspension feeder is one of the most common tanaids in shallow subtidal soft bottom habitats (12–54 m depths) along the Singapore Strait (pers. obs.). Sites of occurrence include southeast of Pulau Tekong, Eastern Bunkering, southwest of Bedok Jetty, east of Lazarus Island Beach and southwest of Jurong Island. The biology of this local species is unknown but other species of kalliapseudids were found to feed on diatoms and crustaceans in Florida, U.S.A. (Drumm, 2005) and were prey for many benthic fishes in Brazil (Contente et al., 2009a, 2009b, 2012).

Distribution: Only known from Singapore, including the unknown shallow subtidal type locality where it was first collected in 1905–1907 (Drumm & Heard, 2011).

Threats: Unknown but possibly marine trash.

Scientific Interest and Potential Value: N.A.

Photo: Danwei Huang



Conservation Measures: Unpublished long-term quantitative data (2009 to 2020) showed that this species is quite common in at least two localities along the Singapore Strait with no obvious decline in numbers. Main conservation measures should include enforcing laws against illegal dumping of trash into the sea.

Scientific Name:
Hermatobates singaporenensis
 Cheng, 1976

Common Name:
 Coral treader

Order/Family:
 Hemiptera: Hermatobatidae

National Status: Endangered (EN)

Habitat and Ecology: These wingless insects live in air-filled crevices in boulders or rocks around coral reefs or stony seawalls. They emerge to feed during low tides and return to hide in the crevices as the tide rises. If trapped and unable to return to their crevices, they can survive at the sea surface. They are rarely sighted. The adults measure about 4 mm in body length with short legs but are fast moving.

Distribution: Described originally from the Siglap Coast of Singapore, this species was recently caught from St. John's Island and also from Malaysia.

Photo: Lanna Cheng
 (Cheng et al., 2001, fig. 97)



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Threats: Coastal reclamation of the Siglap Coast has led to loss of their original habitat. Water pollution might threaten its last remaining known habitat.

Scientific Interest and Potential Value: The family Hermatobatidae is the oldest living lineage of marine insects and are thus one of the first insect groups to have evolved adaptations to live in coastal waters.

Conservation Measures: Continued habitat protection of St. John's Island as part of the Sisters' Islands Marine Park. As the last known collection was made in 2010, it is timely to determine if the species is still present at the locality and to update the population status of this species.

Scientific Name:
Halobates hayanus White,
 1883

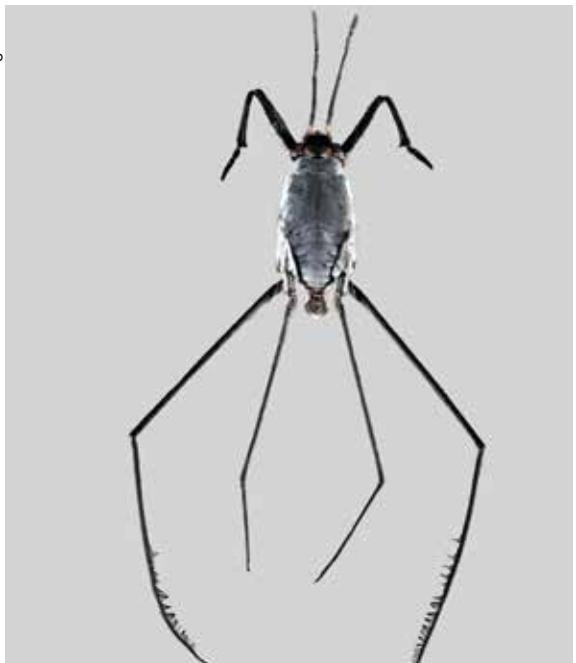
Common Name:
 Sea skater

Order/Family:
 Hemiptera: Gerridae

National Status: Least Concern (LC)

Habitat and Ecology: The species occurs in coastal habitats including coral reef flats with marine algae, seagrass meadows, or overhanging mangroves. Adults measure ~5 mm in length, with long legs. They are carnivorous and known to prey on their own young.

Photo: Marc Chang Jia Jin



Distribution: This species is found at Berlayer Creek, Changi Beach, Chek Jawa Wetlands, Pulau Semakau and Pulau Subar Laut. It has a transoceanic distribution stretching from the Red Sea, across the Indian Ocean to Southeast Asia and all the way to Australia and Papua New Guinea in the Pacific Ocean.

Threats: Potential land reclamation at Changi and Pulau Ubin poses great threats that will reduce their habitable area in Singapore.

Scientific Interest and Potential Value: This species belongs to the only insect genus with five species that has conquered and survived completely on the open

ocean surface, thousands of kilometres away from land. There is great scientific interest in how they evolved to adapt to life on the sea surface (water-proofing, heat and ultraviolet resistance), and how these might be applied to benefit society.

Conservation Measures: Continued habitat protection of Pulau Subar Laut as part of Sisters' Islands Marine Park will ensure this species' persistence. Efforts are needed however, to preserve the Changi and Pulau Ubin habitats, as genetic data suggests that the insects found there could be of a different species, and they have insofar been only recorded at those two sites.

Scientific Name:
Xenobates singaporenensis
Andersen, 2000

Common Name:
Mangrove bug

Order/Family:
Hemiptera: Veliidae

National Status: Least Concern (LC)

Habitat and Ecology: Mangrove tidal streams and pools, often in concert with other marine skaters. They are some of the smallest marine bugs, with adults measuring ~1.5 mm in length. They may be seen at low tide but are easily overlooked due to their small size. Very little is known about their ecology.

Distribution: This species has been found at Mandai mangrove, Pulau Ubin and Sungei Buloh Wetland Reserve in Singapore. It has been recorded recently in Thailand.

Threats: Mangrove degradation and habitat loss from potential land reclamation works in the Pulau Ubin area.

Scientific Interest and Potential Value: Amongst the numerous insect families that have evolved to living on the sea surface, *Xenobates* remains one of the more poorly studied groups. This is likely due to their small

Photo: Tran Anh Duc



size (~1 mm) and cryptic nature making them easy to miss if one was not out consciously searching for them.

Conservation Measures: Continued protection and expansion of the Mandai Mangrove and Sungei Buloh Wetland Reserve will ensure persistence of the insect's habitat. Sustained effort into protecting the mangroves from habitat degradation will also be helpful.

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Echinodermata – Sea Stars, Feather Stars, Brittle Stars, Sea Cucumbers and Sea Urchins

IFFAH IESA, DAVID J.W. LANE, HELEN P.-S. WONG, TERESA STEPHANIE TAY

Scientific Name:

Iconaster longimanus (Möbius, 1859)

Common Name:

Icon star

Order/Family:

Asteroidea: Goniasteridae

National Status: Vulnerable (VU)

Habitat and Ecology: Found on lower reef slopes and coral rubble/sediment of the adjacent seabed, usually deeper than 30m in clear ocean waters but in the more turbid waters of Singapore and the nearby Riau Archipelago at depths of 5–20+ m. Feeds on epilithic growth. Some individuals are infested with the gastropod parasite *Thyca*, as illustrated here.

Distribution: A tropical, central Indo-Pacific sea star commonly found sub-tidally on and around many reefs fringing the Southern Islands, as well as the adjacent islands of the Riau Archipelago. In Singapore it is considered vulnerable for reasons given below.

Threats: Living on and near the slopes of fringing reefs, it is directly threatened by reclamation activities and by enhanced sedimentation that reclamation causes. Additionally, this species is listed on marine aquaria

Photo: David J.W. Lane



websites and its attractive appearance may lead to over-collection as live aquarium specimens or as dried curios.

Scientific Interest and Potential Value: The female produces large eggs which show abbreviated development, omitting the planktonic bipinnaria stage. Eggs possess some kind of chemical defence against predation. As a locally abundant and long-lived sea star this species is an important ecological component of the marine benthic community in Singapore waters.

Conservation Measures: Incorporation of prime Southern Islands *Iconaster* sites into a Marine Protected Area network. Minimising siltation through best dredging practices. Eco-education for SCUBA divers as even casual collection of this attractive, long-lived species – as curios – could result in significant population losses.

Scientific Name:
***Fromia monilis* (Perrier, 1869)**

Common Name:
Peppermint seastar

Order/Family:
Asteroidea: Goniasteridae

National Status: Endangered (EN)

Habitat and Ecology: A species discovered in Singapore waters in 1992 on offshore reef slope rocky substrata.

Distribution: A species typical of open ocean Indo-West Pacific coral reefs. Found locally only on offshore reefs such as Sultan Shoal.

Threats: One local reef site (Sultan Shoal) has been impacted by nearby port reclamation activity. Other offshore reefs where this species occurs have restricted access, but low numbers put it at risk of local extinction. Consequently, its status is revised from Vulnerable to Endangered.



Scientific Interest and Potential Value: Recently transferred to the Goniasteridae, this species is typical of oceanic reef systems in the Indo-West Pacific and locally it is restricted to offshore reefs with better water quality.

Conservation Measures: Restricted access at some sites affords a measure of protection but conservation objectives would be enhanced by inclusion of offshore Southern Islands sites within Singapore's Marine Protected Area network.

Scientific Name:
***Protoreaster nodosus* (Linnaeus, 1758)**

Common Name:
Giant knobbly seastar

Order/Family:
Asteroidea: Oreasteridae

National Status: Endangered (EN)

Habitat and Ecology: This massive, variably-coloured sea star typically occurs on intertidal shores and seagrass habitats around Singapore. An extra-oral feeder, but little is known of its biology.



Distribution: On reef flat sea-grass beds and other intertidal areas in the Southern Islands and the Johore Straits. In recent years (2000-2020) naturalists have reported it on post-reclamation shorelines, e.g. East Coast Park. Juveniles are regularly seen in sea-grass habitats, notably on Cyrene Reef adjacent to the Pasir Panjang container terminal.

Threats: Extirpation due to reclamation of coastal shorelines and patch reefs remains a threat to the viability of populations. Illegal collection of these conspicuous, attractive sea stars for aquaria or as curio—a trade which occurs at scale in some other countries—is a potential threat locally.

Scientific Interest and Potential Value: Little is known of its biology but large size and a potential long-

life span indicates that this species may be an important part of the reef ecosystem and a useful bioindicator species for monitoring reef health.

Conservation Measures: Persistence in Singapore is unlikely unless its refuge habitats are protected (e.g. as MPAs) and remain free from degradation, inappropriate development or curio collection.

Scientific Name:

Pentaceraster mammillatus
(Audouin, 1826)

Common Name:

Mammillated pentaceraster

Order/Family:

Asteroidea: Oreasteridae

National Status: Endangered (EN)

Habitat and Ecology: A recent addition (2008) to the Singapore fauna this massive, spectacular sea star occurs on sea-grass beds and feeds by evertting its stomach over epibenthic biota, micro-organisms and surface organic matter.

Distribution: An Indian Ocean species now known in Singapore waters on sandy sea-grass beds, principally on Cyrene Reef, a large patch reef close to the Pasir Panjang container terminal within the Port of Singapore. Small individuals of this species have also been found there in recent years.

Threats: Rare in Singapore and at severe risk of local extirpation in the event of further land reclamation and expansion of the Port of Singapore. Potentially at risk from collection as a curio.

Photo: David J.W. Lane



Scientific Interest and Potential Value: This large sea star appears to be a recent recruit to the Singapore marine fauna, having never been recorded historically even during intensive Echinoderm surveys in the 1990s, and testifies to the present quality of the marine environment close to port infrastructure.

Conservation Measures: Inclusion of patch reef/sea-grass habitats of this sea star within the Marine Protected Area network of Singapore. Protection from casual or trade curio collectors.

Scientific Name:
Anthenea aspera Döderlein, 1915

Common Name:
 Cake star

Order/Family:
 Asteroidea: Oreasteridae

National Status: Vulnerable (VU)

Habitat and Ecology: Little is known of its biology or ecology but small individuals tend to be found on seagrass beds which may serve as an important recruiting ground and nursery for this species.

Distribution: First found by dredging off Pulau Ubin and the Southern Islands in the 1990s, this large sea star has subsequently been found intertidally on coral rubble or seagrass meadows around Singapore but it is never abundant.

Threats: Potentially threatened by land reclamation of intertidal areas.



Photo: David J.W. Lane

Scientific Interest and Potential Value: A massive but rare species known only from North Australia, southern Japan, China, Indonesia and Singapore. In Singapore individuals are very varied in colour and patterning.

Conservation Measures: Temporary protection of the designated Chek Jawa wetlands area at the eastern end of Pulau Ubin may need to be established more permanently for conservation of this sea star to be effective.

Scientific Name:
Cryptasterina pentagona (Müller & Troschel, 1840)

Common Name:
 Cryptic seastar

Order/Family:
 Asteroidea: Asterinidae

National Status: Vulnerable (VU)

Habitat and Ecology: These small, blunt-armed, almost pentagonal sea stars live limpet-like on the underside of undisturbed rocks and stones on the upper to mid-shore level. Reported to feed on epilithic growth and biofilms.

Distribution: West Pacific. First identified in Singapore in the 1990s. Found in small numbers under rocks and



Photo: David J.W. Lane

stones intertidally on natural shores of the Southern Islands and recently at a remnant mainland site (Berlayer Creek) on southern Singapore. Whether or not this species has managed to colonise the hidden sides of (immovable) boulders that form extensive rock bund sea defenses around much of Singapore remains undetermined.

Threats: The few remaining habitats of mid to upper intertidal, natural rocky/ stony shores are potentially under threat from reclamation, coastal development and/ or human disturbance.

Scientific Interest and Potential Value: Unlike many egg-brooding asterinids in this kind of habitat, this species is a broadcast spawner with larvae developing in the plankton.

Scientific Name:
Echinaster callosus Marenzeller,
 1895

Common Name:
 Warty seastar

Order/Family:
 Asteroidea: Echinasteridae

National Status: Endangered (EN)

Habitat and Ecology: Found on shallow coral reefs or soft substrata and presumed to feed on epibiota or biofilms. The aboral surface sometimes has epi-symbiotic associates, including the comb jelly, *Coeloplana astericola*.

Distribution: A shallow tropical West Indo-Pacific species of coral reefs. Locally it has been found only once, in the 1990s, subtidally on coral rubble substrata between the Southern Islands of Pulau Hantu and Pulau Semakau.

Threats: A locally rare subtidal species that may be threatened with local extinction by SCUBA diver

Conservation Measures: The few remaining natural, rocky, intertidal localities where these sea stars occur need to be protected from development (by inclusion within Marine Protected Areas) if this locally rare species is to survive in Singapore.

Photo: David J.W. Lane



collection. The location where this species has been recorded is used intensively for open water dive training. Further seabed reclamation in the Southern Islands area is an additional threat.

Scientific Interest and Potential Value: The specimen in the Museum (LKNHM) collection has single dorsal callosities, unlike the transverse fused callosities more typical of Indo-Pacific forms. This may point to the Singapore form being a separate sub-species.

Conservation Measures: This species may not survive in Singapore waters unless its habitat is given Marine Protected Area status.

Scientific Name:
***Luidia maculata* (Müller & Troschel, 1842)**

Common Name:
Eight-armed seastar

Order/Family:
Astroidea: Luidiidae

National Status: Endangered (EN)

Habitat and Ecology: Arm number, usually 8 in Singapore specimens, can vary from 6 to 9. A large predatory sea star living in and on soft intertidal and subtidal sediments. Also found on seagrass beds. Nocturnally active. Feeds on molluscs, other echinoderms and a variety of other infaunal invertebrates by engulfing them whole.

Distribution: Indo-west Pacific. Found intertidally all-around Singapore, particularly on northern shores, some of the Southern Islands and on the man-made reclaimed shorelines of East Coast Park.

Threats: Loss of habitat due to further land reclamation. Low salinity mortalities due to high rainfall episodes sometimes affect these and other echinoderms at the



Photo: David J.W. Lone

eastern end of the Johore Straits. Such events may become more frequent if there are climate-change-driven increases in monsoonal rainfall intensities.

Scientific Interest and Potential Value: This very large sea star is important as a component of Singapore's marine invertebrate 'megafaunal' biodiversity.

Conservation Measures: Dredging and coastal land reclamation in the latter part of the 20th century obliterated much of the habitat for this sea star but shorelines newly created by reclamation (e.g. East Coast Park and adjacent area) have, in time, become colonized by *Luidia* sea stars. Protection of both remnant natural habitats and newly created ones is desirable.

Scientific Name:
***Himerometra robustipinna* (Carpenter, 1881)**

Common Name:
Red feather star

Order/Family:
Crinoidea: Himerometridae

National Status: Vulnerable (VU)

Habitat and Ecology: This species lives in both intertidal and subtidal habitats. It is often found fully exposed, perched on corals, rocks or sponges, with its arms curled inwards.

Photo: Comprehensive Marine Biodiversity Survey (CMBs)



Himerometra robustipinna from waters of Lazarus Island.

Distribution: This species is found throughout Indo-Pacific region and is one of the more commonly seen species in Singapore.

Threats: Changes in habitat due to human activities.

Scientific Interest and Potential Value: Changes in habitat due to human activities.

Conservation Measures: Designating more marine protected areas can help in the conservation of this species and feather stars in general.

Scientific Name:

Pontiometra andersoni
(Carpenter, 1889)

Common Name:

Feather star

Order/Family:

Crinoidea: Colobometridae

National Status: Vulnerable (VU)

Habitat and Ecology: This species is easily recognisable by its large size and many arms arranged in a parabolic fan. It has a tendency to shed its arms when stressed.

Distribution: This species is found throughout Indo-Pacific region, but despite being easily identified, there are few official records of this species in Singapore.

Threats: Environmental changes and human disturbances.

Photo: Teresa Tay



Himerometra robustipinna from waters of Lazarus Island.

Photo: Comprehensive Marine Biodiversity Survey (CMBS)



Scientific Interest and Potential Value: Has the potential to be a bio-indicator due to its reaction to stress and disturbance.

Conservation Measures: Designating more marine protected areas can help in the conservation of this species and feather stars in general.

Scientific Name:
Prionocidaris baculosa
(Lamarck, 1816)

Common Name:
Thorny sea urchin

Order/Family:
Echinoidea: Cidaridae

National Status: Vulnerable (VU)

Habitat and Ecology: Feeds by grazing like all regular sea urchins but members of the Cidaridae family are also reported to be scavengers, feeding on dead animal material. Thorny primary spines are often covered with attached organisms and other fouling debris.

Distribution: Tropical Indo-west Pacific. In Singapore found intertidally at the eastern end of the Johore Straits as well as subtidally there and in the Southern Islands area.



Threats: Further land reclamation off eastern Singapore and in the Southern Islands area.

Scientific Interest and Potential Value: The biology of this species is little known, but it is of intrinsic value as a component of Singapore's echinoid biodiversity.

Conservation Measures: Continued inclusion of intertidal Pulau Ubin areas within a designated marine wetland protection zone.

Scientific Name:
Chaetodiadema granulatum
Mortensen, 1903

Common Name:

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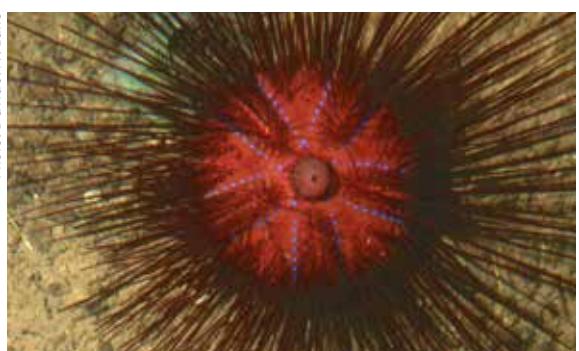
Order/Family:
Echinoidea: Diadematidae

National Status: Endangered (EN)

Habitat and Ecology: A rare sea urchin found on soft sediments below the reef slope.

Distribution: Tropical Indo-west Pacific. In Singapore found thus far only in the Southern Islands area.

Threats: Status not evaluated globally but considered endangered locally as further land reclamation extending into deeper water in the Southern Islands area would lead to habitat loss.



Scientific Interest and Potential Value: Throughout its Indo-west Pacific range this sea urchin is generally found at depths greater than 45 m but in Singapore it has been found at 15 m.

Conservation Measures: Encountered just once in waters off Pulau Semakau in the 1990s and again in the Southern Islands during the 2013 Comprehensive Marine Biological Survey, this species is rare in Singapore and its conservation probably requires inclusion of its localities within Singapore's Marine Protected Area network.

Scientific Name:
***Asthenosoma varium* Grube,**
1868

Common Name:
Fire urchin

Order/Family:
Echinoidea: Echinothuriidae

National Status: Endangered (EN)

Habitat and Ecology: This large sea urchin occurs on coarse soft sediments near reefs. Co-occurrence with gorgonian sea fans in Singapore indicates preference for an environment with good water flow. Several kinds of organisms, including commensal shrimps, live in association and presumably benefit from the protection of the urchin's venomous spines. Feeds on biofilms, detritus, and encrusting organisms.

Distribution: From the eastern Indian Ocean to New Caledonia. In Singapore this sea urchin is found only in the Southern Islands.

Threats: Reclamation of seabed habitat. The only known location for this sea urchin, off Sultan Shoal, is now partially enclosed by southward extending arms of land reclamation from Tuas and Jurong Island. This



Photo: David J.W. Lane

has likely altered the tidal flow and water quality regime; thus, the threat level is raised from Vulnerable to Endangered. Further sea floor reclamation in the area could render it locally extinct.

Scientific Interest and Potential Value: As a venomous marine organism *A. varium* is of particular interest to anyone likely to encounter it, as well as to scientists interested in the biochemical nature of the venom. This colourful urchin harbors equally colourful shrimp associates.

Conservation Measures: Potentially on the verge of local extinction as its only known location in Singapore, Sultan Shoal, has been radically impacted by nearby reclamation and port expansion. This species is in urgent need of re-assessment and protection measures need to be put in place for any remaining populations.

Scientific Name:
***Mespilia globulus* (Linnaeus,**
1758)

Common Name:
Globe urchin

Order/Family:
Echinoidea: Temnopleuridae

National Status: Vulnerable (VU)

Habitat and Ecology: Occurs on shallow reefs and coral rubble and tends to cover itself with debris.



Photo: Jeffrey K.Y. Low

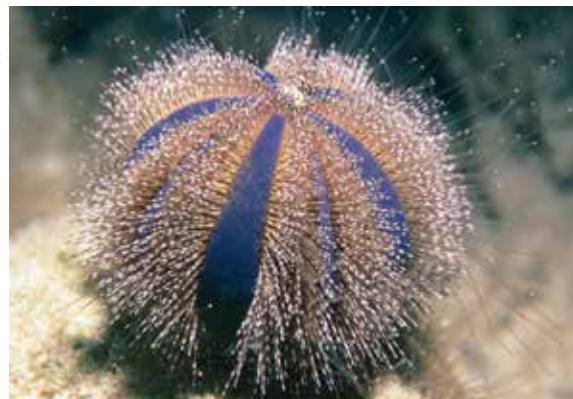
Mespilia globulus at Pulau Satumu, Singapore.

Distribution: A tropical Indo-west Pacific urchin and a relatively new discovery for Singapore. Found on the fringing reef of the southernmost of the Southern Islands, Pulau Satumu, in 2015.

Threats: A rare sea urchin in Singapore and thus vulnerable to illegal collection as an attractive aquarium trade species. Also threatened by further land reclamation in the Southern Islands.

Scientific Interest and Potential Value: The exceptional size of the Singapore specimen (about 8 cm diameter) indicates that this is a long-lived individual.

Conservation Measures: Found only on the furthest offshore reef. Inclusion of this fringing reef and nearby submerged ones in Singapore's Marine Protected Area network would be highly desirable.



Mesoplilia globulus at Pulau Manukan, Sabah, Malaysia.

Scientific Name:
Toxopneustes pileosus (Lamarck, 1816)

Common Name:
Flower urchin

Order/Family:
Echinoidea: Toxopneustidae

National Status: Near Threatened (NT)

Habitat and Ecology: Reef associated, generally found on coral rubble, often covering itself with sea floor debris, possibly as camouflage and/or protection against UV radiation. Reported to feed by grazing on epilithic organisms and detritus.

Distribution: Commonly encountered on Indo-west Pacific coral reefs and seagrass beds but rare in Singapore waters. An aggregation of 3 of these venomous urchins, found on coral rubble at Pulau Hantu in the Southern Islands in 2016, was a new record for Singapore.

Threats: Habitat loss due to further land reclamation in the Southern Islands region.



Toxopneustes pileosus from Pulau Hantu, Singapore.



Toxopneustes pileosus from Pulau Rawa, Malaysia.

Scientific Interest and Potential Value: Stings from the tiny fang-like jaws of the flower-like globiferous pedicellariae are highly dangerous; the venom interferes with nerve signal transmission and causes haemagglutination. Fatalities have been recorded thus gloves are essential when handling live specimens.

Conservation Measures: Inclusion of Pulau Hantu - and/or other sites where this sea urchin may be discovered - within the Marine Protected Area network.

Scientific Name:
Echinodiscus truncatus
(L. Agassiz, 1841)

Common Name:
Key-hole sand dollar

Order/Family:
Echinoidea: Aстriclypeidae

National Status: Vulnerable (VU)

Habitat and Ecology: Intertidal sandy/silty shores and seagrass beds. Using its velvet-like covering of small, short spines it burrows just beneath the sediment surface.

Distribution: Indo-west Pacific from East Africa to New Caledonia. In Singapore known from a few sites in the Pulau Ubin / Pulau Tekong / Changi area.

Threats: An uncommon species it is under threat from coastal development in the Changi / Pulau Ubin / Pulau Tekong area.

Photo: David J.W. Lane



Scientific Interest and Potential Value: Various explanations for the adaptive value of the lunules have been put forward. One theory is that the lunule spines assist in burrowing while another idea is that the holes have a hydrodynamic function in reducing lift in strong currents, thus preventing dislodgment.

Conservation Measures: Currently protected, temporarily, at the Chek Jawa wetlands area at the eastern end of Pulau Ubin. Long-term conservation hinges on inclusion of this and/or neighboring habitats within Singapore's Marine Protected Area network.

Scientific Name:
Holothuria (Metriatyla) scabra
Jaeger, 1833

Common Name:
Sandfish sea cucumber

Order/Family:
Holothuroidea: Holothuriidae

Photo: David J.W. Lane



National Status: Endangered (EN)

Habitat and Ecology: Found at the low tide mark on sandy beaches, reef flats and seagrass beds, often partially or completely buried. Feeds on the organic matter ingested with sediments. Known to harbour symbiotic crabs within the ventilatory cloacal chamber.

Distribution: A widespread tropical Indo-west pacific sea cucumber. Locally it is found near the low tide mark at Chek Jawa (Pulau Ubin), the mainland shores of Changi, the West coast, and on some of the Southern Islands' patch reefs and seagrass beds.

Threats: Harvesting of this valuable bêche de mer species is widespread in the Indo-west Pacific. The numbers in Singapore are too low to support a viable fishery but casual collection for food would threaten populations. The main potential threat would be further land reclamation in the Changi area and of the Southern Islands' fringing and patch reefs.

Scientific Interest and Potential Value: *H. scabra* is a high-value commercial bêche de mer species and is one of the few that have been successfully reared for aquaculture. Singapore, one of the major trading centres for imported bêche de mer product, could profitably focus efforts towards intensive mariculture of this and other sea cucumber species, with local populations providing spawning broodstock.

Conservation Measures: The major factor affecting the continued survival of this species in Singapore waters is, apparently, not collection for food but the threat of further land reclamation, particularly in the Changi and Southern Islands regions. Effective local conservation would require inclusion of intertidal sand and seagrass habitats of this species within an expanded Marine Protected Area network.

Scientific Name:
Stichopus herrmanni Semper,
1868

Common Name:
Curryfish sea cucumber

Order/Family:
Holothuroidea: Stichopodidae

National Status: Endangered (EN)

Habitat and Ecology: Found infrequently on shallow reef slopes of the Southern Islands. Feeds on organic material ingested with sediments.

Distribution: An Indo-west Pacific tropical species found locally only in the Southern Islands area.

Threats: Overexploited by the bêche de mer trade throughout its world distribution range and consequently listed by IUCN as Vulnerable. For Singapore the threat category is raised to Endangered because of the small numbers and restricted distribution range here.



Scientific Interest and Potential Value: A medium-value Indo-west Pacific species in the bêche de mer sea food trade.

Conservation Measures: Effective local conservation would require inclusion of Southern Islands subtidal and seagrass habitats of this species within an expanded Marine Protected Area network.

Scientific Name:
Stichopus vastus Sluiter, 1887

Common Name:
Zebrafish sea cucumber

Order/Family:
Holothuroidea: Stichopodidae

National Status: Endangered (EN)

Habitat and Ecology: Found on coral rubble of reef slopes and soft sediments. Feeds on sediment and derives nutrition from the associated organic matter.

Distribution: A central Indo-west Pacific tropical species that is found in small numbers on reef slopes and seagrass beds of the Southern Islands.

Threats: Exploited by the bêche de mer trade throughout its world distribution range but the IUCN threat level is listed as Least Concern globally. For Singapore the threat category is raised to Endangered because of the small numbers and restricted distribution range here.



Stichopus vastus in the waters of Pulau Semakau, Singapore.

Scientific Interest and Potential Value: A bêche de mer fishery species that is exploited throughout its range.

Conservation Measures: Effective local conservation would require inclusion of Southern Islands subtidal and seagrass habitats of this species within an expanded Marine Protected Area network.

Scientific Name:
Stichopus ocellatus Massin, Zulfigar,
Hwai & Boss, 2002

Common Name:
Ocellated sea cucumber

Order/Family:
Holothuroidea: Stichopodidae

National Status: Endangered (EN)

Habitat and Ecology: Found on coral rubble of reef slopes and soft sediments. Feeds on sediment and derives nutrition from the associated organic matter.

Distribution: South China Sea, South-west Sulawesi, Papua New Guinea in addition to Singapore. First



described and named from Malaysian waters in 2002 but known on Singapore's Southern Islands' reef slopes since the mid-1980s.

Threats: Continued land reclamation around the Southern Islands threatens to obliterate the remaining habitat of this uncommon species.

Scientific Interest and Potential Value: This species is undoubtedly exploited by the sea cucumber trade in the West Pacific but, until recently at least, it was not recognised as a distinct species and had been grouped with other similar stichopodid sea cucumbers in fishery trade data.

Conservation Measures: Inclusion of habitat localities within an expanded Southern Islands Marine Protected Area network would help to conserve this species.

Scientific Name:
Pseudocolochirus violaceus
 (Théel, 1886)

Common Name:
 Sea-apple sea cucumber

Order/Family:
 Holothuroidea: Cucumariidae

National Status: Vulnerable (VU)

Habitat and Ecology: Found intertidally in the Changi/ Pulau Ubin area and in greater numbers in offshore dredge hauls in the same region. Also seen, infrequently, on reef slopes around the Southern Islands (where this photo was taken). Expanded branching tentacles, coated in mucus and held in the water column, are retracted one at time and stuffed into the central mouth to ingest trapped suspended organic particulates and plankton.

Distribution: A tropical sea cucumber with a central Indo-west Pacific distribution. In Singapore it is found in the Changi/ Ubin/ Tekong area and around the Southern Islands.

Threats: This multicoloured sea cucumber is harvested in the Pacific region as an aquarium trade species and

Photo: David J.W. Lane



it is possible that casual collection by beachcombers could present a threat to local populations. Further land reclamation, particularly in the Changi/ Pulau Ubin/ Pulau Tekong area would be a threat to local populations.

Scientific Interest and Potential Value: The bright colouration of the Sea-apple sea cucumber is attractive to the aquarist but in nature, it probably serves as a warning colouration, signaling the presence of toxic chemicals that deter potential predators.

Conservation Measures: Prevention of habitat loss and major population losses of this species requires long-term protection of intertidal sites at the Chek Jawa Wetland Reserve as well as adjacent subtidal habitats between Changi, Pulau Ubin and Pulau Tekong.

Scientific Name:

Euryale aspera
Lamarck, 1816

Common Name:

Basket star

Order/Family:

Euryalida: Euryalidae

National Status: Data Deficient (DD)

Habitat and Ecology: This species stays hidden within crevices on the reef during the day. At night, it emerges to seek for its food in the form of plankton by extending its arms in a basket-like posture. Juveniles have been found on Sea fans.

Distribution: Indo-west Pacific, typically at depths from 2 to 60m. In Singapore, its presence was first based on a single record from the 19th century when it was collected at a depth of 40m off St John's Island in the Southern Islands. Subsequently, over the past fifteen years, it has been recorded in the east Johore Straits, off Changi and at Pulau Hantu in the Southern Islands.

Threats: In the past, the dumping of dredge spoils in the Singapore Deep off St John's Island may have adversely

Photo: David J.W. Lane



impacted this species. The true status of this nocturnal species is still relatively unknown since night diving surveys are not often carried out on Singapore reefs.

Scientific Interest and Potential Value: In the second edition Singapore Red Data Book, it was not known whether this species had already been extirpated. It has since been confirmed to be present at a number of sites including off the coast of Changi and in the waters around the Southern Islands.

Conservation Measures: More night dives are needed to better understand the distribution as well as ecology of this species.

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FAUNA : VERTEBRATES

Freshwater Fishes

LOW BI WEI, TAN HEOK HUI, JEFFREY T.B. KWIK, ZENG YIWEN, DARREN C.J. YEO

The ten species highlighted in this chapter exemplify an assortment of the challenges facing native freshwater fish conservation in Singapore. In total, 45 species of native freshwater fishes have been recorded from Singapore, of which 36 are currently extant and nine presumably Nationally Extinct. Owing to threats such as habitat degradation and invasive species, about half of the extant native freshwater fishes (19 species or 53%) fall within a threatened category.

The majority of the fishes (24 species) occur only in natural streams or freshwater swamp within forests or along forest edges, which are characterized by cool, acidic waters. A few species, such as the saddle barb *Barbodes sellifer* or the harlequin rasbora *Trigonostigma heteromorpha*, may be sighted more frequently in nature areas by those with a keen eye, but are nonetheless considered nationally threatened due to their narrow habitat requirements and restricted distributions. Their small numbers and fragmented populations make them highly vulnerable to anthropogenic and natural stressors such as habitat modification, poaching and extreme weather events. This highlights the importance of preserving and monitoring protected forested areas, such as the nature reserves, for their long-term survival.

The remaining 12 species are generally found in exposed habitats in rural to urban areas, such as open-canopy streams, freshwater marshes, ponds, and reservoirs. While these species are adapted to exposed habitat conditions, their close proximity to anthropogenic activities and disturbances poses a different set of challenges. For instance, the threat posed by non-native species introductions is greater in disturbed habitats. Examples of invasives negatively impacting native counterparts include the introduced barcheek goby *Rhinogobius similis*, believed to have caused extirpations of native gobies *Eugnathogobius siamensis* and *Pseudogobiopsis oligactis*, as well as the African sharptooth catfish *Clarias gariepinus* displacing the once-common native walking catfish *Clarias batrachus* from urban water bodies.

Despite Singapore's small size and numerous anthropogenic pressures on freshwater ecosystems, there have been numerous significant scientific discoveries. For example, the spotted eel-loach *Pangio muraeniformis*, harlequin rasbora *Trigonostigma heteromorpha*, longnose little warty catfish *Parakysis longirostris* and saddle barb *Barbodes sellifer* were all formally described from Singapore, the latter of which as recently as 2021. In 2022, a population of the bladefin catfish *Encheloclarias keloides*, an extremely rare species not seen since its original description from Malaysia in the early 1990s and once thought to be globally extinct, was discovered from a few streams in the Central Catchment Nature Reserve.

Scientific Name:
***Barbodes sellifer* Kottelat & Lim, 2021**

Common Name:
Saddle barb

Order/Family:
Cypriniformes: Cyprinidae

National Status: Vulnerable (VU)

Habitat and Ecology: Gregarious, omnivorous species that frequents the middle and lower parts of the water column, usually occurring in large, loose shoals. Typically inhabits forest streams and freshwater swamps.

Distribution: In Singapore, known from the Central Catchment Nature Reserve, Bukit Timah Nature Reserve, Western Catchment forests and Pulau Tekong. Distributed in the Malay Peninsula, Sumatra, Riau islands, Natuna islands and Anambas islands.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. An introduced congener, *B. rhombeus*, is present in Singapore although it generally occupies a different habitat niche, occurring in disturbed, open-canopy streams at forest



edges and open country habitats. Nonetheless, it is unknown if competition had occurred between both species in the past.

Scientific Interest and Potential Value: This species was described recently in 2021 based on specimens collected from Singapore. Previously identified as *Puntius binotatus* (Valenciennes, in Cuvier & Valenciennes, 1842) and later (1996 onwards) as *Puntius*, *Systomus* or *Barbodes banksi* (Herre, 1940). However recent studies have shown that *B. banksi* is restricted to western Borneo, whereas other populations represent a distinct species and should be referred to as *B. sellifer*.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts.

Scientific Name:
***Boraras maculatus* (Duncker, 1904)**

Common Name:
Pygmy rasbora

Order/Family:
Cypriniformes: Cyprinidae

National Status: Endangered (EN)

Habitat and Ecology: Gregarious species that appears to be restricted to shallow forest streams and freshwater swamps with slow-flowing, acidic waters.



Distribution: In Singapore, known only from a small number of locations in the Central Catchment Nature Reserve. Distributed in the Malay Peninsula, Sumatra and Riau islands.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. Appears to be relatively sensitive to anthropogenic impacts; a sharp population decline was observed at one location between 2013 and 2015 following stream modification (that led to increased sedimentation and altered flow patterns). Does not appear to be collected in any substantial numbers for the aquarium trade locally, although its occurrence in only a few locations (and in

small numbers) means that any illegal collection may still pose a threat.

Scientific Interest and Potential Value: This brightly-coloured species is a popular aquarium fish.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts.

Scientific Name:
Trigonostigma heteromorpha
(Duncker, 1904)

Common Name:
Harlequin rasbora

Order/Family:
Cypriniformes: Cyprinidae

National Status: Endangered (EN)

Habitat and Ecology: Gregarious species that frequents the upper and middle parts of the water column, mainly feeding on insects. Restricted to forest streams and freshwater swamps with acidic waters.

Distribution: In Singapore, known from the Central Catchment Nature Reserve, Bukit Timah Nature Reserve, Western Catchment forests and Pulau Tekong. Distributed in the Malay Peninsula, Sumatra, Riau islands, Natuna islands and Anambas islands.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. Does not

Photo: Tan Heok Hui



appear to be collected in any substantial numbers for the aquarium trade locally, although sporadic illegal collection may still pose a threat.

Scientific Interest and Potential Value: This popular aquarium fish was described in 1904 based on specimens collected from Kuala Lumpur and the Singapore Botanic Gardens. This species was one of seven native fishes featured on an iconic Singapore stamp series issued in 1962 (as *Rasbora heteromorpha*).

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts, as well as policing against illegal collection.

Scientific Name:
Pangio muraeniformis
(de Beaufort, 1933)

Common Name:
Spotted eel-loach

Order/Family:
Cypriniformes: Cobitidae

Photo: Tan Heok Hui



National Status: Critically Endangered (CR)

Habitat and Ecology: Bottom-dwelling omnivorous species that is restricted to forest streams and freshwater swamps with acidic waters. Typically hidden amongst dense submerged vegetation and leaf litter.

Distribution: In Singapore, known only from one small area of the Central Catchment Nature Reserve. Distributed in the Malay Peninsula and Riau islands.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. It occurs only in a single patch of forest, where it is uncommon.

Scientific Interest and Potential Value: This species was described in 1933 based on specimens collected from Singapore.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts.

Scientific Name:
Parakysis longirostris
Ng & Lim, 1995

Common Name:
Longnose little warty catfish

Order/Family:
Siluriformes: Akysidae

Photo: Tan Heok Hui



National Status: Critically Endangered (CR)

Habitat and Ecology: Bottom-dwelling species that inhabits fast-flowing sections of swamp-forest streams with acidic waters and dense growths of submerged vegetation and/or leaf litter. A highly secretive species that feeds on small invertebrates and uses its paired fins to move about on the stream bed.

Distribution: In Singapore, known only from one small area of the Central Catchment Nature Reserve. Distributed in the southern Malay Peninsula and Riau islands.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. It occurs only in a single patch of forest, where it is rare. Occurs mostly in faster-flowing stream sections, which suggests it may be vulnerable to hydrological perturbations.

Scientific Interest and Potential Value: This species was described in 1995 based on specimens collected from Singapore.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts.

Scientific Name:
Encheloclarias keloides
Ng & Lim, 1993

Common Name:
 Bladefin catfish

Order/Family:
 Siluriformes: Clariidae



National Status: Critically Endangered (CR)

Habitat and Ecology: Highly secretive bottom-dwelling species that is restricted to acidic swamps, where it hides amongst submerged vegetation or burrows into the substratum.

Distribution: In Singapore, known so far from only a single location within the Central Catchment Nature Reserve. Distributed in the southern Malay Peninsula.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. It has an extremely restricted local distribution, occurring only in the upper reaches of a few streams, and in very small numbers, within a single patch of forest.

Scientific Interest and Potential Value: Recently discovered in Singapore in 2022. Prior to this, the species was only known from two individuals collected from Johor and Pahang in the early 1990s, with no other specimens known to have been collected since. In 2019, the IUCN Red List noted that the species may already be extinct, given that the only previous known locations (in Johor and Pahang) have become highly degraded, and extensive surveys in Peninsular Malaysia failed to detect the species. The discovery of a population from Singapore is therefore of potential global significance as it could provide assurances for the long-term survival of the species, given its possible extirpation elsewhere.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts.

Scientific Name:
Eugnathogobius siamensis
(Fowler, 1934)

Common Name:
 Roundhead stream goby

Order/Family:
 Gobiiformes: Gobinellidae



National Status: Critically Endangered (CR)

Habitat and Ecology: Bottom-dwelling, diurnal carnivore that inhabits rural open-canopy streams with flowing water and sandy/clay bottoms.

Distribution: In Singapore, known only from one semi-urban stream in the Thomson area. Widely distributed from southern China to Indonesia.

Threats: Displacement by invasive species and habitat degradation. The species was recorded from multiple locations in central, northeastern and western Singapore in the 1930s to 1960s, although since 2005, it is only known from a single location within the Kallang river basin. Observed declines have been largely attributed to competition and displacement by the introduced *Rhinogobius similis* (previously identified as *R. giurinus*). Its last remaining location lies within a semi-urban residential area and is unprotected, which further increases the risk of extirpation from anthropogenic factors (e.g., pollution, channelization). It is also unknown if the completion of the Marina Barrage in 2008 has impacted the species, given that it requires

access to the sea to complete its life cycle (the larvae have an obligate phase in saline waters).

Scientific Interest and Potential Value: This species is very occasionally seen in the aquarium trade.

Conservation Measures: The local status of this species requires urgent verification; it was last recorded in 2005, and there are concerns it may already be extirpated. If still extant, it requires immediate protection of its remaining habitat(s) from human impacts, and, if numbers allow, a potential translocation to waterways that continue to have connection with the sea.

Scientific Name:
Nandus nebulosus (Gray, 1835)

Common Name:
Sunda leaf fish

Order/Family:
Perciformes: Nandidae

National Status: Endangered (EN)

Habitat and Ecology: Solitary, cryptic carnivore that is restricted to slow-flowing forest streams. Resembles a dead leaf and uses its camouflage to avoid predation as well as to sneak up to or ambush small fishes and crustaceans.

Distribution: In Singapore, known only from a small number of locations in the Central Catchment Nature Reserve and Bukit Timah Nature Reserve. Distributed in the Malay Peninsula, Sumatra and Borneo.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. It is generally

Photo: Tan Heok Hui



rare at known locations. Does not appear to be collected in any substantial numbers for the aquarium trade locally, though its occurrences in only a few locations (and in small numbers) means that any illegal collection may still pose a threat.

Scientific Interest and Potential Value: This species is sometimes sold as an aquarium fish.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts, as well as policing against illegal collection.

Scientific Name:
Betta imbellis Ladiges, 1975

Common Name:
Crescent betta

Order/Family:
Perciformes: Osphronemidae

National Status: Endangered (EN)

Habitat and Ecology: Air-breathing species that frequents the upper parts of the water column, mainly feeding on small arthropods. Typically inhabits slow-flowing, rural open-canopy streams, ponds, and swamps with dense aquatic vegetation. Males are highly territorial and usually solitary. Exhibits paternal care; the male builds a bubble nest amongst floating or emergent vegetation, where eggs and fry will be tended to until free-swimming.

Distribution: In Singapore, known from a few small areas in the Central Catchment Nature Reserve and rural parts of northwestern Singapore. Distributed in the Malay Peninsula and northern Sumatra.

Threats: Mainly habitat degradation. While the species is relatively common at one location, it is extremely rare

Scientific Name:
Channa limbata (Cuvier, in Cuvier & Valenciennes, 1831)

Common Name:
Dwarf snakehead

Order/Family:
Perciformes: Channidae

National Status: Endangered (EN)

Habitat and Ecology: Solitary, air-breathing carnivore that is restricted to shallow forest streams

Photo: Tan Heok Hui



at other areas where (presumably small) populations may be highly vulnerable to disturbances. Does not appear to be collected in any substantial numbers for the aquarium trade locally, though its occurrences in only a few locations (and in small numbers) means that any illegal collection may still pose a threat.

Scientific Interest and Potential Value: A popular aquarium fish. In southern Thailand, this species is selectively bred for aggression and used for fish-fighting (similar to its close relative the Siamese fighting fish, *B. splendens*).

Conservation Measures: Continued protection of its natural habitat (typically rural open-canopy streams and ponds) from human impacts, as well as policing against illegal collection.

Photo: Tan Heok Hui



and acidic swamps, feeding on small fish, insects, and crustaceans. Exhibits intensive parental care; the male broods the eggs and fry in his mouth, and both parents guard the free-swimming fry aggressively.

Distribution: In Singapore, known only from a small number of locations in the Central Catchment Nature Reserve and Bukit Timah Nature Reserve. Widely distributed from southern China to Indonesia.

Threats: Mainly habitat degradation, given that this species is restricted to forested habitats. It is generally uncommon in known locations. Reported as extinct in 1966 but was later rediscovered in 1989. Does not appear to be collected in any substantial numbers for the aquarium trade locally, though its occurrences in only a few locations (and in small numbers) means that any illegal collection may still pose a threat.

Scientific Interest and Potential Value: This species is sometimes sold as an aquarium fish. Previously identified as *C. gachua* (Hamilton, 1822), but recent genetic studies have shown that *C. gachua* is restricted to the Indian subcontinent, whereas populations east of the Indo-Burman ranges (southern China, most of Indochina, Sundaic Southeast Asia) including those in Singapore represent a distinct species that should be referred to as *C. limbata*.

Conservation Measures: Continued protection of its natural habitat (forest streams and freshwater swamps) from human impacts, as well as policing against illegal collection.

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Marine Fishes

ZEEHAN JAAFAR, JEFFREY K.Y. LOW, KELVIN K.P. LIM

Scientific Name:

Aetobatus ocellatus (Kuhl, 1823)

Common Name:

Ocellated eagle-ray

Family:

Aetobatidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Ocellated eagle-ray occurs in shallow coastal areas to depths of up to 60m. In Singapore, this species has been observed in areas with fringing coral reefs, as well as lagoons and embayments. This species feeds on fishes as well as small invertebrates such as molluscs and crustaceans. Fecundity in this species is low; females do not bear young annually, and gestation for each litter has been reported to be about twelve months.

Distribution: The Ocellated eagle-ray can be found in the tropical and warmer temperate coastal reefs of the Indo-West and Central Pacific regions. This species was first reported from Singapore in 1849 and is extant at both Singapore and Johor Straits.

Threats: Habitat loss, habitat modification, recreational angling, extraction for consumption.

Scientific Interest and Potential Value: Global populations of this species are classified as Vulnerable to Extinction by IUCN's Red List of Threatened Species. The meat of this species is consumed, and skin is used for leather goods. Throughout its distribution, most population sizes are on the decline given its susceptibility to anthropogenic activities coupled with its low fecundity. In Singapore, this species is considered highly desirable, and targeted by recreational anglers.

Conservation Measures: Presently, there are no conservation measures specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Photo: Khalid El Ouazghi



Aetobatus ocellatus off Sentosa, Singapore.

Scientific Name:
Rhynchobatus australiae
(Whitley, 1939)

Common Name:
White-spotted wedgefish

Family:
Rhinidae

National Status: Critically Endangered (CR)

Habitat and Ecology: One of the largest wedgefish species, the White-spotted wedgefish can grow to 3m in total length. This species can be found throughout the Indo-Pacific region, from shallow coastal waters to 60m deep. The White-spotted wedgefish feeds on small invertebrates such as molluscs and crustaceans. This species is viviparous, and females bear litter sizes of up to 19 pups.

Distribution: The White-spotted wedgefish can be found in the tropical and warmer temperate coastal reefs of the Indo-West Pacific regions. In Singapore, this species was first reported in 1999; and has since been primarily encountered when caught by recreational anglers at nearshore areas with sandy-silt substrate.



Rhynchobatus australiae in the waters of Thailand.

Threats: Habitat loss, habitat modification, recreational angling.

Scientific Interest and Potential Value: Global populations of this species are classified as Critically Endangered by IUCN's Red List of Threatened Species due to targeted and intense fishing pressure in areas where they occur. The fins of this species are prized, as are the snout. The meat is also consumed although often sold at a fraction of the price of the fins and snout. In Singapore, this species is considered highly desirable, and targeted by recreational anglers.

Conservation Measures: Presently, there are no conservation measures specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:
Nebrius ferrugineus
(Lesson, 1831)

Common Name:
Tawny nurse shark

Family:
Ginglymostomatidae



Nebrius ferrugineus in waters off Pulau Biola, Singapore.

National Status: Critically Endangered (CR)

Habitat and Ecology: The Tawny nurse shark is a docile, nocturnal species that is naturally distributed throughout the Indo-Pacific region. This viviparous species is most commonly observed over continental shelf areas shallower than 70m. The Tawny nurse shark feeds on cephalopods, crustaceans, corals, echinoderms, and small fishes.

Distribution: The Tawny nurse shark is widely distributed in the tropical and warmer temperate coastal reefs of the Indo-West Pacific regions. In Singapore, this species was first reported in 1852; and is at present occasionally observed in the coral reef areas within the Singapore Strait.

Threats: Habitat loss, habitat modification.

Scientific Interest and Potential Value: Global populations of this species are classified as Vulnerable by IUCN's Red List of Threatened Species due to targeted and intense fishing pressure in areas where they occur. The meat of this species is consumed fresh, dried, or salted, and the skin is used for leather goods. In Singapore, this species is considered highly desirable by recreational anglers.

Conservation Measures: At present, there are no conservation measures specific for this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:

Hippocampus comes Cantor
1849

Common Name:

Tiger tail seahorse

Family:

Syngnathidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Tiger tail seahorse is a cryptic species typically observed in shallow coastal areas. In Singapore, this species is closely associated with coral reefs and coral-associated seagrass meadows. The upper and lower jaws of seahorses are fused and tubular resulting in a highly specialised feeding mechanism. The prey items of seahorses constitute mostly of small zooplankton organisms. Similar to males of other seahorse species, the males of the Tiger tail seahorse possess a brood pouch into which females deposit eggs. Males tend to the clutch of eggs until they hatch.

Distribution: First described from Penang Island, Peninsular Malaysia, this species is now reported to be distributed along coastal areas of Eastern Indian and Western Pacific Oceans. In Singapore, this species was

Photo: Jeffrey K.Y. Low



Hippocampus comes at 3m water depth off Pulau Hantu, Singapore.

first reported in 1861; and has been reported at sites within Singapore and Johor Straits.

Threats: Habitat loss, habitat modification, declining water quality, targeted extraction.

Scientific Interest and Potential Value: Global populations of the Tiger tail seahorse are assessed as Vulnerable by IUCN's Red List of Threatened Species. The primary drivers of threat include targeted extraction of this species, along with other seahorses and pipefishes as these are sought after for the curio trade and traditional remedies market. Live seahorses are also captured for the aquaria trade.

Conservation Measures: There are no conservation measures in place specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:

Lutjanus sebae
(Cuvier, 1816)

Common Name:

Red emperor snapper

Family:

Lutjanidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Red emperor snapper is a reef-associated species although adults can occur in deeper areas with sandy-silt substrate. This species feeds on small fishes, crustaceans, and cephalopods. Sub-adults possess characteristic dark red bands that are lost in adult individuals; the latter are uniformly red or pink.

Distribution: This species is widely distributed at tropical nearshore areas across the Indo-west Pacific, from the southern Red Sea and East Africa, east to Australia and southern Japan. First reported from Singapore in 1865, this species is encountered—by divers or recreational anglers—with the Straits of Singapore.

Scientific Name:

Pomacentrus alexanderae
Evermann & Seale 1907

Common Name:

Alexander's damselfish

Family:

Pomacentridae

National Status: Endangered (EN)

Habitat and Ecology: Alexander's damselfish is a reef-obligate species that is solitary or occur in pairs. This species feeds on algae and small invertebrate organisms such as crustaceans and gastropods. This oviparous species practices parental care—males guard and aerate eggs, that are laid on hard substrate, until they hatch.

Photo: Jeffrey K.Y. Low



Lutjanus sebae at 12m water depth at Terumbu Pempang Laut, Singapore.

Threats: Habitat loss, habitat modification, declining water quality, targeted extraction.

Scientific Interest and Potential Value: Global populations of the Red emperor snapper are assessed as Least Concern by IUCN's Red List of Threatened Species. This is a commercially important species and is prized by recreational anglers in Singapore.

Conservation Measures: There are no conservation measures in place specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Photo: Jeffrey K.Y. Low



Pomacentrus alexanderae at Sisters' Islands, Singapore.

Distribution: This species is widely distributed at tropical coral reef areas across the Western Pacific. First reported from Singapore in 1990, this species is encountered at only a few sites within the Straits of Singapore where live coral cover is higher.

Threats: Habitat loss, habitat modification, declining water quality.

Scientific Interest and Potential Value: Global populations of Alexander's damselfish have not yet been evaluated by IUCN's Red List of Threatened Species. This species is occasionally observed in the aquaria trade.

Conservation Measures: There are no conservation measures in place specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:

Halichoeres melanochir
Fowler & Bean 1928

Common Name:

Orangefin wrasse

Family:

Labridae

National Status: Endangered (EN)

Habitat and Ecology: The Orangefin wrasse occurs in coral reefs and shallow rocky areas either singly or in small groups. This species feeds on small invertebrate organisms and form distinct pairs during mating. Little else is known of their ecology.

Distribution: This species is widely distributed across the Western Pacific. First reported from Singapore in 1990, this species is now encountered at only a few sites within the Straits of Singapore.

Threats: Habitat loss, habitat modification, declining water quality.

Scientific Interest and Potential Value: Global populations of Orangefin wrasse are evaluated as Least Concern by IUCN's Red List of Threatened Species. This species is occasionally observed in the aquaria trade.

Conservation Measures: There are no conservation measures in place specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Photo: Jeffrey K.Y. Low



Halichoeres melanochir in waters off Pulau Satumu, Singapore.

Scientific Name:
Thalassoma lunare
(Linnaeus 1758)

Common Name:
Moon wrasse

Family:
Labridae

National Status: Endangered (EN)

Habitat and Ecology: The Moon wrasse inhabits coral reefs and shallow rocky areas either singly or in small groups. This species feeds on small invertebrate organisms and occasionally, small fishes. The Moon wrasse has been reported to engage in cleaning behaviour, where they pick on ectoparasites off other fishes that they then consume.

Distribution: This species is widely distributed across the Western Pacific. First reported from Singapore in 1860, this species is now only rarely observed at a few sites within the Straits of Singapore.

Photo: Jeffrey K.Y. Low



Thalassoma lunare in waters of Boracay, Philippines.

Threats: Habitat loss, habitat modification, declining water quality.

Scientific Interest and Potential Value: Global populations of Moon wrasse are evaluated as Least Concern by IUCN's Red List of Threatened Species. This species is occasionally observed in the aquarium trade.

Conservation Measures: There are no conservation measures in place specific to this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Amphibians

NOEL J. THOMAS, LAW ING SIND

Scientific Name:
Ichthyophis paucisulcus

Common Name:
Asian Striped Caecilian

Order/Family:
Gymnophiona: Ichthyophidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits mature forest, burrowing in soil and leaf litter along forest streams. Probably feeds on worms and other soil-dwelling animals. Larvae are aquatic and live in streams among submerged leaf litter.

Distribution: Known from the Bukit Timah Nature Reserve and observed in a single location at the Central Catchment Nature Reserve. Otherwise, it is known only from Sumatra.

Threats: Habitat degradation and climate change.

Scientific Name:
Ingerophrynus quadriporcatus

Common Name:
Four-ridged Toad

Order/Family:
Anura: Bufonidae

National Status: Vulnerable (VU)

Habitat and Ecology: Adults congregate near clear stagnant puddles in primary and secondary swampy forests, where they breed. Larvae are free swimming and live in the puddles.



Photo: Noel Thomas

Scientific Interest and Potential Value: The identification is tentative. The true identity of the species is uncertain as species identification can only be based on adult specimens, and adults have not been found recently. Allied species in the genus are sometimes collected for the pet trade in other parts of Southeast Asia.

Conservation Measures: Continued habitat protection in Bukit Timah and Central Catchment Nature Reserves where it is known to occur, and to protect streams against siltation.



Photo: Law Ing Sind

Distribution: Peninsular Malaysia, Singapore, Borneo and Sumatra. In Singapore it is restricted to the Bukit Timah and Central Catchment Nature Reserves.

Threats: Habitat degradation and climate change.

Scientific Interest and Potential Value: Striking red colour may be attractive to poachers for the commercial pet trade.

Scientific Name:
Pelophryne ingeri

Common Name:
Inger's Cross Toadlet

Order/Family:
Anura: Bufonidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from a small patch of primary forest in Bukit Timah Nature Reserve where the humidity is very high, and breeds in water filled tree holes. Tadpoles are free swimming but do not have functional mouthparts and quickly develop into toadlets.

Distribution: Peninsular Malaysia, Singapore and parts of Sumatra. Locally known only from a small patch of primary forest in Bukit Timah Nature Reserve.

Threats: Habitat degradation, potentially the drying up of Bukit Timah Forest.

Conservation Measures: Continued habitat protection of available habitats, all of which are currently protected.

Photo: Nick Baker



Scientific Interest and Potential Value: Biology and ecology are poorly known. Small size and bright colours might make it attractive to poachers for the commercial pet trade.

Conservation Measures: Continued protection of Bukit Timah Nature Reserve and control of recreational human activities at the specific site where this species occurs. The design and creation of artificial 'tree-holes' for the species to utilise could be considered. Continued population monitoring is needed. A captive breeding program is recommended to further protect this species.

Scientific Name:
Pelobatrachus nasutus

Common Name:
Malayan Horned Frog

Order/Family:
Anura: Megophryidae

Photo: Noel Thomas



National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from small patches of primary forest in Bukit Timah Nature Reserve and the Central Catchment Nature Reserve. This species breeds in flowing clear rocky or sandy bottom streams.

Distribution: Has a wide regional distribution, from Peninsular Malaysia, Indonesia, Thailand, Borneo and Singapore.

Threats: Habitat degradation, fouling of streams and poaching.

Scientific Interest and Potential Value: This species is highly sought after in the pet trade.

Conservation Measures: Continued protection of sites where it occurs at and conservation of forest streams from human use.

Scientific Name:
Leptobrachium nigrops

Common Name:
Black-eyed Litter Frog

Order/Family:
Anura: Megophryidae

National Status: Near Threatened (NT)

Habitat and Ecology: Species occurs in deep leaf litter in primary and mature secondary forests. Tadpoles can be found in puddles or slow flowing streams.

Distribution: Peninsular Malaysia, Singapore and Sumatra. Locally it is restricted to Bukit Timah and Central Catchment Nature Reserves.

Threats: Habitat degradation, fouling of breeding pools, and climate change.

Scientific Interest and Potential Value: Described from Singapore, extinction at type locality will be an issue for future taxonomic work.

Conservation Measures: Continued protection of sites where it occurs.

Photo: Noel Thomas



Scientific Name:
Limnonectes paramacrodon

Common Name:
 Lesser Swamp Frog

Order/Family:
 Anura: Dic平glossidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from a single patch of swamp forest on mainland Singapore and also from Pulau Tekong. Little else is known about the ecology of the species, but it presumably breeds in freshwater swamp forests.

Distribution: Peninsular Malaysia, Borneo, Thailand, Indonesia, Singapore.



Threats: Degradation of swamp forest.

Scientific Interest and Potential Value: The tadpoles are undescribed.

Conservation Measures: Continued protection of forest reserves.

Scientific Name:
Limnonectes plicatellus

Common Name:
 Rhinoceros Frog

Order/Family:
 Anura: Dic平glossidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in primary and mature secondary forests of Bukit Timah Nature Reserve and Central Catchment Nature Reserve. This species breeds in streams and puddles that form after heavy rain. Males are often heard calling from the vicinity of water bodies.

Distribution: Peninsular Malaysia, Borneo, Thailand, Indonesia, Singapore.



Threats: Habitat degradation.

Scientific Interest and Potential Value: It is a potential indicator of the quality of freshwater bodies.

Conservation Measures: Continued protection of the nature reserves is required.

Scientific Name:
Leptomantis cyanopunctatus

Common Name:
Blue-legged Bush Frog

Order/Family:
Anura: Rhacophoridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known from primary forest from a single patch of swamp forest in mainland Singapore. Little else is known about the ecology of the species, but it presumably breeds in freshwater swamp forest streams.

Distribution: Peninsular Malaysia, Borneo, Thailand, Indonesia, Singapore.



Threats: Degradation of swamp forest.

Scientific Interest and Potential Value: Study of its ecology is imperative.

Conservation Measures: Continued protection of the nature reserves. A captive breeding program is recommended to further protect this species.

Scientific Name:
Theforderma horridum

Common Name:
Thorny Bush Frog

Order/Family:
Anura: Rhacophoridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from a handful of records from primary forests in Bukit Timah Nature Reserve, and a single record from Nee Soon swamp forest. Little is known about the ecology of the species, except that it breeds in wet tree-holes.

Distribution: Peninsular Malaysia, Borneo, Thailand, Indonesia, Singapore.



Threats: Degradation of swamp forest.

Scientific Interest and Potential Value: Studies on its reproduction and ecology are imperative.

Conservation Measures: Continued protection of the nature reserves is needed. A captive breeding program is recommended to further protect this species.

Scientific Name:
Micryletta subaraji

Common Name:
Subaraj's Paddy Frog

Order/Family:
Anura: Microhylidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from Kranji marshes and potentially a population may exist in the Central Catchment Nature Reserve. It is known to breed in puddles of water after heavy rain.

Distribution: Currently only known from Singapore where it was recently described.

Threats: Habitat degradation.



Scientific Interest and Potential Value: Studies on population, ecology and reproduction is necessary. Described from Singapore and currently known only as an endemic species, extinction at the type locality will be an issue for future taxonomic work.

Conservation Measures: Continued protection of Kranji marshes, which are currently managed as a nature park. A captive breeding program is recommended to further protect this species.

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Reptiles

NOEL J. THOMAS, LAW ING SIND

Scientific Name:
Cyclemys dentata

Common Name:
Asian Leaf Turtle

Order/Family:
Testudines: Geoemydidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Only four published records of this rare turtle are known, from the Western Catchment and the Central Catchment Nature Reserve. It is usually found in streams.

Distribution: Widespread throughout Malaysia, Indonesia, and Thailand.

Threats: Poaching for the pet trade and for food, habitat degradation plays a part in the decline of this species.

Photo: Law Ing Sind



Scientific Interest and Potential Value: Low population sizes in Singapore raise concern for the future of the species.

Conservation Measures: Captive breeding and further surveys to determine the current size of the population in Singapore. Continued habitat protection is needed.

Scientific Name:
Heosemys spinosa

Common Name:
Spiny Hill Turtle

Order/Family:
Testudines: Geoemydidae

National Status: Endangered (EN)

Habitat and Ecology: Found quite widely within Bukit Timah and the Central Catchment Nature Reserves, usually found around streams and swamps. This species feeds mainly on fallen fruits and rotting carcasses.

Distribution: Found in Indonesia, Malaysia, Thailand and Singapore.

Photo: Serin Subraj



Threats: Poaching and habitat degradation.

Scientific Interest and Potential Value: This beautiful species is highly sought after in the pet trade.

Conservation Measures: Increased population surveys to identify important habitats for conservation. Continued habitat protection in the Nature Reserves and prevention of poaching are required.

Scientific Name:
Crocodylus porosus

Common Name:
Estuarine Crocodile

Order/Family:
Crocodylia: Crocodylidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Found mainly in Sungei Buloh Wetland Reserve, but scattered individuals have been known from Pasir Ris, Pulau Ubin, and Changi.

Distribution: Widespread across South East Asia, and into Australia.

Threats: Widely hunted for meat and leather; Persecuted by humans across its range.

Scientific Interest and Potential Value: Valued for leather and meat products, but undisturbed wild individuals are a major tourist attraction.



Conservation Measures: Population surveys are carried out to understand the carrying capacity of this large reptile in Singapore. Continued habitat protection, and safe distancing to minimise the possibility of human-wildlife conflict.

Scientific Name:
Cyrtodactylus consobrinus

Common Name:
Peter's Bent-toed Gecko

Order/Family:
Squamata: Gekkonidae



National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore it is known only from primary forest in Bukit Timah Nature Reserve. Found mostly on granite or rocky substrates in humid forests.

Distribution: Peninsular Malaysia, Sumatra, Thailand and Singapore.

Threats: Poaching and habitat degradation.

Scientific Interest and Potential Value: *C. consobrinus* is a species complex consisting of multiple species, on which further work on taxonomy is needed.

Conservation Measures: The known Singapore locality is a legally protected nature reserve; continued habitat protection is required, and captive breeding could be an option.

Scientific Name:
Cyrtodactylus majulah

Common Name:
Singapore Bent-toed Gecko

Order/Family:
Squamata: Gekkonidae

National Status: Endangered (EN)

Habitat and Ecology: Widespread in Bukit Timah and Central Catchment Nature reserves, it is also known from Admiralty Park. This species dwells in swamp forests adjacent to streams. Little else is known of its ecology.

Distribution: Singapore, and Pulau Bintan in Indonesia.

Threats: Habitat degradation and climate change.

Scientific Interest and Potential Value: The species is easily confused with the other members of the *C. quadrivirgatus* group, so further work is needed to fully



validate the occurrence of other species within the group in Singapore. Described from Singapore, extinction at the type locality would be an issue for future taxonomic work.

Conservation Measures: Population surveys and continued habitat protection. Two of its three known localities are fully protected by law.

Scientific Name:
Hemidactylus craspedotus

Common Name:
Frilly Gecko

Order/Family:
Squamata: Gekkonidae



National Status: Critically Endangered (CR)

Habitat and Ecology: Known from Bukit Timah and Central Catchment Nature Reserves. Found clinging to large trees in primary forests, this species is cryptic and elusive.

Distribution: Indonesia, Malaysia, Thailand and Singapore.

Threats: Habitat degradation.

Scientific Interest and Potential Value: Investigations into the ecology of this species are needed.

Conservation Measures: Population surveys and continued habitat protection within the nature reserves.

Scientific Name:
Gekko kuhli

Common Name:
Kuhl's Gliding Gecko

Order/Family:
Squamata: Gekkonidae

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore it is known only from Pulau Tekong.

Distribution: Indonesia, Malaysia, Thailand and Singapore.

Threats: Poaching and habitat degradation.

Photo: Law Ing Thong



Scientific Interest and Potential Value: It is part of a species complex which comprises multiple species.

Conservation Measures: Population surveys are needed and may enable reintroduction into mainland Singapore.

Scientific Name:
Typhloscincus temasekensis

Common Name:
Swamp Skink

Order/Family:
Squamata: Scincidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from swamp forest habitats in Bukit Timah and the Central Catchment Nature Reserves. Little else is known about the ecology and habits of this rare species.

Distribution: Known only from Singapore and potentially at a single site in Peninsular Malaysia.

Threats: Habitat degradation.

Photo: Law Ing Sind



Scientific Interest and Potential Value: Described from Singapore, extinction at the type locality would be an issue for future taxonomic work.

Conservation Measures: Although its known localities in Singapore are legally protected, population surveys are needed, and would be useful in assessing the potential for captive breeding to boost numbers.

Scientific Name:
Varanus dumerili

Common Name:
Dumeril's Monitor

Order/Family:
Squamata: Varanidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Known only from a few records from Nee Soon Swamp forest. Ecological differences from other forest monitor lizards are poorly understood.

Distribution: Indonesia, Malaysia, Thailand and Singapore.

Threats: Poaching and habitat degradation.



Scientific Interest and Potential Value: The species is highly sought after in the pet trade.

Conservation Measures: Continued protection and management of Central Catchment Nature Reserve. Population surveys are needed and would be useful in assessing the potential for captive breeding to boost numbers.

Scientific Name:
Argyrophis muelleri

Common Name:
White-bellied Blind Snake

Order/Family:
Squamata: Typhlopidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits mature and secondary forest. Highly fossorial. Known to burrow through soil or decaying logs and rarely comes to the surface.

Distribution: In Singapore, known from the Central Catchment Nature Reserve and Pulau Ubin. Distributed throughout the Malay Peninsula, Sumatra, Borneo and Indo-China.

Threats: Habitat degradation.



Scientific Interest and Potential Value: Despite its striking appearance, the ecology and habits of this secretive snake are poorly known.

Conservation Measures: Habitat protection. Its known localities in Singapore are within protected and managed areas.

Scientific Name:
Cantoria violacea

Common Name:
Cantor's Water Snake

Order/Family:
Squamata: Homalopsidae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits mangrove forests and mudflats. It is aquatic, nocturnal and known to use mud lobster mounds and crab burrows. Feeds on crabs and shrimps.

Distribution: In Singapore, known from the mangrove systems of Pasir Ris, Lim Chu Kang and Sungei Buloh Wetland Reserve.



Threats: Habitat degradation.

Scientific Interest and Potential Value: Known to eat snapping shrimps. The extent to which it specialises on snapping shrimps and its feeding behaviour merit detailed investigation.

Conservation Measures: Protection of mangrove habitats where the species is known. The current localities are in protected areas or managed parks.

Scientific Name:
Ahaetulla fasciolata

Common Name:
Speckle-headed Whip Snake

Order/Family:
Squamata: Colubridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits forests. Arboreal and diurnal in habits and likely feeds on lizards.

Distribution: In Singapore, known from the Bukit Timah Nature Reserve and the Singapore Botanic Gardens. It occurs in the Malay Peninsula, Sumatra and Borneo.

Threats: Habitat degradation.



Scientific Interest and Potential Value: A poorly known and locally rare species whose ecology and behaviour merit investigation.

Conservation Measures: Continued habitat protection and management in the Central Catchment Nature Reserves.

Scientific Name:
Boiga drapiezii

Common Name:
White-spotted Cat Snake

Order/Family:
Squamata: Colubridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits forests where it appears to be arboreal and nocturnal in habits.

Distribution: In Singapore, known only from the Central Catchment Nature Reserve. Widely distributed in the Malay Peninsula, Sumatra, Borneo, Java, the Philippines, and Vietnam.

Threats: Habitat degradation.



Scientific Interest and Potential Value: Rediscovered in Singapore in 2009.

Conservation Measures: Continued habitat protection and management in the Central Catchment Nature Reserves.

Scientific Name:
Dendrelaphis haasi

Common Name:
Haas's Bronzeback

Order/Family:
Squamata: Colubridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits forests. Diurnal and mainly arboreal. Often encountered close to slow moving forest streams. Appears to feed on frogs and lizards.

Distribution: In Singapore, known only from the Central Catchment Nature Reserve. Widely distributed in the Malay Peninsula, Sumatra, Borneo and Java.

Threats: Habitat degradation.



Scientific Interest and Potential Value: A poorly known species whose ecology and habits merit detailed investigation.

Conservation Measures: Continued habitat protection and management in the Central Catchment Nature Reserve.

Scientific Name:
Dryophiops rubescens

Common Name:
Keel-bellied Whip Snake

Order/Family:
Squamata: Colubridae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits forests. Diurnal and arboreal but will come to ground to move between open stretches.

Distribution: In Singapore, recorded from the Bukit Timah and the Central Catchment Nature Reserves, Pulau Ubin, Pulau Tekong and the Western Catchment Area. Distributed in the Malay Peninsula, Cambodia, Sumatra, Java, Borneo and parts of the Philippines.

Threats: Habitat degradation.



Scientific Interest and Potential Value: A poorly known species whose ecology and habits are worth investigating. Closely related to the genus *Ahaetulla* which includes the Oriental Whip Snake, one of the commonest snakes in Singapore.

Conservation Measures: Habitat protection. The two nature reserves that it occurs in are already protected.

Scientific Name:
Lycodon subannulatus

Common Name:
Malayan Bridle Snake

Order/Family:
Squamata: Colubridae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits mature forest. Nocturnal and appears to be both arboreal and terrestrial. Known to feed on lizards.

Distribution: In Singapore, known from the Central Catchment Nature Reserve and Pulau Tekong. Distributed in the Malay Peninsula, Borneo and Sumatra.

Threats: Habitat degradation.



Scientific Interest and Potential Value: Reasons for its apparent rarity in Singapore merit investigation.

Conservation Measures: Continued habitat protection.

Scientific Name:
Oligodon signatus

Common Name:
Barred Kukri Snake

Order/Family:
Squamata: Colubridae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits mature forest and is primarily terrestrial.

Distribution: In Singapore, known from the Bukit Timah and Central Catchment Nature Reserves, as well as the Western Catchment Area and Bukit Batok Nature Park. Distributed in the Malay Peninsula, Sumatra and Borneo.



Threats: Habitat degradation.

Scientific Interest and Potential Value: Singapore is the type locality of this poorly known species whose ecology and habits are worthy of investigation.

Conservation Measures: Continued habitat protection and management of the Bukit Timah and Central Catchment Nature Reserves.

Scientific Name:
Phytolopsis punctata

Common Name:
Blackwater Mud Snake

Order/Family:
Squamata: Homalopsidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits swamp forest. Aquatic and burrows well into soft mud. It feeds on fish.

Distribution: In Singapore, known from only one location within the Central Catchment Nature Reserve. This species occurs in peat swamps on the Malay Peninsula, Sumatra and Borneo.



Threats: Habitat degradation and fouling of streams.

Scientific Interest and Potential Value: First discovered in Singapore only in 2014. Its ecology and habits are poorly known.

Conservation Measures: Continued habitat protection and management in the Central Nature Reserves.

Scientific Name:
Bungarus fasciatus

Common Name:
Banded Krait

Order/Family:
Squamata: Elapidae

National Status: Vulnerable (VU)

Habitat and Ecology: Inhabits forests and scrubland. Locally it is found close to the coast and in mangroves. Terrestrial and nocturnal and feeds mainly on other snakes.

Distribution: In Singapore, it is found in Pulau Ubin, Pulau Tekong, Lim Chu Kang, Sungei Buloh and Khatib Bongsu. This species is widely distributed throughout Southeast Asia.



Threats: Habitat degradation.

Scientific Interest and Potential Value: High medical importance as it is a highly venomous snake.

Conservation Measures: Habitat protection and strict policing against illegal collecting and killing.

Scientific Name:
Ophiophagus hannah

Common Name:
King Cobra

Order/Family:
Squamata: Elapidae

National Status: Vulnerable (VU)

Habitat and Ecology: Inhabits forests and scrubland. Terrestrial and diurnal, its diet comprises largely of other snakes and monitor lizards. The female lays her eggs in a nest of vegetation and guards them till they hatch.

Distribution: In Singapore, known from many locations including the Bukit Timah and Central Catchment Nature Reserves, Sungei Buloh Wetland Reserve, Kranji, Sentosa and Pulau Tekong. A complex of several taxa, this species is widespread from India to Southern China and throughout Southeast Asia.



Threats: Habitat degradation. Individuals have been killed by vehicles on the roads. Their skin has been used for the making of belts and wallets and other parts of the snake are collected for food.

Scientific Interest and Potential Value: This is the longest venomous snake in the world. King Cobras are often a highlight in zoos and private herpetological collections.

Conservation Measures: Habitat protection and strict policing against illegal collection and killing.

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Birds

DING LI YONG, ALFRED CHIA, ANUJ JAIN, BENJAMIN P.Y.-H. LEE, DAVID Z.W. LI,
GEOFFREY DAVISON, GEOFFREY LIM, GIM CHEONG TAN, JESSICA LEE,
KIM CHUAH LIM, KIM SENG LIM, MOVIN NYANASENGARAN

Scientific Name:
Dendrocygna javanica

Common Name:
Lesser Whistling Duck

Order/Family:
Anseriformes: Anatidae

National Status: Endangered (EN). The species is assessed to have met criterion D (small population <200), and nearly met the thresholds for criterion A2 with an inferred decline of -43% over 10 years or three generations.

Habitat and Ecology: An uncommon resident of ponds and marshes with well-vegetated fringes, as well as flooded grasslands. It regularly occurs in reedy ponds at the Singapore Botanic Gardens and Gardens by the Bay. Birds are gregarious and may occur in flocks of more than 50 individuals (e.g. Lorong Halus, Kranji, Western Catchment), although parties of smaller numbers (1–6 individuals, Botanic Gardens) are more typical. The highest number ever recorded was a flock of 107 at Senoko wetlands on 14 June 1987 (SINAV 1:6; MBR 1986-87). Nests are usually built in tree cavities and breeding has been recently documented at several sites.

Photo: Con Foley



Distribution: Much of the Indian subcontinent, to S and SE China, mainland SE Asia and Thai-Malay Peninsula east to the Lesser Sundas.

Threats: Habitat loss and degradation (of marshes, flooded grasslands) are the main threats. Extensive areas of marshy countryside have now been cleared or developed in N, W Singapore. Hybridisation with the introduced Wandering Whistling Duck *D. arcuata* where they co-occur poses another threat.

Scientific Interest and Potential Value: One of two resident breeding species of wildfowl in Singapore, and potentially a good indicator of wetland conditions.

Conservation Measures: Habitat restoration of existing wetlands is expected to benefit the species. This may include improved management of ponds in Kranji marshes and elsewhere.

Scientific Name:
Collocalia affinis

Common Name:
Plume-toed Swiftlet

Order/Family:
Apodiformes: Apodidae

Photo: Lim Kim Chuan



National Status: ssp. *cyanoptila*. Vulnerable (VU). Previously considered Critically Endangered. Likely met Criterion D2 - small population and restricted number of locations of breeding colonies (up to 3 known, and none within a protected area) but not thresholds for CR based on new information. First discovered in Singapore in 1990 in Bukit Timah Nature Reserve. Formerly assessed to be very rare and localised but the recent discovery of at least two breeding colonies in the Bukit Timah area indicates a far larger population, estimated to exceed 200 pairs, and likely others undiscovered (Bukit Batok area).

Habitat and Ecology: A locally common swiftlet, most frequently seen foraging over forest edges, the forest canopy (both secondary and primary forests) and woodland. It regularly occurs around the fringes of the Bukit Timah Nature Reserve and in the Central Catchment forest; there are also records from the Southern Ridges, Bukit Batok and Singapore Botanic Gardens. Outside Singapore, the species is known to

form nesting colonies of several hundred individuals in old buildings, bridges and culverts.

Distribution: Thai-Malay Peninsula, Sumatra, Borneo and intervening islands; also Andaman and Nicobar Islands.

Threats: Habitat loss and degradation of secondary forests and woodland outside the Central forests expected to be a major threat. The known breeding colonies are close to residential areas and are highly susceptible to disturbance.

Scientific Interest and Potential Value: A member of a species complex widely distributed across Southeast Asia and the West Pacific.

Conservation Measures: Breeding colonies need to be better documented and protected as they are vulnerable to disturbance and construction.

Scientific Name:
Apus nipalensis

Common Name:
House Swift

Order/Family:
Apodiformes: Apodidae

National Status: ssp. *subfasciatus*. Vulnerable (VU). Previously unassessed. An inferred decline of –42% over 10 years or three generations based on Annual Bird Census data, and therefore meets thresholds for Criterion A2. A previously common and widely distributed swift across Singapore and several satellite islands.

Habitat and Ecology: A locally uncommon swift, most frequently seen foraging over open country, urban areas, parks and woodland, and less frequently in forested areas. Bucknill & Chasen (1927) noted it to be very numerous and easily the commonest swift but numbers have declined steeply since the early 20th century. Most sightings from 2014 onward

Photo: Lee Tiah Khee



comprised singles or pairs, especially around Seletar Dam-Punggol Barat, Kranji Marshes and the Southern Ridges. The largest congregation in recent years was 40–50 individuals at Singapore Quarry in May 2019. Breeding has been documented but not recently, the best known being the colonies around the General Post Office (now Fullerton Hotel) and the Tanjong Pagar Railway Station. The breeding season is from March to May, July to August and November.

Distribution: Himalayas and S China, east to mainland SE Asia, Greater and Lesser Sundas, the Philippines and Sulawesi.

Threats: Competition with Germain's swiftlets, which have become more abundant in recent years due to bird nest farming, may have played a role in its decline. Disturbance at nesting colonies (in urban areas) and the decline of aerial insect populations are potential threats.

Scientific Interest and Potential Value: The only local swift that regularly uses old building facades for nesting.

Scientific Name:
Treron fulvicollis

Common Name:
Cinnamon-headed Green Pigeon

Order/Family:
Columbiformes: Columbidae

National Status: ssp. *fulvicollis*. Endangered (EN). Previously unassessed. The species is expected to meet thresholds for Criterion B and D; it occurs at fewer than 5 locations, and the area of occupancy in Singapore is largely confined to Pulau Ubin, with only sporadic records in the Central Catchment and elsewhere.

Habitat and Ecology: Once considered a rare non-breeding visitor, recent evidence suggests that the species is an uncommon and highly localised resident, given regular documentation from Pulau Ubin. Bucknill & Chasen (1927) considered it an uncommon resident of coastal mangroves in the 1920s. Flocks of up to 20 individuals with immatures have been documented at fruiting trees, including *Ficus* sp. and *Syzygium polyanthum*, associating with Pink-necked *T. vernans* and Thick-billed Green Pigeon *T. curvirostra*. In Singapore, the species occurs mostly in coastal forests and mangroves, but is known to regularly stray into abutting areas of secondary woodland and old plantations.

Distribution: Thai-Malay Peninsula, Sumatra, Borneo, and intervening islands (e.g. Riau, Bangka).

Threats: Habitat loss and degradation of mangroves, secondary forests and woodland outside the Central Catchment Forests expected to be a threat.

Conservation Measures: None at present besides monitoring. Studies are needed to establish causes of decline.

Photo: Con Foley



Scientific Interest and Potential Value: A species strongly associated with coastal forests, and thus a good indicator of the state of mangroves and adjacent swampy forests. Seed disperser for small fruits.

Conservation Measures: Long-term conservation and management of Pulau Ubin's natural areas will benefit the species.

Scientific Name:
Ptilinopus jambu

Common Name:
Jambu Fruit Dove

Order/Family:
Columbiformes: Columbidae

National Status: Vulnerable (VU). Previously unassessed. The species appears to be largely confined to the Central Catchment forests and is therefore expected to meet Criterion D for a small and restricted population.

Habitat and Ecology: An uncommon resident (and non-breeding visitor) of primary and secondary forests, sporadically entering secondary woodland, mangroves old plantations to feed at fruiting trees, typically among green pigeons. Most records are clustered around Bukit Timah Nature Reserve and the Central Catchment Nature Reserve, and adjoining parks. Bucknill & Chasen (1927) reported that the species was 'not common' and recorded 'several in the mangrove on the Singapore bank of the Johore Strait', but there are no recent records from mangroves. The highest count ever recorded was a flock of 15 seen at a *Ficus benjamina* at Sime Road in March 1988. Breeding has not been reported but

Photo: Con Foley



immatures have been seen Oct-Dec, and behaviour suggestive of nesting has been observed (e.g. birds carrying sticks, fruits).

Distribution: Thai-Malay Peninsula, Sumatra and Borneo. Few records on Java.

Threats: Habitat loss and degradation of secondary forests and woodland around and outside the Central forests is expected to be a threat.

Scientific Interest and Potential Value: Seed disperser for small fruits. Individuals are thought to move long distances.

Conservation Measures: The nature reserves and other forested areas provide habitat. Species may benefit from park connector network to access food resources.

Scientific Name:
Ducula aenea

Common Name:
Green Imperial Pigeon

Order/Family:
Columbiformes: Columbidae

National Status: ssp. *polia*. Endangered (EN). Previously unassessed. The species is expected to meet thresholds under Criterion D for small population (<250 individuals) and very small number of locations in Singapore, mostly in the Pasir Ris-Loyang area, Pulau Ubin and Pulau Tekong.

Photo: Lee Tiah Khee



Habitat and Ecology: Formerly considered a rare non-breeding visitor to the Singapore mainland, it is now a local and uncommon resident in the Changi-Pasir Ris area. There is also a known population in Pulau Ubin and Pulau Tekong. Historically, it was thought to be a resident in small numbers in mangroves and coastal areas (Chasen 1923; Gibson-Hill 1950) but may have been extirpated at some point thereafter as a breeding species. Sightings continued to remain scarce until the early 2010s when a regular flock was observed feeding on ornamental palms at Changi from around March 2013. The species may have recolonised woodland in eastern Singapore from Pulau Tekong or Malaysia in the past two decades as records became increasingly regular from 2015 onwards, including at least one nesting record at Changi Business Park. The highest counts involve flocks of 7–15 birds at Changi and Pasir Ris.

Scientific Name:
Porzana cinerea

Common Name:
White-browed Crake

Order/Family:
Ralliformes: Rallidae

National Status: Vulnerable (VU). Previously unassessed. Inferred decline of 33% over 10 years or three generations based on Annual Bird Census data and therefore meets thresholds for Criterion A2.

Habitat and Ecology: An increasingly uncommon resident of freshwater wetlands with floating vegetation, marshes and wet grasslands. Kelham (1883) noted that it was formerly 'very plentiful' but became less common owing to drainage and urban expansion (also Robinson & Chasen 1936). Most recent records are concentrated in the wetlands on the western fringes of the Kranji Reservoir (e.g. Kranji Marshes, Neo Tiew) and adjacent marshy areas in Lim Chu Kang. There are also records from Sungei Buloh Wetland Reserve and the wetlands in Lorong Halus. Breeding has been documented, with the most recent record of two adults with two chicks at Neo Tiew Harvest Lane in Sep 2020.

Distribution: Indian Subcontinent and S China, and much of SE Asia east to the Philippines and Sulawesi.

Threats: Habitat loss and degradation of secondary forests and woodland in eastern Singapore (Changi), Pulau Ubin and Pulau Tekong may pose a threat.

Scientific Interest and Potential Value: Probably an important seed disperser for medium to large fruits.

Conservation Measures: A species recovery plan developed by National Parks Board is in place, and tracking studies to understand its movements and ecology are ongoing.

Photo: Narhafiani Abdul Majid



Distribution: Southeast Asia to New Guinea and Australia, east to Micronesian and the Polynesian islands (Samoa).

Threats: Habitat loss and degradation of wet grasslands and marshes. Extensive stands of reed beds and marshy scrub in the Kranji and Neo Tiew area have been cleared in recent years as a result of agricultural expansion.

Scientific Interest and Potential Value: The only member of the genus in Singapore, and a distinctive member of the avian assemblage in dense wetland vegetation.

Conservation Measures: The creation of artificial wetland habitats, such as those in Gardens by the Bay and Sengkang, may benefit the species.

Scientific Name:
Gallicrex cinerea

Common Name:
Watercock

Order/Family:
Ralliformes: Rallidae

National Status: Endangered (EN). Previously unassessed. Inferred declines of 45-57% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data, therefore meeting thresholds for Criterion A2. Steep declines have also been noted in many parts of Southeast and East Asia.

Habitat and Ecology: An uncommon non-breeding visitor (and long-distance migrant) of mostly freshwater wetlands such as marshes, vegetated edges of ponds, lakes and ditches, and wet grassland. Formerly considered to be very common and widespread (e.g. Kelham 1883, Bucknill & Chasen 1936) but clearance of wet marshy area has reduced suitable habitat significantly (Hails 1987b). Records are widely distributed but increasingly scarce, with a particular concentration to the west, e.g. Kranji Marshes, Neo Tiew, Tuas and Bulim, and south (Marina East). High counts involved as many as five birds have been documented (e.g. Bulim on 7 Jan 2018). During the migration period (Dec-Jan), injured, lost or dead individuals are regularly recovered from residential areas.

Photo: Cheng Heng Yee



Male Watercock in flight.

Distribution: Indian Subcontinent, east to E, NE China, Korea and SE Asia. Northern populations winter in SE Asia, east to Sulawesi and Lesser Sundas.

Threats: Habitat loss is the main threat. A substantial number of records of dead, injured or lost birds, all likely casualties of collisions with structures have been documented, and suggests that the species is vulnerable to disorientation when migrating over urban areas.

Scientific Interest and Potential Value: Breeding populations occurring close to Singapore (to north Johor) suggests that records here involve both regional dispersants and long-distance migrants.

Conservation Measures: The creation and management of wetland habitats, such as stands of marshy vegetation in Gardens by the Bay and Kranji Marshes, may benefit the species.

Scientific Name:
Porphyrio poliocephalus

Common Name:
Grey-headed Swamphen

Order/Family:
Ralliformes: Rallidae

Photo: Con Foley



National Status: ssp. *viridis*. Critically Endangered (CR). Previously Near Threatened. Estimated declines of 57-61% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data meets thresholds for Criterion A2. However, actual rates of decline are believed to be more severe and the species has completely disappeared from one well-monitored area of Kranji where it was once common.

Habitat and Ecology: A formerly common and localised resident of freshwater wetlands, marshes (and marshy scrub), wet grasslands in western Singapore; very few recent records. In the 1980s, the species colonised and became established in marshland formed by the creation of the Kranji and Poyan Reservoirs (Hails 1988). The well-documented population in Kranji has declined since the mid-2010s although the cause of decline is unclear. High counts of up to 15 individuals were documented from Kranji Marshes in March 1989.

Breeding has been reported, with several records between 1986 and 2017 but none in recent years.

Distribution: Middle East and the Indian Subcontinent, east to mainland SE Asia and the Thai-Malay Peninsula.

Threats: Habitat loss and degradation of wet grasslands and marshes. Extensive stands of reed beds and marshy scrub in the Kranji and Neo Tiew area have been cleared in recent years due to agricultural expansion and land use change.

Scientific Interest and Potential Value: A member of a species complex widely distributed across Southeast Asia, the Indian Subcontinent and the Middle East.

Conservation Measures: Further research to understand the drivers of decline would be needed.

Scientific Name:
Tachybaptus ruficollis

Common Name:
Little Grebe

Order/Family:
Podicipediformes: Podicipedidae

National Status: ssp. *poggei*. Critically Endangered (CR). Meets thresholds for Criterion B and D – the population of the species is unlikely to exceed 50 individuals, and restricted to no more than five sites, only one of which is protected. The species is also estimated to have declined by 48-67% over 10 years or three generations based on Asian Waterbird Census data.

Habitat and Ecology: A highly localised resident of freshwater ponds with vegetated margins, including quarry ponds. This species did not occur historically, and the first known record was from Punggol in Dec 1992. A small population was found in a series of ponds by Sungei Serangoon (Lorong Halus wetlands) and as many as 10 adults have been detected. A separate population of up to 13 birds was found at a quarry pond at Tampines in 1998 but the population was presumably lost when this site was drained. The first breeding record was 3 adults with a juvenile at Lorong

Photo: Mohamad Zahidi



Halus on 25 Oct 1994, with several more thereafter. The documented breeding season is Oct to May and Aug.

Distribution: Widely distributed across Eurasia and Africa: W Europe and Sub-Saharan Africa, Middle East, east to the Indian Subcontinent, much of E, NE China and SE Asia.

Threats: Loss, degradation and disturbance of often ephemeral freshwater pond habitat are the key threats, alongside invasive fish which may increase chick mortality.

Scientific Interest and Potential Value: The only breeding species of grebe in the region.

Conservation Measures: Several quarry ponds are included within protected and managed areas. Further research to understand habitat requirements and the drivers of decline would be needed.

Scientific Name:
Himantopus himantopus

Common Name:
Black-winged Stilt

Order/Family:
Charadriiformes: Recurvirostridae

National Status: Data Deficient (DD). Previously unassessed. Insufficient data to trigger thresholds for Red List criteria but more research is needed on the breeding population.

Habitat and Ecology: Considered a rare winter visitor and passage migrant to freshwater marshes, ponds and wet grasslands until it was discovered breeding in Pulau Tekong in 2019. The first record for Singapore was in 1918 (Robinson & Chasen 1936; Gibson-Hill 1950). Whilst rare, small groups or individuals have been sporadically found in wetlands across the country during migratory periods, with recent documentation from Jurong Lake Gardens, Sungei Buloh, Marina East and Tuas South, and are presumably from migratory populations. Two chicks seen on 27 and 29 Jul 2019, together with several adults on Pulau Tekong provided definitive proof of breeding and may have involved recent colonisation with source populations from E Johor. The birds also interacted with nesting Pied Stilts *H. leucocephalus* in the vicinity. Both species have recently expanded their breeding range in Malaysia.



leucocephalus in the vicinity. Both species have recently expanded their breeding range in Malaysia.

Distribution: Breeds widely across Eurasia and Africa. Northern populations winter in N Africa and the Middle East, Indian Subcontinent, east to S China and SE Asia.

Threats: Habitat loss and degradation of wet grasslands and marshes. However, the species is able to utilise ephemeral habitat such as vegetated ponds formed on newly reclaimed land.

Scientific Interest and Potential Value: A member of a species complex closely related to Pied Stilt, with which extensive hybridisation has been documented.

Conservation Measures: Further surveys needed to establish the size of the breeding population on Pulau Tekong.

Scientific Name:
Pluvialis fulva

Common Name:
Pacific Golden Plover

Order/Family:
Charadriiformes: Charadriidae

National Status: Vulnerable (VU). Previously unassessed. The species is estimated to have declined by 31–39% over 10 years or three generations based on Asian Waterbird Census data, and therefore meeting thresholds for Criterion A2 (>30% in 10 years).



Habitat and Ecology: Formerly considered a very common winter visitor and passage migrant to intertidal flats, mangroves and estuaries; the species also uses fields, open scrubby areas on reclaimed land, grassy areas and occasionally golf courses for foraging and as roosts. The birds typically arrive from late Aug and large flocks are known to occur at Sungei Buloh and Mandai mudflats. The Pacific Golden Plover has been considered the most abundant wintering shorebird in Singapore with mid-winter counts formerly exceeding 1,000 birds and the highest count being 2,000 individuals in 2005 (data: NParks). However, numbers have plummeted in the past two decades with much smaller congregations reported. Recent counts in Sungei Buloh typically involve 300-500 individuals (data: NParks).

Distribution: Breeds across the Eurasian Arctic east to W Alaska. Winters across E Africa, Indian

Subcontinent, S China and SE Asia, east to Australia and New Zealand.

Threats: Habitat loss and degradation of coastal intertidal areas (and grassy high tide roosts), but the species is especially vulnerable to threats across the East Asian-Australasian Flyway (outside Singapore), particularly shorebird hunting (and bycatch).

Scientific Interest and Potential Value: The population makes up a significant proportion of wader totals using the East Asian Australasian Migratory Flyway.

Conservation Measures: Long-term conservation and management of the Sungei Buloh and Mandai coastline is expected to benefit wintering populations.

Scientific Name:
Anarhynchus dealbatus

Common Name:
White-faced Plover

Order/Family:
Charadriiformes: Charadriidae

National Status: Endangered (EN). Previously unassessed. The species may have declined by 44–53% over 10 years or three generations based on Asian Waterbird Census data for the similar-looking Kentish Plover *C. alexandrinus* (with which it was formerly considered to be conspecific), therefore meeting thresholds for Criterion A2.

Habitat and Ecology: An uncommon and highly localised winter visitor in small numbers to sandy and rocky coasts, including rocky seawalls. White-faced Plover is typically seen associating with large groups of other plovers (e.g. Tibetan Sand-plover *A. atrifrons*). Records used to be mostly concentrated around Tuas and Changi, but the rocky seawall and breakwater at Marina East appears to be a regular wintering locality, with up to five individuals recorded over Jan-Mar 2022. The highest count to date is eight individuals reported in Oct 2008.



Anarhynchus dealbatus breeding plumage.



Anarhynchus dealbatus non-breeding plumage.

Distribution: Breeds SE China (Fujian) to Vietnam and Cambodia, with recent breeding reported S Vietnam. Winters mainland SE Asia coasts to Thai-Malay Peninsula and Borneo.

Threats: Habitat loss and degradation of coastal intertidal areas. The species is vulnerable to threats across the East Asian-Australasian Flyway (outside Singapore), particularly shorebird hunting (and bycatch).

Scientific Name:
Rostratula benghalensis

Common Name:
Greater Painted-snipe

Order/Family:
Charadriiformes: Rostratulidae

National Status: Endangered (EN). Formerly Critically Endangered. The species may have declined by 43–57% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data, and therefore met thresholds for Criterion A2. However, it appears to be adaptable and is known to colonise marshy areas, including such habitat on reclaimed land. Crepuscular, and hard to detect during surveys, so likely overlooked.

Habitat and Ecology: An uncommon resident occurring in well-vegetated edges of freshwater ponds and ditches, and wet scrub and grassland, including on reclaimed land. Records are widely distributed, with sightings spanning Jurong West, parts of Lim Chu Kang to the Singapore Botanic Gardens, Seletar and Lorong Halus wetlands. The highest counts to date involved 12 individuals at Serangoon in 1992, and 11 at Kranji Marshes in Feb 2022. There are several documented breeding records, most recently from Jan-Apr 2022 when at least two adult males with three to five chicks were documented at Marina East. Breeding has been documented in Feb, Jun, Jul and Oct in Singapore.

Scientific Interest and Potential Value: Until recently it was thought to be a localised subspecies of Kentish Plover but phylogenetic studies show that it is distinct.

Conservation Measures: None specific, other than protection under the Wildlife Act.



Distribution: Sub-Saharan Africa, east to Indian subcontinent, S, E China, and across SE Asia to the Lesser Sundas.

Threats: Habitat loss and degradation of wet grassland and scrub. Marshy areas that form on reclaimed land are often colonised but such habitat tends to be ephemeral.

Scientific Interest and Potential Value: A polyandrous species, females more brightly plumaged than males.

Conservation Measures: Occurs within wetlands in some protected areas, e.g., Singapore Botanic Gardens. The maintenance and management of stands of rank marshy vegetation and reedbeds in Kranji Marshes and Lorong Halus wetlands may benefit the species.

Scientific Name:
Numenius arquata

Common Name:
Eurasian Curlew

Order/Family:
Charadriiformes: Scolopacidae

National Status: ssp. *orientalis*. Endangered (EN). Previously unassessed. The species is estimated to have declined by 47% over 10 years based on Annual Bird Census data and exceeding 90% when generation length is considered, and therefore meets thresholds for Criterion A2.

Habitat and Ecology: A rare winter visitor and passage migrant to muddy and sandy intertidal flats and estuaries, including on Pulau Ubin and Pulau Tekong. In Malaysia and Indonesia, the species typically associates with large flocks of Whimbrel *N. phaeopus*, godwits *Limosa* sp. and Great Knot *Calidris tenuirostris*. Historically, the strongholds for wintering birds were the Changi coast (e.g. Changi Cove) and the Serangoon Estuary (now mostly reclaimed), with six individuals reported from Serangoon in Sep 1987 being the highest count. Recent records mostly involve singletons from Sungei Buloh and the Pulau Tekong coast, with a high of four birds in Oct 2016.

Distribution: Breeds widely across Eurasia, from W Europe to Mongolia and N China; winters across Africa and Middle East, eastwards to E China and SE Asia.



Threats: Habitat loss and degradation of coastal intertidal areas. The species is also vulnerable to threats across the East Asian-Australasian Flyway, particularly shorebird hunting.

Scientific Interest and Potential Value: Scattered breeding populations across Europe and northern Asia migrate to different southern wintering grounds. The species has declined over much of its range and is Red Listed by several nations.

Conservation Measures: The sustained conservation and management of the Sungei Buloh Wetland Reserve and Chek Jawa (Pulau Ubin) coastline may benefit the species and several other shorebirds. Further surveys of wintering shorebirds on the Pulau Tekong coast may help to establish the importance of that site.

Scientific Name:
Limosa limosa

Common Name:
Black-tailed Godwit

Order/Family:
Charadriiformes: Scolopacidae



National Status: ssp. *melanuroides*. Critically Endangered (CR). Previously unassessed. The species is estimated to have declined by 48% over 10 years based on Annual Bird Census data, and exceeding 90% when generation time is considered, and therefore meets thresholds for Criterion A2.

Habitat and Ecology: An uncommon winter visitor and passage migrant to sandy and muddy intertidal flats and estuaries, and occasionally freshwater ponds. The maximum count was 141 birds at Sungei Buloh in January 1996, but most records involve far fewer individuals and are concentrated over the autumn months. In recent years, counts typically number below 10 and there are years with no records. The highest count between 2014 and 2020 involved 32 birds at Sungei Buloh in September 2015. A few individuals continue to use Sekudu rocks off Pulau Ubin as a high tide roost, and these birds are likely to feed at Chek Jawa or Pulau Tekong.

Scientific Name:
Tringa totanus

Common Name:
Common Redshank

Order/Family:
Charadriiformes: Scolopacidae

National Status: ssp. *eurhina*, *terrignotae*, *ussuriensis*. Endangered (EN). Previously unassessed. The species is estimated to have declined by 26–50% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data, and therefore meets thresholds for Criterion A2.

Habitat and Ecology: A winter visitor and passage migrant occurring in muddy intertidal flats, estuaries and mangrove creeks. Also feeds in ponds and occasionally, flooded fields and marshes, while roosting in mangroves, and typically associates with Marsh Sandpiper and Common Greenshank when they are present. The species has been considered among the commonest shorebird species in Singapore but the rate of decline indicates that this may not continue. The highest count to date involved 1093 individuals

Distribution: Breeds across Eurasia: from N Europe, east to N China; winters S Europe and Africa, eastwards to Indian Subcontinent, SE Asia and Australia.

Threats: Habitat loss and degradation of coastal intertidal areas. The species is also vulnerable to threats across the East Asian-Australasian Flyway, particularly shorebird hunting.

Scientific Interest and Potential Value: A remarkable long-distance migrant.

Conservation Measures: The sustained management of the Sungei Buloh Wetland Reserve and Chek Jawa (Pulau Ubin) coastline may benefit the species and several other shorebirds.



at Sungei Buloh in Sep 1998. Counts in recent years are lower, with congregations of around 200 and 250 birds at Sungei Buloh being more typical.

Distribution: Breeds widely across Eurasia: Scandinavia east to N China and Japan; also C Asia and the Qinghai-Tibetan Plateau. Winters Africa and Middle East, east to the Indian Subcontinent, SE Asia and Australia.

Threats: Habitat loss and degradation of coastal intertidal areas. As for all other migratory shorebirds, populations are at risk on their breeding grounds, wintering grounds and their intervening migratory routes.

Scientific Interest and Potential Value: Through satellite tracking, wintering birds in Sungei Buloh and Ubin have been tracked to breeding areas in the Tibetan Plateau, and migrating across the Himalayas (Li et al. 2021). Young birds often do not complete the full

migration to breeding areas, e.g. one individual banded as a juvenile in Senoko in Sep 1983 was recaptured at Pattani Bay, Thailand in Jul 1985 (MBR 1984-85).

Conservation Measures: The sustained management of mudflat habitat in Sungei Buloh will benefit the species. Extensions of the boundaries of the protected area towards the intertidal flats and Mandai will secure key foraging and roost habitat.

Scientific Name:
Tringa stagnatilis

Common Name:
Marsh Sandpiper

Order/Family:
Charadriiformes: Scolopacidae

National Status: Endangered (EN). Previously unassessed. The species is estimated to have declined by 41–52% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data, and therefore meets thresholds for Criterion A2.

Habitat and Ecology: Formerly common, the Marsh Sandpiper is a rare winter visitor and passage migrant occurring in sandy and muddy intertidal flats, estuaries and mangrove creeks, and occasionally foraging in freshwater marshes, ponds and wet grassland. It was once among the most abundant waders in Singapore, with the highest count being 770 individuals reported from Sungei Buloh in Dec 1998. Recent records are from Sungei Buloh, Seletar Dam and Pulau Ubin. Counts in recent years are a magnitude lower than the 1990s with mostly small parties of 2 to 5 birds and singletons reported except for a high count of 23 birds recorded in Oct 2020.

Photo: Yong Ding Li



Distribution: Breeds across Eurasia, from W Russia, east to NE China; winters Africa, SW Europe and Middle East, east to Indian Subcontinent, SE Asia and Australia.

Threats: Habitat loss and degradation of coastal intertidal areas. The species is also vulnerable to threats across the East Asian-Australasian Flyway.

Scientific Interest and Potential Value: One of the few wader species regularly using freshwater habitats.

Conservation Measures: The long-term conservation and management of mudflat habitat in Sungei Buloh will benefit the species. Recent extension of the boundaries of Sungei Buloh will also help secure key foraging habitat in Singapore.

Scientific Name:

Thalasseus bergii

Common Name:

Greater Crested Tern

Order/Family:

Charadriiformes: Laridae

National Status: ssp. *cristatus*. Endangered (EN). Previously unassessed. The species is estimated to have declined by 42% over 10 years or three generations based on data from the Annual Bird Census and exceeding 90% when generation time is considered, and therefore meets thresholds for Criterion A2. It is however still regularly observed in the Johor Straits although numbers seen in recent years are smaller.

Habitat and Ecology: A non-breeding visitor to the coastal waters around Singapore, and most offshore islands; birds regularly rest on intertidal flats and sand bars. The waters around Pulau Ubin and Pulau Tekong (in the Johor Straits) are where there are regular feeding and roosting congregations. Gibson-Hill (1950) reported that it was fairly plentiful along the Singapore Strait and noted that it was then the commonest tern; this observation remains valid to this day. Congregations of c. 100 on kelong poles in the Johor Straits and feeding off Sungai Serangoon were typical during the 1990s. While still regular, recent counts are much lower, with

Photo: Norhafiani Abdul Majid



counts at mostly 10–50 individuals from 2019–2021. High counts include 145 birds on the sandy intertidal flats at Chek Jawa, Ubin in Jan 2001.

Distribution: Breeds in colonies off the coasts of Africa, the Arabian Peninsula and Iran (i.e. Red Sea, Persian Gulf), and the Indian Subcontinent, eastwards to E China, SE Asia and Australia.

Threats: Plastic and water pollution likely pose a threat to the species, as they do with most seabirds. Other threats tend to operate at breeding colonies, of which there are none in Singapore waters.

Scientific Interest and Potential Value: An important component of the seabird community, taking small fish and invertebrates.

Conservation Measures: The sustained management of coastal habitat around Pulau Ubin will likely benefit the species.

Scientific Name:

Onychoprion anaethetus

Common Name:

Bridled Tern

Order/Family:

Charadriiformes: Laridae

National Status: ssp. *anaethetus*. Endangered (EN). Previously unassessed. Expected to meet thresholds for Criterion D; the population at the only known breeding colony (Horsburgh Lighthouse, Pedra Branca) is estimated at no more than 200 individuals.

Photo: Lim Kim Chuah



Habitat and Ecology: An uncommon tern of offshore waters around Singapore, and a localised breeding visitor to Pedra Branca. Specimens collected from Horsburgh in Oct 1921 were the first record for Singapore. Individuals and small groups are regularly documented during pelagic surveys and the highest known counts involve 100–140 individuals in the Singapore Straits. Bridled Terns are known to disperse during the winter months and return to breed in Apr. From Apr, Bridled Terns are the dominant species of tern on the island where they nest on the flat roof of buildings, unusual as the species is normally known to nest on coral beaches, rocky and sandy slopes. One egg is laid.

Distribution: Breeds across tropical Atlantic, Indian, and W Pacific Oceans. In SE Asia, breeding colonies are on small islands across the South China Sea, to

the Philippines and eastward to New Guinea. Large breeding colonies are known from the E coast of Pahang and Johor (e.g. Pulau Seri Buat, Pulau Tinggi) based on recent surveys.

Threats: Plastic and water pollution likely poses a threat to the species, as it does with most seabirds. Other threats tend to operate at breeding colonies.

Scientific Interest and Potential Value: Reliant on offshore islands for breeding.

Conservation Measures: The species is well protected as Horsburgh Lighthouse is a restricted area, as long as no attempt is made to intervene. Further surveys should aim to track the size of the breeding population.

Scientific Name:
Sterna sumatrana

Common Name:
Black-naped Tern

Order/Family:
Charadriiformes: Laridae

National Status: ssp. *sumatrana*. Endangered (EN). Expected to meet thresholds for Criterion D; the population at the only known breeding colony (Loyang Rocks) is estimated to be well below 100, with the single highest count consisting of 30–35 individuals.

Habitat and Ecology: An uncommon resident of inshore coastal waters around Singapore, and a localised breeder on Loyang Rocks. This species is typically more common in the Straits of Johor than the Singapore Straits where Bridled Tern is the dominant resident tern. Birds seen here may also involve dispersants from further north in Johor. Breeding has been regularly observed at Loyang Rocks since the 1940s, with three pairs documented in Jul 1949 (Gibson-Hill 1950). Birds lay a single egg on the bare rock surface, with up to seven pairs documented incubating or feeding young. The documented breeding season is from Apr to Aug. The highest counts known to date involved 30 birds off



Changi Point on 12 Apr and 35 off Pulau Ubin in Apr 2005.

Distribution: Breeds in colonies across Indian Ocean, E and SE Asia, Indonesia, the Philippines, and New Guinea to Australia.

Threats: Plastic and water pollution likely pose a threat to the species, as they do with most seabirds. Large congregations of photographers who approach too close may cause disturbance to nesting birds, and the sole breeding site is technically unprotected.

Scientific Interest and Potential Value: Familiar to many people as its image used to feature on Singapore currency.

Conservation Measures: Further actions are needed to enhance protection for nesting birds on Loyang Rocks.

Scientific Name:
Leptoptilos javanicus

Common Name:
Lesser Adjutant

Order/Family:
Ciconiiformes: Ciconiidae

National Status: Vulnerable (VU). Previously unassessed. Data on the species' status is still limited but it is reasonable to benchmark to the species' IUCN Red List status.

Habitat and Ecology: A small resident population once occurred in Singapore until the 1900s but this went extinct and the species was subsequently considered a rare non-breeding visitor, likely from colonies on the Johor coast. Records, typically singletons, have been concentrated around Sungei Buloh Wetland Reserve, Mandai Mudflats, Lim Chu Kang and Neo Tiew Crescent, and in the Western Catchment. The Lesser Adjutant appears to have become commoner in the past 5–6 years, and since 2020 small parties are regularly seen foraging on intertidal mudflats and mangrove creeks in Sungei Buloh, with as many as 17 birds counted in April 2023. A boat-based survey that spanned the coastal waters off Raffles Marina



and Mandai Mudflats tallied 15 individuals, with 10–13 seen feeding in Sungei Buloh alone. The species scavenges carcasses but also hunts fish and reptiles.

Distribution: Indian Subcontinent, east to mainland SE Asia and the Greater Sundas.

Threats: Habitat loss and degradation of coastal intertidal areas and mangroves.

Scientific Interest and Potential Value: Across its range the species is known to play an important scavenger role, as with vultures. Its unusual appearance can make it a flagship species.

Conservation Measures: The sustained conservation and management of coastal wetlands in Sungei Buloh, Lim Chu Kang and Kranji coastline is likely to benefit the species.

Scientific Name:
Ixobrychus sinensis

Common Name:
Yellow Bittern

Order/Family:
Ciconiiformes: Ardeidae

National Status: Vulnerable (VU). Previously unassessed. The species, whilst still often seen, is estimated to have declined by 35% over 10 years or three generations based on Annual Bird Census, and therefore meets thresholds for Criterion A2.



Habitat and Ecology: A winter visitor (possibly rarer as a resident breeder) of well-vegetated edges of ponds, freshwater marshes, reedbeds and wet grasslands. Migrants may also show up in mangroves and woodland with marshy fringes. Evidence of breeding dates back to the 1980s along the marshland abutting Kranji Reservoir, and the first nest was documented in Jun 1986. The known breeding period in Singapore spans May to Aug. Marshy areas and reedbeds in the Kranji and Neo Tiew area remain a stronghold, but birds occur widely during the migratory period.

Distribution: Indian subcontinent; C and E China, to SE Russia, Japan; Taiwan, SE Asia, Greater and Lesser

Sundas, the Philippines and New Guinea. E Asian populations are migratory, wintering in SE Asia.

Threats: Loss and degradation of freshwater wetland (ponds), marshland and reedbed habitat the key threat. Agricultural expansion in the Kranji area has driven clearance of marshy scrub and *Phragmites* and cattail reedbeds.

Scientific Interest and Potential Value: An indicator species in freshwater wetland habitat.

Conservation Measures: Further research to understand the drivers of decline would be needed.

Scientific Name:
Egretta eulophotes

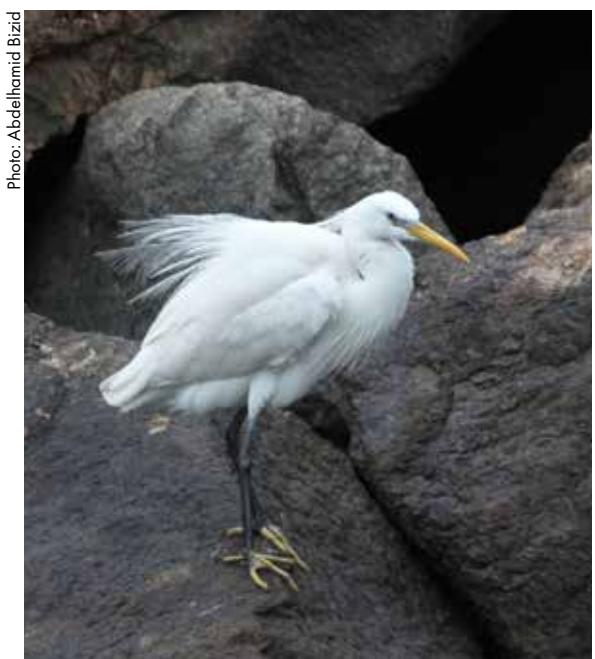
Common Name:
Chinese Egret

Order/Family:
Ciconiiformes: Ardeidae

National Status: Endangered (EN). The species is estimated to have declined by 43–69% over 10 years or three generations based on Annual Bird Census and Asian Waterbird Census data, and therefore meets thresholds for Criterion A2. Considered as globally Vulnerable in the IUCN Red List.

Habitat and Ecology: A rare winter visitor occurring in intertidal flats, estuaries, mangroves and creeks across Singapore, including Pulau Ubin and Pulau Tekong. The Serangoon Estuary (now Lorong Halus Wetlands) used to be a known wintering stronghold with high counts exceeding 10 individuals recorded through the 1980s. In recent years, double-digit counts come solely from Chek Jawa, Pulau Ubin, with up to 10 birds counted in Apr 2022. The species is more dependent on coastal wetlands than other egrets, and forages very actively on intertidal flats.

Distribution: Breeds on coasts of Russian Far East, Korean Peninsula, NE and E China; winters coasts of mainland SE Asia, Thai-Malay Peninsula and the Greater Sundas, east to Sulawesi and the Philippines.



Threats: Habitat loss and degradation of coastal intertidal areas and mangroves.

Scientific Interest and Potential Value: The rarest of the egrets occurring in Singapore. One bird observed on 27 Feb 2022 on Pulau Ubin had been banded in South Korea on 24 Jun 2021 as a juvenile at its nest.

Conservation Measures: The sustained management of coastal intertidal habitat around Ubin, especially Chek Jawa, will likely benefit the species.

Scientific Name:

Ardea sumatrana

Common Name:

Great-billed Heron

Order/Family:

Ciconiiformes: Ardeidae

National Status: ssp. *sumatrana*. Critically Endangered (CR). New information suggests that while the population has increased over time, the species continues to meet thresholds for Criterion D for a small population estimated at fewer than 50 individuals.

Habitat and Ecology: An uncommon resident occurring in intertidal flats, estuaries and mangrove creeks, as are rocky shores and reefs on small islands in the Singapore and Johor Straits, including Pulau Ubin and Pulau Tekong. Records from the Johor Straits had been scarce, but the species appears to have colonised the estuarine mangroves in Sungei Buloh, while the overall number of records has increased. At least two pairs appear to have established themselves at Sungei Buloh Wetland Reserve, and birds are now regularly seen in courtship display. The highest counts recorded in recent years involved five birds on Mandai Mudflats in Dec 2022, and a total of eight during a pelagic survey along the Johor Straits between Raffles Marina and Mandai Mudflats. Breeding was first reported in 1978: a nest with one young on a mangrove islet off Pulau Bukom. The breeding period spans the months of Feb to Jun, and Nov.

Distribution: Coastal SE Asia, from Greater and Lesser Sundas, the Philippines, east to Sulawesi, Moluccas, New Guinea and N Australia.

Photo: Yong Ding Li



Threats: Habitat loss and degradation of coastal intertidal areas, reefs and mangroves.

Scientific Interest and Potential Value: Largest resident heron, and unlike its closest relatives the species appear to be a coastal specialist.

Conservation Measures: The sustained management of coastal habitat around Ubin, especially Chek Jawa, and Sungei Buloh is expected to benefit the species.

Scientific Name:
Elanus caeruleus

Common Name:
Black-winged Kite

Order/Family:
Accipitriformes: Accipitridae

National Status: ssp. *vociferus*. Vulnerable (VU). The species is assessed to have met thresholds for Criterion D for small population not exceeding 200 individuals, whilst suitable open country habitat has declined in Singapore.

Habitat and Ecology: A locally common resident of open country habitats such as grassland, scrub, freshwater marshes and occasionally playing fields, often uses recently reclaimed land. The species was historically considered a winter visitor, but sometime between the 1970s to 1980s it probably colonised recently cleared or reclaimed areas. Records are widely scattered but with concentrations in the Changi/Tanah Merah, Serangoon, Kranji and Tuas areas. The first breeding record was a pair seen at nest at Jalan Lembah Bedok in May 1986. More recently, there are several breeding records spanning 2011 to 2022, including well documented records from the Turut Track (Kranji) area.

Photo: Lua Wai Heng



Distribution: S Europe and Africa, east to S China and Indian Subcontinent. Also much of SE Asia, Sulawesi and New Guinea.

Threats: Loss and clearance of open country habitats, including grassland and coastal scrub.

Scientific Interest and Potential Value: The species complex has a very wide range from the Americas to Australia. It is a predator of rats and other small mammals.

Conservation Measures: Sustained management of open scrubby areas in the Kranji area can be expected to benefit the species.

Scientific Name:
Spilornis cheela

Common Name:
Crested Serpent Eagle

Order/Family:
Accipitriformes: Accipitridae

National Status: ssp. *malayensis*. Critically Endangered (CR). The species is assessed to have met thresholds for Criterion D with a small breeding population estimated at 2–5 pairs.

Photo: Norhafiani Abdul Majid



Habitat and Ecology: A rare and localised resident of forests, secondary woodland, old plantations and mangroves, particularly the Central forests, Pulau Ubin and Pulau Tekong. ssp. *burmanicus* from mainland SE Asia has also been sporadically reported during the migratory period, as have presumed dispersants of ssp. *malayensis* from Malaysia. Robinson (1927) thought its occurrence was doubtful but Gibson-Hill (1950) considered it a resident in very small numbers. Presently, regular sites for the species are Pulau Ubin where possibly one pair occurs, and at least a pair in the Central Catchment Nature Reserve and adjoining woodland. The best known locality for the species is the woodland patch at Goldhill Ave, adjacent to MacRitchie forest. The pair at Goldhill was first reported in 2011, has been recorded regularly thereafter with mating observed in March 2021 (one young fledged).

Distribution: Indian Subcontinent and S China, mainland SE Asia, east to Borneo, Sumatra and Java.

Threats: Habitat loss and degradation of secondary forests and woodland outside the Central forests expected to be a major threat.

Scientific Interest and Potential Value: A specialist predator of mostly reptiles, especially arboreal snakes.

Conservation Measures: The species is assumed to be secure in the key protected areas, but long-term management and protection of woodland areas in W Singapore and Ubin may benefit the species.

Scientific Name:
Haliaeetus ichthyaetus

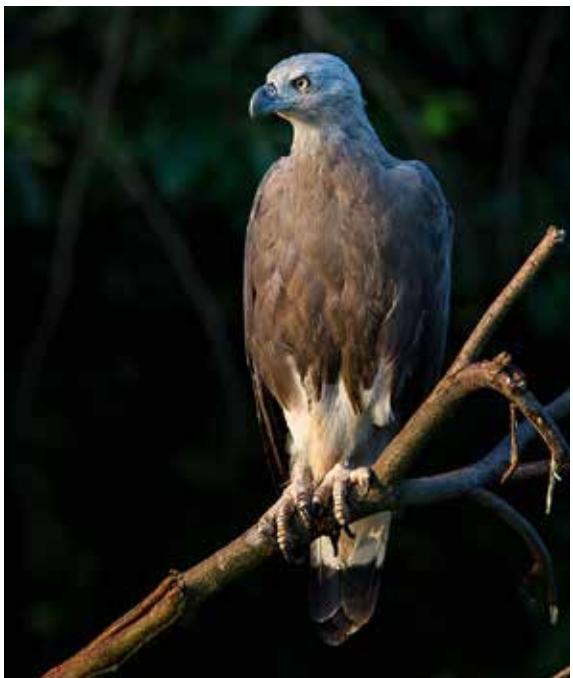
Common Name:
Grey-headed Fish Eagle

Order/Family:
Accipitriformes: Accipitridae

National Status: Vulnerable (VU). The species is assessed to have met thresholds for Criterion D due to its relatively small population. However, the population is estimated to have increased by more than 160% over 10 years or three generations based on Annual Bird Census data, and the area of occupancy has expanded. In the 1990s, the population was estimated at no more than 3 pairs.

Habitat and Ecology: An increasing and widespread resident (and probably non-breeding visitor) of forested reservoirs, quarries and adjacent woodland. The first Singapore record was an individual seen off Loyang in 1949, the next record at Tanjong Murai in 1980, and another was at MacRitchie Reservoir in 1983. Subsequently, records became increasingly frequent in the Central Catchment Nature Reserve, especially in MacRitchie Reservoir, and Poyan in the Western Catchment. By 2010, birds were regularly seen on almost every month at several sites across Singapore,

Photo: Wang Bin



including Sungei Buloh and Pulau Ubin. There are breeding records annually but possibly the best documented breeding involves a pair at Little Guilin Park.

Distribution: Indian Subcontinent, mainland SE Asia and the Malay Peninsula, east to the Philippines and Sulawesi.

Threats: Habitat loss and degradation of riparian secondary forests and woodland outside the Central forests is expected to be a major threat.

Scientific Interest and Potential Value: A specialist predator of fish, directly competing with White-bellied Sea Eagle, typically requiring forested banks of large water bodies.

Scientific Name:
Bubo sumatranus

Common Name:
Barred Eagle Owl

Order/Family:
Strigiformes: Strigidae

National Status: ssp. *sumatranus*. Critically Endangered (CR). Previously unassessed. The species is assessed to have met thresholds for Criterion D with an estimated population at less than 50 individuals. However, the increase in records over recent years suggests a growing population.

Habitat and Ecology: An uncommon resident of forests and tall woodland, primarily in the Central forests and Ubin. The species was believed to be extirpated after a long period with no records until the 1990s where the re-emergence of records may suggest that the species either recently recolonised Singapore or had escaped detection by earlier field surveys. There were several records from Central Catchment and Bukit Timah Nature Reserves between 1995 and 2008, while the first documentation on Pulau Ubin came in July 2015. Breeding has now been confirmed from sightings of juveniles at Pulau Ubin in March 2018, Bukit Timah (Singapore Quarry) in August 2018, 2019 and more recently in the Central Catchment (Rifle Range) in April 2021.

Distribution: Thai-Malay Peninsula, Sumatra, Java, Borneo and Bali

Threats: Habitat loss and degradation of secondary forests and woodland outside the Central forests expected to be a major threat.

Conservation Measures: The species is assumed to be secure in the key protected areas, but long-term management and protection of woodland areas in western Singapore will be important.



Scientific Interest and Potential Value: An apex nocturnal predator in SE Asian forest ecosystems.

Conservation Measures: The species is assumed to be secure in the key protected areas, but long-term management and protection of woodland areas in Pulau Ubin will be important.

Scientific Name:
Strix seloputo

Common Name:
Spotted Wood Owl

Order/Family:
Strigiformes: Strigidae

National Status: ssp. *seloputo*. Vulnerable (VU). Previously Critically Endangered. Expected to have met thresholds for Criteria B and D as population is thought to be quite large, and the species has widely colonised parkland habitat.

Habitat and Ecology: A fairly common resident of forest edges, woodland, old plantations, and parkland widely distributed across Singapore, including on several offshore islands such as St. John's, Kusu, Sentosa and Ubin. The first modern record was a bird seen at MacRitchie Reservoir in December 1985, and since then it has been recorded from many sites throughout the mainland, including the fringes of the Central Catchment Nature Reserve, Singapore Botanic Gardens and the Southern Ridges (e.g. Telok Blangah, Kent Ridge), east to Pasir Ris and Changi. It is possible that the species colonised Singapore in the 1980s from populations in Peninsular Malaysia, as oil palm plantation (a known habitat) became more widespread there. The breeding period is from January to March and August to September, and there are several breeding records, most recently from Pasir Ris Park where a nest was discovered in February 2022, and chicks seen thereafter till June.

Distribution: Mainland SE Asia to the Thai-Malay Peninsula, Sumatra and Java. Also Palawan.

Threats: Habitat loss and degradation of secondary forests and woodland.

Photo: Norhafiani Abdul Majid



Scientific Interest and Potential Value: An adaptable large owl that has spread widely across suburban woodland and parks in Singapore, and possibly an apex predator in such habitat.

Conservation Measures: The species is assumed to be secure in the key protected areas, but long-term protection of woodland area in Pulau Ubin, Pasir Ris and elsewhere will benefit the species.

Scientific Name:
Halcyon coromanda

Common Name:
Ruddy Kingfisher

Order/Family:
Coraciiformes: Halcyonidae

National Status: ssp. *minor*. Critically Endangered (CR). With a tiny estimated population of less than 50 individuals, the species is assessed to have met thresholds for Criterion D and possibly Criterion B.

Habitat and Ecology: A very rare and localised resident of mangrove forests, nipa swamps and adjacent coastal forest on Pulau Tekong and Pulau Ubin (ssp. *minor*). It also occurs as a winter visitor and passage migrant (ssp. *coromanda*? *major*? in forests and woodland throughout Singapore. Historically, the species was recorded from mainland Singapore and the Ayer Merbau island cluster, but mangroves there have been entirely lost to the development of Jurong Island. There have been recent records from Pulau Ubin (2021–2022), and this may either involve recent colonists or a tiny, overlooked population. Pulau Tekong remains a stronghold for the species, and is the only site with breeding evidence, including observations of adults attending to juveniles and fledglings in

Photo: Belinda Wong



the late 1980s. The main influx of the migratory subspecies typically occurs from early October to the end of November and mid-February to March.

Distribution: E China, Korean Peninsula and Japan, to mainland SE Asia, east to the Greater Sundas, Sulawesi and the Philippines.

Threats: Habitat loss and degradation of mangroves and associated coastal vegetation.

Scientific Interest and Potential Value: One of three resident kingfishers in mangroves.

Conservation Measures: The continued protection of mangrove forests in Pulau Ubin and Pulau Tekong will benefit the species.

Scientific Name:
Alcedo meninting

Common Name:
Blue-eared Kingfisher

Order/Family:
Coraciiformes: Alcedinidae

National Status: ssp. *verreauxii*. Endangered (EN). The species is expected to have met thresholds for Criterion D for its small population but it is now known to be widespread, occurring across the Western Catchment, Pulau Ubin, Pulau Tekong, and several woodland sites.

Photo: Con Foley



Habitat and Ecology: A resident typically associated with forested streams in the Central forests. Gibson-Hill (1950) noted that it was resident in very small numbers and found in the more heavily wooded areas of Singapore. The occurrence of the species in Bukit Timah Nature Reserve and its adjoining parks since the 2010s suggests that it has successfully colonised the site from the Central Catchment Nature Reserve. Similarly, it appears to have recently colonised woodland on the fringes of Kranji Reservoir. Breeding has been variously documented, the first being a pair observed mating in July 1996 although no nests have ever been found in Singapore. Several more records of juveniles accompanied by adults have been documented across the Central Catchment and Bukit Timah Nature Reserves.

Distribution: Indian Subcontinent, mainland SE Asia, east to Sumatra, Borneo, Java and Palawan; also in Sulawesi and Lombok.

Threats: Habitat loss and degradation of secondary forests and woodland outside the Central forests expected to be a major threat.

Scientific Interest and Potential Value: A forest-living kingfisher that nests in earth banks.

Conservation Measures: The species is assumed to be secure in the key protected areas, but long-term protection of woodland areas in western Singapore and Pulau Ubin is expected to benefit the species.

Scientific Name:
Psilopogon rafflesii

Common Name:
Red-crowned Barbet

Order/Family:
Piciformes: Megalaimidae

National Status: Vulnerable (VU). Previously unassessed. The species is expected to have met thresholds for Criterion D on the basis of a small population, and is largely restricted to the Central forests. A small decline has been detected based on Annual Bird Census data.

Habitat and Ecology: An uncommon resident of forests and forest edges, and primarily recorded in the Central Catchment and Bukit Timah Nature Reserves, with dispersants recorded elsewhere. It was formerly found on Pulau Ubin (Gibson-Hill 1950) but became extirpated there by the 1950s. A key stronghold in the Central Catchment Nature Reserve is the Nee Soon forest where up to 5 or 6 individuals can be recorded in a morning. The first breeding record was in April 1979 when a nest with young was found at Upper Peirce Reservoir. Since then, there has been several more breeding records, most recently an adult seen feeding berries to a juvenile at Dairy Farm Nature Park in April-May 2022.

Photo: Isabelle Lee



Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra and Borneo.

Threats: Competition with the introduced Lineated Barbet likely an important threat, especially in the fringes of the Central forests.

Scientific Interest and Potential Value: Likely an important fruit disperser for forest trees.

Conservation Measures: The species is assumed to be secure (but has small population size) in the Central forests, which are protected as Nature Reserves. Initiatives to improve forest connectivity can benefit the species.

Scientific Name:

Psittinus cyanurus

Common Name:

Blue-rumped Parrot

Order/Family:

Psittaciformes: Psittacidae

National Status: ssp. *cyanurus*. Endangered (EN). Previously Critically Endangered. The species is assessed to have met thresholds for Criterion B and D due to its relatively small population not exceeding 250 individuals. However, the population is estimated to have increased by 210% over 10 years or three generations based on Annual Bird Census data.

Habitat and Ecology: An uncommon resident of forests, forest edges and woodland, especially in the Bukit Timah and Central Catchment Nature Reserves where it appears locally common and where flocks are regularly observed. Presumed dispersants have been more widely recorded, including on Pulau Ubin. The highest count to date involves a report of 12 individuals, including two juveniles, at Old Upper Thomson Road in July 2018 and comparable numbers at Windsor Nature Park. Breeding has not been directly documented but a female was observed inspecting a tree hole at Bukit

Photo: Con Foley



Timah Nature Reserve on 27 November 1988 (SINAV 2:11).

Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra, Borneo and intervening islands.

Threats: Competition with introduced parakeets (for nesting cavities) may be a potential threat.

Scientific Interest and Potential Value: Possibly a disperser for some forest trees (although more likely a seed predator).

Conservation Measures: A species recovery plan has been developed for the species by the National Parks Board and captive breeding activities are being undertaken at the (Mandai) Bird Paradise. The nature reserves provide protected habitat.

Scientific Name:

Cymbirhynchus macrorhynchos

Common Name:

Black-and-red Broadbill

Order/Family:

Passeriformes: Eurylaimidae

National Status: ssp. *malaccensis*. Critically Endangered (CR). Previously unassessed. The species is expected to have met thresholds under Criterion D for small population (fewer than 50 individuals).

Photo: Norhofiani Abdul Majid



Habitat and Ecology: Formerly considered a very rare non-breeding visitor (to Pulau Ubin), it now seems more likely that the Black-and-Red Broadbill occurs as a rare and localised resident in Pulau Ubin and Sungai Buloh. Bucknill and Chasen (1927) reported that it was an uncommon resident and was quite numerous on Pulau Ubin while Gibson-Hill (1950) considered it to be scarce but then the most plentiful of its family. A male photographed in woodland abutting mangroves on Pulau Ubin in August 2004 was the first confirmed report in four decades, and since then there has been an increase in the regularity of sightings there, including several in the Chek Jawa area from 2022 to 2023, and the Noordin area during a two-year survey of Pulau Ubin's biota. An adult was ringed at Sungai Buloh in 2019.

Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra and Borneo; also Cambodia and S Vietnam.

Threats: Habitat loss and degradation of mangrove forests and adjacent woodland. Small population at high risk of local extirpation.

Scientific Interest and Potential Value: Nests must overhang water. The species is attractive to photographers and birdwatchers.

Conservation Measures: The long-term protection of woodland areas in western Singapore and Pulau Ubin is expected to benefit the species.

Scientific Name:
Pitta megarhyncha

Common Name:
Mangrove Pitta

Order/Family:
Passeriformes: Pittidae

National Status: Critically Endangered (CR). The species is expected to have met thresholds for Criteria B and D based on its small area of occupancy, and equivalently small population on Pulau Ubin and Pulau Tekong.

Habitat and Ecology: An uncommon but localised resident of mangroves and adjacent old plantations and woodland in Pulau Ubin and Pulau Tekong. The species appears to be a specialist feeder on crabs and other mangrove arthropods and is regularly seen hunting crabs on mud mounds and mangrove roots. Bucknill and Chasen (1927) noted the species to be a common resident of mangroves along the northern coast of Singapore but the species apparently became extirpated in the 1980s. Records elsewhere, including one from Sungai Buloh in 2008 may have involved dispersants from southern Johor. Allen (1955) described the first nest for Singapore from the Pasir Panjang area. Several records involving nest-building have been

Photo: Con Foley



documented on Pulau Ubin thereafter, and most recently adults and juveniles were reported in July 2022.

Distribution: Bangladesh, Myanmar, coastal Thai-Malay Peninsula and Sumatra.

Threats: Loss and degradation of mangrove forests.

Scientific Interest and Potential Value: Ecological interactions with the recently colonising Blue-winged Pitta merit further investigation. The latter species was not known to breed in Singapore until the past decade.

Conservation Measures: The species is assumed to be secure in Pulau Ubin.

Scientific Name:
Pericrocotus speciosus

Common Name:
Scarlet Minivet

Order/Family:
Passeriformes: Campephagidae

National Status: ssp. *xanthogaster*. Critically Endangered (CR). The species is expected to have met thresholds for Criterion D for small population (fewer than 50 individuals). There are very few records since the early 2000s when it was regularly documented at Bukit Timah, suggesting continuing declines.

Habitat and Ecology: A very rare resident occurring in tall secondary and primary forest in Bukit Timah and the Central Catchment Nature Reserves (Lim and Gardner 1997). Most recent reports come from Bukit Timah Nature Reserve, where a few birds were regularly encountered up till the late 1990s, sometimes in mixed foraging flocks. There were no records there after March 1998 (SINAV 12:1). Only three records after 2000 were reported elsewhere (SINAV 14:4,



SINAV 18:3, NSSMBR Feb 2021) and all may involve non-breeding visitors. Breeding has not been reported for Singapore.

Distribution: Indian Subcontinent, S and SE China, mainland SE Asia, Greater Sundas and the Philippines. Also present in the Andaman and Nicobars.

Threats: This species is threatened due to its low population levels.

Scientific Interest and Potential Value: A largely canopy-feeding insectivore.

Conservation Measures: None specific to the species other than habitat conservation.

Scientific Name:
Dicrurus macrocercus

Common Name:
Black Drongo

Order/Family:
Passeriformes: Dicruridae

National Status: ssp. *cathoecus*. Vulnerable (VU). Previously unassessed. The species is estimated to have declined by 43% over 10 years or three generations based on the Annual Bird Census data, and therefore meeting thresholds for Criterion A2.

Habitat and Ecology: A winter visitor and passage migrant occurring in grasslands, freshwater marshes, fields and open scrub, including on reclaimed land. Formerly regularly occurring in small numbers, the



evidence suggests that it has declined steadily and it has not been detected in some years since 2000s (LKS pers. obs.) and is corroborated by recent records, when sightings were only rarely reported (NSSMBR Nov 2014, Nov 2018, Mar 2019, Nov 2021, NSSSBR 2022b). Surprisingly, the species is little documented in the historical literature such as Chasen (1923), Bucknill and Chasen (1927), Gibson-Hill (1950).

Distribution: Indian Subcontinent, E, SE and S China, mainland SE Asia, Java and Bali. E Asian populations winter south to SE Asia and the Greater Sundas.

Threats: Loss of open country habitat such as scrub. The increased use of agricultural chemicals may have contributed to its decline at the regional scale.

Scientific Interest and Potential Value: Considered an efficient agent in control of agricultural pests, such

as white grub (*Holotrichia*) (Rocamora and Yeatman-Berthelot 2020).

Conservation Measures: While currently globally abundant, this species is dependent on grasslands and open country, such as those around Tuas, Neo Tiew and Kranji; these are vulnerable to land clearance for development.

Scientific Name:
Hypothymis azurea

Common Name:
Black-naped Monarch

Order/Family:
Passeriformes: Monarchidae

National Status: ssp. *prophata*. Critically Endangered (CR). The species is expected to have met thresholds for Criteria B and D based on its small area of occupancy, and equivalently small population known only from Pulau Tekong.

Habitat and Ecology: A rare and localised resident of secondary forests and adjacent mangrove and woodland on Pulau Tekong Besar and rarely on Pulau Ubin. It is also a very rare non-breeding visitor, with sightings of single individuals reported over the years (SINAV 18:1, NSSMBR Oct 2019, Jan 2021, Mar 2021). Previously, Gibson-Hill (1950) reported that it was resident in small numbers in scrub and thickly wooded areas, although Gregory (1970) mentioned that there were no records collected by the Royal Air Force Ornithological Society between 1967 and 1970.

Photo: Con Foley



Distribution: Indian Subcontinent, S and SW China, mainland SE Asia and Greater Sundas, east to Philippines, Lesser Sundas.

Threats: Loss and degradation of forests on Tekong.

Scientific Interest and Potential Value: A forest understorey insectivore.

Conservation Measures: More individuals may occur if increased habitat loss in southern Johor forces birds to find refuge further south in Singapore.

Scientific Name:
Pycnonotus zeylanicus

Common Name:
Straw-headed Bulbul

Order/Family:
Passeriformes: Pycnonotidae

National Status: Endangered (EN). The species is expected to meet thresholds under Criterion D for small population, but newer data suggest that there has been a sustained population increase since the 2000s.

Habitat and Ecology: An uncommon to locally common resident of secondary forests, forest edge, old plantations, woodland, and parks on the Singapore mainland and Ubin. Several specimens were collected in Pulau Ubin in July 1921 (Chasen 1923) and are currently in the Lee Kong Chian Natural History Museum. Recent ecological studies have shown that this species favours ecotones (Ho 2000) and woodland and scrub in the vicinity of water such as quarries, ponds and rivers. Monitoring data by the Nature Society (Singapore) since the 2000s suggests that the species is expanding its mainland range. Recent documentation of breeding includes nesting observed at Dairy Farm Nature Park in July 2018 and sighting of adults with juveniles in March 2019 at Bukit Batok Nature Park. The documented breeding period is September to May. Observations of wild individuals in the Mandai area suggest that birds



from previous clutches assist parents in raising young; up to two clutches have been reported in one year.

Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra, Borneo and Java (probably now extirpated).

Threats: This species is globally threatened due to the songbird trade and to a smaller extent, degradation of its riparian habitat.

Scientific Interest and Potential Value: Potentially an important disperser of small fruits in secondary forests, and riparian areas.

Conservation Measures: Singapore supports a large proportion of the known global population and a national species action plan was recently developed and published for the species. 'Critically Endangered' on the IUCN Global Red List, the species was uplisted to Appendix I in CITES (Convention on International Trade in Endangered Species) in 2022 after proposals by governments in the region.

Scientific Name:
Pycnonotus simplex

Common Name:
Cream-vented Bulbul

Order/Family:
Passeriformes: Pycnonotidae

National Status: ssp. *simplex*. Vulnerable (VU). Previously unassessed. The species is expected to have met thresholds for Criterion D for small population (population fewer than 1,000 individuals). No clear



trend was documented through Annual Bird Census data but there have been suspected declines (and the species is likely to have met thresholds for Criterion A2).

Habitat and Ecology: An uncommon resident of primary and secondary forests, and adjacent woodland in the Central forests, including several buffer nature parks. Records elsewhere, for instance in Bukit Batok and Singapore Botanic Gardens, likely refer to dispersants. Considered as 'not uncommon' by Bucknill & Chasen (1927) but populations likely to have further declined since then. Breeding has been reported and the documented breeding period is April, and June to October.

Distribution: Thai-Malay Peninsula, Sumatra, Borneo and intervening islands.

Threats: Loss and degradation of forest habitat. The species appears to be less tolerant of habitat disturbance than most other bulbuls.

Scientific Interest and Potential Value: Useful indicator species for good quality forests in Singapore. The closely related Cream-eyed Bulbul *P. pseudosimplex*, a (cryptic) species formerly thought endemic to Borneo has now been found in the Peninsula, and could occur (or have occurred) in Singapore.

Conservation Measures: The species is assumed to be secure in the Central forests and adjacent nature parks which provide protected and managed habitat.

Scientific Name:
Pycnonotus brunneus

Common Name:
Asian Red-eyed Bulbul

Order/Family:
Passeriformes: Pycnonotidae

National Status: ssp. *brunneus*. Vulnerable (VU). The species is expected to have met Criterion D for small population – but the number of records has increased across Central Catchment Nature Reserve and adjacent parks and it is now relatively more abundant than Cream-vented Bulbul. A small increasing trend has been detected based on Annual Bird Census data.

Habitat and Ecology: An uncommon to locally common resident of primary and secondary forests, now largely restricted to the Central forests and adjoining woodland, including Bukit Batok. Compared to Cream-vented Bulbul, the species appears more adaptable, frequently occurring in secondary forest and woodland. Historically the species was more widespread and was considered as 'not uncommon' but it became extirpated from Pulau Ubin and Labrador Park by the 1980s. Breeding has been reported with the documented breeding period being March to April, and July.

Distribution: Thai-Malay Peninsula, Sumatra and Borneo.

Photo: Norhafiani Abdul Majid



Threats: Loss and degradation of forest habitat.

Scientific Interest and Potential Value: Useful indicator species for good quality forests in Singapore.

Conservation Measures: None specific to the species other than general habitat protection, and the species is assumed to be secure in the Central forests and adjacent nature parks.

Scientific Name:
Acrocephalus orientalis

Common Name:
Oriental Reed Warbler

Order/Family:
Passeriformes: Acrocephalidae

National Status: Vulnerable (VU). Previously unassessed. The species is estimated to have declined by 45% over 10 years or three generations based on the Annual Bird Census data, and therefore meeting thresholds for Criterion A2.

Habitat and Ecology: A winter visitor and passage migrant to freshwater marshes, *Phragmites* reed beds and the well-vegetated fringes of ponds and reservoirs, flooded grassland and scrub. Presumed passage migrants occur in scrub in reclaimed areas such as Tuas and Changi, and occasionally in mangroves. Birds arrive from September and winterers (more females than males) may stay as late as mid-May. This is the commoner of two reed warblers occurring in Singapore, and appears to have a wider habitat breadth than Black-browed Reed Warbler *A. bistrigiceps*.



Photo: Norhafiani Abdul Majid

Distribution: Breeds E Russia, E Mongolia, south to NE and E China, Japan and Korea; winters NE India, S China, mainland SE Asia, Sumatra, Borneo, the Philippines and Wallacea.

Threats: Habitat loss due to clearance of grasslands and marshes. Clearance of large areas of swampy grassland and reedbeds in the Neo Tiew area is expected to have reduced habitat significantly.

Scientific Interest and Potential Value: A useful indicator species of freshwater wetlands in E Asia.

Conservation Measures: The long-term management of the Kranji Marshes and other areas of freshwater wetlands (e.g. Sengkang, Lorong Halus) is expected to benefit this species.

Scientific Name:
Cyanoderma erythropterum

Common Name:
Chestnut-winged Babbler

Order/Family:
Passeriformes: Timaliidae

National Status: ssp. *erythropterum*. Critically Endangered (CR). Newly uplisted. Expected to have met thresholds under Criterion D for small population; also Criterion B for small area of occupancy and limited number of sites (B2-a) where it is known to occur.



Photo: Con Foley

Habitat and Ecology: An increasingly uncommon resident of primary and secondary forests, and forest edges, often skulking in dense growths of ferns in the Central Catchment Nature Reserve where the Nee Soon swamp forest remains a stronghold; it appears extirpated from Bukit Timah. A species strongly associated with the forest understorey, Cros et al. (2020) found that genetic diversity of the species in intact forests elsewhere in SE Asia (Borneo) was nearly three times higher than sampled populations in Singapore, demonstrating the sustained erosion of genetic diversity as a result of forest fragmentation (which has reduced gene flow between forest patches within the Central Catchment Nature Reserve). Breeding reported and nest building activities have been most recently documented in May 2018. The breeding period in Singapore is April-May, and August.

Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra and Borneo.

Threats: Loss and degradation of forest habitat, small, declining population is at high risk of loss of genetic variability.

Scientific Interest and Potential Value: Useful indicator species of good quality forests in Singapore.

Conservation Measures: The species is assumed to be secure in the Central Catchment forests, and adjacent nature parks; the constructed ecological corridor in the form of the Ecolink bridge between the Central Catchment and Bukit Timah may benefit the dispersal of this species, enabling potential recolonisation of suitable habitat in future.

Scientific Name:
Pellorneum malaccense

Common Name:
Short-tailed Babbler

Order/Family:
Passeriformes: Pellorneidae

National Status: ssp. *malaccensis*. Vulnerable (VU). Expected to have met thresholds under Criterion D for small and declining population, and now shown to have low genetic variability (see Cros et al. 2017); also expected to have met thresholds for Vulnerable/Endangered under Criterion B2a.

Habitat and Ecology: A resident in primary and secondary forests in the Central Catchment Nature Reserve; there are very few recent records from Bukit Timah and it may now be on the verge of extirpation there. The species also once occurred in Singapore Botanic Gardens (Bucknill & Chasen 1927). A species of the forest understorey and floor, Short-tailed Babblers are not good dispersers and do not easily cross large gaps in forest landscapes, including large roads and water bodies. Cros et al. (2020) found that genetic diversity of the species in Singapore forests is nearly three times lower than populations in intact forests in Borneo and there are landscape-level barriers to gene flow



even within the Central Catchment (Sadanandan et al. 2015), splitting the species into further subpopulations. Breeding has been reported, the earliest being that of a pair carrying insects near a possible nest at Sime Road in May 1988. The documented breeding period in Singapore is January and May.

Distribution: Thai-Malay Peninsula, Sumatra and Borneo.

Threats: Loss and fragmentation of forest habitat. The small, declining and fragmented population even within the Central forests is at high risk of loss of genetic variability.

Scientific Interest and Potential Value: Useful indicator species of good quality forests.

Conservation Measures: The species is assumed to be secure in the Central forests, and adjacent nature

parks; the construction of an ecological corridor, the Ecolink between the Central Catchment and Bukit Timah may benefit the dispersal of this species, enabling potential recolonisation of habitat in future.

Scientific Name:
Copsychus malabaricus

Common Name:
White-rumped Shama

Order/Family:
Passeriformes: Muscicapidae

National Status: ssp. *tricolor*. Endangered (EN). Previously Critically Endangered. The species is expected to have met threshold under Criterion D for small populations, although Pulau Tekong populations are yet to be quantified. The species is now known to occur at fairly high densities in Pulau Ubin.

Habitat and Ecology: An uncommon to rare resident of forests, woodland and old plantations but appears locally common in Pulau Ubin and Pulau Tekong. The species was formerly not uncommon in mainland Singapore (Bucknill & Chasen 1927, Gibson-Hill 1950) but the population was thought to have been poached to near extinction (Lim 1992). Pulau Ubin and Pulau Tekong remain key strongholds for the species in Singapore, and recent surveys have found up to 20 individuals in a morning in Pulau Ubin. Birds in the Central forests and elsewhere may involve a combination of genuinely wild birds and escapees. Breeding has been reported and the documented breeding period in Singapore is March and June to August.

Photo: Con Foley



Distribution: Indian subcontinent, S China, mainland SE Asia and Greater Sundas.

Threats: Poaching for the songbird trade (at the regional level), and the loss and degradation of forest habitats.

Scientific Interest and Potential Value: A sought after species in the songbird trade, an important component in the forest soundscape, and part of a genetically diverse group in SE Asia.

Conservation Measures: The long-term conservation and management of forest and woodland habitat is expected to benefit the species in Pulau Ubin, and possibly Pulau Tekong. Restricted access to Pulau Tekong limits the risk of poaching there.

Scientific Name:

Cyornis rufigastra

Common Name:

Mangrove Blue Flycatcher

Order/Family:

Passeriformes: Muscicapidae

National Status: ssp. *rufigastra*. Critically Endangered (CR). The species is expected to have met thresholds for Criterion B and D (localised, and tiny population in Pulau Tekong, unlikely to exceed 50 individuals, few recent records from Pulau Ubin although breeding was documented there in the 2000s).

Habitat and Ecology: A rare and localised resident of mangrove forests, and adjacent secondary forests and woodland in Pulau Ubin and Pulau Tekong. It was formerly widespread and considered to be 'not uncommon in mangroves' on mainland Singapore (Chasen 1923, 1924; Bucknill & Chasen 1927; Gibson-Hill 1950), but by the late 1960s had declined greatly and was largely confined to mangroves in the Jurong area (Tweedie 1970). Breeding has been reported on both Pulau Ubin and Pulau Tekong from May to July.

Distribution: Thai-Malay Peninsula, Sumatra, Java and Borneo, north to the Philippines.

Scientific Name:

Cyornis brunneatus

Common Name:

Brown-chested Jungle Flycatcher

Order/Family:

Passeriformes: Muscicapidae

National Status: Vulnerable (VU). Previously unassessed. The species is expected to have approached thresholds under Criterion D, due to dependence on forests as wintering habitat. 'Vulnerable' on IUCN Red List due to presumed declines and small population.

Photo: Lee Tiah Khee



Threats: Loss and degradation of mangrove forests; small, declining population is at high risk of loss of genetic variability.

Scientific Interest and Potential Value: A mangrove specialist that is an important indicator of good quality mangrove forests.

Conservation Measures: The species is assumed to be secure in Pulau Tekong for the time being despite its small population.

Photo: Noorafiani Abdul Majid



Habitat and Ecology: An uncommon passage migrant, occurring in primary and secondary forests, woodland, scrub, old plantations and occasionally parkland. Migrants have also shown up in remnant woodland in Bidadari, in stands of *Leucaena* and *Casuarina* scrub on reclaimed land in Tuas, and several offshore islands including Pulau Jurong, Ubin, Hantu and St. John's. There are also records from wooded patches in urban areas (e.g. Changi Business Park, Shenton Way) during the migration period from mid-September to early November, with birds periodically reported to collide with windows of lighted buildings. There are however very few records of wintering birds; in Peninsular Malaysia it mostly winters in lowland forests. This species was not listed by Bucknill & Chasen (1927) or Gibson-Hill (1950) and was only first documented in Singapore in the 1980s.

Distribution: Breeds C, SE China; winters Thai-Malay Peninsula and Sumatra.

Threats: Habitat loss and degradation in the wintering range. Also collisions with man-made structures on migration.

Scientific Interest and Potential Value: Recent taxonomic studies have established it to be an aberrant 'blue' flycatcher in the genus *Cyornis*.

Conservation Measures: Long-term protection and management of small woodland patches can be expected to benefit the species as stopover habitat. A small patch of woodland at Bidadari has been retained for the conservation of migratory landbirds.

Scientific Name:
Chloropsis sonnerati

Common Name:
Greater Green Leafbird

Order/Family:
Passeriformes: Chloropseidae

National Status: ssp. *zosterops*. Critically Endangered (CR). Expected to meet thresholds under Criterion D (population fewer than 250 individuals). Also expected to meet Criterion B2 for small area of occupancy and small populations. 'Endangered' on IUCN Red List.

Habitat and Ecology: An uncommon resident of primary and secondary forests, and adjacent woodland in the Central forests. It was formerly considered to be 'not uncommon' in mangroves (Chasen 1923; Bucknill & Chasen 1927) but there are no records today in mangroves. Recent data suggest that it is now restricted to the Bukit Timah and Central Catchment Nature Reserves, with the Nee Soon swamp forest an important stronghold. The summit at Bukit Timah Nature Reserve is known to attract as many as five to eight birds when the several *Ficus benjamina* trees are in fruit. Breeding has been variously documented in recent years, with immatures and juveniles seen in Bukit Timah and adjacent areas such as Dairy Farm Nature Park.

Photo: Con Foley



Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra and Borneo.

Threats: Loss and degradation of lowland forest habitat. This species is also threatened by poaching for the regional songbird trade.

Scientific Interest and Potential Value: A potentially important seed disperser for forest trees.

Conservation Measures: The species is assumed to be secure in the Central forests and adjacent nature parks; the construction of an ecological corridor, the EcoLink between the Central Catchment and Bukit Timah may benefit the dispersal of this species.

Scientific Name:
Leptocoma calcostetha

Common Name:
Copper-throated Sunbird

Order/Family:
Passeriformes: Nectariniidae

National Status: Vulnerable (VU). Previously unassessed. Restricted to a small set of mangrove remnants and expected to have met thresholds under Criterion B (population fewer than 1,000 individuals), locally extirpated in Pasir Ris and Ulu Pandan mangroves.

Habitat and Ecology: A locally common resident of mangroves and adjacent coastal vegetation such as beach scrub and secondary woodland. Historically 'plentiful' around the coasts and in coconut plantations (Bucknill & Chasen 1927; Gibson-Hill 1950), the species is now largely confined to mangroves and coastal scrub in and around Sungei Buloh Wetland Reserve, and on Pulau Ubin, Pulau Tekong and Pulau Semakau. The documented breeding period is February to May, August and December. Nest building has also been regularly reported from Sungei Buloh between March and June in recent years.

Distribution: S Myanmar, Thai-Malay Peninsula, Sumatra, Java, Borneo and Palawan.

Photo: Norhafiani Abdul Majid



Threats: Loss and degradation of mangrove forests.

Scientific Interest and Potential Value: A mangrove specialist that is an indicator of good quality mangrove habitat. May potentially be an important pollinator for several mangrove trees.

Conservation Measures: The long-term conservation and management of mangrove forests at Ubin is expected to benefit the species in Pulau Ubin. Similarly, the expansion of the Sungei Buloh Wetland Reserve towards Mandai and Kranji will also help to secure key habitat.

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Marine Mammals

SIRIUS Z.H. NG, ZEEHAN JAAFAR

Scientific Name:

Neophocaena phocaenoides
(Cuvier, 1829)

Common Name:

Finless Porpoise

Family:

Phocoenidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Finless porpoise inhabits shallow coastal waters especially estuaries, embayments, and areas adjacent to mangrove forests. They feed on small fishes, crustaceans, and cephalopods.

Distribution: This species is widely distributed throughout the coastal areas of the Indo-Pacific ranging from the Persian Gulf to the South China Sea. In Singapore, this species has been reported only in the north-eastern Johor Straits of Singapore.

Threats: Habitat loss, habitat modification, net entanglement, elevated marine noise pollution and high vessel traffic.

Scientific Name:

Tursiops aduncus (Ehrenberg, 1833)

Common Name:

Indo-Pacific Bottlenose Dolphin

Family:

Delphinidae

Photo: The MareCet Research Organisation



A small pod of *Neophocaena phocaenoides* in the waters off Pulau Langkawi, Kedah, Malaysia.

Scientific Interest and Potential Value: Recent dramatic widespread declines to the populations of this species were attributed to the habitat degradation and losses, as well as fishing gear entanglement. Consequently, this species is classified as Vulnerable to extinction throughout its range.

Conservation Measures: Presently, there are no conservation measures specific for this species. There have been no other reports of this species since 2011, suggesting that no known resident individuals or population(s) continue to occur within the territorial waters of Singapore.

Photo: The MareCet Research Organisation



A pod of *Tursiops aduncus* in the waters offshore of Kedah, Malaysia.

National Status: Critically Endangered (CR)

Habitat and Ecology: The Indo-Pacific Bottlenose Dolphin inhabits tropical marine habitats from shallow coastal waters to deeper areas but are most commonly observed over continental shelf areas shallower than 100m. This species is non-migratory and occupy small home ranges, moving in pod sizes of not more than 30 individuals. In some areas, they occur in mixed pods with other dolphin species. This species primarily feeds on fishes.

Distribution: As its common name suggests, this species is well distributed throughout the coastal regions of the Indo-Pacific. In Singapore, this species has been recorded along the waters of north-eastern Johor Straits, the Singapore Straits, and Horsburgh Lighthouse. Similar to *Sousa chinensis*, the majority of sightings of this species have been within the Singapore Straits.

Threats: Habitat loss, habitat modification, net entanglement, elevated marine noise pollution and high vessel traffic.

Scientific Interest and Potential Value: Global populations of this species are classified as Near Threatened by IUCN's Red List of Threatened species and are primarily impacted by fishing gear entanglement. In some areas within its range, *Tursiops aduncus* is actively hunted for human consumption or targeted by the oceanarium industry.

Conservation Measures: At present, there are no conservation measures specific for this species. Existing measures are in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:
Sousa chinensis (Osbeck, 1765)

Common Name:
Indo-Pacific Humpback Dolphin

Family:
Delphinidae

National Status: Critically Endangered (CR)

Habitat and Ecology: This species is commonly observed in shallow nearshore coastal habitats within and/or adjacent to sandbanks, coral reefs, rocky reefs, estuaries, and mangrove areas. Indo-Pacific Humpback Dolphins occupy a small home range, and rarely migrate over large distances. Natural pod sizes tend to be between two and six individuals, although pods of several dozen individuals have been observed in areas with larger populations. Where populations are studied, calving is observed throughout the year although the monsoon seasons is demonstrated to positively impact birth rates. This species engages in opportunistic foraging and consume a wide range of prey items including cephalopods and crustaceans.



Sousa chinensis individual leaping out of water off Pulau Langkawi, Kedah, Malaysia.

Distribution: The Indo-Pacific Humpback Dolphin is endemic to the coastal areas of the eastern Indian Ocean and western Pacific Ocean. In Singapore, this species has been recorded along the waters of north-eastern Johor Straits, the Southern and Western Islands of the Singapore Straits, and Horsburgh Lighthouse. Sites along the Singapore Straits—Pulau Tekukor, Sisters' Islands, St John's Island and Lazarus Island, Pulau Hantu, Terumbu Pempang Laut and Terumbu Pempang Darat—are identified as areas with the most sightings events.

Threats: Habitat loss, habitat modification, net entanglement, elevated marine noise pollution and high vessel traffic.

Scientific Interest and Potential Value: Global populations of this species are classified as Vulnerable to extinction by IUCN's Red List of Threatened Species. Throughout its distribution, most population sizes are on the decline, given their susceptibility to coastal

anthropogenic activities. In certain areas, *Sousa chinensis* are actively hunted for human consumption or targeted by the oceanarium industry.

Conservation Measures: Presently, there are no conservation measures specific to this species. Existing measures exist in the form of area protection and maritime regulation within the Sisters' Islands Marine Park.

Scientific Name:
Orcaella brevirostris
(Owen in Gray, 1866)

Common Name:
Irrawaddy Dolphin

Family:
Delphinidae

National Status: Critically Endangered (CR)

Habitat and Ecology: This elusive species is typically found in shallow coastal areas. The Irrawaddy Dolphin is known to enter the lower reaches of rivers depending on factors such as freshwater flow, water depth and temperature. This species exhibits high site fidelity and are usually encountered in small groups of fewer than ten individuals.

Distribution: The Irrawaddy dolphin is distributed along coastal areas of tropical and subtropical continental Southeast Asia, including the central islands of the Indonesian Archipelago, Borneo and Palawan, Philippines as well as the Bay of Bengal,. There are a total of four unconfirmed and one confirmed record of this species in Singapore, with the most recent being a carcass recovered off East Coast Park beach in 2014.

Photo: The MareCet Research Organisation



A pod of *Orcaella brevirostris* offshore in the waters of Matang, Perak, Malaysia.

Threats: Habitat loss, habitat modification, net entanglement, elevated marine noise pollution and high vessel traffic.

Scientific Interest and Potential Value: Global *Orcaella brevirostris* populations are classified as Endangered by IUCN's Red List of Threatened Species.

Conservation Measures: There are no species-specific conservation measures in place. Since the carcass retrieval in 2014, there is no evidence to indicate that resident individuals or population(s) of *Orcaella brevirostris* occur within the territorial waters of Singapore.

Scientific Name:

Dugong dugon
(Müller, 1776)

Common Name:

Dugong

Family:

Dugongidae

National Status: Critically Endangered (CR)

Habitat and Ecology: The Dugong is an elusive species typically occurring in nearshore areas such as embayments, mangrove forests, and estuaries. Dugongs are reported to travel in small groups, but mother-calf pairs are most frequently observed. This species displays high site fidelity, associated to established feeding grounds. Dugongs are herbivorous, consuming a variety of seagrass species. Dugongs leaves behind characteristic serpentine shaped furrows devoid of vegetation—known as ‘feeding trails’—within seagrass meadows.

Distribution: Dugongs are naturally distributed between 23.5° north and south of the equator. Large herds of dugongs in north-eastern Australia and the Persian Gulf account for the majority of the global population. In Singapore, this species has been reported along the north-eastern Johor Straits and the Western Islands of the Singapore Straits. The north-eastern Johor Straits—in areas of Pulau Ubin, Pulau Tekong and Changi—has been identified as a hotspot of dugong activity since the early 19th century. At these sites, sightings of live individuals, recoveries of carcasses, and presence of feeding trails are most common. Feeding trails have also been reported from sites within the Singapore Straits, such as Terumbu Pandan, signalling the area as important for native dugong populations.



A herd of *Dugong dugon* off Pulau Sibu, Johor, Malaysia.

Threats: Habitat loss, habitat modification, net entanglement, elevated marine noise pollution and high vessel traffic.

Scientific Interest and Potential Value: Dugong herbivory is described to enhance the germination potential of seagrass seeds and improve both the productivity and clonal richness of seagrass meadows. Dugongs are therefore important in shaping the seagrass ecosystem, and the resultant services conferred by seagrass meadows (e.g., carbon sequestering potential). Global populations of dugongs are classified as Vulnerable to extinction in IUCN’s Red List of Threatened Species. Remnant populations of this species along the coastal areas of Southeast Asia remain poorly studied, thus hindering broad-area conservation efforts.

Conservation Measures: There are no conservation measures specific to this species at present. Limited protection exists in the form of area protection and maritime regulation within the Chek Jawa Wetlands and Sisters’ Islands Marine Park.

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Terrestrial Mammals

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SUAY HWEE YEO, MAX D.Y. KHOO, TZE KWAN FUNG

Scientific Name:

Tragulus napu

Common Name:

Greater Mouse-deer

Order/Family:

Artiodactyla: Tragulidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Forest and back mangroves. Nocturnal and mostly solitary. Feeds mostly on fallen fruits.

Distribution: Mostly found in suitable habitats across Pulau Ubin. One individual was recorded with a camera trap at the Western Catchment in 2012. The species is present in the Malay Peninsula, Borneo, Sumatra, and smaller islands.

Threats: Habitat loss and possibly predation by feral domestic dogs.



Photo: Marcus A.H. Chua

Scientific Interest and Potential Value: The species was thought to be nationally extinct in Singapore for over 80 years since the 1920s. Precise mechanisms leading to their rediscovery (e.g., natural recolonisation, accidental escape, deliberate release) is not known.

Conservation Measures: Habitat protection and restoration.

Scientific Name:

Aonyx cinereus

Common Name:

Asian Small-clawed Otter

Order/Family:

Carnivora: Mustelidae

National Status: Critically Endangered (CR)

Habitat and Ecology: In Singapore, occurs mainly in mangroves and mudflats in small family groups. This nocturnal creature eats mainly crustaceans and molluscs.

Distribution: In Singapore, presently recorded from Pulau Ubin and Pulau Tekong. Distributed from India



Photo: Max D.Y. Khoo

and south China to the Malay Peninsula, Sumatra, Borneo, Java, and Palawan.

Threats: Habitat loss, human disturbance, and persecution.

Scientific Interest and Potential Value: Because of its adorable appearance, there is a growing threat to the species in the region as they are increasingly trapped for the illegal pet trade.

Conservation Measures: Habitat protection and stringent policing against poaching. The local population may not be strictly resident as individuals can easily travel between shores of the Johor Straits.

Scientific Name:
Arctogalidia trivirgata

Common Name:
Small-toothed Palm Civet,
Three-striped Palm Civet

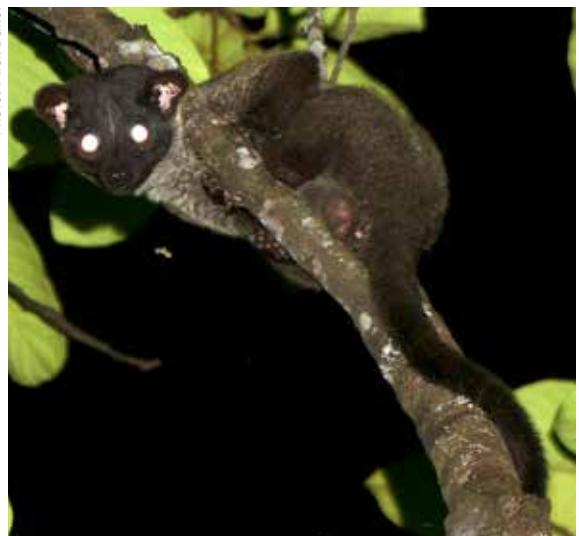
Order/Family:
Carnivora: Viverridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Primary, mature secondary forest, and freshwater swamp forest. This nocturnal, omnivorous, and generally solitary animal is primarily arboreal. Known diet in Singapore include fruits of *Palaquium obovatum*, figs, and more recently, a Sunda Slow Loris (*Nycticebus coucang*) as vertebrate prey.

Distribution: In Singapore, confined to the Central Catchment Nature Reserve, Bukit Timah Nature Reserve, and the peripheral nature parks. Distributed over Southeast Asia from Assam, south China, Indochina to the Malay Peninsula, Sumatra, and Borneo.

Threats: Habitat loss. The species also faces illegal trapping for the wildlife trade in neighbouring countries.



Scientific Interest and Potential Value: Records are anecdotal and information on the biology of this species is scant. The frugivorous nature of this civet species suggests that it could be an effective seed disperser. This species is also hunted for the illegal wildlife trade in neighbouring countries.

Conservation Measures: Habitat protection, reforestation, ensuring connectivity across forest patches, and stringent policing against poaching.

Scientific Name:
Prionailurus bengalensis

Common Name:
Mainland Leopard Cat

Order/Family:
Carnivora: Felidae



National Status: Critically Endangered (CR)

Habitat and Ecology: Found in forests, scrublands, and plantations with vegetation cover. Noted to occur in reclaimed land with secondary forest succession. Nocturnal and crepuscular, feeding on rodents, lizards, birds, frogs, and arthropods. An estimate of 21 adult individuals on Pulau Tekong in 2012, and fewer on the main island of Singapore and Pulau Ubin.

Distribution: Offshore islands of Pulau Tekong and Pulau Ubin, Western Catchment Area, including Sungai Buloh Nature Park Network, Central Catchment Nature Reserve and surrounding forested habitats. Occurs from Siberia, to Pakistan, East Asia, and mainland Southeast Asia in other parts of its geographical range.

Threats: Habitat loss and fragmentation, road kills. The limited genetic variability of this species in Singapore may lead to inbreeding depression. Leopard cats are sometimes desired in the wildlife trade as pets or for breeding hybrid Bengal cats.

Scientific Interest and Potential Value: Leopard cats in southern Peninsular Malaysia and Singapore are thought to occur in a possible hybrid zone between the mainland leopard cats and Sunda leopard cat (*P. javanensis*). The exactly evolutionary relationship is yet to be determined.

Conservation Measures: Habitat protection and restoration, roadkill mitigation measures, and stringent policing against poaching.

Scientific Name:
Penthetor lucasii

Common Name:
Dusky Fruit Bat

Order/Family:
Chiroptera: Pteropodidae

National Status: Critically Endangered (CR)

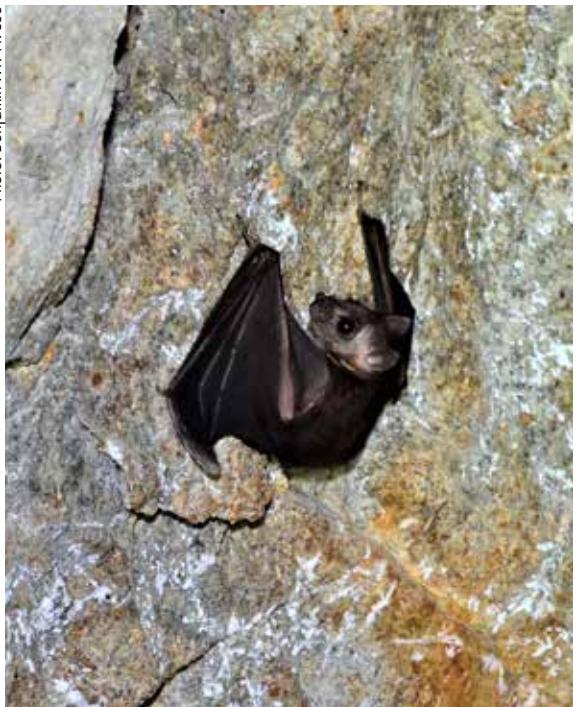
Habitat and Ecology: This gregarious frugivore roosts in caves and under rock shelters, a habit that limits its distribution. It is known to carry fruit back to its roost for consumption. An estimated 60 bats live in a cave in Bukit Timah Nature Reserve.

Distribution: In Singapore, recent records are restricted to the Bukit Timah Nature Reserve. Distributed in the Malay Peninsula, the Riau Islands and Borneo.

Threats: Habitat loss and disturbance of roosting sites.

Scientific Interest and Potential Value: As its habits are poorly known, there is scope for scientific investigations. Fruit bats serve as pollinators and seed-dispersing agents for certain tree species.

Photo: Benjamin P.Y.-H. Lee



Conservation Measures: Habitat protection and protection of known roosting sites (e.g., installing gates at caves where this species is known to roost to prevent human disturbance).

Scientific Name:
Pteropus vampyrus

Common Name:
Large Flying Fox

Order/Family:
Chiroptera: Pteropodidae

National Status: Critically Endangered (CR)

Habitat and Ecology: They roost gregariously in tall trees during the day and move out to feed before dusk, usually flying long distances. Its diet consists of fruits, flowers, pollen, and nectar from many tree species in both forests and cultivated lands.

Distribution: This bat is no longer a resident of Singapore but it is known to occur as a visitor throughout the year in the Central Catchment Nature Reserve, Swiss Club Road remnant forest, the Southern Islands of St John's and Sisters', and Pulau Ubin. Occasionally, they would occur in large groups of about a hundred, as observed in 2001 and 2020. They are found over much of Southeast Asia, from south Vietnam to Borneo and the Philippines.

Scientific Name:
Megaderma spasma

Common Name:
Lesser Asian False-vampire Bat,
Malayan False-vampire Bat

Order/Family:
Chiroptera: Megadermatidae

National Status: Endangered (EN)

Habitat and Ecology: This bat roosts in small groups in caves, tunnels, and hollow trees in forest. It feeds on insects and other animals, including smaller bats, but does not feed on blood.

Photo: Benjamin P.Y.-H. Lee



Threats: There are no current threats to this species in Singapore. Elsewhere in its range, the threats are overharvesting and habitat loss, and sometimes persecution as a crop pest.

Scientific Interest and Potential Value: A crucial pollinating agent for many species of forest and crop trees, including durian.

Conservation Measures: The Nature Reserves together with its buffer parks, as well as Pulau Ubin, provide refuge, food resources, and protection for visiting bats from other parts of the archipelago.

Photo: Benjamin P.Y.-H. Lee



Distribution: In Singapore, known from Pulau Tekong and Pulau Ubin. Distributed in India and Sri Lanka, across to Indochina, the Philippines, the Malay Peninsula, Sumatra, Borneo and Java.

Threats: Habitat loss.

Scientific Interest and Potential Value: This species may play a role in the suppression of insect pests through their consumption of large insects.

Scientific Name:
Rhinolophus trifoliatus

Common Name:
Trefoil Horseshoe Bat

Order/Family:
Chiroptera: Rhinolophidae

National Status: Critically Endangered (CR)

Habitat and Ecology: This distinctive insectivorous bat with large yellow nose-leaf is known to inhabit the understorey of forests. It roosts singly among vegetation and appears to hunt from a perch by fly-catching.

Distribution: In Singapore, recorded from the Central Catchment Nature Reserve, and Pulau Tekong. Distributed in India, Myanmar, Thailand, the Malay Peninsula, Sumatra, Borneo, and Java.

Threats: Habitat loss.

Scientific Interest and Potential Value: Its population and ecology are not well-known.

Conservation Measures: Protection of forest habitats.

Conservation Measures: Habitat protection and artificial roost provision through the building of bat houses. Preliminary efforts at roost provision suggest that the species responds well to artificial roost structures locally and the population has increased.

Photo: Nick Baker



Scientific Name:
Hypsugo macrotis

Common Name:
Big-eared Pipistrelle

Order/Family:
Chiroptera: Vespertilionidae

National Status: Critically Endangered (CR)

Habitat and Ecology: This insectivorous bat forages in semi-cluttered environments, and its ecology and wing morphology suggests that it is an edge species. It has been recorded elsewhere foraging at forest edges and above tree canopies, as well as open areas like coastal mudflats, as with the lone record from Singapore.

Distribution: In Singapore, there is a single published record in 2018 from mudflats at Chek Jawa, Pulau Ubin. Distribution includes west Peninsular Malaysia, northeast Sumatra, Padang, Enggano, Bali, and Lombok Island.

Photo: Chung Yi Fei



Threats: Unknown, although an urban roost in Peninsular Malaysia had evidence of disturbance by domestic cats.

Scientific Interest and Potential Value: Unknown. This species is very rarely recorded throughout its entire distribution, and it is listed as Data Deficient on the IUCN Global Red List.

Conservation Measures: More surveys and research are required to better understand its ecology for conservation actions.

Scientific Name:
Galeopterus variegatus

Common Name:
Sunda Colugo

Order/Family:
Dermoptera: Cynocephalidae

National Status: Near Threatened (NT)

Habitat and Ecology: Forests as the species is strictly arboreal; sightings of individuals in gardens and plantations are possible when these sites are adjacent to forests. Largely sedentary during the day, and perches against tree trunks or rests amongst canopy vegetation and in tree hollows. Nocturnal and moves between trees via gliding for foraging and other activities. Feeds primarily on leaves. Estimated to be at 1,500 individuals in Singapore.

Photo: Max D.Y. Khoo



Distribution: In Singapore, mainly in Bukit Timah Nature Reserve, Central Catchment Nature Reserve and their periphery. Increasing sightings outside of these areas in recent years (e.g., Wessex estate, Gallop Road). Found across mainland Southeast Asia, Borneo, Sumatra, and Java.

Threats: Habitat loss and fragmentation. In neighbouring countries, they may be persecuted as they occasionally feed on flowers of crop plants (e.g., coconut).

Scientific Interest and Potential Value: Little is known of the biology and ecology of the Sunda Colugo, particularly of wild individuals. Recent genetic studies

reveal that colugos are the sister group to primates, and there might be multiple cryptic species within this wide-ranging species.

Conservation Measures: Protection of habitats. Glide poles could be installed in between forest fragments to enhance connectivity across gaps.

Scientific Name:
Manis javanica

Common Name:
Sunda Pangolin

Order/Family:
Pholidota: Manidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Forests, scrublands and plantations. Largely nocturnal and active for about four hours each night. Diet consists of termites and ants whose nests are ripped open with the pangolin's foreclaws, and prey lapped up with its long and sticky tongue. Although largely terrestrial when active, the species shelters in burrows, in the canopy level of trees, and even urban structures when available. When threatened, curls itself up into a ball.

Distribution: In Singapore, mainly in the Central Catchment Nature Reserve and its periphery. It is also recorded from Bukit Timah Nature Reserve, Bukit Batok, Western Catchment Area, and on the islands of Ubin and Tekong. This species occurs in mainland Southeast Asia, Borneo, Sumatra, and Java, including Bali and Lombok.

Threats: Habitat loss, road kills, and poaching. Forests could be important for reproduction as pangolins utilise natal dens associated with large trees. Road kills are a significant cause of mortality in Singapore.

Photo: Max D.Y. Khoo



Pangolins are hunted heavily for their meat and scales in neighbouring countries.

Scientific Interest and Potential Value: Very little is known of the biology and ecology of the Sunda Pangolin, particularly of wild individuals. Although the species is listed in CITES Appendix I, pangolin meat and scales are still highly sought after in neighbouring countries for use in traditional Chinese medicine and as wild game meat.

Conservation Measures: Wildlife crossings could be constructed to facilitate the animals' movements across roads that bisect wooded areas (e.g., area near intersection of Pan-Island and Bukit Timah Expressways).

Scientific Name:
Nycticebus coucang

Common Name:
Sunda Slow Loris

Order/Family:
Primates: Loridae

National Status: Endangered (EN)

Habitat and Ecology: Inhabits forests. This nocturnal and arboreal creature is usually solitary and sleeps in a curled-up posture on branches. Despite its name, its movements are not necessarily slow. Its diet consists mainly of flowers, sap, fruits, gum, and insects.

Distribution: In Singapore, recorded from the Bukit Timah and Central Catchment Nature Reserves, Nature Parks, and Pulau Tekong. Native to Southeast Asia in the Malay Peninsula, Sumatra, and some surrounding islands.

Threats: Habitat loss and poaching.



Photo: Norman T-L Lim

Scientific Interest and Potential Value: One of the few mammals whose bite is known to be venomous. Due to its attractive appearance, individuals are often caught and sold as pets.

Conservation Measures: Protection of forest habitats, ensuring connectivity across forest patches, and enforcement of strict anti-poaching laws. It is possible that part of the local slow loris population consists of abandoned pets.

Scientific Name:
Presbytis femoralis

Common Name:
Raffles's Banded Langur

Order/Family:
Primates: Cercopithecidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Inhabits mature/secondary lowland and swamp forest. This arboreal creature is usually in troop of 6 to 15 individuals, consisting of a dominant male, several females, and their offspring. Its diet consists mainly of leaves, flowers, fruits, and sometimes insects. It has a few roosting sites that they will switch around. Tall big trees are their preferred roosting sites.



Distribution: Endemic to Southern Johor (Malaysia) and Singapore. In Singapore, recorded from the Central Catchment Nature Reserves and some adjacent Nature Parks or secondary forests.

Threats: Habitat loss and low genetic diversity due to small population size of ~70 individuals in 2023. Road kills have occurred from time to time.

Scientific Interest and Potential Value: With the recognition of two other subspecies (*P. f. robinsoni* and *P. f. percura*) as distinct from *P. femoralis*, the small geographical distribution and population size of this species warrant targeted conservation actions to ensure the continued survival of the species.

Conservation Measures: Most individuals in Singapore reside within the protected Nature Reserves and Nature Parks, with only a small number of individuals wandering to unprotected secondary forests. Installation of rope bridges and planting of trees with widespread canopy along road dividers will enhance habitat connectivity and facilitate safe passage across roads.

Scientific Name:
Hylopetes spadiceus

Common Name:
Red-cheeked Flying Squirrel

Order/Family:
Rodentia: Sciuridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in forests. Nocturnal and arboreal, moving through forest by climbing up trees and gliding. Nests in small tree holes that are plugged with fibrous plant material during the day.

Distribution: Locally restricted to Bukit Timah Nature Reserve and Central Catchment Nature Reserve. Range includes Indochina, Malay Peninsula, Sumatra, Java, and Borneo.

Threats: Habitat loss.

Photo: Robert C.H. Teo



Scientific Interest and Potential Value: It is difficult to observe this shy animal, due to its arboreal habits and its evasive behaviour when lights are used for illumination. Therefore, very little is known about the ecology and behaviour of this species.

Conservation Measures: Safeguarding of natural habitat and known nests.

Scientific Name:
Rhinosciurus laticaudatus

Common Name:
Shrew-faced Ground Squirrel

Order/Family:
Rodentia: Sciuridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in primary and tall secondary forests. Diurnal and terrestrial. Diet consists of insects, earthworms, and fallen fruits. Rarely encountered during visual surveys; recent records were largely from camera traps deployed in forests.

Distribution: Locally restricted to Bukit Timah Nature Reserve and Central Catchment Nature Reserve. Range includes Borneo, Peninsular Malaysia, southern Thailand, and Sumatra and adjacent islands.

Scientific Name:
Maxomys rajah

Common Name:
Brown Spiny Rat

Order/Family:
Rodentia: Muridae

National Status: Critically Endangered (CR)

Habitat and Ecology: Occurs in primary and secondary forests. Nocturnal and largely terrestrial, rests in burrows during the day. Feeds on fallen fruits and seeds, shoots and insects. Studies in Borneo have reported population explosions triggered by masting events.

Distribution: Locally recorded from Central Catchment Nature Reserve only. Range includes Borneo, Peninsular Malaysia, Peninsular Thailand, and Sumatra and adjacent islands.

Photo: Nick Baker



Threats: Habitat loss.

Scientific Interest and Potential Value: Very little is known about the ecology and behaviour of this secretive species.

Conservation Measures: Safeguarding of natural habitat.

Photo: Nick Baker



Threats: Habitat loss.

Scientific Interest and Potential Value: Very little is known about the ecology and behaviour of this species.

Conservation Measures: Protection of natural habitat.

Scientific Name:
Hystrix brachyura

Common Name:
Malayan Porcupine

Order/Family:
Rodentia: Hystricidae

National Status: Critically Endangered (CR)

Habitat and Ecology: Found in forests and forest edge habitats, including agricultural areas. Nocturnal and terrestrial, using extensive burrows to rest during the day. Feeds on roots, tubers, bark, fallen fruits, and bone of dead animals. Solitary or in small family groups. When threatened, the hollow quills are raised and shaken to produce a rattling noise. When this fails as a deterrence, porcupines may charge backwards with quills raised.

Distribution: Locally recorded from Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Pulau Ubin, Pulau Tekong, and Western Catchment Area. Range includes Bangladesh, Borneo, India, Indochina, Nepal, Peninsular Malaysia, southern China, Sumatra, and Tibet.



Photo: Norman T-L Lim

Threats: Habitat loss and road kills.

Scientific Interest and Potential Value: More studies are needed to determine if current records include other porcupine species, as not all recorded animals possess the distinctive colouration of *H. brachyura*.

Conservation Measures: Safeguarding of natural habitats. Wildlife crossings between habitat fragments (e.g., culverts under roads) could benefit the species.

Scientific Name:
Tupaia glis

Common Name:
Common Treeshrew

Order/Family:
Scandentia: Tupaiidae

National Status: Least Concern (LC)

Habitat and Ecology: Occurs in primary and secondary forests. Diurnal and commonly observed alone or in pairs in the lower understorey levels of the forest. Diet includes fruits, seeds, leaves, and arthropods. Territorial chases occur between individuals of the same sex.



Distribution: Found in Bukit Timah Nature Reserve, Central Catchment Nature Reserve, and surrounding nature parks. Native to the Malay Peninsula.

Threats: Habitat loss.

Scientific Interest and Potential Value: Little is known of the biology and ecology of the Common Treeshrew. In Singapore, this is the only member in the order.

Conservation Measures: Protection of natural habitat.

Scientific Name:
Crocidura malayana

Common Name:
Malayan Shrew

Order/Family:
Soricomorpha: Soricidae

National Status: Data Deficient (DD)

Habitat and Ecology: Occurs mainly in forest, where it forages on the forest floor, largely hidden away in the leaf litter. Individuals that have been encountered thus far have been caught in pitfall traps. The diet of this terrestrial animal consists mainly of insects.

Distribution: Locally confined to the Bukit Timah Nature Reserve and certain locations in the Central Catchment Nature Reserve. Apparently endemic to the Malay Peninsula.

Drawing of *Crocidura malayana*:
Kelvin K.P. Lim



Threats: Habitat loss.

Scientific Interest and Potential Value: This secretive animal is rarely encountered during visual surveys and extremely difficult to observe under natural conditions. Therefore, very little is known about this species.

Conservation Measures: Protection of its natural habitat is vital to its survival.

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CHECKLISTS OF BIODIVERSITY

Red Lists of Singapore Biodiversity

A selection of mainly threatened species in Singapore has been described and illustrated in the main section. The following checklists in this section attempt to provide a fuller picture of Singapore's biodiversity. Species that are threatened and not threatened are included in the checklists and a category of threat status (conservation status) in the national context has been assigned to them. Even so, the number of species in Singapore is still hardly known for a number of taxa especially for those groups from the invertebrates, let alone the information needed for the assessment of their conservation status. Great strides have been made to include and list the number of species from taxa ranging from the algae, plants, fungi to the fauna including the invertebrates and vertebrates.

We have decided to include as many species as possible that have been recorded from Singapore, from the taxa covered in this edition, whether they are threatened or not, to complete the picture rather than to leave their status ambiguous.

The RDB2 column in these checklists present the earlier threat assessment for each taxon as given in the second edition of the Singapore Red Data Book (SRDB2) published in 2008 (or 'Not Listed' is given in the RDB2 column if the taxon was not included in the 2008 checklists). Do note that the names used in the SRDB2 may not be the same as in the third edition (SRDB3) due to synonymy, misapplication of names or recircumscription of taxa. To ascertain how each plant name is to be interpreted between the two editions, please refer to Lindsay et al., (2022) in the References under the Flora chapter. For other groups of organisms, refer to the References under the relevant chapters, seek advice from specialists, or use only the names in the list and the assessments in the RDB3 column.

The Categories used in this 3rd edition Singapore Red Data Book checklists are:

	Category	Abbreviation	Remarks
Not Threatened	Least Concern	LC	Not approaching the criteria for being threatened
	Near-Threatened	NT	Approaching but not yet reaching the threshold for being threatened
Threatened	Vulnerable	VU	
	Endangered	EN	
	Critically Endangered	CR	
Extirpation & Extinction	Presumed Nationally Extinct	NEx	The species is extinct (extirpated) within Singapore but it still survives outside Singapore.
	Globally Extinct	EX	The species is extinct all over the world, both in the wild and in cultivation
Other Categories	Data Deficient	DD	Species eligible for assessment at the national level but with inadequate information to make an informed assessment
	Not Applicable	NA	Species that are not eligible for assessment at the national level (mainly introduced taxa and vagrants)
	Not Evaluated	NE	Species that are possibly eligible for assessment but have not yet been evaluated against the criteria
	Not Listed	Not Listed	Species not listed in the records (in the IUCN Global Red List database, or the first edition Singapore Red Data Book - RDB1 and second edition Singapore Red Data Book - RDB2) for whatever reason

Checklist of Algae Species with their Category of Threat Status for Singapore

Prepared by Michelle Lee Ai Chin, Jenny Fong, Yip Zhi Ting, Regina Yeo Shu Wen, Valerie Kwan

Family	Genus	Species	Authority	RDB2	RDB3
Achnanthaceae	<i>Achnanthes</i>	<i>brevipes</i> var. <i>intermedia</i>	(Kützing) Cleve	Not Listed	NE
Achnanthaceae	<i>Achnanthes</i>	<i>exigua</i>	Grunow	Not Listed	NE
Achnanthaceae	<i>Achnanthes</i>	<i>longipes</i>	C.Agardh	Not Listed	NE
Achnanthaceae	<i>Achnanthes</i>	<i>sueklandtii</i>	Hustedt	Not Listed	NE
Achnanthaceae	<i>Achnanthes</i>	<i>temporei</i>	M.Peralgo	Not Listed	NE
Achnanthaceae	<i>Achnanthes</i>	<i>tenuistauros</i>	A.Mann	Not Listed	NE
Achnanthidiaceae	<i>Lemnicola</i>	<i>hungarica</i>	(Grunow) F.E.Round & P.W.Basson	Not Listed	NE
Achnanthidiaceae	<i>Planothidium</i>	<i>hauckianum</i>	(Grunow) Round & Bukhtiyarova	Not Listed	NE
Cocconeidaceae	<i>Amphicocconeis</i>	<i>disculoides</i>	(Hustedt) Stefano & Marino	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>dirupta</i>	Gregory	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>disculus</i>	(Schumann) Cleve	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>feuerbornii</i>	Hustedt	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>heteroidea</i>	C.A.Hantzsch	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>pelta</i>	A.Schmidt	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>placentula</i>	Ehrenberg	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>placentula</i> var. <i>euglypta</i>	(Ehrenberg) Grunow	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>pseudomarginata</i> var. <i>intermedia</i>	Grunow	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>speciosa</i>	Gregory	Not Listed	NE
Cocconeidaceae	<i>Cocconeis</i>	<i>sublittoralis</i>	Hendey	Not Listed	NE
Bacillariaceae	<i>Bacillaria</i>	<i>paradoxa</i>	J.F.Gmelin	Not Listed	NE
Bacillariaceae	<i>Bacillaria</i>	<i>paxillifer</i> var. <i>tumidula</i>	(Grunow) Witkowski, Lange-Bertalot & Metzeltin	Not Listed	NE
Bacillariaceae	<i>Cylindrotheca</i>	<i>closterium</i>	(Ehrenberg) Reimann & J.C.Lewin	Not Listed	NE
Bacillariaceae	<i>Denticula</i>	<i>subtilis</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Fragilariopsis</i>	<i>cylindrus</i>	(Grunow) Krieger	Not Listed	NE
Bacillariaceae	<i>Fragilariopsis</i>	<i>oceania</i>	(Cleve) Hasle	Not Listed	NE
Bacillariaceae	<i>Hantzschia</i>	<i>amphioxys</i> var. <i>capitata</i>	O.F.Müller	Not Listed	NE
Bacillariaceae	<i>Hantzschia</i>	<i>virgata</i>	(Roper) Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>acicularis</i>	(Kützing) W.Smith	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>amphibia</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>amphibia</i> var. <i>acutiuscula</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>bilobata</i> var. <i>minor</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>brebissonii</i> var. <i>borealis</i>	Cleve	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>brevissima</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>commutata</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>constricta</i>	(Gregory) Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>ganderscheimensis</i>	Krasske	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>hybridaeformis</i>	Hustedt	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>lanceolata</i>	W.Smith	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>linearis</i> var. <i>subtilis</i>	(Grunow) Hustedt	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Bacillariaceae	<i>Nitzschia</i>	<i>longissima</i>	(Brébisson) Ralfs	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>lorenziana</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>nana</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>palea</i>	(Kützing) W. Smith	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>punctata</i> var. <i>coarctata</i>	(Grunow) Hustedt	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>romana</i>	Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>sigma</i>	(Kützing) W. Smith	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>sigma</i> var. <i>rigida</i>	Grunow ex van Heurck	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>sigmoidea</i>	(Nitzsch) W. Smith	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>tryblionella</i> var. <i>victoriae</i>	(Grunow) Grunow	Not Listed	NE
Bacillariaceae	<i>Nitzschia</i>	<i>vermicularis</i>	(Kützing) Hantzsch	Not Listed	NE
Bacillariaceae	<i>Psammodictyon</i>	<i>panduriforme</i>	(W. Gregory) D.G. Mann	Not Listed	NE
Bacillariaceae	<i>Pseudo-nitzschia</i>	<i>pungens</i>	(Grunow ex Cleve) G.R. Hasle	Not Listed	NE
Bacillariaceae	<i>Pseudo-nitzschia</i>	<i>seriata</i>	(Cleve) H. Peragallo	Not Listed	NE
Bacillariaceae	<i>Tryblionella</i>	<i>apiculata</i>	Gregory	Not Listed	NE
Bacillariaceae	<i>Tryblionella</i>	<i>cocconeiformis</i>	(Grunow) D.G.	Not Listed	NE
Bacillariaceae	<i>Tryblionella</i>	<i>compressa</i>	(J.W. Bailey) M. Poulin	Not Listed	NE
Bacillariaceae	<i>Tryblionella</i>	<i>granulata</i>	(Grunow) D.G. Mann	Not Listed	NE
Anomoeoneidaceae	<i>Anomoeoneis</i>	<i>serians</i>	(Brébisson ex Kützing) A. Cleve	Not Listed	NE
Cymbellaceae	<i>Brebissonia</i>	<i>lanceolata</i>	(C. Agardh) Mahoney & Reimer	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>hebridica</i>	(W. Gregory) Grunow	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>minuta</i> var. <i>pseudogracilis</i>	(Choln.) Reimer	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>norvegica</i>	Grunow	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>triangulum</i>	(Ehrenberg) Cleve	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>turgida</i>	W. Gregory	Not Listed	NE
Cymbellaceae	<i>Cymbella</i>	<i>turgidula</i>	Grunow	Not Listed	NE
Cymbellaceae	<i>Navicella</i>	<i>pusilla</i>	(Grunow) Krammer	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>affine</i> var. <i>insigne</i>	(W. Gregory) G.W. Andrews	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>angustatum</i>	(Kützing) Rabenhorst	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>angustatum</i> var. <i>[producta]</i> f. <i>indica</i>	H.P. Gandhi	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>gracile</i>	Ehrenberg	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>olivaceum</i> var. <i>insigne</i>	(Cleve) van Herck	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>parvulum</i>	(Kützing) Kützing	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>parvulum</i> var. <i>lagenula</i>	(Grunow) Hustedt	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>puiggarianum</i> var. <i>aequatorialis</i>	Cleve	Not Listed	NE
Gomphonemataceae	<i>Gomphonema</i>	<i>sphaerophorum</i>	Ehrenberg	Not Listed	NE
Rhoicospheniaceae	<i>Rhoicosphenia</i>	<i>abbreviata</i>	(C. Agardh) Lange- Bertalot	Not Listed	NE
Eunotiaceae	<i>Desmogonium</i>	<i>rabenhorstianum</i>	Grunow	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>arcus</i> var. <i>uncinata</i>	Grunow	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>bilunaris</i>	(Ehrenberg) Schaarschmidt	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Eunotiaceae	<i>Eunotia</i>	<i>camelus</i> var. <i>kaarverensis</i>	Gandhi	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>fallax</i>	A.Cleve	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>gracilis</i>	(Ehrenberg) Rabenhorst	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>incisa</i>	W.Smith ex W.Gregory	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>major</i> var. <i>indica</i>	(Grunow) Cleve-Euler	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>monodon</i>	Ehrenberg	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>monodon</i> var. <i>constricta</i>	A.Cleve	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>pectinalis</i>	(Kützing) Rabenhorst	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>praerupta</i>	Ehrenberg	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>praerupta</i> var. <i>inflata</i>	Grunow	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>robusta</i>	Ralfs	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>serra</i>	Ehrenberg	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>sudetica</i> var. <i>bidens</i>	Hustedt	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>valida</i> var. <i>[ambigua]</i> f. <i>boriviana</i>	E.A.Gonzalves & H.P.Gandhi	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>vanheurckii</i>	R.M.Patrick	Not Listed	NE
Eunotiaceae	<i>Eunotia</i>	<i>veneris</i>	(Kützing) De Toni	Not Listed	NE
Fragilariaceae	<i>Fragilaria</i>	<i>capucina</i> var. <i>vaucheriae</i>	(Kützing) Lange-Bertalot	Not Listed	NE
Fragilariaceae	<i>Fragilaria</i>	<i>inflata</i>	(Heiden) Hustedt	Not Listed	NE
Fragilariaceae	<i>Fragilaria</i>	<i>lapponica</i>	Grunow	Not Listed	NE
Fragilariaceae	<i>Fragilaria</i>	<i>leptostauron</i> var. <i>dubia</i>	(Grunow) Hustedt	Not Listed	NE
Fragilariaceae	<i>Fragilaria</i>	<i>schulzii</i>	C.Brockmann	Not Listed	NE
Fragilariaceae	<i>Martyana</i>	<i>martyi</i>	(Héribaud) Round	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>amphicephala</i>	Kützing	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>crystallina</i>	(C.Agardh) Kützing	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>demerarae</i>	Grunow	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>fasciculata</i> var. <i>truncata</i>	(Greville) Pantocsek	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>formosa</i>	Hantzsch	Not Listed	NE
Fragilariaceae	<i>Synedra</i>	<i>gailonii</i>	(J.Bory) Ehrenberg	Not Listed	NE
Staurosiraceae	<i>Opephora</i>	<i>pacifica</i>	(Grunow) Petit	Not Listed	NE
Staurosiraceae	<i>Opephora</i>	<i>schwartzii</i>	(Grunow) Petit ex Pelletan	Not Listed	NE
Staurosiraceae	<i>Staurosirella</i>	<i>pinnata</i>	(Ehrenberg)	Not Listed	NE
Licmophoraceae	<i>Licmophora</i>	<i>ehrenbergii</i>	(Kützing) Grunow	Not Listed	NE
Licmophoraceae	<i>Licmophora</i>	<i>gracilis</i>	(Ehrenberg) Grunow	Not Listed	NE
Licmophoraceae	<i>Licmophora</i>	<i>lyngbyei</i>	(Kützing) Grunow ex van Heurck	Not Listed	NE
Ulnariaceae	<i>Ulnaria</i>	<i>biceps</i>	(Kützing) P.Compère	Not Listed	NE
Ulnariaceae	<i>Ulnaria</i>	<i>ulna</i>	(Nitzsch) P.Compère	Not Listed	NE
Ulnariaceae	<i>Ulnaria</i>	<i>ulna</i> var. <i>amphirhynchus</i>	(Ehrenberg) M.Aboal	Not Listed	NE
Lyrellaceae	<i>Lyrella</i>	<i>clavata</i>	(Gregory) D.G.Mann	Not Listed	NE
Lyrellaceae	<i>Lyrella</i>	<i>lyra</i>	(Ehrenberg) Karajeva	Not Listed	NE
Lyrellaceae	<i>Lyrella</i>	<i>praetexta</i>	(Ehrenberg) D.G.Mann	Not Listed	NE
Lyrellaceae	<i>Petroneis</i>	<i>monilifera</i>	(Cleve) A.J.Stickle & D.G.Mann	Not Listed	NE
Lyrellaceae	<i>Petroneis</i>	<i>transfuga</i>	(Grunow ex Cleve) D.G.Mann	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Mastogloiacae	<i>Mastogloia</i>	<i>fimbriata</i>	(Brightwell) Cleve	Not Listed	NE
Amphipleuraceae	<i>Frustulia</i>	<i>rhomboides</i>	(Ehrenberg) De Toni	Not Listed	NE
Amphipleuraceae	<i>Frustulia</i>	<i>rhomboides</i> var. <i>saxonica</i>	(Rabenhorst) De Toni	Not Listed	NE
Diadesmidaceae	<i>Diadesmis</i>	<i>contenta</i>	(Grunow ex van Heurck)	Not Listed	NE
			D.G.Mann		
Diadesmidaceae	<i>Luticola</i>	<i>mutica</i>	(Kützing) D.G.Mann	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>bombiformis</i>	Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>bombus</i>	(Ehrenberg) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>bombus</i> var. <i>densestriata</i>	(A.Schmidt) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>coffaeiformis</i>	(Schmidt) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>crabro</i>	Ehrenberg	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>exemta</i> var. <i>digrediens</i>	Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>gravelleana</i>	R.Hagelstein	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>incurvata</i>	(Gregory) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>interrupta</i>	(Kützing) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>interrupta</i> var. <i>gorjanovicii</i>	(Pantocsek) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>litoralis</i>	(Donkin) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>oculata</i>	(Brébisson) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>puella</i>	(Schumann) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>smithii</i>	(Brébisson in W.Smith) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>smithii</i> var. <i>rhombica</i>	Mereschkowski	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>subovalis</i>	Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>vetula</i>	(A.Schmidt) Cleve	Not Listed	NE
Diploneidaceae	<i>Diploneis</i>	<i>weissflogii</i>	(A.Schmidt) Cleve	Not Listed	NE
Naviculaceae	<i>Caloneis</i>	<i>alpestris</i>	(Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Caloneis</i>	<i>liber</i>	(W.Smith) Cleve	Not Listed	NE
Naviculaceae	<i>Caloneis</i>	<i>ventricosa</i> var. <i>minuta</i>	(Grunow) R.M.Patrick	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>balticum</i>	(Ehrenberg) Rabenhorst	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>distortum</i>	(W.Smith) Griffith & Henfrey	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>exilis</i>	(Grunow) C.W.Reimer	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>fasciola</i> var. <i>sulcatum</i>	(Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>plagiostomum</i>	(Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>rectum</i>	(Donkin) Cleve	Not Listed	NE
Naviculaceae	<i>Gyrosigma</i>	<i>simile</i>	(Grunow) Boyer	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>cincta</i>	(Ehrenberg) Ralfs	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>cryptocephala</i> f. <i>terrestris</i>	Lund	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>discernenda</i>	Pantocsek	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>distans</i>	(W.Smith) Ralfs	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>elginensis</i>	(W.Gregory) Ralfs	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>feuerborni</i>	Hustedt	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>forcipata</i> var. <i>suborbicularis</i>	(Grunow) Grunow in van Heurck	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>glacialis</i>	(Cleve) Cleve	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Naviculaceae	<i>Navicula</i>	<i>gruendleri</i>	(Cleve & Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>hustedtii</i>	Krasske	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>lateropunctata</i>	J.H.Wallace	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>meniana</i>	Hendey	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>monilifera</i> var. <i>constricta</i>	Heiden	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>mutica</i> var. <i>undulata</i>	(Hilse) Grunow	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>niceensis</i>	H.Peragallo	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>ostenfeldii</i>	Ostrup	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>pennata</i>	A.Schmidt	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>philippinarum</i>	A.Mann	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>pi</i>	Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>platessa</i>	Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>platyventris</i>	Meister	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>plicata</i>	Donkin	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>pupula</i> var. <i>capitata</i>	Skvortzov & Meyer	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>radiosafallax</i>	Lange-Bertalot	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>ramosissima</i>	(C.Agardh) Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>ramosissima</i> f. <i>caspia</i>	(Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>reichardtii</i>	(Grunow) Grunow	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>rhapsoneis</i>	(Ehrenberg) Ralfs	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>rhynchocephala</i>	Kützing	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>secura</i>	R.M.Patrick	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>subtilissima</i>	Cleve	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>tridentula</i>	Krasske	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>tripunctata</i>	(O.F.Müller) Bory	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>trituberculata</i>	Prowse	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>veneta</i>	Kützing	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>yarrensis</i>	Grunow	Not Listed	NE
Naviculaceae	<i>Navicula</i>	<i>zostereti</i>	Grunow	Not Listed	NE
Naviculaceae	<i>Trachyneis</i>	<i>antillarum</i>	(Cleve & Grunow in Cleve)	Not Listed	NE
Naviculaceae	<i>Trachyneis</i>	<i>aspera</i>	(Ehrenberg) Cleve	Not Listed	NE
Naviculaceae	<i>Trachyneis</i>	<i>aspera</i> var. <i>intermedia</i>	(Grunow) Cleve	Not Listed	NE
Naviculaceae	<i>Trachyneis</i>	<i>aspera</i> var. <i>pulchella</i>	(W.Smith) Cleve	Not Listed	NE
Neidiaceae	<i>Neidium</i>	<i>productum</i>	(W.Smith) Cleve	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>acrosphaeria</i>	W.Smith	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>biceps</i>	W.Gregory	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>borealis</i>	Ehrenberg	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>borealis</i> var. <i>rectangularis</i>	Carlson	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>brauniiana</i>	(Grunow) Mills	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>cruciformis</i>	(Donkin) Cleve	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>intermedia</i>	(Lagerstedt) Cleve	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>mayeri</i>	K.Krammer	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>microstauron</i>	(Ehrenberg) Cleve	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>obscura</i>	Krasske	Not Listed	NE
Pinnulariaceae	<i>Pinnularia</i>	<i>subcapitata</i>	W.Gregory	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>aestuarii</i>	(Brébisson ex Kützing) W.Smith	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Pleurosigmataceae	<i>Pleurosigma</i>	<i>delicatulum</i>	W.Smith	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>elongatum</i>	W.Smith	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>fasciola</i>	(Ehrenberg) W.Smith	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>formosum</i>	W.Smith	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>intermedium</i>	W.Smith	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>majus</i>	(Grunow) Cleve	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>marinum</i>	Donkin	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>normanii</i>	Ralfs	Not Listed	NE
Pleurosigmataceae	<i>Pleurosigma</i>	<i>salinarum</i>	(Grunow) Grunow	Not Listed	NE
Sellaphoraceae	<i>Sellaphora</i>	<i>pupula</i>	(Kützing) Mereschkovsky	Not Listed	NE
Stauroneidaceae	<i>Craticula</i>	<i>halophila</i>	(Grunow in van Heurck) D.G.Mann	Not Listed	NE
Stauroneidaceae	<i>Stauroneis</i>	<i>anceps</i>	Ehrenberg	Not Listed	NE
Stauroneidaceae	<i>Stauroneis</i>	<i>membranacea</i>	(Cleve) Hustedt	Not Listed	NE
Stauroneidaceae	<i>Stauroneis</i>	<i>nobilis</i>	Schumann	Not Listed	NE
Stauroneidaceae	<i>Stauroneis</i>	<i>phoenicenteron</i>	(Nitzsch) Ehrenberg	Not Listed	NE
Plagiogrammaceae	<i>Plagiogramma</i>	<i>staurophorum</i>	(Gregory) Heiberg	Not Listed	NE
Grammatophoraceae	<i>Grammatophora</i>	<i>marina</i>	(Lyngbye) Kützing	Not Listed	NE
Grammatophoraceae	<i>Grammatophora</i>	<i>oceanica</i>	Ehrenberg	Not Listed	NE
Tabellariaceae	<i>Asterionella</i>	<i>japonica</i>	Cleve & Moller	Not Listed	NE
Tabellariaceae	<i>Tabellaria</i>	<i>fenestrata</i>	(Lyngbye) Kützing	Not Listed	NE
Psammodiscaceae	<i>Psammodiscus</i>	<i>nitidus</i>	(W.Gregory) Round & D.G.Mann	Not Listed	NE
Rhabdonemataceae	<i>Rhabdonema</i>	<i>adriaticum</i>	Kützing	Not Listed	NE
Rhaphoneidaceae	<i>Delphineis</i>	<i>surirella</i>	(Ehrenberg) G.W.Andrews	Not Listed	NE
Rhaphoneidaceae	<i>Rhaphoneis</i>	<i>amphiceros</i>	(Ehrenberg) Ehrenberg	Not Listed	NE
Rhopalodiaceae	<i>Pyxidicula</i>	<i>africana</i>	B.J.Cholnoky	Not Listed	NE
Rhopalodiaceae	<i>Rhopalodia</i>	<i>gibba</i> var. <i>ventricosa</i>	(Kützing) H.Peragallo & Peragallo	Not Listed	NE
Rhopalodiaceae	<i>Rhopalodia</i>	<i>gibberula</i>	(Ehrenberg) Otto Müller	Not Listed	NE
Rhopalodiaceae	<i>Rhopalodia</i>	<i>gibberula</i> var. <i>producta</i>	(Grunow) Cleve-Euler	Not Listed	NE
Rhopalodiaceae	<i>Rhopalodia</i>	<i>gibberula</i> var. <i>vanheurckii</i>	Otto Müller	Not Listed	NE
Rhopalodiaceae	<i>Rhopalodia</i>	<i>musculus</i>	(Kützing) Otto Müller	Not Listed	NE
Striatellaceae	<i>Striatella</i>	<i>unipunctata</i>	(Lyngbye) C.Agardh	Not Listed	NE
Surirellaceae	<i>Campylodiscus</i>	<i>fastuosus</i>	Ehrenberg	Not Listed	NE
Surirellaceae	<i>Campylodiscus</i>	<i>ralfssii</i>	W.Smith	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>americana</i>	H.Peragallo	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>caproni</i>	L.A.Brébisson ex F. Kitton	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>fastuosa</i>	(Ehrenberg) Kützing	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>fastuosa</i> var. <i>recedens</i>	(A.Schmidt) Cleve	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>linearis</i>	W.Smith	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>muelleri</i>	F.Hustedt	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>robusta</i>	Ehrenberg	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>spiralis</i>	Kützing	Not Listed	NE
Surirellaceae	<i>Surirella</i>	<i>tenuissima</i>	Hustedt	Not Listed	NE
Surirellaceae	<i>Tryblioptychus</i>	<i>cocconeiformis</i>	(Grunow) Hendey	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Thalassionemataceae	<i>Thalassionema</i>	<i>nitzschiaoides</i>	(Grunow) Mereschkowsky	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>acutiuscula</i>	Kützing	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>angusta</i> var. <i>eulensteini</i>	(Grunow) Cleve	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>angusta</i> var. <i>oblongella</i>	Grunow	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>angusta</i> var. <i>ventricosa</i>	(W.Gregory) Cleve	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>coffeaeformis</i>	(C.Agardh) Kützing	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>decipiens</i>	Grunow	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>graeffei</i> var. <i>minor</i>	Peragallo	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>holsatica</i>	Hustedt	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>javanica</i>	A.W.F.Schmidt	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>normanii</i>	Rabenhorst	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>ostrearia</i>	Brébisson	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>proteus</i>	Gregory	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>turgida</i>	W.Gregory	Not Listed	NE
Catenulaceae	<i>Amphora</i>	<i>wisei</i>	(M.M.Salah) R.Simonsen	Not Listed	NE
Coscinodiscaceae	<i>Coscinodiscus</i>	<i>argus</i>	Ehrenberg	Not Listed	NE
Coscinodiscaceae	<i>Coscinodiscus</i>	<i>marginatus</i>	Ehrenberg	Not Listed	NE
Coscinodiscaceae	<i>Coscinodiscus</i>	<i>radiatus</i>	Ehrenberg	Not Listed	NE
Coscinodiscaceae	<i>Coscinodiscus</i>	<i>wailesii</i>	Gran & Angst	Not Listed	NE
Heliopeltaceae	<i>Actinoptychus</i>	<i>senarius</i>	(Ehrenberg) Ehrenberg	Not Listed	NE
Hemidiscaceae	<i>Actinocyclus</i>	<i>octonarius</i>	Ehrenberg	Not Listed	NE
Hemidiscaceae	<i>Actinocyclus</i>	<i>octonarius</i> var. <i>sparsus</i>	(Gregory) Hendey	Not Listed	NE
Hemidiscaceae	<i>Actinocyclus</i>	<i>platensis</i>	F.C.Müller Melchers	Not Listed	NE
Hemidiscaceae	<i>Azpeitia</i>	<i>nodulifera</i>	(A.W.F.Schmidt)	Not Listed	NE
			G.A.Fryxell & P.A.Sims		
Hyalodiscaceae	<i>Hyalodiscus</i>	<i>stelliger</i>	J.W.Bailey	Not Listed	NE
Melosiraceae	<i>Melosira</i>	<i>granulata</i>	(Ehrenberg) Ralfs	Not Listed	NE
Melosiraceae	<i>Melosira</i>	<i>italica</i>	(Ehrenberg) Kützing	Not Listed	NE
Melosiraceae	<i>Melosira</i>	<i>nummuloides</i>	C.Agardh	Not Listed	NE
Paraliaceae	<i>Paralia</i>	<i>sulcata</i>	(Ehrenberg) Cleve	Not Listed	NE
Stephanopyxidaceae	<i>Stephanopyxis</i>	<i>turris</i> var. <i>polaris</i>	Grunow	Not Listed	NE
Triceratiaceae	<i>Triceratium</i>	<i>broeckii</i>	G. Leuduger-Fortmorel	Not Listed	NE
Triceratiaceae	<i>Triceratium</i>	<i>dubium</i>	Brightwell	Not Listed	NE
Biddulphiaceae	<i>Biddulphia</i>	<i>biddulphiana</i>	(J.E.Smith) Boyer	Not Listed	NE
Biddulphiaceae	<i>Biddulphia</i>	<i>petitiana</i>	(G.Leuduger-Fortmorel)	Not Listed	NE
			A.Mann		
Biddulphiaceae	<i>Biddulphia</i>	<i>vesiculos</i> a	(C.Agardh) Boyer	Not Listed	NE
Chaetocerotaceae	<i>Bacteriastrum</i>	<i>delicatum</i>	Cleve	Not Listed	NE
Chaetocerotaceae	<i>Bacteriastrum</i>	<i>hyalinum</i>	Lauder	Not Listed	NE
Chaetocerotaceae	<i>Chaetoceros</i>	<i>danicus</i>	Cleve	Not Listed	NE
Chaetocerotaceae	<i>Chaetoceros</i>	<i>lorenzianus</i>	Grunow	Not Listed	NE
Chaetocerotaceae	<i>Chaetoceros</i>	<i>peruvianus</i>	Brightwell	Not Listed	NE
Chaetocerotaceae	<i>Chaetoceros</i>	<i>tetrastichon</i>	Cleve	Not Listed	NE
Cymatosiraceae	<i>Cymatosira</i>	<i>lorenziana</i>	Grunow	Not Listed	NE
Eupodiscaceae	<i>Auliscus</i>	<i>reticulatus</i>	Greville	Not Listed	NE
Odontellaceae	<i>Odontella</i>	<i>aurita</i>	(Lyngbye) C.Agardh	Not Listed	NE
Odontellaceae	<i>Odontella</i>	<i>mobilensis</i>	(J.W.Bailey) Grunow	Not Listed	NE
Odontellaceae	<i>Odontella</i>	<i>obtusa</i>	Kützing	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Isthmiaceae	<i>Isthmia</i>	<i>enervis</i>	Ehrenberg	Not Listed	NE
Lithodesmiaceae	<i>Ditylum</i>	<i>brightwellii</i>	(T.West) Grunow	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>kuetzingiana</i>	Thwaites	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>meneghiniana</i>	Kützing	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>operculata</i>	(C.Agardh) Kützing	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>stelligera</i>	Cleve & Grunow	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>striata</i>	(Kützing) Grunow	Not Listed	NE
Stephanodiscaceae	<i>Cyclotella</i>	<i>stylorum</i>	Brightwell	Not Listed	NE
Stephanodiscaceae	<i>Stephanodiscus</i>	<i>rotula</i>	(Kützing) Hendey	Not Listed	NE
Skeletonemaceae	<i>Skeletonema</i>	<i>costatum</i>	(Greville) Cleve	Not Listed	NE
Thalassiosiraceae	<i>Shionodiscus</i>	<i>oestruppii</i>	(Ostenfeld)	Not Listed	NE
			A.J.Alverson, S.H.Kang & E.C.Theriot		
Thalassiosiraceae	<i>Thalassiosira</i>	<i>angulata</i>	(W.Gregory) Hasle	Not Listed	NE
Thalassiosiraceae	<i>Thalassiosira</i>	<i>condensata</i>	Cleve	Not Listed	NE
Thalassiosiraceae	<i>Thalassiosira</i>	<i>decipiens</i>	(Grunow) E.G.Jørgensen	Not Listed	NE
Thalassiosiraceae	<i>Thalassiosira</i>	<i>eccentrica</i>	(Ehrenberg) Cleve	Not Listed	NE
Thalassiosiraceae	<i>Thalassiosira</i>	<i>rotula</i>	Meunier	Not Listed	NE
Climacospheniaceae	<i>Climacosphenia</i>	<i>moniligera</i>	Ehrenberg	Not Listed	NE
Toxariaceae	<i>Toxarium</i>	<i>hennedyanum</i>	(Gregory) Pelletan	Not Listed	NE
Characeae	<i>Chara</i>	<i>fibrosa</i> subsp. <i>benthamii</i>	(A.Braun) Zaneveld	Not Listed	NE
Characeae	<i>Chara</i>	<i>fibrosa</i> subsp. <i>gymnopitys</i>	(A.Braun) Zaneveld	Not Listed	NE
Characeae	<i>Nitella</i>	<i>acuminata</i> var. <i>subglomerata</i>	(A.Braun) T.F.Allen	Not Listed	NE
Characeae	<i>Nitella</i>	<i>mucosa</i>	(C.F.O.Nordstedt) J.Groves	Not Listed	NE
Chaetosphaeridiaceae	<i>Chaetosphaeridium</i>	<i>globosum</i>	(Nordstedt) Klebahn	Not Listed	NE
Elakatotrichaceae	<i>Elakatothrix</i>	<i>viridis</i>	(J.Snow) Printz	Not Listed	NE
Klebsormidiaceae	<i>Klebsormidium</i>	<i>nitens</i>	(Meneghini) Lokhorst	Not Listed	NE
Closteriaceae	<i>Closterium</i>	<i>kützingii</i>	Bréb.	Not Listed	NE
Closteriaceae	<i>Closterium</i>	<i>navicula</i>	(Brébisson) Lütkemüller	Not Listed	NE
Closteriaceae	<i>Closterium</i>	<i>parvulum</i>	Nägeli	Not Listed	NE
Closteriaceae	<i>Closterium</i>	<i>tumidum</i>	L.N.Johnson	Not Listed	NE
Desmidiaceae	<i>Actinotaenium</i>	<i>turgidum</i>	(Brébisson ex Ralfs) Teiling ex Ruzicka & Pouzar	Not Listed	NE
Desmidiaceae	<i>Arthrodesmus</i>	<i>incus</i>	Hassal ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>askenasyi</i>	Schmidle	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>connatum</i>	Brébisson ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>contractum</i>	O.Kirchner	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>lundellii</i> var. <i>corruptum</i>	(W.B.Turner) West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>obsoletum</i>	(Hantzsch) Reinsch	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>pyramidatum</i>	Brébisson ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Cosmarium</i>	<i>quadrum</i>	P.Lundell	Not Listed	NE
Desmidiaceae	<i>Desmidium</i>	<i>coarctatum</i>	Nordstedt	Not Listed	NE
Desmidiaceae	<i>Euastrum</i>	<i>ansatum</i>	Ehrenberg ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Euastrum</i>	<i>binale</i> var. <i>hians</i>	(W.West) Willi Krieger	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Desmidiaceae	<i>Euastrum</i>	<i>gnathophorum</i>	W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Hyalotheca</i>	<i>burmensis</i>	W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Hyalotheca</i>	<i>dissiliens</i>	Brébisson ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Micrasterias</i>	<i>foliacea</i>	Bailey ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Micrasterias</i>	<i>mahabuleshwarensis</i>	J.Hobson	Not Listed	NE
Desmidiaceae	<i>Micrasterias</i>	<i>pinnatifida</i>	Ralfs	Not Listed	NE
Desmidiaceae	<i>Pleurotaenium</i>	<i>baculoides</i>	(J.Roy & Bisset) Playfair	Not Listed	NE
Desmidiaceae	<i>Pleurotaenium</i>	<i>nodosum</i>	(F.M.Bailey) P.Lundell	Not Listed	NE
Desmidiaceae	<i>Pleurotaenium</i>	<i>subcoronulatum</i>	(W.B.Turner) W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Pleurotaenium</i>	<i>verrucosum</i>	(J.W.Bailey) P.Lundell	Not Listed	NE
Desmidiaceae	<i>Spondylosium</i>	<i>tetragonum</i>	W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>arachne</i> var. <i>curvatum</i>	W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>disparatum</i>	W.West & G.S.West	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>gracile</i>	Ralfs	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>hexacerum</i>	Ehrenberg ex Wittrock	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>orbiculare</i>	Meneghini ex Ralfs	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>paradoxum</i>	Meyen	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>smithii</i>	Teiling	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>subpygmaeum</i>	W.West	Not Listed	NE
Desmidiaceae	<i>Staurastrum</i>	<i>wildemanii</i>	Gutwinski	Not Listed	NE
Desmidiaceae	<i>Staurodesmus</i>	<i>connatus</i>	(P.Lundell) Thomasson	Not Listed	NE
Desmidiaceae	<i>Staurodesmus</i>	<i>dejectus</i>	(Brébisson) Teiling	Not Listed	NE
Desmidiaceae	<i>Staurodesmus</i>	<i>megacanthus</i>	(P.Lundell) Thunmark	Not Listed	NE
Desmidiaceae	<i>Tetmemorus</i>	<i>brebissonii</i>	(Menegh.) Ralfs	Not Listed	NE
Gonatozygaceae	<i>Gonatozygon</i>	<i>monotaenium</i>	De Bary	Not Listed	NE
Peniaceae	<i>Penium</i>	<i>digitus</i>	Brébisson ex Ralfs	Not Listed	NE
Mesotaeniaceae	<i>Spirotaenia</i>	<i>condensata</i>	Brébisson	Not Listed	NE
Zygnemataceae	<i>Mougeotia</i>	<i>genuflexa</i>	(Dillwyn) C.Agardh	Not Listed	NE
Zygnemataceae	<i>Spirogyra</i>	<i>angolensis</i>	Welwitsch	Not Listed	NE
Oedogoniaceae	<i>Oedogonium</i>	<i>cylindrosporum</i>	C.C.Jao	Not Listed	NE
Oedogoniaceae	<i>Oedogonium</i>	<i>khannae</i>	Skuja	Not Listed	NE
Oedogoniaceae	<i>Oedogonium</i>	<i>pusillum</i>	Kirchner	Not Listed	NE
Codiaceae	<i>Codium</i>	<i>arabicum</i>	Kützing	Not Listed	NE
Codiaceae	<i>Codium</i>	<i>effusum</i>	(Rafinesque) Delle Chiaje	Not Listed	NE
Codiaceae	<i>Codium</i>	<i>geppiorum</i>	O.C.Schmidt	Not Listed	NE
Codiaceae	<i>Codium</i>	<i>tomentosum</i>	Stackhouse	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>discoidea</i>	Decaisne	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>discoidea</i> f. <i>intermedia</i>	Gilbert	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>fragilis</i>	W.R.Taylor	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>gracilis</i>	Harvey ex J.Agardh	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>incrassata</i>	(J.Ellis) J.V.Lamouroux	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>macroloba</i>	Decaisne	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>opuntia</i>	(Linnaeus) J.V.Lamouroux	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>opuntia</i> var. <i>minor</i>	(Vickers) W.R.Taylor	Not Listed	NE
Halimedaceae	<i>Halimeda</i>	<i>papyracea</i>	Zanardini	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Halimedaceae	<i>Halimeda</i>	<i>tuna</i>	(J.Ellis & Solander) J.V.Lamouroux	Not Listed	NE
Udoteaceae	<i>Avrainvillea</i>	<i>amadelphe</i>	(Montagne) A.Gepp & E.S.Gepp	Not Listed	NE
Udoteaceae	<i>Avrainvillea</i>	<i>erecta</i>	(Berkeley) A.Gepp & E.S.Gepp	Not Listed	NE
Udoteaceae	<i>Avrainvillea</i>	<i>lacerata</i>	Harvey ex J.Agardh	Not Listed	NE
Udoteaceae	<i>Avrainvillea</i>	<i>obscura</i>	(C.Agardh) J.Agardh	Not Listed	NE
Udoteaceae	<i>Boodelopsis</i>	<i>carolinensis</i>	Trono	Not Listed	NE
Udoteaceae	<i>Boodelopsis</i>	<i>carolinensis</i>	Trono	Not Listed	NE
Udoteaceae	<i>Rhipidiosiphon</i>	<i>javensis</i>	Montagne	Not Listed	NE
Udoteaceae	<i>Udotea</i>	<i>argentea</i>	Zanardini	Not Listed	NE
Udoteaceae	<i>Udotea</i>	<i>flabellum</i>	(J.Ellis & Solander) M.A.Howe	Not Listed	NE
Udoteaceae	<i>Udotea</i>	<i>glaucescens</i>	Harvey ex J.Agardh	Not Listed	NE
Aphanochaetaceae	<i>Aphanochaete</i>	<i>repens</i>	A.Braun	Not Listed	NE
Aphanochaetaceae	<i>Thamniochaete</i>	<i>huberii</i>	F.Gay	Not Listed	NE
Schizomeridaceae	<i>Schizomeris</i>	<i>leibleinii</i>	Kützing	Not Listed	NE
Chlamydomonadaceae	<i>Sphaerella</i>	<i>lacustris</i>	(Girod-Chantrans) Wittrock	Not Listed	NE
Chlorangiellaceae	<i>Malleochloris</i>	<i>sessilis</i>	Pascher	Not Listed	NE
Chlorangiellaceae	<i>Stylosphaeridium</i>	<i>stipitatum</i>	(Bachmann) Geitler & Gimesi	Not Listed	NE
Chlorococcaceae	<i>Chlorococcum</i>	<i>infusionum</i>	(Schrank) Meneghini	Not Listed	NE
Goniaceae	<i>Gonium</i>	<i>pectorale</i>	O.F.Müller	Not Listed	NE
Palmellaceae	<i>Sphaerocystis</i>	<i>schroeteri</i>	Chodat	Not Listed	NE
Palmellopsidaceae	<i>Asterococcus</i>	<i>limneticus</i>	G.M.Smith	Not Listed	NE
Palmellopsidaceae	<i>Chlamydocalpsa</i>	<i>planctonica</i>	(W.West & G.S.West) Fott	Not Listed	NE
Phacotaceae	<i>Phacotus</i>	<i>lenticularis</i>	(Ehrenberg) Stein	Not Listed	NE
Phacotaceae	<i>Pteromonas</i>	<i>aculeata</i>	Lemmermann	Not Listed	NE
Phacotaceae	<i>Pteromonas</i>	<i>angulosa</i>	Lemmermann	Not Listed	NE
Protosiphonaceae	<i>Spongiochloris</i>	<i>spongiosa</i>	(Vischer) Starr	Not Listed	NE
Spondylomoraceae	<i>Spondylomorum</i>	<i>quaternarium</i>	Ehrenberg	Not Listed	NE
Tetrabaenaceae	<i>Tetrabaena</i>	<i>socialis</i>	(Dujardin) H.Nozaki & M.Itoh	Not Listed	NE
Tetrasporaceae	<i>Apiocystis</i>	<i>brauniana</i>	Nägeli	Not Listed	NE
Volvocaceae	<i>Pandorina</i>	<i>charkowiensis</i>	Korschikov	Not Listed	NE
Volvocaceae	<i>Pandorina</i>	<i>elegans</i>	(Ehrenberg) Dujardin	Not Listed	NE
Volvocaceae	<i>Pandorina</i>	<i>morum</i>	(O.F.Müller) Bory de Saint-Vincent	Not Listed	NE
Volvocaceae	<i>Platydorina</i>	<i>caudata</i>	Kofoid	Not Listed	NE
Volvocaceae	<i>Volvox</i>	<i>aureus</i>	Ehrenberg	Not Listed	NE
Volvocaceae	<i>Volvulina</i>	<i>steinii</i>	Playfair	Not Listed	NE
Chlorellaceae	<i>Keratococcus</i>	<i>bicaudatus</i>	(A.Braun ex Rabenhorst) J.B.Petersen	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>aerea</i>	(Dillwyn) Kützing	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>antennina</i>	(Bory de Saint-Vincent)	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>crassa</i>	Kützing (C. Agardh) Kützing	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Cladophoraceae	<i>Chaetomorpha</i>	<i>gracilis</i>	Kützing	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>indica</i>	(Kützing) Kützing	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>ligustica</i>	(Kützing) Kützing	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>linum</i>	(O.F.Müller) Kützing	Not Listed	NE
Cladophoraceae	<i>Chaetomorpha</i>	<i>spiralis</i>	Okamura	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>crispula</i>	Vickers	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>herpestica</i>	(Montagne) Kützing	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>patentiramea</i>	(Montagne) Kützing	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>sericea</i>	(Hudson) Kützing	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>vagabunda</i>	(Linnaeus) Hoek	Not Listed	NE
Cladophoraceae	<i>Cladophora</i>	<i>viridifusca</i>	(Montagne) Montagne	Not Listed	NE
Cladophoraceae	<i>Pithophora</i>	<i>sumatrana</i>	Schmidle	Not Listed	NE
Cladophoraceae	<i>Rhizoclonium</i>	<i>africanum</i>	Kützing	Not Listed	NE
Cladophoraceae	<i>Rhizoclonium</i>	<i>grande</i>	Børgesen	Not Listed	NE
Cladophoraceae	<i>Rhizoclonium</i>	<i>tortuosum</i>	(Dillwyn) Kützing	Not Listed	NE
Siphonocladaceae	<i>Dictyosphaeria</i>	<i>cavernosa</i>	(Forsskål) Børgesen	Not Listed	NE
Siphonocladaceae	<i>Dictyosphaeria</i>	<i>intermedia</i>	Weber-van Bosse	Not Listed	NE
Valoniaceae	<i>Valonia</i>	<i>aegagropila</i>	C.Agardh	Not Listed	NE
Valoniaceae	<i>Valonia</i>	<i>fastigiata</i>	Harvey ex J.Agardh	Not Listed	NE
Valoniaceae	<i>Valonia</i>	<i>ventricosa</i>	J.Agardh	Not Listed	NE
Valoniaceae	<i>Valoniopsis</i>	<i>pachynema</i>	(G.Martens) Børgesen	Not Listed	NE
Dasycladaceae	<i>Bornetella</i>	<i>oligospora</i>	Solms-Laubach	Not Listed	NE
Dasycladaceae	<i>Bornetella</i>	<i>sphaerica</i>	(Zanardini) Solms-Laubach	Not Listed	NE
Dasycladaceae	<i>Neomeris</i>	<i>annulata</i>	Dickie	Not Listed	NE
Dasycladaceae	<i>Neomeris</i>	<i>bilimbata</i>	J.T.Koster	Not Listed	NE
Dasycladaceae	<i>Neomeris</i>	<i>dumetosa</i>	J.V.Lamouroux	Not Listed	NE
Dasycladaceae	<i>Neomeris</i>	<i>stipitata</i>	Howe	Not Listed	NE
Dasycladaceae	<i>Neomeris</i>	<i>vanbosseae</i>	M.A.Howe	Not Listed	NE
Polyphysaceae	<i>Acetabularia</i>	<i>dentata</i>	Solms-Laubach	Not Listed	NE
Polyphysaceae	<i>Parvocaulis</i>	<i>parvulus</i>	(Solms-Laubach) S.Berger, U.Fettweiss, S.Gleissberg, L.B.Liddle, U.Richter, H.Sawitsky & G.C.Zuccarello	Not Listed	NE
Polyphysaceae	<i>Parvocaulis</i>	<i>polyphysoides</i>	(P.L.Crouan & H.M.Crouan) S.Berger, U.Fettweiss, S.Gleissberg, L.B.Liddle, U.Richter, H.Sawitsky & G.C.Zuccarello	Not Listed	NE
Characiaceae	<i>Characium</i>	<i>acuminatum</i>	A.Braun	Not Listed	NE
Gloeotilaceae	<i>Radiofilum</i>	<i>conjunctivum</i>	Schmidle	Not Listed	NE
Golenkiniaeae	<i>Golenkinia</i>	<i>paucispina</i>	W.West & G.S.West	Not Listed	NE
Golenkiniaeae	<i>Golenkinia</i>	<i>radiata</i>	Chodat	Not Listed	NE
Hydrodictyaceae	<i>Parapediastrum</i>	<i>biradiatum</i>	(Meyen) E.Hegewald	Not Listed	NE
Hydrodictyaceae	<i>Pediastrum</i>	<i>boryanum</i>	(Turpin) Meneghini	Not Listed	NE
Hydrodictyaceae	<i>Pediastrum</i>	<i>duplex</i>	Meyen	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Hydrodictyaceae	<i>Pediastrum</i>	<i>duplex</i> var. <i>gracillimum</i>	W.West & G.S.West	Not Listed	NE
Hydrodictyaceae	<i>Pediastrum</i>	<i>simplex</i>	Meyen	Not Listed	NE
Hydrodictyaceae	<i>Stauridium</i>	<i>tetras</i>	(Ehrenberg) E.Hegewald	Not Listed	NE
Microsporaceae	<i>Microspora</i>	<i>floccosa</i>	(Vaucher) Thuret	Not Listed	NE
Microsporaceae	<i>Microspora</i>	<i>stagnorum</i>	(Kützing) Lagerheim	Not Listed	NE
Neochloridaceae	<i>Chlorotetraedron</i>	<i>incus</i>	(Teiling) Komárek & Kováčik	Not Listed	NE
Neochloridaceae	<i>Schroederia</i>	<i>planktonica</i>	(Skuja) Philipose	Not Listed	NE
Neochloridaceae	<i>Schroederia</i>	<i>setigera</i>	(Schröder)	Not Listed	NE
			Lemmermann		
Neochloridaceae	<i>Tetraedron</i>	<i>caudatum</i>	(Corda) Hansgirg	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>hemisphaericum</i>	Skuja	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>lobulatum</i>	(Nägeli) Hansgirg	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>minimum</i>	(A.Braun) Hansgirg	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>muticum</i> f. <i>punctulatum</i>	(Reinsch) De Toni	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>proteiforme</i>	(Turner) Brunnthaler	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>regulare</i> var. <i>incus</i> f. <i>major</i>	Prescott	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>trigonum</i>	(Nägeli) Hansgirg	Not Listed	NE
Neochloridaceae	<i>Tetraedron</i>	<i>trigonum</i> var. <i>gracile</i>	(Reinsch) De Toni	Not Listed	NE
Oocystaceae	<i>Selenastrum</i>	<i>bibraianum</i>	Reinsch	Not Listed	NE
Oocystaceae	<i>Selenastrum</i>	<i>gracile</i>	Reinsch	Not Listed	NE
Radiococcaceae	<i>Radiococcus</i>	<i>nimbatus</i>	(De Wildeman)	Not Listed	NE
			Schmidle		
Radiococcaceae	<i>Tomaculum</i>	<i>catenatum</i>	Whitford	Not Listed	NE
Scenedesmaceae	<i>Acutodesmus</i>	<i>acuminatus</i>	(Lagerheim) Tsarenko	Not Listed	NE
Scenedesmaceae	<i>Acutodesmus</i>	<i>obliquus</i>	(Turpin) Hegewald & Hanagata	Not Listed	NE
Scenedesmaceae	<i>Coelastrum</i>	<i>proboscideum</i>	Bohlin	Not Listed	NE
Scenedesmaceae	<i>Coelastrum</i>	<i>pulchrum</i>	Schmidle	Not Listed	NE
Scenedesmaceae	<i>Coelastrum</i>	<i>reticulatum</i>	(P.A.Dangeard) Senn	Not Listed	NE
Scenedesmaceae	<i>Coelastrum</i>	<i>sphaericum</i>	Nägeli	Not Listed	NE
Scenedesmaceae	<i>Desmodesmus</i>	<i>armatus</i>	R.Chodat	Not Listed	NE
Scenedesmaceae	<i>Desmodesmus</i>	<i>perforatus</i>	(Lemmermann)	Not Listed	NE
			E.Hegewald		
Scenedesmaceae	<i>Dimorphococcus</i>	<i>lunatus</i>	A.Braun	Not Listed	NE
Scenedesmaceae	<i>Hylodesmus</i>	<i>singaporensis</i>	Eliás, Nemcová, Skaloud, Neustupa	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>abundans</i>	(O.Kirchner) Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>acuminatus</i>	(Lagerheim) Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>acus</i> var. <i>globosus</i>	Hortobágyi	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>arcuatus</i>	Lemmermann	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>balatonicus</i>	Hortobágyi	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>bicaudatus</i>	(Hansgirg) Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>bijuga</i>	(Turpin) Lagerheim	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>brasiliensis</i>	Bohlin	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>denticulatus</i>	Lagerheim	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>dispar</i>	Brébisson	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>ecornis</i>	(Ehrenberg) Chodat	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Scenedesmaceae	<i>Scenedesmus</i>	<i>longispina</i>	R.Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>magnus</i>	Meyen	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>obliquus</i>	(Turpin) Kützing	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>opoliensis</i>	P.G.Richter	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>polyglobulus</i>	Hortobágyi	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>quadricauda</i>	(Turpin) Brébisson	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>quadricauda</i> var. <i>parvus</i>	G.M.Smith	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>quadrispina</i>	Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>rubescens</i>	(Dangeard) E.Kessler, M.Schafer, C.Hummer, A.Kloboucek & V.A.R.Huss	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>sooi</i>	Hortobágyi	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>spinosus</i>	Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>subspicatus</i>	Chodat	Not Listed	NE
Scenedesmaceae	<i>Scenedesmus</i>	<i>verrucosus</i>	Y.V.Roll	Not Listed	NE
Scenedesmaceae	<i>Tetraedesmus</i>	<i>cumbricus</i>	G.S.West	Not Listed	NE
Scenedesmaceae	<i>Tetraellantos</i>	<i>lagerheimii</i>	Teiling	Not Listed	NE
Scenedesmaceae	<i>Tetrastrum</i>	<i>heteracanthum</i>	(Nordstedt) Chodat	Not Listed	NE
Scenedesmaceae	<i>Tetrastrum</i>	<i>staurogeniaeforme</i>	(Schröder) Lemmermann	Not Listed	NE
Selenastraceae	<i>Ankistrodesmus</i>	<i>falcatus</i>	(Corda) Ralfs	Not Listed	NE
Selenastraceae	<i>Ankistrodesmus</i>	<i>spiralis</i>	(W.B.Turner) Lemmermann	Not Listed	NE
Selenastraceae	<i>Chlorolobion</i>	<i>braunii</i>	(Nägeli) Komárek	Not Listed	NE
Selenastraceae	<i>Kirchneriella</i>	<i>lunaris</i>	(Kirchner) K.Möbius	Not Listed	NE
Sphaeropleaceae	<i>Ankyra</i>	<i>ancora</i>	(G.M.Smith) Fott	Not Listed	NE
Treubariaceae	<i>Treubaria</i>	<i>crassispina</i>	G.M.Smith	Not Listed	NE
Treubariaceae	<i>Treubaria</i>	<i>schmidlei</i>	(Schröder) Fott & Kováčik	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>clathrata</i>	(Roth) Greville	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>flexuosa</i>	(Wulfen) J. Agardh subsp. <i>flexuosa</i>	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>flexuosa</i>	(Wulfen) J. Agardh subsp. <i>paradoxa</i> (C. Agardh) Bliding	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>intestinalis</i>	(Linnaeus) Nees	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>lingulata</i>	J. Agardh	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>muscoides</i>	(Clemente y Rubio) Cremades	Not Listed	NE
Ulvaceae	<i>Enteromorpha</i>	<i>ovata</i>	Thivy & Visalakshmi ex H.Joshi & V.Krishnamurthy	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>beytensis</i>	Thivy & Sharma	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>clathrata</i>	(Roth) C. Agardh	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>compressa</i>	Linnaeus	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>fasciata</i>	Delile	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>fenestrata</i>	Postels & Ruprecht	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>flexuosa</i>	Wulfen	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>flexuosa</i> subsp. <i>paradoxa</i>	(C.Agardh) M.J.Wynne	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Ulvaceae	<i>Ulva</i>	<i>intestinalis</i>	Linnaeus	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>lactuca</i>	Linnaeus	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>latissima</i>	[auctorum]	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>pertusa</i>	Kjellman	Not Listed	NE
Ulvaceae	<i>Ulva</i>	<i>reticulata</i>	Forsskål	Not Listed	NE
Nephroselmidaceae	<i>Heteromastix</i>	<i>angulata</i>	Korshikov	Not Listed	NE
Pedinomonadaceae	<i>Pedinomonas</i>	<i>minor</i>	Korshikov	Not Listed	NE
Phacotaceae	<i>Pedinopera</i>	<i>granulosa</i>	(Playfair) Pascher	Not Listed	NE
Scourfieldiaceae	<i>Scourfieldia</i>	<i>complanata</i>	G.S.West	Not Listed	NE
Chlorococcaceae	<i>Podochedra</i>	<i>tropica</i>	J.Neustupa	Not Listed	NE
Chlorellaceae	<i>Actinastrum</i>	<i>hantzschii</i>	Lagerheim	Not Listed	NE
Chlorellaceae	<i>Actinastrum</i>	<i>hantzschii</i> var. <i>elongatum</i>	G.M.Smith	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>angustoellipsoidea</i>	N.Hanagata & M.Chihara	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>homosphaera</i>	Skuja	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>luteo-viridis</i>	Chodat	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>rugosa</i>	J.B.Petersen	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>saccharophila</i>	(Krüger) Migula	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>sphaerica</i>	Tschermak-Woess	Not Listed	NE
Chlorellaceae	<i>Chlorella</i>	<i>vulgaris</i>	Beijerinck	Not Listed	NE
Chlorellaceae	<i>Closteriopsis</i>	<i>longissima</i>	(Lemmermann) Lemmermann	Not Listed	NE
Chlorellaceae	<i>Dictyosphaerium</i>	<i>pulchellum</i>	H.C.Wood	Not Listed	NE
Chlorellaceae	<i>Micractinium</i>	<i>bornhemiense</i>	(W.Conrad) Korshikov	Not Listed	NE
Chlorellaceae	<i>Micractinium</i>	<i>pusillum</i>	Fresenius	Not Listed	NE
Chlorellaceae	<i>Nannochloris</i>	<i>bacillaris</i>	Naumann	Not Listed	NE
Chlorococcaceae	<i>Podochedra</i>	<i>saltans</i>	J.Neustupa	Not Listed	NE
Oocystaceae	<i>Cerasterias</i>	<i>irregularis</i>	G.M.Smith	Not Listed	NE
Oocystaceae	<i>Cerasterias</i>	<i>staurastrodes</i>	W.West & G.S.West	Not Listed	NE
Oocystaceae	<i>Chodatella</i>	<i>wratislawiensis</i>	(Schröder) Ley	Not Listed	NE
Oocystaceae	<i>Keriochlamys</i>	<i>styriaca</i>	Pascher	Not Listed	NE
Oocystaceae	<i>Lagerheimia</i>	<i>genevensis</i>	(Chodat) Chodat	Not Listed	NE
Oocystaceae	<i>Lagerheimia</i>	<i>longiseta</i>	(Lemmermann) Printz	Not Listed	NE
Oocystaceae	<i>Lagerheimia</i>	<i>subsalsa</i>	Lemmermann	Not Listed	NE
Oocystaceae	<i>Nephrocytum</i>	<i>agardhianum</i>	Nägeli	Not Listed	NE
Oocystaceae	<i>Oocystis</i>	<i>elliptica</i>	West	Not Listed	NE
Oocystaceae	<i>Oocystis</i>	<i>pusilla</i>	Hansgirg	Not Listed	NE
Oocystaceae	<i>Oonephris</i>	<i>obesa</i>	(W.West) Fott	Not Listed	NE
Oocystaceae	<i>Pachycladella</i>	<i>umbrina</i>	(G.M.Smith) P.C.Silva	Not Listed	NE
Microthamniales incertae sedis	<i>Microthamnion</i>	<i>kuetzingianum</i>	Nägeli	Not Listed	NE
Chlorococcaceae	<i>Elliptochloris</i>	<i>subsphaerica</i>	(H.Reisigl) H.Ettl & G.Gärtner	Not Listed	NE
Prasiolales incertae sedis	<i>Desmococcus</i>	<i>olivaceus</i>	(Persoon ex Acharius) J.R.Laundon	Not Listed	NE
Chlorococcaceae	<i>Dictyochloropsis</i>	<i>irregularis</i>	T.Nakano & Y.Isagi	Not Listed	NE
Chlorococcaceae	<i>Dictyochloropsis</i>	<i>symbiontica</i>	Tschermak-Woess	Not Listed	NE
Chlorococcaceae	<i>Myrmecia</i>	<i>globosa</i>	Printz	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Chlorococcaceae	<i>Myrmecia</i>	<i>irregularis</i>	(J.B.Petersen) H.Ettl & G.Gärtner	Not Listed	NE
Coccomyxaceae	<i>Ourococcus</i>	<i>bicaudatus</i>	(A.Braun) Grobéty	Not Listed	NE
Trebouxiophyceae incertae sedis	<i>Crucigenia</i>	<i>tetrapedia</i>	(Kirchner) W.West & G.S.West	Not Listed	NE
Trebouxiophyceae incertae sedis	<i>Pseudomarvania</i>	<i>aerophytica</i>	(Neustupa & Sejnohová) Eliáš &	Not Listed	NE
Trebouxiophyceae incertae sedis	<i>Watanabea</i>	<i>reniformis</i>	N.Hanagata, I.Karube, M.Chihara & P.C.Silva	Not Listed	NE
Trebouxiophyceae incertae sedis	<i>Botryococcus</i>	<i>braunii</i>	Kützing	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>corymbosa</i>	J. Agardh	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>hypnoides</i>	J.V.Lamouroux	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>indica</i>	A. Gepp & E. Gepp	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>pennata</i>	J.V.Lamouroux	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>pennata</i> var. <i>leptosticta</i>	(Kützing) Collins & Hervey	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>pennata</i> var. <i>secunda</i>	(Harvey) Collins & Hervey	Not Listed	NE
Bryopsidaceae	<i>Bryopsis</i>	<i>plumosa</i>	(Hudson) C. Agardh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>cupressoides</i>	(West) C.Agardeh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>lentillifera</i>	J.Agardeh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>macrophysa</i>	(Sonder ex Kützing)	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>mexicana</i>	Sonder ex Kützing	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>peltata</i>	J.V.Lamouroux	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>peltata</i> var. <i>macrodisca</i>	(Decaisne) Weber-van Bosse	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>racemosa</i>	(Forsskål) J.Agardeh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>racemosa</i> var. <i>clavifera</i>	(C.Agardeh) Weber-van Bosse	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>racemosa</i> var. <i>occidentalis</i>	(J.Agardeh) Børgesen	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>racemosa</i> var. <i>turbinata</i>	(J.Agardeh) Eubank	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>scalpelliformis</i>	(R.Brown ex Turner)	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>serrulata</i>	C.Agardeh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>sertularioides</i>	(Forsskål) J.Agardeh	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>sertularioides</i> var. <i>longiseta</i>	(S.G.Gmelin) M.A.Howe	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>taxifolia</i>	(Bory de Saint-Vincent) Svedelius	Not Listed	NE
Caulerpaceae	<i>Caulerpa</i>	<i>verticillata</i>	(M.Vahl) C.Agardeh	Not Listed	NE
Derbesiaceae	<i>Derbesia</i>	<i>fastigiata</i>	J.Agardeh	Not Listed	NE
Derbesiaceae	<i>Derbesia</i>	<i>fastigiata</i>	W.R. Taylor	Not Listed	NE
Udoteaceae	<i>Chlorodesmis</i>	<i>hildebrandtii</i>	W.R.Taylor	Not Listed	NE
Anadyomenaceae	<i>Anadyomene</i>	<i>stellata</i>	A.Gepp & E.S.Gepp	Not Listed	NE
Anadyomenaceae	<i>Anadyomene</i>	<i>wrightii</i>	(Wulfen) C.Agardeh	Not Listed	NE
Anadyomenaceae	<i>Microdictyon</i>	<i>tenuius</i>	Harvey ex J.E.Gray	Not Listed	NE
Boodleaceae	<i>Boodlea</i>	<i>composita</i>	J.E.Gray	Not Listed	NE
			(Harvey) F.Brand	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Bodaleaceae	<i>Bodalea</i>	<i>montagnei</i>	(Harvey ex J.E.Gray) Egerod	Not Listed	NE
Bodaleaceae	<i>Cladophoropsis</i>	<i>javanica</i>	(Kützing) P.C.Silva	Not Listed	NE
Bodaleaceae	<i>Cladophoropsis</i>	<i>membranacea</i>	(Hofman Bang ex C. Agardh) Børgesen	Not Listed	NE
Bodaleaceae	<i>Cladophoropsis</i>	<i>sundanensis</i>	Reinbold	Not Listed	NE
Bodaleaceae	<i>Cladophoropsis</i>	<i>vaucheriaeformis</i>	(J.E.Areschoug) Papenfuss	Not Listed	NE
Bodaleaceae	<i>Phyllodictyon</i>	<i>anastomosans</i>	(Harvey) Kraft & M.J. Wynne	Not Listed	NE
Siphonocladaceae	<i>Boergesenia</i>	<i>forbesii</i>	(Harvey) Feldmann Marine	Not Listed	NE
Trentepohliaceae	<i>Printzina</i>	<i>effusa</i>	(Krempelhuber) R.H.Thompson & D.E.Wujek	Not Listed	NE
Trentepohliaceae	<i>Printzina</i>	<i>lagenifera</i>	(Hildebrand) R.H.Thompson & D.E.Wujek	Not Listed	NE
Trentepohliaceae	<i>Trentepohlia</i>	<i>aurea</i>	(Linnaeus) C.F.P.Martius	Not Listed	NE
Trentepohliaceae	<i>Trentepohlia</i>	<i>odorata</i>	(F.H.Wiggers) Wittrock	Not Listed	NE
Trentepohliaceae	<i>Trentepohlia</i>	<i>rigidula</i>	(J.Müller) Hariot	Not Listed	NE
Collinsiellaceae	<i>Collinsiella</i>	<i>cava</i>	(Yendo) Printz	Not Listed	NE
Gloeotilaceae	<i>Binuclearia</i>	<i>tectorum</i>	(Kützing) Berger ex Wichmann	Not Listed	NE
Codonosigidae	<i>Sphaeroeca</i>	<i>volvox</i>	Lauterborn	Not Listed	NE
Cryptomonadaceae	<i>Cryptomonas</i>	<i>erosa</i>	Ehrenberg	Not Listed	NE
Cryptomonadaceae	<i>Cryptomonas</i>	<i>ovata</i>	Ehrenberg	Not Listed	NE
Cryptomonadaceae	<i>Cryptomonas</i>	<i>paramaecium</i>	(Ehrenberg) Hoef- Emden & Melkonian	Not Listed	NE
Cryptomonadaceae	<i>Cryptomonas</i>	<i>phaseolus</i>	Skuja	Not Listed	NE
Senniaceae	<i>Sennia</i>	<i>parvula</i>	Skuja	Not Listed	NE
Senniaceae	<i>Sennia</i>	<i>parvula</i>	Skuja	Not Listed	NE
Chrococcaceae	<i>Chrococcus</i>	<i>dispersus</i>	(Keissler) Lemmermann	Not Listed	NE
Chrococcaceae	<i>Chrococcus</i>	<i>limneticus</i>	Lemmermann	Not Listed	NE
Chrococcaceae	<i>Chrococcus</i>	<i>minutus</i>	(Kützing) Nägeli	Not Listed	NE
Chrococcaceae	<i>Chrococcus</i>	<i>turgidus</i>	(Kützing) Nägeli	Not Listed	NE
Cyanobacteriaceae	<i>Aphanothece</i>	<i>conglomerata</i>	Rich	Not Listed	NE
Cyanobacteriaceae	<i>Aphanothece</i>	<i>stagnina</i>	(Sprengel) A.Braun	Not Listed	NE
Cyanobacteriaceae	<i>Gloeothece</i>	<i>rupestris</i>	(Lyngbye) Bornet	Not Listed	NE
Merismopediaceae	<i>Aphanocapsa</i>	<i>elachista</i>	W.West & G.S.West	Not Listed	NE
Merismopediaceae	<i>Aphanocapsa</i>	<i>incerta</i>	(Lemmermann)	Not Listed	NE
Merismopediaceae	<i>Coelosphaerium</i>	<i>kuetzingianum</i>	Cronberg & Komárek Nägeli	Not Listed	NE
Merismopediaceae	<i>Merismopedia</i>	<i>elegans</i>	A.Braun ex Kützing, 1849	Not Listed	NE
Merismopediaceae	<i>Merismopedia</i>	<i>minima</i>	Beck	Not Listed	NE
Merismopediaceae	<i>Merismopedia</i>	<i>thermalis</i>	Kützing, 1843	Not Listed	NE
Merismopediaceae	<i>Snowella</i>	<i>lacustris</i>	(Chodat) Komárek & Hindák, 1988	Not Listed	NE
Merismopediaceae	<i>Synechocystis</i>	<i>aquatilis</i>	Sauvageau	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Microcystaceae	<i>Gloeocapsa</i>	<i>compacta</i>	Kützing	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>aeruginosa</i>	(Kützing) Kützing	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>flos-aquae</i>	(Wittrock) Kirchner	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>robusta</i>	(Clark) Nygaard	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>smithii</i>	Komárek & Anagnostidis	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>wesenbergii</i>	(Komárek) Komárek	Not Listed	NE
Microcystaceae	<i>Microcystis</i>	<i>zanardinii</i>	(Hauck) P.Silva	Not Listed	NE
Stichosiphonaceae	<i>Stichosiphon</i>	<i>sansibaricus</i>	(Hieronymus) Drouet & Daily	Not Listed	NE
Gomphosphaeriaceae	<i>Gomphosphaeria</i>	<i>aponina</i>	Kützing	Not Listed	NE
Hapalosiphonaceae	<i>Hapalosiphon</i>	<i>fontinalis</i>	(C.Agardh) Bornet	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>circinalis</i>	Rabenhorst ex Bornet & Flahault	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>flos-aquae</i>	(Lyngbye) Brébisson ex Bornet & Flahault	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>fuellebornii</i>	Schmidle	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>licheniformis</i>	Bory de Saint-Vincent	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>macrospora</i>	Klebahn	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>planctonica</i>	Brunnthalter	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>pseudoscillatoria</i>	Bory de Saint- Vincent	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>spiroides</i>	Klebahn	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>tanganyikae</i>	G.S.West	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>torulosa</i>	Lagerheim ex Bornet & Flahault	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>utermohlii</i>	(Utermöhl) Geitler	Not Listed	NE
Nostocaceae	<i>Anabaena</i>	<i>licheniformis</i>	Bory de Saint- Vincent	Not Listed	NE
Nostocaceae	<i>Aphanizomenon</i>	<i>aphanizomenoides</i>	(Forti) Hortobágyi & Komárek	Not Listed	NE
Nostocaceae	<i>Aphanizomenon</i>	<i>issatschenkoi</i>	(Usacev) Proshkina- Lavrenko	Not Listed	NE
Nostocaceae	<i>Aphanizomenon</i>	<i>ovalisporum</i>	Forti	Not Listed	NE
Nostocaceae	<i>Cylindrospermopsis</i>	<i>raciborskii</i>	(Woloszynska) Seenaya & Subba Raju	Not Listed	NE
Nostocaceae	<i>Cylindrospermum</i>	<i>minimum</i>	G.S.West	Not Listed	NE
Nostocaceae	<i>Dolichospermum</i>	<i>flos-aquae</i>	(Brébisson ex Bornet & Flahault) P.Wacklin, L.Hoffmann & J.Komárek	Not Listed	NE
Nostocaceae	<i>Nodularia</i>	<i>spumigena</i>	Mertens	Not Listed	NE
Nostocaceae	<i>Nostoc</i>	<i>commune</i>	Vaucher ex Bornet & Flahault, 1888	Not Listed	NE
Nostocaceae	<i>Nostoc</i>	<i>commune</i>	Vaucher ex Bornet & Flahault	Not Listed	NE
Nostocaceae	<i>Nostoc</i>	<i>paludosum</i>	Kützing ex Bornet & Flahault, 1886	Not Listed	NE
Nostocaceae	<i>Nostoc</i>	<i>paludosum</i>	Kützing ex Bornet & Flahault	Not Listed	NE
Nostocaceae	<i>Raphidiopsis</i>	<i>curvata</i>	F.E.Fritsch & M.F.Rich	Not Listed	NE
Nostocaceae	<i>Sympyiosiphon</i>	<i>arenarius</i>	Zanardini	Not Listed	NE
Nostocaceae	<i>Trichormus</i>	<i>azollae</i>	(Strasburger) Komárek & Anagnostidis	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Rivulariaceae	<i>Gardnerula</i>	<i>spongiosa</i>	(Zanardini) Tsedng & Hua	Not Listed	NE
Rivulariaceae	<i>Thrichocladia</i>	<i>nostocooides</i>	Zanardini	Not Listed	NE
Scytonemataceae	<i>Brachytrichia</i>	<i>quoyi</i>	(C. Agardh) Bornet & Flauhault	Not Listed	NE
Scytonemataceae	<i>Scytonema</i>	<i>hofman-bangii</i>	C.Agardh ex P.C.Silva	Not Listed	NE
Tolypothrichaceae	<i>Tolypothrix</i>	<i>tenuis</i>	Kützing	Not Listed	NE
Borziaceae	<i>Komvophoron</i>	<i>constrictum</i>	(Szafer) Anagnostidis & Komárek	Not Listed	NE
Cyanobacteriaceae	<i>Cyanothece</i>	<i>aeruginosa</i>	(Nägeli) Komárek	Not Listed	NE
Microcoleaceae	<i>Microcoleus</i>	<i>vaginatus</i>	(Vaucher) Gomont ex Gomont	Not Listed	NE
Microcoleaceae	<i>Planktothrix</i>	<i>rubescens</i>	(De Candolle ex Gomont) Anagnostidis & Komárek	Not Listed	NE
Microcoleaceae	<i>Porphyrosiphon</i>	<i>luteus</i>	(Gomont) Anagnostidis & Komárek	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>aestuarii</i>	(Mertens) Liebman ex Gomont	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>birgei</i>	G.M.Smith	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>majuscula</i>	(Dillwyn) Harvey ex Gomont	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>martensiana</i>	Meneghini ex Gomont	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>noronhae</i>	Dickie ex Forti	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>lutea</i>	(C. Agardh) Areschoug	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>majuscula</i>	(Dillwyn) Harvey ex Gomont, 1892	Not Listed	NE
Oscillatoriaceae	<i>Lyngbya</i>	<i>noronhae</i>	Dickie ex Forti, 1907	Not Listed	NE
Oscillatoriaceae	<i>Oscillatoria</i>	<i>curviceps</i>	C.Agardh ex Gomont	Not Listed	NE
Oscillatoriaceae	<i>Oscillatoria</i>	<i>subbrevis</i>	Schmidle	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>articulatum</i>	(Gardner) Anagnostidis & Komárek	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>formosum</i>	(Bory de Saint-Vincent) Anagnostidis & Komárek	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>granulatum</i>	(Gardner) Anagnostidis	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>limosum</i>	(Dillwyn) P.C.Silva	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>lucidum</i>	(C.Agardh) Kützing ex	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>taylori</i>	(Drouet & Strickland)	Not Listed	NE
Oscillatoriaceae	<i>Phormidium</i>	<i>versicolor</i>	Wartmann ex Gomont	Not Listed	NE
Oscillatoriaceae	<i>Sympyrosiphon</i>	<i>arenarius</i>	Zanardini, 1872	Not Listed	NE
Phormidiaceae	<i>Arthrospira</i>	<i>gigantea</i>	(Schmidle) Anagnostidis	Not Listed	NE
Phormidiaceae	<i>Arthrospira</i>	<i>jenneri</i>	Stizenberger ex Gomont	Not Listed	NE
Phormidiaceae	<i>Arthrospira</i>	<i>major</i>	(Kützing) Crow	Not Listed	NE
Pseudanabaenaceae	<i>Geitlerinema</i>	<i>acutissimum</i>	(Kufferath) Anagnostidis	Not Listed	NE
Pseudanabaenaceae	<i>Geitlerinema</i>	<i>splendidum</i>	(Greville) Anagnostidis	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Schizotrichaceae	<i>Schizothrix</i>	<i>arenaria</i>	(Berkeley) Gomont	Not Listed	NE
Schizotrichaceae	<i>Schizothrix</i>	<i>calcicola</i>	(C.Agardh) Gomont ex Gomont	Not Listed	NE
Schizotrichaceae	<i>Schizothrix</i>	<i>mexicana</i>	Gomont	Not Listed	NE
Spirulinaceae	<i>Spirulina</i>	<i>gomontiana</i>	(Setchell) Geitler	Not Listed	NE
Spirulinaceae	<i>Spirulina</i>	<i>subsalsa</i>	Örstedt ex Gomont	Not Listed	NE
Leptolyngbyaceae	<i>Leibleinia</i>	<i>epiphytica</i>	(Hieronymus) Compère, 1985	Not Listed	NE
Leptolyngbyaceae	<i>Leptolyngbya</i>	<i>cebennensis</i>	(Gomont) I.Umezaki & M.Watanabe	Not Listed	NE
Leptolyngbyaceae	<i>Leptolyngbya</i>	<i>laminosa</i>	(Gomont) Anagnostidis & Komárek	Not Listed	NE
Chamaesiphonaceae	<i>Clastidium</i>	<i>setigerum</i>	Kirchner	Not Listed	NE
Coelosphaeriaceae	<i>Woronichinia</i>	<i>naegeliana</i>	(Unger) Elenkin	Not Listed	NE
Leptolyngbyaceae	<i>Leibleinia</i>	<i>epiphytica</i>	(Hieronymus) Compère	Not Listed	NE
Leptolyngbyaceae	<i>Planktolyngbya</i>	<i>contorta</i>	(Lemmermann) Anagnostidis & Komárek	Not Listed	NE
Leptolyngbyaceae	<i>Planktolyngbya</i>	<i>limnetica</i>	(Lemmermann) J.Komárová-Legnerová & G. Cronberg	Not Listed	NE
Pseudanabaenaceae	<i>Jaaginema</i>	<i>angustissimum</i>	(W.West & G.S.West) Anagnostidis & Komárek	Not Listed	NE
Pseudanabaenaceae	<i>Pseudanabaena</i>	<i>catenata</i>	Lauterborn	Not Listed	NE
Ceratiaceae	<i>Ceratium</i>	<i>hirundinella</i>	(O.F.Müller) Dujardin	Not Listed	NE
Pyrocystaceae	<i>Alexandrium</i>	<i>leei</i>	E.Balech	Not Listed	NE
Pyrocystaceae	<i>Gambierdiscus</i>	<i>yasumotoi</i>	M.J.Holmes	Not Listed	NE
Gymnodiniaceae	<i>Gymnodinium</i>	<i>catenatum</i>	L.W.Graham	Not Listed	NE
Gymnodiniaceae	<i>Gymnodinium</i>	<i>uberrimum</i>	(G.J.Allman) Kofoid & Swezy	Not Listed	NE
Peridiniaceae	<i>Peridiniopsis</i>	<i>thompsonii</i>	(Thompson) Bourrelly	Not Listed	NE
Peridiniaceae	<i>Peridinium</i>	<i>africanum</i>	Lemmermann	Not Listed	NE
Peridiniaceae	<i>Peridinium</i>	<i>bipes</i>	F.Stein	Not Listed	NE
Peridiniaceae	<i>Peridinium</i>	<i>cinctum</i>	(O.F.Müller) Ehrenberg	Not Listed	NE
Peridiniaceae	<i>Peridinium</i>	<i>gatunense</i>	Nygaard	Not Listed	NE
Peridiniaceae	<i>Peridinium</i>	<i>umbonatum</i>	F.Stein	Not Listed	NE
Hemidiiniaceae	<i>Hemidiinium</i>	<i>nasutum</i>	F.Stein	Not Listed	NE
Goniodomataceae	<i>Goniodoma</i>	<i>sphaericum</i>	Murray & Whitting	Not Listed	NE
Euglenidae	<i>Amblyophis</i>	<i>viridis</i>	Ehrenberg	Not Listed	NE
Euglenidae	<i>Colacium</i>	<i>vesiculosum</i>	Ehrenberg	Not Listed	NE
Euglenidae	<i>Cryptoglena</i>	<i>skujae</i>	Marin & Melkonian	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>acus</i>	Ehrenberg	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>chlorophoenicea</i>	L.K.Schmarda	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>cyclopiscola</i>	J.Gickelhorn	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>elongata</i>	Schewiakoff	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>granulata</i>	(G.A.Klebs) Schmitz	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>intermedia</i>	(Klebs) F.R.Schmitz	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Euglenidae	<i>Euglena</i>	<i>longicauda</i>	Ehrenberg	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>mainxi</i>	Deflandre	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>mutabilis</i>	Schmitz	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>oxyuris</i>	Schmarda	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>pisciformis</i>	Klebs	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>proxima</i>	P.A.Dangeard	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>refringens</i>	M.Gojdics	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>sanguinea</i>	Ehrenberg	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>splendens</i>	P.A.Dangeard	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>subehrenbergii</i>	Skuja	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>texta</i>	(Dujardin) Hübner	Not Listed	NE
Euglenidae	<i>Euglena</i>	<i>tripteris</i>	(Dujardin) Klebs	Not Listed	NE
Euglenidae	<i>Monomorphina</i>	<i>pyrum</i>	(Ehrenberg) Mereschkowski	Not Listed	NE
Euglenidae	<i>Strombomonas</i>	<i>australica</i>	(Playfair) Deflandre	Not Listed	NE
Euglenidae	<i>Strombomonas</i>	<i>deflandrei</i>	(Y.V.Roll) Deflandre	Not Listed	NE
Euglenidae	<i>Strombomonas</i>	<i>gibberosa</i>	(Playfair) Deflandre	Not Listed	NE
Euglenidae	<i>Strombomonas</i>	<i>verrucosa</i>	(E.Daday) Deflandre	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>allia</i>	Drezepolski	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>armata</i>	(Ehrenberg) F.Stein	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>conica</i>	Playfair	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>dybowskii</i>	Drezepolski	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>hispida</i>	(Perty) F.Stein	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>hispida</i> var. <i>elongata</i>	G.A.Prowse	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>hystrix</i> var. <i>paucispinosa</i>	G.A.Prowse	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>intermedia</i>	P.A.Dangeard	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>klebsii</i>	Deflandre	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>lacustris</i>	Drezepolski	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>lismorensis</i>	Playfair	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>megalacantha</i>	Da Cunha	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>mirabilis</i> var. <i>affinis</i>	Skvortzov	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>oblonga</i>	Lemmermann	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>pulchella</i>	Drezepolski	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>rugulosa</i>	F.Stein ex Deflandre	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>scabra</i> var. <i>labiata</i>	(Teiling) Huber-Pestalozzi	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>similis</i>	A.Stokes	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>superba</i>	Svirenko	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>volvocina</i>	(Ehrenberg) Ehrenberg	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>volvocinopsis</i>	Svirenko	Not Listed	NE
Euglenidae	<i>Trachelomonas</i>	<i>volzii</i> var. <i>cylindracea</i>	Playfair	Not Listed	NE
Phacaceae	<i>Lepocinclis</i>	<i>fusca</i>	(Klebs) Kosmala & Zakrys	Not Listed	NE
Phacaceae	<i>Lepocinchis</i>	<i>fusiformis</i>	(H.J.Carter)	Not Listed	NE
Phacaceae	<i>Lepocinchis</i>	<i>marssonii</i>	Lemmermann	Not Listed	NE
Phacaceae	<i>Lepocinchis</i>	<i>ovum</i>	(Ehrenberg)	Not Listed	NE
Phacaceae	<i>Lepocinchis</i>	<i>playfairiana</i>	Lemmermann	Not Listed	NE
Phacaceae	<i>Lepocinchis</i>	<i>salina</i>	Deflandre	Not Listed	NE
			F.E.Fritsch	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Phacaceae	<i>Lepocinclus</i>	<i>sphagnophila</i>	Lemmermann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>acuminatus</i>	Stokes	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>angulatus</i>	Pochm.	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>anomalus</i>	F.E.Fritsch & M.F.Rich	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>caudatus</i>	Hübner	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>caudatus</i> var. <i>ovalis</i>	Drezepolski	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>curvicauda</i>	Svirenko	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>glaber</i>	(Defl.) Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>hamatus</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>helikoides</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>lefèvrei</i>	Bourrelly	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>longicauda</i> f. <i>rotundus</i>	(Pochmann) Popova	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>meson</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>monilatus</i> var. <i>suecicus</i>	Lemmermann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>onyx</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>orbicularis</i>	K.Hübner	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>oscillans</i>	G.A.Klebs	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>pleuronectes</i>	(O.F.Müller) Dujardin	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>polytrophos</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>pyrum</i>	(Ehrenberg) F.Stein	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>raciborskii</i>	Drezepolski	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>ranula</i>	Pochmann	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>tortus</i>	(Lemmermann) Skvortzov	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>tricarinatus</i>	Prowse	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>trifacialis</i>	Prowse	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>triqueter</i>	(Ehrenberg) Dujardin	Not Listed	NE
Phacaceae	<i>Phacus</i>	<i>unidentatus</i>	Prowse	Not Listed	NE
Anisonemidae	<i>Heteronema</i>	<i>acus</i>	(Ehrenberg) Stein	Not Listed	NE
Anisonemidae	<i>Heteronema</i>	<i>polymorphum</i>	Deflandre	Not Listed	NE
Astasiidae	<i>Astasia</i>	<i>variabilis</i>	Skvortzov	Not Listed	NE
Astasiidae	<i>Cyclidiopsis</i>	<i>acus</i>	Korchikow	Not Listed	NE
Distigmidae	<i>Distigma</i>	<i>curvatum</i>	Pringsheim	Not Listed	NE
Distigmidae	<i>Distigma</i>	<i>proteus</i>	Ehrenberg	Not Listed	NE
Peranemidae	<i>Peranema</i>	<i>cuneatum</i>	Playfair	Not Listed	NE
Peranemidae	<i>Peranema</i>	<i>curvicauda</i>	Skuja	Not Listed	NE
Chromulinaceae	<i>Chromulina</i>	<i>sphaerica</i>	Bachmann	Not Listed	NE
Chrysamoebaceae	<i>Chrysamoeba</i>	<i>radians</i>	Klebs	Not Listed	NE
Chrysococcaceae	<i>Chrysococcus</i>	<i>biporus</i>	Skuja	Not Listed	NE
Chrysococcaceae	<i>Chrysococcus</i>	<i>rufescens</i>	Klebs	Not Listed	NE
Mallomonadaceae	<i>Mallomonas</i>	<i>acaroides</i>	Perty	Not Listed	NE
Mallomonadaceae	<i>Synura</i>	<i>uvella</i>	Ehrenberg	Not Listed	NE
Eustigmataceae	<i>Eustigmatos</i>	<i>vischeri</i>	Hibberd	Not Listed	NE
Eustigmataceae	<i>Pseudostaurastrum</i>	<i>hastatum</i>	(Reinsch) Chodat	Not Listed	NE
Goniochloridaceae	<i>Tetraedriella</i>	<i>regularis</i>	(Kützing) Fott	Not Listed	NE
Dictyotaceae	<i>Canistrocarpus</i>	<i>cervicornis</i>	(Kützing) De Paula & De Clerck	Not Listed	NE
Dictyotaceae	<i>Dictyopteris</i>	<i>delicatula</i>	J.V.Lamouroux	Not Listed	NE
Dictyotaceae	<i>Dictyopteris</i>	<i>repens</i>	(Okamura) Børgesen	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Dictyotaceae	<i>Dictyopteris</i>	<i>woodwardia</i>	(R.Brown ex Turner) C.Agardh	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>adnata</i>	Zanardini	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>bartayresiana</i>	J.V.Lamouroux	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>cervicornis</i>	Kützing	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>ciliolata</i>	Sonder ex Kützing	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>crispata</i>	J.V.Lamouroux	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>dichotoma</i>	(Hudson)	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>dichotoma</i> var. <i>intricata</i>	J.V.Lamouroux (C.Agardh) Greville	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>hauckiana</i>	Nizamuddin	Not Listed	NE
Dictyotaceae	<i>Dictyota</i>	<i>lata</i>	J.V.Lamouroux	Not Listed	NE
Dictyotaceae	<i>Dictyotopsis</i>	<i>propagulifera</i>	Troll	Not Listed	NE
Dictyotaceae	<i>Lobophora</i>	<i>challengeriae</i>	Viera	Not Listed	DD
Dictyotaceae	<i>Lobophora</i>	<i>lamourouxii</i>	Payri & Vieira	Not Listed	DD
Dictyotaceae	<i>Lobophora</i>	<i>novae</i>	Sun, Lim Tanaka, Kawai	Not Listed	DD
Dictyotaceae	<i>Lobophora</i>	<i>variegata</i>	(J.V.Lamouroux) Womersley ex E.C.Oliveira	Not Listed	DD
Dictyotaceae	<i>Padina</i>	<i>antillarum</i>	(Kützing) Piccone	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>australis</i>	Hauck	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>boryana</i>	Thivy	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>distromatica</i>	Hauck	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>gymnospora</i>	(Kützing) Sonder	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>pavonica</i>	(Linnaeus) Thivy	Not Listed	NE
Dictyotaceae	<i>Padina</i>	<i>tetrastromatica</i>	Hauck	Not Listed	NE
Dictyotaceae	<i>Stoechospermum</i>	<i>marginatum</i>	(C.Agardh) Kützing	Not Listed	NE
Dictyotaceae	<i>Stylopodium</i>	<i>zonale</i>	(Lamouroux) Papenfuss	Not Listed	NE
Dictyotaceae	<i>Stylopodium</i>	<i>zonale</i>	(J.V.Lamouroux) Papenfuss	Not Listed	NE
Acinetosporaceae	<i>Feldmannia</i>	<i>indica</i>	(Sonder) Womersley & A.Bailey	Not Listed	NE
Chordariaceae	<i>Trichocladia</i>	<i>nostocooides</i>	Zanardini	Not Listed	NE
Scytosiphonaceae	<i>Chnoospora</i>	<i>implexa</i>	J.Agardh	Not Listed	NE
Scytosiphonaceae	<i>Hydroclathrus</i>	<i>cancellatus</i>	Bory de Saint-Vincent	Not Listed	NE
Scytosiphonaceae	<i>Hydroclathrus</i>	<i>clathratus</i>	(C.Agardh) M.A.Howe	Not Listed	NE
Scytosiphonaceae	<i>Iyengaria</i>	<i>stellata</i>	(Børgesen) Børgesen	Not Listed	NE
Scytosiphonaceae	<i>Rosenvingea</i>	<i>fastigiata</i> f. <i>major</i>	(Reinbold) Egerod	Not Listed	NE
Scytosiphonaceae	<i>Rosenvingea</i>	<i>orientalis</i>	(J.Agardh) Børgesen	Not Listed	NE
Fucaceae	<i>Fucus</i>	<i>clavifer</i>	Turner	Not Listed	NE
Sargassaceae	<i>Hormophysa</i>	<i>cuneiformis</i>	(J. Gmelin) P.C. Silva	Not Listed	NE
Sargassaceae	<i>Hormophysa</i>	<i>triquetra</i>	(C.Agardh) Kützing	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>condensata</i>	Sonder	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>conoides</i>	(J.Agardh) Kützing	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>conoides</i> f. <i>laticuspidata</i>	W.R.Taylor	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>conoides</i> f. <i>retroflexa</i>	W.R.Taylor	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>decurrens</i>	Bory de Saint-Vincent	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>murrayana</i>	E.S.Barton	Not Listed	NE

Family	Genus	Species	Authority	RDB2	RDB3
Sargassaceae	<i>Turbinaria</i>	<i>ornata</i>	(Turner) J.Agardh	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>ornata</i> var. <i>serrata</i>	Jaasund	Not Listed	NE
Sargassaceae	<i>Turbinaria</i>	<i>trialata</i>	(J.Agardh) Kützing	Not Listed	NE
Neoralfsiaceae	<i>Neoralfsia</i>	<i>expansa</i>	(J.Agardh) P.-E.Lim & H.Kawai	Not Listed	NE
Scytoniphonaceae	<i>Colpomenia</i>	<i>sinuosa</i>	(Mertens ex Roth) Derbès & Solier	Not Listed	NE
Sphacelariaceae	<i>Sphacelaria</i>	<i>caespitula</i>	Lyngbye	Not Listed	NE
Sphacelariaceae	<i>Sphacelaria</i>	<i>indica</i>	Reinke	Not Listed	NE
Sphacelariaceae	<i>Sphacelaria</i>	<i>tribuloides</i>	Meneghini	Not Listed	NE
Vacuolariaceae	<i>Chattonella</i>	<i>subsalsa</i>	B.Biecheler	Not Listed	NE
Botrydiopsidaceae	<i>Botrydiopsis</i>	<i>intercedens</i>	Pascher	Not Listed	NE
Characiopsidaceae	<i>Harpochytrium</i>	<i>discopodium</i>	Skuja	Not Listed	NE
Sciadiaceae	<i>Centritractus</i>	<i>belonophorus</i>	(W.Schmidel) E.Lemmermann	Not Listed	NE
Sargassaceae	<i>Sargassum</i>	<i>angustifolium</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>aquifolium</i>	(Turner) C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>assimile</i>	Harvey	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>baccularia</i>	(Mertens) C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>baccularia</i> var. <i>subcompressum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>belangeri</i>	Bory de Saint-Vincent	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>biserrula</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	var. <i>singapoorense</i>			
Sargassaceae	<i>Sargassum</i>	<i>brevifolium</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	var. <i>pergracile</i>			
Sargassaceae	<i>Sargassum</i>	<i>cervicornе</i>	Greville	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>cinereum</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>filifolium</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>glaucescens</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>glaucescens</i> var. <i>ivanii</i>	(Montagne) Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>gracile</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>granuliferum</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>granuliferum</i> var. <i>dubiosum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>grevillei</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>ilicifolium</i>	(Turner) C. Agardh	Not Listed	LC
Sargassaceae	<i>Sargassum</i>	<i>ilicifolium</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	var. <i>pseudospinulosum</i>			
Sargassaceae	<i>Sargassum</i>	<i>latifolium</i>	(Turner) C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>latifolium</i> var. <i>seychallense</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>microcystum</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>microcystum</i> f. <i>dilatatum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>microphyllum</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>myriocystum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	var. <i>grandifolium</i>			
Sargassaceae	<i>Sargassum</i>	<i>obtusifolium</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	var. <i>reichelii</i>			

Family	Genus	Species	Authority	RDB2	RDB3
Sargassaceae	<i>Sargassum</i>	<i>oocyste</i> var. <i>chierchii</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>parvifolium</i>	(Turner) C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>plagiophyllum</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>plagiophyllum</i> var. <i>hebetatum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>plagiophyllum</i> var. <i>singapoorense</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>polycystum</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>pseudocystocarpum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>pulchellum</i>	Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>siliquosum</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	sp.	Mattio and Payri	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>squarrosum</i>	Greville	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>subspathulatum</i>	(Grunow) Grunow	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>swartzii</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>torvum</i>	J. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>virgatum</i>	C. Agardh	Not Listed	DD
Sargassaceae	<i>Sargassum</i>	<i>vulgare</i>	C. Agardh	Not Listed	DD
Erythrotrichiaceae	<i>Erythrotrichia</i>	<i>carnea</i>	(Dillwyn) J. Agardh	Not Listed	DD
Erythrotrichiaceae	<i>Sahlingia</i>	<i>subintegra</i>	(Rosenvinge) Kornmann	Not Listed	DD
Acrochaetiaceae	<i>Acrochaetium</i>	<i>hypnea</i>	(Børgesen) Børgesen	Not Listed	NE
Batrachospermaceae	<i>Batrachospermum</i>	<i>turfosum</i>	Bory de Saint-Vincent	Not Listed	NE
Bonnemaisoniacae	<i>Asparagopsis</i>	<i>taxiformis</i>	(Delile) Trevisan	Not Listed	LC
Callithamniaceae	<i>Spyridia</i>	<i>filamentosa</i>	(Wulfen) Harvey	Not Listed	LC
Ceramiaceae	<i>Antithamnionella</i>	<i>breviramosa</i>	(E.Y. Dawson) Wollaston	Not Listed	DD
Ceramiaceae	<i>Centroceras</i>	<i>clavulatum</i>	(C. Agardh) Montagne	Not Listed	DD
Ceramiaceae	<i>Corallophila</i>	<i>huysmansii</i>	(Weber-van Bosse)	Not Listed	DD
			R.E.Norris		
Ceramiaceae	<i>Gayliella</i>	<i>fimbriata</i>	(Setchell & N.L. Gardner)	Not Listed	DD
Ceramiaceae	<i>Gayliella</i>	<i>flaccida</i>	T.O.Cho & S.M. Boo (Harvey ex Kützing)	Not Listed	DD
			T.O.Cho & L.J. McIvor		
Delesseriaceae	<i>Caloglossa</i>	<i>adhaerens</i>	R.J. King & Puttock	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>angustalata</i>	J.A. West	Not Listed	NE
Delesseriaceae	<i>Caloglossa</i>	<i>beccarii</i>	(Zanardini) De Toni	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>bengalensis</i>	(G. Martens) R.J. King & Puttock	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>leptolepis</i>	(Montagne) G. Martens	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>leptolepis</i> var. <i>hookeri</i>	Post	Not Listed	NE
Delesseriaceae	<i>Caloglossa</i>	<i>ogasawarensis</i>	Okamura	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>saigonensis</i>	Tanaka & Pham-Hoàng Hô	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>stipitata</i>	Post	Not Listed	NE
Delesseriaceae	<i>Caloglossa</i>	<i>stipitata</i>	E. Post	Not Listed	DD
Delesseriaceae	<i>Caloglossa</i>	<i>vieillardii</i>	(Kützing) Setchell	Not Listed	DD
Delesseriaceae	<i>Heterosiphonia</i>	<i>crispella</i>	(C. Agardh) M.J. Wynne	Not Listed	DD
Delesseriaceae	<i>Martensia</i>	<i>elegans</i>	Hering	Not Listed	DD

Family	Genus	Species	Authority	RDB2	RDB3
Rhodomelaceae	<i>Acanthophora</i>	<i>muscoides</i>	(Linnaeus) Bory	Not Listed	DD
Rhodomelaceae	<i>Acanthophora</i>	<i>spicifera</i>	(M.Vahl) Børgesen	Not Listed	LC
Rhodomelaceae	<i>Acrocystis</i>	<i>nana</i>	Zanardini	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>calliptera</i>	(Montagne) Montagne	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>kelanensis</i>	Grunow	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>moritziana</i>	(Sonder ex Kützing) J.Agardh	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>pinnata</i>	J. Tanaka & Chihara	Not Listed	NE
Rhodomelaceae	<i>Bostrychia</i>	<i>radicans</i>	(Montagne) Montagne	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>simpliciuscula</i>	Harvey ex J.Agardh	Not Listed	DD
Rhodomelaceae	<i>Bostrychia</i>	<i>tenella</i>	(J.V.Lamouroux) J.Agardh	Not Listed	DD
Rhodomelaceae	<i>Chondria</i>	<i>riparia</i>	(J.Agardh) De Toni	Not Listed	DD
Rhodomelaceae	<i>Chondria</i>	<i>simpliciuscula</i>	Weber Bosse	Not Listed	DD
Rhodomelaceae	<i>Endosiphonia</i>	<i>horrida</i>	(C. Agardh) P.C.Silva	Not Listed	LC
Rhodomelaceae	<i>Herposiphonia</i>	<i>parca</i>	Setchell	Not Listed	DD
Rhodomelaceae	<i>Herposiphonia</i>	<i>secunda</i>	(C.Agardh) Ambronn	Not Listed	DD
Rhodomelaceae	<i>Herposiphonia</i>	<i>secunda f. tenella</i>	(C.Agardh) M.J.Wynne	Not Listed	NE
Rhodomelaceae	<i>Laurencia</i>	<i>botryoides</i>	(C.Agardh) Gaillon	Not Listed	DD
Rhodomelaceae	<i>Laurencia</i>	<i>microcladia</i>	Kützing	Not Listed	DD
Rhodomelaceae	<i>Laurencia</i>	<i>singaporensis</i>	Zanardini ex De Toni & Levi	Not Listed	DD
Rhodomelaceae	<i>Leveillea</i>	<i>jungermannioides</i>	(Hering &G.Martens) Harvey	Not Listed	DD
Rhodomelaceae	<i>Melanothamnus</i>	<i>ferulaceus</i>	(Suhr ex J.Agardh) Díaz-Tapia & Maggs	Not Listed	DD
Rhodomelaceae	<i>Melanothamnus</i>	<i>platycarpus</i>	(Børgesen) Díaz-Tapia & Maggs	Not Listed	DD
Rhodomelaceae	<i>Murrayella</i>	<i>periclados</i>	(C.Agardh) F.Schmitz	Not Listed	DD
Rhodomelaceae	<i>Neosiphonia</i>	<i>ferulacea</i>	(Suhr ex J.Agardh) S.M.Guimarães & M.T.Fuji	Not Listed	NE
Rhodomelaceae	<i>Neosiphonia</i>	<i>howei</i>	(Hollenberg) Skelton & G.R.South	Not Listed	NE
Rhodomelaceae	<i>Palisada</i>	<i>perforata</i>	(Bory) K.W.Nam	Not Listed	DD
Rhodomelaceae	<i>Polysiphonia</i>	<i>ferulacea</i>	Suhr ex J. Agardh	Not Listed	NE
Rhodomelaceae	<i>Polysiphonia</i>	<i>howei</i>	Hollenberg	Not Listed	NE
Rhodomelaceae	<i>Polysiphonia</i>	<i>platycarpa</i>	Børgesen	Not Listed	NE
Rhodomelaceae	<i>Stictosiphonia</i>	<i>kelanensis</i>	(Grunow) King & Puttock	Not Listed	NE
Rhodomelaceae	<i>Wilsonosiphonia</i>	<i>howei</i>	(Hollenberg) D.Bustamante, Won & T.O.Cho	Not Listed	DD
Wrangeliaceae	<i>Anotrichium</i>	<i>tenue</i>	(C.Agardh) Nägeli	Not Listed	DD
Wrangeliaceae	<i>Griffithsia</i>	<i>ovalis</i>	Harvey	Not Listed	DD
Colaconemataceae	<i>Colaconema</i>	<i>hypnea</i>	(Børgesen) A.A.Santos & C.W.N.Moura	Not Listed	DD
Corallinaceae	<i>Jania</i>	<i>adhaerens</i>	J.V.Lamouroux	Not Listed	NE
Corallinaceae	<i>Jania</i>	<i>capillacea</i>	Harvey	Not Listed	DD
Corallinaceae	<i>Jania</i>	<i>pedunculata</i> var. <i>adhaerens</i>	(J.V.Lamouroux) A.S.Harvey, Woelkerling & Reviers	Not Listed	DD

Family	Genus	Species	Authority	RDB2	RDB3
Corallinaceae	<i>Jania</i>	<i>ungulata</i>	(Yendo) Yendo	Not Listed	DD
Corallinaceae	<i>Jania</i>	<i>verrucosa</i>	J.V.Lamouroux	Not Listed	NE
Hydrolithaceae	<i>Hydrolithon</i>	<i>farinosum</i>	(J.V.Lamouroux) Penrose & Y.M.Chamberlain	Not Listed	DD
Lithophyllaceae	<i>Amphiroa</i>	<i>anceps</i>	(Lamarck) Decaisne	Not Listed	DD
Lithophyllaceae	<i>Amphiroa</i>	<i>foliacea</i>	J.V.Lamouroux	Not Listed	DD
Lithophyllaceae	<i>Amphiroa</i>	<i>foliacea f. erecta</i>	Weber Bosse	Not Listed	DD
Lithophyllaceae	<i>Amphiroa</i>	<i>fragilissima</i>	(Linnaeus)	Not Listed	LC
Lithophyllaceae	<i>Amphiroa</i>	<i>rigida</i>	J.V.Lamouroux	Not Listed	DD
Lithophyllaceae	<i>Amphiroa</i>	<i>tribulus</i>	(J.Ellis & Solander)	Not Listed	DD
Lithothamniaceae	<i>Lithothamnion</i>	<i>erubescens</i>	J.V.Lamouroux Foslie	Not Listed	NE
Lithothamniaceae	<i>Melyvonnea</i>	<i>erubescens</i>	(Foslie) Athanasiadis & D.L.Ballantine	Not Listed	DD
Halymeniaceae	<i>Halymenia</i>	<i>amoena</i>	Bory de Saint-Vincent	Not Listed	NE
Halymeniaceae	<i>Halymenia</i>	<i>microcarpa</i>	(Montagne) P.C.Silva	Not Listed	NE
Gelidiaceae	<i>Gelidium</i>	<i>amansii</i>	(J.V.Lamouroux)	Not Listed	DD
Gelidiaceae	<i>Gelidium</i>	<i>divaricatum</i>	J.V.Lamouroux G.Martens	Not Listed	DD
Gelidiaceae	<i>Gelidium</i>	<i>pusillum</i>	(Stackhouse) Le Jolis	Not Listed	DD
Gelidiaceae	<i>Gelidium</i>	<i>sentosaense</i>	G.H.Boo, Y.Cai & S.M.Boo	Not Listed	DD
Gelidiellaceae	<i>Gelidiella</i>	<i>acerosa</i>	(Forsskål) Feldmann & G.Hamel	Not Listed	DD
Pterocladiaceae	<i>Pterocladiella</i>	<i>bartlettii</i>	(W.R.Taylor) Santelices	Not Listed	DD
Pterocladiaceae	<i>Pterocladiella</i>	<i>caerulescens</i>	(Kützing) Santelices & Hommersand	Not Listed	DD
Pterocladiaceae	<i>Pterocladiella</i>	<i>capillacea</i>	(S.G.Gmelin) Santelices & Hommersand	Not Listed	LC
Caulacanthaceae	<i>Catenella</i>	<i>caespitosa</i>	(Withering) L.M.Irvine	Not Listed	DD
Caulacanthaceae	<i>Catenella</i>	<i>impudica</i>	(Montagne) J.Agardh	Not Listed	DD
Caulacanthaceae	<i>Catenella</i>	<i>nipae</i>	Zanardini	Not Listed	DD
Caulacanthaceae	<i>Caulacanthus</i>	<i>ustulatus</i>	(Turner) Kützing	Not Listed	DD
Cystocloniaceae	<i>Hypnea</i>	<i>anastomosans</i>	Papenfuss, Lipkin & P.C.Silva	Not Listed	DD
Cystocloniaceae	<i>Hypnea</i>	<i>caespitosa</i>	P.J.L.Geraldino & S.M.Boo	Not Listed	DD
Cystocloniaceae	<i>Hypnea</i>	<i>cornuta</i>	(Kützing) J.Agardh	Not Listed	DD
Cystocloniaceae	<i>Hypnea</i>	<i>esperi</i>	Bory de Saint-Vincent	Not Listed	NE
Cystocloniaceae	<i>Hypnea</i>	<i>musciformis</i>	(Wulfen) J.V.Lamouroux	Not Listed	DD
Cystocloniaceae	<i>Hypnea</i>	<i>pannosa</i>	J.Agardh	Not Listed	LC
Cystocloniaceae	<i>Hypnea</i>	<i>spinella</i>	(C.Agardh) Kützing	Not Listed	DD
Rhizophyllidaceae	<i>Portieria</i>	<i>hornemannii</i>	(Lyngbye) P.C.Silva	Not Listed	DD
Solieriaceae	<i>Eucheuma</i>	<i>arnoldii</i>	Weber-van Bosse	Not Listed	NE
Solieriaceae	<i>Eucheuma</i>	<i>crassum</i>	Zanardini	Not Listed	DD
Solieriaceae	<i>Eucheuma</i>	<i>denticulatum</i>	(N.L.Burman) Collins & Hervey	Not Listed	DD

Family	Genus	Species	Authority	RDB2	RDB3
Solieriaceae	<i>Eucheuma</i>	<i>edule</i>	(Kützing) Weber Bosse	Not Listed	DD
Solieriaceae	<i>Eucheuma</i>	<i>horridum</i>	J.Agardh	Not Listed	DD
Solieriaceae	<i>Kappaphycus</i>	<i>cottonii</i>	(Weber Bosse) Doty ex H.D.Nguyen & Q.N.Huyn	Not Listed	DD
Solieriaceae	<i>Kappaphycus</i>	<i>striatum</i>	(Schmitz) Doty ex P.C. Silva	Not Listed	NE
Solieriaceae	<i>Kappaphycus</i>	<i>striatus</i>	(F.Schmitz) L.M.Liao	Not Listed	DD
Solieriaceae	<i>Mimica</i>	<i>arnoldii</i>	(Weber Bosse) Santiañez & M.J.Wynne	Not Listed	DD
Solieriaceae	<i>Solieria</i>	<i>robusta</i>	(Greville) Kylin	Not Listed	DD
Gracilariaeae	<i>Corallopsis</i>	<i>urvillei</i> var. <i>cereus</i>	J.Agardh	Not Listed	NE
Gracilariaeae	<i>Crassiphycus</i>	<i>changii</i>	(B.-M.Xia & I.A.Abbott) Gurgel, J.N.Norris & Fredericq	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>arcuata</i>	Zanardini	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>blodgettii</i>	Harvey	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>bursa-pastoris</i>	(S.G.Gmelin) P.C.Silva	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>canaliculata</i>	Sonder	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>changii</i>	(B.M.Xia & I.A.Abbott) I.A.Abbott, J.Zhang & B.M.Xia	Not Listed	NE
Gracilariaeae	<i>Gracilaria</i>	<i>chondracantha</i>	(Kützing) A.J.K.Millar	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>coronopifolia</i>	J.Agardh	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>corticata</i>	(J.Agardh) J.Agardh	Not Listed	LC
Gracilariaeae	<i>Gracilaria</i>	<i>debilis</i>	(Forsskål) Børgesen	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>disticha</i>	(J.Agardh) J.Agardh	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>edulis</i>	(S.G.Gmelin) P.C.Silva	Not Listed	NE
Gracilariaeae	<i>Gracilaria</i>	<i>gracilis</i>	(Stackhouse) Steentoft, L.M.Irvine & Farnham	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>lichenoides</i>	Greville forma taenioides (J. Agardh) V. May	Not Listed	NE
Gracilariaeae	<i>Gracilaria</i>	<i>manilaensis</i>	Yamamoto & Trono	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>minuta</i>	Lewmanomont	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>rhodymenioides</i>	A.J.K.Millar	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>salicornia</i>	(C.Agardh) E.Y.Dawson	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>sri Lanka</i>	(Chang & B.Xia) Withell, A.J.K.Millar & Kraft	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>tenuistipitata</i>	C.F.Chang & B.M.Xia	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>urvillei</i>	(Montagne) I.A.Abbott	Not Listed	NE
Gracilariaeae	<i>Gracilaria</i>	<i>vanbosseae</i>	(I.A.Abbott) I.A.Abbott	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>verrucosa</i>	(Esper) M.P.Reis	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>vieillardii</i>	P.C.Silva	Not Listed	DD
Gracilariaeae	<i>Gracilaria</i>	<i>disticha</i>	(J.Agardh) J.Agardh	Not Listed	NE
Gracilariaeae	<i>Hydropuntia</i>	<i>edulis</i>	(S.G.Gmelin) Gurgel & Fredericq	Not Listed	LC

Family	Genus	Species	Authority	RDB2	RDB3
Gracilariaeae	<i>Hydropuntia</i>	<i>eucheumatooides</i>	(Harvey) Gurgel & Fredericq	Not Listed	DD
Gracilariaeae	<i>Hydropuntia</i>	<i>urvillei</i>	Montagne	Not Listed	DD
Gracilariaeae	<i>Polycavernosa</i>	<i>urvillei</i>	(Montagne) Xia & Abbott	Not Listed	NE
Halymeniaceae	<i>Grateloupia</i>	<i>filicina</i>	(J.V.Lamouroux) C.Agardh	Not Listed	DD
Halymeniaceae	<i>Halymenia</i>	<i>dilatata</i>	Zanardini	Not Listed	LC
Halymeniaceae	<i>Halymenia</i>	<i>durvillei</i>	Bory	Not Listed	LC
Halymeniaceae	<i>Halymenia</i>	<i>floresii</i>	(Clemente) C.Agardh	Not Listed	DD
Halymeniaceae	<i>Halymenia</i>	<i>formosa</i>	Harvey ex Kützing	Not Listed	DD
Halymeniaceae	<i>Halymenia</i>	<i>maculata</i>	J.Agardh	Not Listed	LC
Hapalidiaceae	<i>Melobesia</i>	<i>membranacea</i>	(Esper) J.V.Lamouroux	Not Listed	DD
Mesophyllumaceae	<i>Mesophyllum</i>	<i>erubescens</i>	(Foslie) Me.Lemoine	Not Listed	DD
Galaxauraceae	<i>Actinotrichia</i>	<i>fragilis</i>	(Forsskål) Børgesen	Not Listed	DD
Galaxauraceae	<i>Galaxaura</i>	<i>divaricata</i>	(Linnaeus) Huisman & R.A.Townsend	Not Listed	DD
Galaxauraceae	<i>Galaxaura</i>	<i>rugosa</i>	(J.Ellis & Solander)	Not Listed	DD
Galaxauraceae	<i>Tricleocarpa</i>	<i>cylindrica</i>	J.V.Lamouroux (J.Ellis & Solander)	Not Listed	LC
Galaxauraceae	<i>Tricleocarpa</i>	<i>fragilis</i>	Huisman & Borowitzka (Linnaeus) Huisman & R.A.Townsend	Not Listed	DD
Peyssonneliaceae	<i>Peyssonnelia</i>	<i>inamoena</i>	Pilger	Not Listed	DD
Peyssonneliaceae	<i>Peyssonnelia</i>	<i>rubra</i>	(Greville) J.Agardh	Not Listed	DD
Champiaceae	<i>Champia</i>	<i>parvula</i>	(C.Agardh) Harvey	Not Listed	DD
Champiaceae	<i>Caelothrix</i>	<i>irregularis</i>	(Harvey) Børgesen	Not Listed	DD
Lomentariaceae	<i>Ceratodictyon</i>	<i>intricatum</i>	(C.Agardh) R.E.Norris	Not Listed	LC
Lomentariaceae	<i>Ceratodictyon</i>	<i>spongiosum</i>	Zanardini	Not Listed	LC
Lomentariaceae	<i>Gelidiosis</i>	<i>intricata</i>	(C.Agardh) Vickers	Not Listed	NE
Rhodymeniaceae	<i>Botryocladia</i>	<i>leptopoda</i>	(J.Agardh) Kylin	Not Listed	DD
Rhodymeniaceae	<i>Botryocladia</i>	<i>skottsb ergii</i>	(Børgesen) Levring	Not Listed	DD
Rhodymeniaceae	<i>Chrys menia</i>	<i>procumbens</i>	Weber Bosse	Not Listed	DD
Sebdeniaceae	<i>Sebdenia</i>	<i>amoena</i>	(Bory) E.Soler-Onís	Not Listed	DD

Checklist of Flora Species with their Category of Threat Status for Singapore

Prepared by D.J. Middleton, S. Lindsay, B.C. Ho, K.Y. Chong, P. Athen, Bazilah Ibrahim, J.Chen L.M.J. Chen, L.M. Choo, J.W.M. Gan, S.K. Ganesan, E.M. Gardner, A.Q. Hu, S.L. Koh, H. Kurzweil, S. Lai, W.N. Lam, S.M.L. Lee, P.K.F. Leong, J. Leong-Škorničková, D.C.H. Liew, R.C.J. Lim, W.H. Lim, Y.W. Low, H.K. Lua, L. Neo, X.Y. Ng, M.A. Niissalo, A. Phang, M.L. Rodda, W.W. Seah, D.C. Thomas, I.M. Turner, K.M. Wong, S.M. Yaakub, C.K. Yeo & Y.S. Yeoh

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Liverwort	Adelanthaceae	<i>Syzygiella subintegerrima</i> (Reinw. et al.) Spruce	Not Listed	NEx
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia crenulata</i> Schiffn.	Not Listed	NEx
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia elata</i> (Steph.) Schiffn.	Not Listed	EN
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia graeffei</i> (Steph.) Hewson	Not Listed	VU
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia grossitexta</i> (Steph.) Furuki	Not Listed	NEx
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia inconspicua</i> (Steph.) Reeb & Bardat	Not Listed	VU
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia latifronsoides</i> Schiffn.	Not Listed	EX
Bryophyte - Liverwort	Aneuraceae	<i>Riccardia singapurensis</i> Schiffn.	Not Listed	EN
Bryophyte - Liverwort	Calypogeiacae	<i>Calypogeia arguta</i> Nees & Mont.	Not Listed	VU
Bryophyte - Liverwort	Calypogeiacae	<i>Mizutania riccardioides</i> Furuki & Z.Iwats.	Not Listed	CR
Bryophyte - Liverwort	Cephaloziellaceae	<i>Cephaloziella inaequalis</i> R.M.Schust.	Not Listed	CR
Bryophyte - Liverwort	Cephaloziellaceae	<i>Cylindrocolea kiaeri</i> (Austin) Váňa	Not Listed	CR
Bryophyte - Liverwort	Cyathodiaceae	<i>Cyathodium cavernarum</i> Kunze	Not Listed	LC
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania apiculata</i> (Reinw. et al.) Nees	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania brotheri</i> Steph.	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania ericoides</i> (Nees) Mont.	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania gaudichaudii</i> (Nees & Mont.) Nees & Mont.	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania gracilis</i> (Reinw. et al.) Nees var. <i>brevior</i> Gottsche et al.	Not Listed	LC
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania hypoleuca</i> Nees	Not Listed	CR
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania intermedia</i> (Reinw. et al.) Nees	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania nodulosa</i> (Reinw. et al.) Nees	Not Listed	NEx
Bryophyte - Liverwort	Frullaniaceae	<i>Frullania sublignosa</i> Steph.	Not Listed	NEx
Bryophyte - Liverwort	Jackiellaceae	<i>Jackiella javanica</i> Schiffn.	Not Listed	EN
Bryophyte - Liverwort	Jackiellaceae	<i>Jackiella singapurensis</i> Schiffn.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Acrolejeunea fertilis</i> (Reinw. et al.) Schiffn.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Acrolejeunea pycnoclada</i> (Taylor) Schiffn. subsp. <i>pycnoclada</i>	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Acrolejeunea securifolia</i> (Nees) Steph. subsp. <i>hartmannii</i> (Steph.) Gradst.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Caudalejeunea cristiloba</i> (Steph.) Gradst. subsp. <i>cristiloba</i>	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Caudalejeunea reniloba</i> (Gottsche) Steph.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Ceratolejeunea singapurensis</i> (Lindenb.) Schiffn.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea intertexta</i> (Lindenb.) Steph.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea lindenbergii</i> (Gottsche) Mizut.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea malaccensis</i> (G.Hoffm.) X.L.He	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea rigidula</i> (Nees ex Mont.) R.M.Schust.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea ventricosa</i> (Schiffn. ex P.Syd.) X.L.He	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Liverwort	Lejeuneaceae	<i>Cheilolejeunea vittata</i> (Steph. ex G.Hoffm.) R.M.Schust. & Kachroo	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea aequabilis</i> (Sande Lac.) Schiffn.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea ceratilobula</i> (P.C.Chen) R.M.Schust.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea cordiflora</i> Steph.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea cuneata</i> (Lehm. & Lindenb.) Herzog	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea floccosa</i> (Lehm. & Lindenb.)	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea grossepapillosa</i> (Horik.) N.Kitag.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea haskarliana</i> (Lehm.) Schiffn.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea inflectens</i> (Mitt.) Benedix	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea perakensis</i> Tixier	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea planissima</i> (Mitt.) Abeyw.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea raduliloba</i> Steph.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea siamensis</i> Steph.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea stoniana</i> Tixier	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea trichomanis</i> (Gottsche) Besch.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Cololejeunea wightii</i> Steph.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Colura brevistyla</i> Herzog	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Colura cristata</i> Jovet-Ast	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Drepanolejeunea vesiculosus</i> (Mitt.) Steph.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Gaolejeunea hoi</i> W.Ye & Y.M.Wei	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea adpressa</i> Nees	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea coecos</i> Mitt.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea exilis</i> (Reinw. et al.) Grolle	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea flava</i> (Sw.) Nees	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea papilionacea</i> Prantl	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea sordida</i> (Nees) Nees	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Lejeunea tenella</i> Taylor	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Lepidolejeunea bidentula</i> (Steph.) R.M.Schust.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Leptolejeunea elliptica</i> (Lehm. & Lindenb.) Besch.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Leptolejeunea epiphylla</i> (Mitt.) Steph.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Leptolejeunea maculata</i> (Mitt.) Schiffn.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Leptolejeunea truncatifolia</i> Steph.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Leptolejeunea vitrea</i> (Nees) Schiffn.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Lopholejeunea nigricans</i> (Lindenb.) Schiffn.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Lopholejeunea subfusca</i> (Nees) Schiffn.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Metalejeunea cucullata</i> (Reinw. et al.) Grolle	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Microlejeunea filicispis</i> (Steph.) Heinrichs et al.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Microlejeunea lunulatiloba</i> Horik.	Not Listed	DD
Bryophyte - Liverwort	Lejeuneaceae	<i>Microlejeunea punctiformis</i> (Taylor) Steph.	Not Listed	DD
Bryophyte - Liverwort	Lejeuneaceae	<i>Microlejeunea ulicina</i> (Taylor) Steph.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Mohamedia borneensis</i> (Steph.) R.L.Zhu & LShu	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Myriocoleopsis minutissima</i> (Sm.) R.L.Zhu et al. subsp. <i>myriocarpa</i> (Nees & Mont.) R.L.Zhu et al.	Not Listed	EN
Bryophyte - Liverwort	Lejeuneaceae	<i>Pycnolejeunea contigua</i> (Nees) Grolle	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Schiffnerolejeunea cumingiana</i> (Mont.) Gradst.	Not Listed	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Liverwort	Lejeuneaceae	<i>Schiffnerialejeunea pulopenangensis</i> (Gottsche) Gradst.	Not Listed	LC
Bryophyte - Liverwort	Lejeuneaceae	<i>Schiffnerialejeunea tumida</i> (Nees) Gradst.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Spruceanthus planiusculus</i> (Mitt.) X.Q.Shi et al.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Thysananthus ciliaris</i> (Sande Lac.) Sukkharak	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Thysananthus comosus</i> Lindenb.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Thysananthus fruticosus</i> (Lindenb. & Gottsche) Schiffn.	Not Listed	CR
Bryophyte - Liverwort	Lejeuneaceae	<i>Thysananthus indicus</i> (Steph.) Sukkharak & Gradst.	Not Listed	NEx
Bryophyte - Liverwort	Lejeuneaceae	<i>Thysananthus spathulistipus</i> (Reinw. et al.) Lindenb.	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Acromastigum echinatum</i> (Gottsche) A.Evans	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Acromastigum inaequilaterum</i> (Lehm. & Lindenb.) A.Evans	Not Listed	CR
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania fleischeri</i> (Steph.) Abeyw.	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania indica</i> (Gottsche & Lindenb.) Trevis.	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania paradoxa</i> (Sande Lac.) Steph.	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania recurva</i> (Mont.) Trevis.	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania tridens</i> (Reinw. et al.) Trevis.	Not Listed	EN
Bryophyte - Liverwort	Lepidoziaceae	<i>Bazzania wallichiana</i> (Lindenb.) Trevis.	Not Listed	EN
Bryophyte - Liverwort	Lepidoziaceae	<i>Kurzia gonyotricha</i> (Sande Lac.) Grolle	Not Listed	NEx
Bryophyte - Liverwort	Lepidoziaceae	<i>Neolepidozia mamillosa</i> (Schiffn.) E.D.Cooper	Not Listed	CR
Bryophyte - Liverwort	Lepidoziaceae	<i>Neolepidozia wallichiana</i> (Gottsche) Fulford & J.Taylor	Not Listed	EN
Bryophyte - Liverwort	Lepidoziaceae	<i>Telaranea major</i> (Herzog) J.J Engel & G.L.Merr.	Not Listed	CR
Bryophyte - Liverwort	Lepidoziaceae	<i>Tricholepidozia neesii</i> (Lindenb.) E.D.Cooper	Not Listed	EN
Bryophyte - Liverwort	Lophocoleaceae	<i>Chiloscyphus tridens</i> Steph.	Not Listed	DD
Bryophyte - Liverwort	Lophocoleaceae	<i>Heteroscyphus argutus</i> (Reinw. et al.) Schiffn.	Not Listed	LC
Bryophyte - Liverwort	Lophocoleaceae	<i>Heteroscyphus splendens</i> (Lehm. & Lindenb.) Grolle	Not Listed	DD
Bryophyte - Liverwort	Lophocoleaceae	<i>Heteroscyphus succulentus</i> (Gottsche) Schiffn.	Not Listed	CR
Bryophyte - Liverwort	Lophocoleaceae	<i>Heteroscyphus zollingeri</i> (Gottsche) Schiffn.	Not Listed	LC
Bryophyte - Liverwort	Marchantiaceae	<i>Marchantia acaulis</i> Steph.	EN	NEx
Bryophyte - Liverwort	Marchantiaceae	<i>Marchantia emarginata</i> Reinw. et al.	Not Listed	EN
Bryophyte - Liverwort	Pallaviciniaceae	<i>Pallavicinia levieri</i> Schiffn.	Not Listed	DD
Bryophyte - Liverwort	Pallaviciniaceae	<i>Pallavicinia lyellii</i> (Hook.) Gray	Not Listed	VU
Bryophyte - Liverwort	Pallaviciniaceae	<i>Podomitrium malaccense</i> (Steph.) Campb.	Not Listed	EN
Bryophyte - Liverwort	Plagiochilaceae	<i>Plagiochila bantamensis</i> (Reinw. et al.) Mont.	Not Listed	CR
Bryophyte - Liverwort	Plagiochilaceae	<i>Plagiochila kurzii</i> Steph.	Not Listed	CR
Bryophyte - Liverwort	Plagiochilaceae	<i>Plagiochila sciophila</i> Nees	Not Listed	NEx
Bryophyte - Liverwort	Radulaceae	<i>Radula anceps</i> Sande Lac.	Not Listed	EN
Bryophyte - Liverwort	Radulaceae	<i>Radula javanica</i> Gottsche	Not Listed	CR
Bryophyte - Liverwort	Radulaceae	<i>Radula lorianae</i> Castle	Not Listed	CR
Bryophyte - Liverwort	Radulaceae	<i>Radula reflexa</i> Nees & Mont.	Not Listed	NEx
Bryophyte - Liverwort	Ricciaceae	<i>Riccia treubiana</i> Steph.	Not Listed	LC
Bryophyte - Liverwort	Schistochilaceae	<i>Schistochila sciurea</i> (Nees) Schiffn.	Not Listed	NEx
Bryophyte - Liverwort	Solenostomaceae	<i>Solenostoma ariadne</i> (Taylor) R.M.Schust. ex Váňa & D.G.Long	Not Listed	NEx
Bryophyte - Liverwort	Solenostomaceae	<i>Solenostoma truncatum</i> (Nees) R.M.Schust. ex Váňa & D.G.Long	Not Listed	VU

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Liverwort	Trichocoleaceae	<i>Trichocolea pluma</i> (Reinw. et al.) Mont.	Not Listed	CR
Bryophyte - Moss	Bartramiaceae	<i>Philonotis hastata</i> (Duby) Wijk & Margad.	Not Listed	LC
Bryophyte - Moss	Bartramiaceae	<i>Philonotis laii</i> T.J.Kop.	Not Listed	DD
Bryophyte - Moss	Bartramiaceae	<i>Philonotis mollis</i> (Dozy & Molk.) Mitt.	Not Listed	DD
Bryophyte - Moss	Bartramiaceae	<i>Philonotis thwaitesii</i> Mitt.	Not Listed	LC
Bryophyte - Moss	Bryaceae	<i>Bryum apiculatum</i> Schwägr.	Not Listed	LC
Bryophyte - Moss	Bryaceae	<i>Bryum coronatum</i> Schwägr.	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Arthrocormus schimperi</i> (Dozy & Molk.) Dozy & Molk.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Calympere boulayi</i> Besch.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Calympere crassinerve</i> (Mitt.) A.Jaeger	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Calympere erosum</i> Müll.Hal.	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Calympere fasciculatum</i> Dozy & Molk.	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Calympere graeffeanum</i> Müll.Hal.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Calympere lonchophyllum</i> Schwägr. subsp. <i>lonchophyllum</i>	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Calympere moluccense</i> Schwägr.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Calympere motleyi</i> Mitt.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Calympere pallidum</i> Mitt.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Calympere porrectum</i> Mitt.	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Calympere serratum</i> A.Braun ex Müll.Hal.	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Calympere subintegrum</i> Broth.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Calympere taitense</i> (Sull.) Mitt.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Calympere tenerum</i> Müll.Hal.	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Exostratum blumei</i> (Nees ex Hampe) L.T.Ellis	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Leucophanes candidum</i> (Schwägr.) Lindb.	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Leucophanes glaucum</i> (Schwägr.) Mitt. subsp. <i>glaucum</i>	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Leucophanes octoblepharioides</i> Brid. subsp. <i>octoblepharioides</i>	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium fasciculatum</i> (Hook. & Grev.) H.Rob. subsp. <i>fasciculatum</i>	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium flavum</i> (Müll.Hal.) H.Rob.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium jungquianum</i> (Mitt.) H.Rob.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium repens</i> (Harv.) H.Rob.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium undulatum</i> (Dozy & Molk.) H.Rob.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Mitthyridium wallisii</i> (Müll.Hal.) H.Rob.	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Octoblepharum albidum</i> Hedw.	Not Listed	LC
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon albovaginatus</i> Schwägr.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon aristifolius</i> Mitt.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon armatus</i> Mitt.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon borneensis</i> (Hampe) A.Jaeger	Not Listed	NEx
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon ciliatus</i> (Hook.) Schwägr.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon croceus</i> Mitt.	Not Listed	EN
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon loreus</i> (Sande Lac.) W.D.Reese	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon muelleri</i> (Dozy & Molk.) Sande Lac.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon revolutus</i> Dozy & Molk.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon rufescens</i> Hook. & Grev.	Not Listed	CR
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon spiculosus</i> Hook. & Grev.	Not Listed	VU
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon trachyphyllus</i> Mont.	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Moss	Calymperaceae	<i>Syrrhopodon tristichus</i> Nees ex Schwägr.	Not Listed	CR
Bryophyte - Moss	Daltoniaceae	<i>Distichophyllum schmidtii</i> Broth.	Not Listed	NEx
Bryophyte - Moss	Dicranaceae	<i>Dicranoloma braunii</i> (Müll.Hal.) Paris	Not Listed	NEx
Bryophyte - Moss	Dicranaceae	<i>Leptotrichella brasiliensis</i> (Duby) Ochyra	Not Listed	DD
Bryophyte - Moss	Dicranaceae	<i>Leptotrichella miquelianiana</i> (Mont.) Lindb. ex Broth. var. <i>longifolia</i> (Baumgartner & J.Froehl.) Ochyra	Not Listed	DD
Bryophyte - Moss	Dicranaceae	<i>Leptotrichella miquelianiana</i> (Mont.) Lindb. ex Broth. var. <i>miquelianiana</i>	Not Listed	LC
Bryophyte - Moss	Dicranaceae	<i>Leucoloma amoenevirens</i> Mitt.	Not Listed	NEx
Bryophyte - Moss	Diphysciaceae	<i>Diphyscia mucronifolium</i> Mitt.	CR	CR
Bryophyte - Moss	Ditrichaceae	<i>Garckea flexuosa</i> (Griff.) Margad. & Nork.	Not Listed	EN
Bryophyte - Moss	Fissidentaceae	<i>Fissidens autoicus</i> Thér. & Dixon	Not Listed	DD
Bryophyte - Moss	Fissidentaceae	<i>Fissidens bogoriensis</i> M.Fleisch.	Not Listed	EN
Bryophyte - Moss	Fissidentaceae	<i>Fissidens ceylonensis</i> Dozy & Molk.	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens crassinervis</i> Sande Lac.	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens crenulatus</i> Mitt. var. <i>elmeri</i> (Broth.) Z.Iwats. & Tad.Suzuki	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens crispulus</i> Brid. var. <i>crispulus</i>	Not Listed	EN
Bryophyte - Moss	Fissidentaceae	<i>Fissidens flaccidus</i> Mitt.	Not Listed	EN
Bryophyte - Moss	Fissidentaceae	<i>Fissidens guangdongensis</i> Z.Iwats. & Z.H.Li	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens gymnogynus</i> Besch.	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens holleanus</i> Dozy & Molk.	Not Listed	CR
Bryophyte - Moss	Fissidentaceae	<i>Fissidens oblongifolius</i> Hook.f. & Wilson	Not Listed	DD
Bryophyte - Moss	Fissidentaceae	<i>Fissidens pallidinervis</i> Mitt.	Not Listed	CR
Bryophyte - Moss	Fissidentaceae	<i>Fissidens pallidus</i> Hook.f. & Wilson	Not Listed	CR
Bryophyte - Moss	Fissidentaceae	<i>Fissidens pellucidus</i> Hornsch.	Not Listed	LC
Bryophyte - Moss	Fissidentaceae	<i>Fissidens polypodioides</i> Hedw.	Not Listed	CR
Bryophyte - Moss	Fissidentaceae	<i>Fissidens pseudoceylonensis</i> B.C.Tan & M.-A.Jaeger	Not Listed	DD
Bryophyte - Moss	Fissidentaceae	<i>Fissidens serratus</i> Müll.Hal.	Not Listed	DD
Bryophyte - Moss	Fissidentaceae	<i>Fissidens zollingeri</i> Mont.	Not Listed	LC
Bryophyte - Moss	Hypnaceae	<i>Ctenidiodelphus plumularia</i> (Müll.Hal.)	Not Listed	NEx
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium buitenzorgi</i> (Bél.) Mitt.	Not Listed	DD
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium ichnotocladum</i> (Müll.Hal.) A.Jaeger	Not Listed	NEx
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium incubans</i> (Reinw. & Hornsch.) A.Jaeger	Not Listed	CR
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium monumentorum</i> (Duby) A.Jaeger	Not Listed	EN
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium moritzii</i> A.Jaeger var. <i>moritzii</i>	Not Listed	CR
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium singapurense</i> Dixon	Not Listed	EN
Bryophyte - Moss	Hypnaceae	<i>Ectropothecium zollingeri</i> (Müll.Hal.) A.Jaeger	Not Listed	DD
Bryophyte - Moss	Hypnaceae	<i>Taxiphyllum taxirameum</i> (Mitt.) M.Fleisch.	Not Listed	EN
Bryophyte - Moss	Hypnaceae	<i>Vesicularia dubyana</i> (Müll.Hal.) Broth.	Not Listed	LC
Bryophyte - Moss	Hypnaceae	<i>Vesicularia kurzii</i> (A.Jaeger) Broth.	Not Listed	DD
Bryophyte - Moss	Hypnaceae	<i>Vesicularia miquelianii</i> (Sande Lac.) M.Fleisch.	Not Listed	EN
Bryophyte - Moss	Hypnaceae	<i>Vesicularia montagnei</i> (Bél.) Broth.	Not Listed	VU
Bryophyte - Moss	Hypnaceae	<i>Vesicularia reticulata</i> (Dozy & Molk.) Broth.	Not Listed	LC

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Moss	Hypnodendraceae	<i>Dendro-hypnum subspininervium</i> (Müll.Hal.) N.E.Bell et al. subsp. <i>arborescens</i> (Mitt.) N.E.Bell et al.	Not Listed	NEx
Bryophyte - Moss	Hypopterygiaceae	<i>Hypopterygium tamarisci</i> (Sw.) Brid. ex Müll.Hal.	Not Listed	NEx
Bryophyte - Moss	Leucobryaceae	<i>Campylopus serratus</i> Sande Lac.	Not Listed	EN
Bryophyte - Moss	Leucobryaceae	<i>Cladopodanthus heterophyllus</i> (M.Fleisch.) E.B.Bartram	Not Listed	NEx
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum aduncum</i> Dozy & Molk. var. <i>aduncum</i>	Not Listed	VU
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum aduncum</i> Dozy & Molk. var. <i>teysmannianum</i> (Dozy & Molk.) T.Yamag.	Not Listed	DD
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum aduncum</i> Dozy & Molk. var. <i>tjibodense</i> (M.Fleisch.) Ochyra	Not Listed	NEx
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum chlorophyllosum</i> Müll.Hal.	Not Listed	DD
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum javense</i> (Brid.) Mitt.	Not Listed	NEx
Bryophyte - Moss	Leucobryaceae	<i>Leucobryum sanctum</i> (Nees ex Schwägr.) Hampe var. <i>sanctum</i>	Not Listed	EN
Bryophyte - Moss	Meteoriaceae	<i>Aerobryopsis longissima</i> (Dozy & Molk.) M.Fleisch.	Not Listed	NEx
Bryophyte - Moss	Mniaceae	<i>Plagiommium succulentum</i> (Mitt.) T.J.Kop.	Not Listed	DD
Bryophyte - Moss	Myuriaceae	<i>Oedocladium pseudorufescens</i> (Hampe) B.C.Tan & Mohamed	Not Listed	NEx
Bryophyte - Moss	Neckeraceae	<i>Caduciella mariei</i> (Besch.) Enroth	Not Listed	NEx
Bryophyte - Moss	Neckeraceae	<i>Neckeropsis gracilenta</i> (Bosch & Sande Lac.) M.Fleisch.	Not Listed	CR
Bryophyte - Moss	Neckeraceae	<i>Pinnatella mucronata</i> (Bosch & Sande Lac.) M.Fleisch.	Not Listed	NEx
Bryophyte - Moss	Orthotrichaceae	<i>Desmotheca apiculata</i> (Dozy & Molk.) Lindb.	Not Listed	NEx
Bryophyte - Moss	Orthotrichaceae	<i>Groutiella tomentosa</i> (Hornschr.) Wijk & Margad.	Not Listed	NEx
Bryophyte - Moss	Orthotrichaceae	<i>Macromitrium fuscescens</i> Schwägr.	Not Listed	NEx
Bryophyte - Moss	Orthotrichaceae	<i>Macromitrium incurvifolium</i> (Hook. & Grev.) Schwägr.	Not Listed	NEx
Bryophyte - Moss	Orthotrichaceae	<i>Macromitrium nepalense</i> (Hook. & Grev.) Schwägr.	Not Listed	NEx
Bryophyte - Moss	Pilotrichaceae	<i>Callicostella papillata</i> (Mont.) Mitt. var. <i>papillata</i>	Not Listed	EN
Bryophyte - Moss	Pilotrichaceae	<i>Callicostella papillata</i> (Mont.) Mitt. var. <i>prabaktiana</i> (Müll.Hal.) Streimann	Not Listed	EN
Bryophyte - Moss	Plagiotheciaceae	<i>Pseudotaxiphyllum pohliicarpum</i> (Sull. & Lesq.) Z.Iwats.	Not Listed	EN
Bryophyte - Moss	Polytrichaceae	<i>Pogonatum piliferum</i> (Dozy & Molk.) Touw	Not Listed	CR
Bryophyte - Moss	Pottiaceae	<i>Barbula thelimitria</i> Müll.Hal.	Not Listed	DD
Bryophyte - Moss	Pottiaceae	<i>Chionoloma angustatum</i> (Mitt.) M.Menzel	Not Listed	NEx
Bryophyte - Moss	Pottiaceae	<i>Chionoloma induratum</i> Dixon	Not Listed	NEx
Bryophyte - Moss	Pottiaceae	<i>Gymnostomiella vernicosa</i> (Hook. ex Harv.) M.Fleisch. var. <i>vernicosa</i>	Not Listed	NEx
Bryophyte - Moss	Pottiaceae	<i>Hydrogonium arcuatum</i> (Griff.) Wijk & Margad.	Not Listed	NEx
Bryophyte - Moss	Pottiaceae	<i>Hydrogonium consanguineum</i> (Thwaites & Mitt.) Hilp. var. <i>consanguineum</i>	Not Listed	LC
Bryophyte - Moss	Pottiaceae	<i>Hydrogonium orientale</i> (F.Weber) Jan Kučera	Not Listed	LC
Bryophyte - Moss	Pottiaceae	<i>Hydrogonium subcomosum</i> (Broth.) P.C.Chen	Not Listed	NEx
Bryophyte - Moss	Pottiaceae	<i>Hyophila beruensis</i> Dixon	Not Listed	DD

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Moss	Pottiaceae	<i>Hyophila involuta</i> (Hook.) A.Jaeger	Not Listed	LC
Bryophyte - Moss	Pottiaceae	<i>Hyophila javanica</i> (Nees & Blume) Brid.	Not Listed	DD
Bryophyte - Moss	Pottiaceae	<i>Splachnobryum oorschotii</i> (Sande Lac.) Müll.Hal.	Not Listed	EN
Bryophyte - Moss	Pottiaceae	<i>Splachnobryum temasekense</i> B.C.Tan et al.	Not Listed	CR
Bryophyte - Moss	Pylaisiadelphaceae	<i>Isopterygium albescens</i> (Hook.) A.Jaeger var. <i>albescens</i>	Not Listed	LC
Bryophyte - Moss	Pylaisiadelphaceae	<i>Isopterygium bancanum</i> (Sande Lac.) A.Jaeger	Not Listed	LC
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium instratum</i> (Brid.) Broth.	Not Listed	LC
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium isocladium</i> (Bosch & Sande Lac.) Renauld & Cardot	Not Listed	NEx
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium kerianum</i> (Broth.) Broth.	Not Listed	NEx
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium leptosigmatum</i> (Müll.Hal. ex Geh.) Paris	Not Listed	NEx
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium nepalense</i> (Schwägr.) Broth.	Not Listed	LC
Bryophyte - Moss	Pylaisiadelphaceae	<i>Taxithelium vernieri</i> (Duby) Besch.	Not Listed	DD
Bryophyte - Moss	Pylaisiadelphaceae	<i>Trismegistia lancifolia</i> (Harv.) Broth. var. <i>lancifolia</i>	CR	CR
Bryophyte - Moss	Pylaisiadelphaceae	<i>Trismegistia lancifolia</i> (Harv.) Broth. var. <i>pseudoplicata</i> H.Akiyama	Not Listed	CR
Bryophyte - Moss	Racopilaceae	<i>Racopilum cuspidigerum</i> (Schwägr.) Ångstr.	Not Listed	NEx
Bryophyte - Moss	Rhizogoniaceae	<i>Pyrrhobryum latifolium</i> (Bosch & Sande Lac.) Mitt.	Not Listed	CR
Bryophyte - Moss	Rhizogoniaceae	<i>Pyrrhobryum spiniforme</i> (Hedw.) Mitt.	EN	CR
Bryophyte - Moss	Sematophyllaceae	<i>Acanthorrhynchium papillatum</i> (Harv.) M.Fleisch.	Not Listed	VU
Bryophyte - Moss	Sematophyllaceae	<i>Acroporium convolutum</i> (Sande Lac.) M.Fleisch. var. <i>convolutum</i>	Not Listed	CR
Bryophyte - Moss	Sematophyllaceae	<i>Acroporium microcladon</i> (Dozy & Molk.) B.C.Tan	Not Listed	NEx
Bryophyte - Moss	Sematophyllaceae	<i>Acroporium rufum</i> (Reinw. & Hornsch.) M.Fleisch.	Not Listed	NEx
Bryophyte - Moss	Sematophyllaceae	<i>Acroporium secundum</i> (Reinw. & Hornsch.) M.Fleisch. var. <i>secundum</i>	Not Listed	NEx
Bryophyte - Moss	Sematophyllaceae	<i>Clastobryophilum asperifolium</i> (Thwaites & Mitt.) B.C.Tan	Not Listed	NEx
Bryophyte - Moss	Sematophyllaceae	<i>Meiothecium jagorii</i> (Müll.Hal.) Broth. var. <i>jagorii</i>	Not Listed	DD
Bryophyte - Moss	Sematophyllaceae	<i>Meiothecium microcarpum</i> (Harv.) Mitt. var. <i>lineolatum</i> (Duby) M.Fleisch.	Not Listed	DD
Bryophyte - Moss	Sematophyllaceae	<i>Meiothecium microcarpum</i> (Harv.) Mitt. var. <i>microcarpum</i>	Not Listed	LC
Bryophyte - Moss	Sematophyllaceae	<i>Meiothecium microcarpum</i> (Harv.) Mitt. var. <i>minus</i> (Paris) Wijk & Margad.	Not Listed	DD
Bryophyte - Moss	Sematophyllaceae	<i>Papillidiopsis bruchii</i> (Dozy & Molk.) W.R.Buck & B.C.Tan	CR	CR
Bryophyte - Moss	Sematophyllaceae	<i>Papillidiopsis luxurians</i> (Dozy & Molk.) W.R.Buck & B.C.Tan	Not Listed	NEx
Bryophyte - Moss	Sematophyllaceae	<i>Papillidiopsis ramulina</i> (Thwaites & Mitt.) W.R.Buck & B.C.Tan	Not Listed	EN
Bryophyte - Moss	Sematophyllaceae	<i>Se matophyllum subpinnatum</i> (Brid.) E.Britton	Not Listed	EN
Bryophyte - Moss	Sematophyllaceae	<i>Trichosteleum boschii</i> (Dozy & Molk.) A.Jaeger	Not Listed	EN
Bryophyte - Moss	Sematophyllaceae	<i>Trichosteleum fleischeri</i> B.C.Tan et al.	Not Listed	EN
Bryophyte - Moss	Sematophyllaceae	<i>Trichosteleum saprophylophilum</i> (Müll.Hal.) B.C.Tan et al.	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Bryophyte - Moss	Sematophyllaceae	<i>Trichosteleum stigmosum</i> Mitt.	Not Listed	VU
Bryophyte - Moss	Thuidiaceae	<i>Pelekium bifarium</i> (Bosch & Sande Lac.) M.Fleisch.	Not Listed	NEx
Bryophyte - Moss	Thuidiaceae	<i>Pelekium velatum</i> Mitt.	Not Listed	VU
Bryophyte - Hornwort	Anthocerotaceae	<i>Folioceros glandulosus</i> (Lehm. & Lindenb.) D.C.Bharadwaj	VU	VU
Bryophyte - Hornwort	Notothyladaceae	<i>Notothylas javanica</i> (Sande Lac.) Gottsche	Not Listed	VU
Bryophyte - Hornwort	Notothyladaceae	<i>Phaeoceros laevis</i> (L.) Prosk.	Not Listed	DD
Lycophyte	Lycopodiaceae	<i>Palhinhaea cernua</i> (L.) Franco & Vasc.	Not Listed	LC
Lycophyte	Lycopodiaceae	<i>Phlegmariurus carinatus</i> (Desv.) Ching	NEx	CR
Lycophyte	Lycopodiaceae	<i>Phlegmariurus dalhousianus</i> (Spring) A.R.Field & Bostock	NEx	NEx
Lycophyte	Lycopodiaceae	<i>Phlegmariurus nummulariifolius</i> (Blume) Ching	NEx	NEx
Lycophyte	Lycopodiaceae	<i>Phlegmariurus phlegmaria</i> (L.) T.Sen & U.Sen	EN	EN
Lycophyte	Lycopodiaceae	<i>Phlegmariurus squarrosus</i> (G.Forst.) Á.Löve & D.Löve	NEx	NEx
Lycophyte	Selaginellaceae	<i>Selaginella ciliaris</i> (Retz.) Spring	Not Listed	LC
Lycophyte	Selaginellaceae	<i>Selaginella intermedia</i> (Blume) Spring var. <i>intermedia</i>	VU	LC
Lycophyte	Selaginellaceae	<i>Selaginella mayeri</i> Hieron.	EN	EN
Lycophyte	Selaginellaceae	<i>Selaginella roxburghii</i> (Hook. & Grev.) Spring var. <i>roxburghii</i>	VU	VU
Lycophyte	Selaginellaceae	<i>Selaginella wallichii</i> (Hook. & Grev.) Spring	CR	NEx
Lycophyte	Selaginellaceae	<i>Selaginella willdenowii</i> (Desv.) Baker	VU	VU
Fern	Aspleniaceae	<i>Asplenium batuense</i> Alderw.	EN	EN
Fern	Aspleniaceae	<i>Asplenium cf. oxyphyllum</i> J.Sm. ex Kunze	Not Listed	DD
Fern	Aspleniaceae	<i>Asplenium longissimum</i> Blume	Not Listed	LC
Fern	Aspleniaceae	<i>Asplenium macrophyllum</i> Sw.	NEx	NEx
Fern	Aspleniaceae	<i>Asplenium nidus</i> L. var. <i>musifolium</i> (Mett.) C.Chr.	Not Listed	LC
Fern	Aspleniaceae	<i>Asplenium nidus</i> L. var. <i>nudus</i>	Not Listed	LC
Fern	Aspleniaceae	<i>Asplenium nitidum</i> Sw.	NEx	CR
Fern	Aspleniaceae	<i>Asplenium phyllitidis</i> D.Don subsp. <i>malesicum</i> Holtum	EN	CR
Fern	Aspleniaceae	<i>Asplenium tenerum</i> G.Forst.	VU	EN
Fern	Athyriaceae	<i>Diplazium cordifolium</i> Blume	EN	CR
Fern	Athyriaceae	<i>Diplazium esculentum</i> (Retz.) Sw.	VU	VU
Fern	Athyriaceae	<i>Diplazium fraxinifolium</i> C.Presl	EN	CR
Fern	Athyriaceae	<i>Diplazium holttumii</i> Hovenkamp	EN	EN
Fern	Athyriaceae	<i>Diplazium mixtum</i> (Roxb.) C.V.Morton	EN	EN
Fern	Athyriaceae	<i>Diplazium phanerotis</i> Kunze	VU	EN
Fern	Athyriaceae	<i>Diplazium polypodioides</i> Blume	EN	NEx
Fern	Athyriaceae	<i>Diplazium sorzogonense</i> (C.Presl) C.Presl	EN	EN
Fern	Athyriaceae	<i>Diplazium sylvaticum</i> (Bory) Sw.	Not Listed	CR
Fern	Athyriaceae	<i>Diplazium tomentosum</i> Blume	VU	CR
Fern	Blechnaceae	<i>Blechnopsis finlaysoniana</i> (Wall. ex Hook. & Grev.) C.Presl	VU	LC
Fern	Blechnaceae	<i>Blechnopsis orientalis</i> (L.) C.Presl	VU	LC
Fern	Blechnaceae	<i>Stenochlaena palustris</i> (Burm.f.) Bedd.	Not Listed	LC
Fern	Blechnaceae	<i>Telmatoblechnum indicum</i> (Burm.f.) Perrie et al.	VU	CR
Fern	Cyatheaceae	<i>Alsophila glabra</i> (Blume) Hook.	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Fern	Cyatheaceae	<i>Alsophila latebrosa</i> Wall. ex Hook.	VU	LC
Fern	Cyatheaceae	<i>Sphaeropteris squamulata</i> (Blume) R.M.Tryon	EN	VU
Fern	Cyatheaceae	<i>Sphaeropteris trichodesma</i> (Scort.) R.M.Tryon	Not Listed	CR
Fern	Davalliaceae	<i>Davallia angustata</i> Wall. ex Hook. & Grev.	EN	NEx
Fern	Davalliaceae	<i>Davallia denticulata</i> (Burm.f.) Mett. var. <i>denticulata</i>	Not Listed	LC
Fern	Davalliaceae	<i>Davallia heterophylla</i> Sm.	NEx	NEx
Fern	Davalliaceae	<i>Davallia parvula</i> Wall. ex Hook. & Grev.	NEx	NEx
Fern	Davalliaceae	<i>Davallia pectinata</i> Sm.	EN	NEx
Fern	Davalliaceae	<i>Davallia repens</i> (L.f.) Kuhn	VU	NEx
Fern	Davalliaceae	<i>Davallia solida</i> (G.Forst.) Sw. var. <i>solida</i>	VU	VU
Fern	Davalliaceae	<i>Davallia triphylla</i> Hook.	VU	CR
Fern	Dennstaedtiaceae	<i>Histiopteris incisa</i> (Thunb.) J.Sm.	VU	CR
Fern	Dennstaedtiaceae	<i>Microlepia speluncae</i> (L.) T.Moore	Not Listed	VU
Fern	Dennstaedtiaceae	<i>Pteridium revolutum</i> (Blume) Nakai	Not Listed	DD
Fern	Dennstaedtiaceae	<i>Pteridium semihastatum</i> (Wall. ex J.Agardh) S.B.Andrews	VU	EN
Fern	Dipteridaceae	<i>Dipteris conjugata</i> Reinw.	CR	CR
Fern	Dryopteridaceae	<i>Bolbitis appendiculata</i> (Willd.) K.Iwats.	EN	EN
Fern	Dryopteridaceae	<i>Bolbitis heteroclita</i> (C.Presl) Ching	EN	NEx
Fern	Dryopteridaceae	<i>Bolbitis sinuata</i> (C.Presl) Hennipman	NEx	CR
Fern	Dryopteridaceae	<i>Elaphoglossum amblyphyllum</i> P.R.Bell ex	EN	NEx
Fern	Dryopteridaceae	<i>Pleocnemia irregularis</i> (C.Presl) Holttum	Not Listed	LC
Fern	Dryopteridaceae	<i>Pleocnemia olivacea</i> (Copel.) Holttum	Not Listed	NEx
Fern	Dryopteridaceae	<i>Teratophyllum aculeatum</i> (Blume) Mett. ex Kuhn CR var. <i>aculeatum</i>	CR	CR
Fern	Dryopteridaceae	<i>Teratophyllum ludens</i> (Fée) Holttum	CR	CR
Fern	Dryopteridaceae	<i>Teratophyllum rotundifoliatum</i> (Bonap.)	CR	CR
Fern	Gleicheniaceae	<i>Dicranopteris curranii</i> Copel.	Not Listed	LC
Fern	Gleicheniaceae	<i>Dicranopteris linearis</i> (Burm.f.) Underw. var. <i>linearis</i>	Not Listed	LC
Fern	Gleicheniaceae	<i>Dicranopteris subpectinata</i> (Christ) C.M.Kuo	Not Listed	LC
Fern	Gleicheniaceae	<i>Sticherus truncatus</i> (Willd.) Nakai	VU	VU
Fern	Hymenophyllaceae	<i>Abrodictyum obscurum</i> (Blume) Ebihara & K.Iwats.	EN	VU
Fern	Hymenophyllaceae	<i>Callistopteris superba</i> (Backh.) Ebihara &	NEx	CR
Fern	Hymenophyllaceae	<i>Cephalomanes javanicum</i> (Blume) C.Presl var. <i>javanicum</i>	EN	EN
Fern	Hymenophyllaceae	<i>Cephalomanes singaporianum</i> Bosch	VU	CR
Fern	Hymenophyllaceae	<i>Crepidomanes christii</i> (Copel.) Copel.	NEx	NEx
Fern	Hymenophyllaceae	<i>Crepidomanes humile</i> (G.Forst.) Bosch	EN	NEx
Fern	Hymenophyllaceae	<i>Crepidomanes minutum</i> (Blume) K.Iwats.	NEx	NEx
Fern	Hymenophyllaceae	<i>Didymoglossum bimarginatum</i> (Bosch) Ebihara & K.Iwats.	EN	EN
Fern	Hymenophyllaceae	<i>Didymoglossum motleyi</i> (Bosch) Ebihara & K.Iwats.	EN	EN
Fern	Hymenophyllaceae	<i>Didymoglossum sublimbatum</i> (Müll.Berol.) Ebihara & K.Iwats.	EN	EN
Fern	Hymenophyllaceae	<i>Hymenophyllum acanthoides</i> (Bosch) Rosenst.	EN	NEx
Fern	Hymenophyllaceae	<i>Hymenophyllum denticulatum</i> Sw.	EN	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Fern	Hymenophyllaceae	<i>Hymenophyllum digitatum</i> (Sw.) Fosberg	Not Listed	NEx
Fern	Hymenophyllaceae	<i>Hymenophyllum holochilum</i> (Bosch) C.Chr.	EN	NEx
Fern	Hymenophyllaceae	<i>Hymenophyllum pallidum</i> (Blume) Ebihara & K.Iwats.	NEx	NEx
Fern	Hymenophyllaceae	<i>Hymenophyllum polyanthos</i> (Sw.) Sw.	NEx	NEx
Fern	Hymenophyllaceae	<i>Hymenophyllum serrulatum</i> (C.Presl) C.Chr.	EN	NEx
Fern	Lindsaeaceae	<i>Lindsaea borneensis</i> Hook.	NEx	NEx
Fern	Lindsaeaceae	<i>Lindsaea cultrata</i> (Willd.) Sw.	EN	EN
Fern	Lindsaeaceae	<i>Lindsaea divergens</i> Hook. & Grev.	NEx	CR
Fern	Lindsaeaceae	<i>Lindsaea doryphora</i> K.U.Kramer	EN	EN
Fern	Lindsaeaceae	<i>Lindsaea ensifolia</i> Sw. var. <i>ensifolia</i>	Not Listed	LC
Fern	Lindsaeaceae	<i>Lindsaea heterophylla</i> Dryand.	NEx	CR
Fern	Lindsaeaceae	<i>Lindsaea orbiculata</i> (Lam.) Mett.	NEx	CR
Fern	Lindsaeaceae	<i>Lindsaea ovata</i> J.Sm.	NEx	NEx
Fern	Lindsaeaceae	<i>Lindsaea parallelogramma</i> Alderw.	NEx	NEx
Fern	Lindsaeaceae	<i>Lindsaea parasitica</i> (Roxb.) Wall. ex Hieron.	VU	EN
Fern	Lindsaeaceae	<i>Lindsaea pectinata</i> Blume	NEx	CR
Fern	Lindsaeaceae	<i>Lindsaea walkerae</i> Hook.	NEx	NEx
Fern	Lindsaeaceae	<i>Tapeinidium pinnatum</i> (Cav.) C.Chr.	VU	NEx
Fern	Lomariopsidaceae	<i>Lomariopsis lineata</i> (C.Presl) Holttum	CR	EN
Fern	Lygodiaceae	<i>Lygodium flexuosum</i> (L.) Sw.	Not Listed	LC
Fern	Lygodiaceae	<i>Lygodium longifolium</i> (Willd.) Sw.	VU	LC
Fern	Lygodiaceae	<i>Lygodium microphyllum</i> (Cav.) R.Br.	Not Listed	LC
Fern	Lygodiaceae	<i>Lygodium salicifolium</i> C.Presl	Not Listed	VU
Fern	Marattiaceae	<i>Angiopteris evecta</i> (G.Forst.) Hoffm.	VU	VU
Fern	Nephrolepidaceae	<i>Nephrolepis acutifolia</i> (Desv.) Christ	EN	EN
Fern	Nephrolepidaceae	<i>Nephrolepis biserrata</i> (Sw.) Schott	Not Listed	LC
Fern	Nephrolepidaceae	<i>Nephrolepis brownii</i> (Desv.) Hovenkamp & Miyam.	Not Listed	DD
Fern	Nephrolepidaceae	<i>Nephrolepis radicans</i> (Burm.f.) Kuhn	Not Listed	NEx
Fern	Ophioglossaceae	<i>Helminthostachys zeylanica</i> (L.) Hook.	Not Listed	CR
Fern	Ophioglossaceae	<i>Ophioglossum nudicaule</i> L.f.	Not Listed	DD
Fern	Ophioglossaceae	<i>Ophioglossum pendulum</i> L.	CR	CR
Fern	Ophioglossaceae	<i>Ophioglossum reticulatum</i> L.	Not Listed	LC
Fern	Polypodiaceae	<i>Ctenopterella blechnoides</i> (Grev.) Parris	NEx	NEx
Fern	Polypodiaceae	<i>Drynaria quercifolia</i> (L.) J.Sm.	Not Listed	LC
Fern	Polypodiaceae	<i>Drynaria sparsisora</i> (Desv.) T.Moore	Not Listed	VU
Fern	Polypodiaceae	<i>Drynaria speciosa</i> (Blume) Christenh.	NEx	NEx
Fern	Polypodiaceae	<i>Goniophlebium percussum</i> (Cav.) W.H.Wagner & Grether	VU	VU
Fern	Polypodiaceae	<i>Lecanopteris crustacea</i> Copel.	VU	NEx
Fern	Polypodiaceae	<i>Lecanopteris sinuosa</i> (Wall. ex Hook.) Copel.	Not Listed	EN
Fern	Polypodiaceae	<i>Microsorum membranifolium</i> (R.Br.) Ching	Not Listed	NEx
Fern	Polypodiaceae	<i>Microsorum punctatum</i> (L.) Copel.	Not Listed	LC
Fern	Polypodiaceae	<i>Microsorum rubidum</i> (Kunze) Copel.	EN	DD
Fern	Polypodiaceae	<i>Microsorum scolopendria</i> (Burm.f.) Copel.	Not Listed	LC
Fern	Polypodiaceae	<i>Paragrimma longifolia</i> (Blume) T.Moore	EN	NEx
Fern	Polypodiaceae	<i>Platycerium coronarium</i> (J.Koenig) Desv.	Not Listed	EN
Fern	Polypodiaceae	<i>Platycerium ridleyi</i> Christ	NEx	NEx
Fern	Polypodiaceae	<i>Pyrrosia angustata</i> (Sw.) Ching	VU	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Fern	Polypodiaceae	<i>Pyrrosia lanceolata</i> (L.) Farw.	Not Listed	LC
Fern	Polypodiaceae	<i>Pyrrosia longifolia</i> (Burm.f.) C.V.Morton	Not Listed	LC
Fern	Polypodiaceae	<i>Pyrrosia piloselloides</i> (L.) M.G.Price	Not Listed	LC
Fern	Polypodiaceae	<i>Selliguea lateritia</i> (Baker) Hovenkamp	NEx	NEx
Fern	Polypodiaceae	<i>Selliguea stenophylla</i> (Blume) Parris	Not Listed	NEx
Fern	Polypodiaceae	<i>Selliguea taeniata</i> (Sw.) Parris	Not Listed	NEx
Fern	Psilotaceae	<i>Psilotum complanatum</i> Sw.	NEx	NEx
Fern	Psilotaceae	<i>Psilotum nudum</i> (L.) P.Beauv.	Not Listed	LC
Fern	Pteridaceae	<i>Acrostichum aureum</i> L.	Not Listed	LC
Fern	Pteridaceae	<i>Acrostichum speciosum</i> Willd.	Not Listed	LC
Fern	Pteridaceae	<i>Adiantum flabellatum</i> L.	EN	NEx
Fern	Pteridaceae	<i>Adiantum stenochlamys</i> Baker	NEx	NEx
Fern	Pteridaceae	<i>Antrophyum callifolium</i> Blume	CR	CR
Fern	Pteridaceae	<i>Cheilanthes tenuifolia</i> (Burm.f.) Sw.	VU	VU
Fern	Pteridaceae	<i>Haplopteris dareicarpa</i> (Hook.) S.Linds. & C.W.Chen	NEx	NEx
Fern	Pteridaceae	<i>Haplopteris elongata</i> (Sw.) E.H.Crane	Not Listed	LC
Fern	Pteridaceae	<i>Haplopteris ensiformis</i> (Sw.) E.H.Crane	Not Listed	LC
Fern	Pteridaceae	<i>Haplopteris sessilifrons</i> (Miyam. & H.Ohba) S.Linds.	Not Listed	NEx
Fern	Pteridaceae	<i>Pteris mertensiooides</i> Willd.	EN	NEx
Fern	Pteridaceae	<i>Syngramma wallichii</i> (Hook.) Bedd.	EN	EN
Fern	Pteridaceae	<i>Taenitis blechnoides</i> (Willd.) Sw.	Not Listed	LC
Fern	Pteridaceae	<i>Taenitis interrupta</i> Hook. & Grev.	Not Listed	DD
Fern	Pteridaceae	<i>Vaginularia trichoidea</i> Fée	NEx	NEx
Fern	Schizaeaceae	<i>Actinostachys digitata</i> (L.) Wall.	EN	EN
Fern	Schizaeaceae	<i>Actinostachys wagneri</i> (Selling) C.F.Reed	NEx	NEx
Fern	Schizaeaceae	<i>Schizaea dichotoma</i> (L.) Sm.	EN	EN
Fern	Tectariaceae	<i>Tectaria angulata</i> (Willd.) Copel.	EN	NEx
Fern	Tectariaceae	<i>Tectaria barberi</i> (Hook.) Copel.	Not Listed	LC
Fern	Tectariaceae	<i>Tectaria grandidentata</i> (Ces.) Holttum	EN	NEx
Fern	Tectariaceae	<i>Tectaria multicaudata</i> (C.B.Clarke) Ching	EN	CR
Fern	Tectariaceae	<i>Tectaria sagenioides</i> (Mett.) Christenh.	EN	EN
Fern	Tectariaceae	<i>Tectaria semipinnata</i> (Roxb.) C.V.Morton	EN	EN
Fern	Tectariaceae	<i>Tectaria singaporiana</i> (Wall. ex Hook. & Grev.) Copel.	EN	LC
Fern	Tectariaceae	<i>Tectaria vasta</i> (Blume) Copel.	EN	CR
Fern	Thelypteridaceae	<i>Abacopteris repanda</i> (Fée) S.E.Fawc. & A.R.Sm.	Not Listed	EN
Fern	Thelypteridaceae	<i>Amblovenatum decorum</i> (Domin) S.Linds. & D.J.Middleton	Not Listed	CR
Fern	Thelypteridaceae	<i>Amblovenatum opulentum</i> (Kaulf.) J.P.Roux	EN	LC
Fern	Thelypteridaceae	<i>Christella arida</i> (D.Don) Holttum	Not Listed	LC
Fern	Thelypteridaceae	<i>Christella dentata</i> (Forssk.) Brownsey & Jermy	Not Listed	LC
Fern	Thelypteridaceae	<i>Christella parasitica</i> (L.) H.Lév.	Not Listed	VU
Fern	Thelypteridaceae	<i>Christella subpubescens</i> (Blume) Holttum	Not Listed	LC
Fern	Thelypteridaceae	<i>Cyclosorus interruptus</i> (Willd.) H.Ito	Not Listed	LC
Fern	Thelypteridaceae	<i>Grypothrix triphylla</i> (Sw.) S.E.Fawc. & A.R.Sm.	Not Listed	LC
Fern	Thelypteridaceae	<i>Mesophlebion chlamydophorum</i> (Rosenst. ex C.Chr.) Holttum	VU	VU
Fern	Thelypteridaceae	<i>Mesophlebion motleyanum</i> (Hook.) Holttum	VU	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Fern	Thelypteridaceae	<i>Metathelypteris dayi</i> (Bedd.) Holttum	NEx	DD
Fern	Thelypteridaceae	<i>Pronephrium menisciicarpon</i> (Blume) Holttum	EN	NEx
Fern	Thelypteridaceae	<i>Reholttumia truncata</i> (Poir.) S.E.Fawc. & A.R.Sm.	VU	CR
Fern	Thelypteridaceae	<i>Sphaerostephanos heterocarpus</i> (Blume)	Not Listed	LC
Fern	Thelypteridaceae	<i>Sphaerostephanos polycarpus</i> (Blume) Copel.	VU	LC
Fern	Thelypteridaceae	<i>Strophocaulon unitum</i> (L.) S.E.Fawc. & A.R.Sm.	Not Listed	VU
Gymnosperm	Cycadaceae	<i>Cycas edentata</i> de Laub.	CR	CR
Gymnosperm	Gnetaceae	<i>Gnetum gnemon</i> L. var. <i>gnemon</i>	CR	CR
Gymnosperm	Gnetaceae	<i>Gnetum gnemonoides</i> Brongn.	CR	CR
Gymnosperm	Gnetaceae	<i>Gnetum latifolium</i> Blume	CR	CR
Gymnosperm	Gnetaceae	<i>Gnetum macrostachyum</i> Hook.f.	CR	CR
Gymnosperm	Gnetaceae	<i>Gnetum microcarpum</i> Blume	EN	EN
Gymnosperm	Podocarpaceae	<i>Nageia wallichiana</i> (C.Presl) Kuntze	CR	CR
Gymnosperm	Podocarpaceae	<i>Podocarpus polystachyus</i> R.Br. ex Endl.	CR	EN
Angiosperm	Acanthaceae	<i>Acanthus ebracteatus</i> Vahl	VU	VU
Angiosperm	Acanthaceae	<i>Acanthus ilicifolius</i> L.	Not Listed	EN
Angiosperm	Acanthaceae	<i>Acanthus volubilis</i> Nees	VU	EN
Angiosperm	Acanthaceae	<i>Avicennia alba</i> Blume	Not Listed	LC
Angiosperm	Acanthaceae	<i>Avicennia marina</i> (Forssk.) Vierh.	CR	CR
Angiosperm	Acanthaceae	<i>Avicennia officinalis</i> L.	Not Listed	LC
Angiosperm	Acanthaceae	<i>Avicennia rumphiana</i> Hallier f.	Not Listed	LC
Angiosperm	Acanthaceae	<i>Hygrophila ringens</i> (L.) R.Br. ex Steud.	Not Listed	LC
Angiosperm	Acanthaceae	<i>Justicia quadrifaria</i> (Nees) T.Anderson	NEx	NEx
Angiosperm	Acanthaceae	<i>Justicia vasculosa</i> (Nees) T.Anderson	CR	CR
Angiosperm	Acanthaceae	<i>Pseuderanthemum kingii</i> (C.B.Clarke) Ridl.	NEx	NEx
Angiosperm	Acanthaceae	<i>Ptyssiglottis kunthiana</i> (Nees) B.Hansen	Not Listed	EN
Angiosperm	Acanthaceae	<i>Staurogyne griffithiana</i> (Nees) Kuntze	NEx	CR
Angiosperm	Acanthaceae	<i>Staurogyne kingiana</i> C.B.Clarke	CR	CR
Angiosperm	Acanthaceae	<i>Staurogyne setigera</i> (Nees) Kuntze	CR	CR
Angiosperm	Acanthaceae	<i>Strobilanthes brunelloides</i> (Lam.) J.R.I.Wood	Not Listed	EN
Angiosperm	Acanthaceae	<i>Strobilanthes collina</i> Nees	Not Listed	DD
Angiosperm	Acanthaceae	<i>Strobilanthes echinata</i> Nees	Not Listed	NEx
Angiosperm	Acanthaceae	<i>Strobilanthes palawanensis</i> Elmer	CR	CR
Angiosperm	Acanthaceae	<i>Thunbergia dasychlamys</i> Bremek.	EX	NEx
Angiosperm	Achariaceae	<i>Ryparosa fasciculata</i> King	CR	CR
Angiosperm	Achariaceae	<i>Ryparosa hullettii</i> King	NEx	CR
Angiosperm	Actinidiaceae	<i>Saurauia pentapetala</i> (Jack) Hoogland	NEx	CR
Angiosperm	Adoxaceae	<i>Viburnum sambucinum</i> Reinw. ex Blume	NEx	NEx
Angiosperm	Aizoaceae	<i>Sesuvium portulacastrum</i> (L.) L.	Not Listed	LC
Angiosperm	Amaranthaceae	<i>Allmania nodiflora</i> (L.) R.Br. ex Wight	Not Listed	LC
Angiosperm	Amaranthaceae	<i>Cyathula prostrata</i> (L.) Blume	Not Listed	LC
Angiosperm	Amaryllidaceae	<i>Crinum asiaticum</i> L.	CR	CR
Angiosperm	Anacardiaceae	<i>Bouea oppositifolia</i> (Roxb.) Meisn.	VU	CR
Angiosperm	Anacardiaceae	<i>Buchanania arborescens</i> (Blume) Blume	Not Listed	LC
Angiosperm	Anacardiaceae	<i>Buchanania sessifolia</i> Blume	CR	EN
Angiosperm	Anacardiaceae	<i>Campnosperma auriculatum</i> (Blume) Hook.f.	Not Listed	LC
Angiosperm	Anacardiaceae	<i>Campnosperma squamatum</i> Ridl.	Not Listed	VU
Angiosperm	Anacardiaceae	<i>Dracontomelon dao</i> (Blanco) Merr. & Rolfe	Not Listed	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Anacardiaceae	<i>Gluta malayana</i> (Corner) Ding Hou	Not Listed	CR
Angiosperm	Anacardiaceae	<i>Gluta wallichii</i> (Hook.f.) Ding Hou	Not Listed	EN
Angiosperm	Anacardiaceae	<i>Mangifera foetida</i> Lour.	VU	CR
Angiosperm	Anacardiaceae	<i>Mangifera gracilipes</i> Hook.f.	Not Listed	CR
Angiosperm	Anacardiaceae	<i>Mangifera griffithii</i> Hook.f.	EN	CR
Angiosperm	Anacardiaceae	<i>Mangifera laurina</i> Blume	NEx	NEx
Angiosperm	Anacardiaceae	<i>Mangifera magnifica</i> Kochummen	CR	CR
Angiosperm	Anacardiaceae	<i>Mangifera paludosa</i> Kosterm. ex S.K.Ganesan	NEx	NEx
Angiosperm	Anacardiaceae	<i>Mangifera pentandra</i> Hook.f.	Not Listed	CR
Angiosperm	Anacardiaceae	<i>Mangifera quadrifida</i> Jack	Not Listed	CR
Angiosperm	Anacardiaceae	<i>Mangifera subsessilifolia</i> Kosterm.	VU	CR
Angiosperm	Anacardiaceae	<i>Melanochyla angustifolia</i> Hook.f.	Not Listed	CR
Angiosperm	Anacardiaceae	<i>Melanochyla auriculata</i> Hook.f.	VU	CR
Angiosperm	Anacardiaceae	<i>Melanochyla bracteata</i> King	VU	CR
Angiosperm	Anacardiaceae	<i>Melanochyla caesia</i> (Blume) Ding Hou	VU	CR
Angiosperm	Anacardiaceae	<i>Parishia insignis</i> Hook.f.	VU	CR
Angiosperm	Anacardiaceae	<i>Parishia maingayi</i> Hook.f. var. <i>maingayi</i>	VU	CR
Angiosperm	Anacardiaceae	<i>Parishia paucijuga</i> Engl.	EN	CR
Angiosperm	Anacardiaceae	<i>Semecarpus heterophyllus</i> Blume	Not Listed	NEx
Angiosperm	Anacardiaceae	<i>Swintonia schwenkii</i> (Teijsm. & Binn.) Teijsm. & Binn.	VU	CR
Angiosperm	Ancistrocladaceae	<i>Ancistrocladus tectorius</i> (Lour.) Merr.	CR	CR
Angiosperm	Anisophylleaceae	<i>Anisophyllea disticha</i> (Jack) Baill.	Not Listed	LC
Angiosperm	Anisophylleaceae	<i>Anisophyllea griffithii</i> Oliv.	CR	CR
Angiosperm	Annonaceae	<i>Alphonsea johorensis</i> J.Sinclair	Not Listed	EN
Angiosperm	Annonaceae	<i>Alphonsea maingayi</i> Hook.f. & Thomson	CR	CR
Angiosperm	Annonaceae	<i>Anaxagorea javanica</i> Blume var. <i>javanica</i>	CR	CR
Angiosperm	Annonaceae	<i>Artobotrys costatus</i> King	VU	EN
Angiosperm	Annonaceae	<i>Artobotrys crassifolius</i> Hook.f. & Thomson	CR	EN
Angiosperm	Annonaceae	<i>Artobotrys maingayi</i> Hook.f. & Thomson	CR	VU
Angiosperm	Annonaceae	<i>Artobotrys scorchedinii</i> King	CR	CR
Angiosperm	Annonaceae	<i>Artobotrys suaveolens</i> (Blume) Blume	EN	LC
Angiosperm	Annonaceae	<i>Artobotrys wrayi</i> King	EN	DD
Angiosperm	Annonaceae	<i>Cyathocalyx sumatrana</i> Scheff.	CR	CR
Angiosperm	Annonaceae	<i>Dasymaschalon dasymaschalum</i> (Blume) I.M.Turner	CR	EN
Angiosperm	Annonaceae	<i>Dasymaschalon wallichii</i> (Hook.f. & Thomson)	Not Listed	EN
Angiosperm	Annonaceae	Jing Wang & R.M.K.Saunders <i>Dendrokingstonia nervosa</i> (Hook.f. & Thomson)	Not Listed	CR
		Rauschert		
Angiosperm	Annonaceae	<i>Desmos dumosus</i> (Roxb.) Saff.	CR	CR
Angiosperm	Annonaceae	<i>Desmos dunali</i> (Wall. ex Hook.f. & Thomson) Saff.	Not Listed	CR
Angiosperm	Annonaceae	<i>Drepananthus pruniferus</i> Maingay ex Hook.f. & Thomson	Not Listed	CR
Angiosperm	Annonaceae	<i>Drepananthus ramuliflorus</i> Maingay ex Hook.f. & Thomson	Not Listed	VU
Angiosperm	Annonaceae	<i>Drepananthus ridleyi</i> (King) Survesw. & R.M.K.Saunders	VU	EN
Angiosperm	Annonaceae	<i>Fissistigma fulgens</i> (Hook.f. & Thomson) Merr.	VU	VU

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Annonaceae	<i>Fissistigma lanuginosum</i> (Hook.f. & Thomson) Merr.	EN	EN
Angiosperm	Annonaceae	<i>Fissistigma manubriatum</i> (Hook.f. & Thomson) Merr.	VU	VU
Angiosperm	Annonaceae	<i>Fissistigma ovoideum</i> (King) Merr.	VU	EN
Angiosperm	Annonaceae	<i>Friesodielsia biglandulosa</i> (Blume) Steenis	VU	EN
Angiosperm	Annonaceae	<i>Friesodielsia borneensis</i> (Miq.) Steenis var. <i>sumatrana</i> (Miq.) I.M.Turner	VU	VU
Angiosperm	Annonaceae	<i>Friesodielsia calycina</i> (King) Steenis	VU	NEx
Angiosperm	Annonaceae	<i>Friesodielsia glauca</i> (Hook.f. & Thomson) Steenis	NEx	EN
Angiosperm	Annonaceae	<i>Friesodielsia latifolia</i> (Hook.f. & Thomson) Steenis	Not Listed	LC
Angiosperm	Annonaceae	<i>Goniothalamus macrophyllus</i> (Blume) Hook.f. & Thomson	VU	EN
Angiosperm	Annonaceae	<i>Goniothalamus malayanus</i> Hook.f. & Thomson	VU	CR
Angiosperm	Annonaceae	<i>Goniothalamus ridleyi</i> King	VU	EN
Angiosperm	Annonaceae	<i>Goniothalamus tapis</i> Miq.	VU	EN
Angiosperm	Annonaceae	<i>Huberantha jenkinsii</i> (Hook.f. & Thomson) Chaowasku	CR	CR
Angiosperm	Annonaceae	<i>Huberantha rumphii</i> (Blume ex Hensch.) Chaowasku	CR	CR
Angiosperm	Annonaceae	<i>Maasia glauca</i> (Hassk.) Mols et al.	EN	CR
Angiosperm	Annonaceae	<i>Maasia hypoleuca</i> (Hook.f. & Thomson) Mols et al.	CR	CR
Angiosperm	Annonaceae	<i>Maasia sumatrana</i> (Miq.) Mols et al.	CR	CR
Angiosperm	Annonaceae	<i>Meiogyne virgata</i> (Blume) Miq.	CR	CR
Angiosperm	Annonaceae	<i>Mezzettia parviflora</i> Becc.	CR	CR
Angiosperm	Annonaceae	<i>Miliusa eupoda</i> (Miq.) I.M.Turner	NEx	NEx
Angiosperm	Annonaceae	<i>Mitrella kentii</i> (Blume) Miq.	Not Listed	VU
Angiosperm	Annonaceae	<i>Monocarpia maingayi</i> (Hook.f. & Thomson) I.M.Turner	VU	CR
Angiosperm	Annonaceae	<i>Monooon anomalum</i> (Becc.) B.Xue & R.M.K.Saunders	NEx	NEx
Angiosperm	Annonaceae	<i>Monooon borneense</i> (H.Okada) B.Xue & R.M.K.Saunders	EN	EN
Angiosperm	Annonaceae	<i>Monooon hookerianum</i> (King) B.Xue & R.M.K.Saunders	CR	NEx
Angiosperm	Annonaceae	<i>Monooon lateriflorum</i> (Blume) Miq.	CR	CR
Angiosperm	Annonaceae	<i>Monooon sclerophyllum</i> (Hook.f. & Thomson) B.Xue & R.M.K.Saunders	CR	CR
Angiosperm	Annonaceae	<i>Orophea hastata</i> King	NEx	CR
Angiosperm	Annonaceae	<i>Phaeanthus intermedius</i> (P.Parm.) I.M.Turner & Veldkamp	VU	VU
Angiosperm	Annonaceae	<i>Phaeanthus splendens</i> Miq.	Not Listed	CR
Angiosperm	Annonaceae	<i>Polyalthia angustissima</i> Ridl.	VU	VU
Angiosperm	Annonaceae	<i>Polyalthia cauliflora</i> Hook.f. & Thomson	VU	VU
Angiosperm	Annonaceae	<i>Popowia fusca</i> King	VU	VU
Angiosperm	Annonaceae	<i>Popowia pisocarpa</i> (Blume) Endl. ex Walp.	VU	EN
Angiosperm	Annonaceae	<i>Popowia tomentosa</i> Maingay ex Hook.f. & Thomson var. <i>tomentosa</i>	EN	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Annonaceae	<i>Pyramidanthe prismatica</i> (Hook.f. & Thomson) Merr.	EN	EN
Angiosperm	Annonaceae	<i>Trivalvaria macrophylla</i> (Blume) Miq. var. <i>macrophylla</i>	NEx	NEx
Angiosperm	Annonaceae	<i>Uvaria blumei</i> (Boerl.) I.M.Turner	Not Listed	CR
Angiosperm	Annonaceae	<i>Uvaria clementis</i> (Merr.) Attan. et al.	NEx	CR
Angiosperm	Annonaceae	<i>Uvaria cuneifolia</i> (Hook.f. & Thomson) L.L.Zhou et al.	CR	CR
Angiosperm	Annonaceae	<i>Uvaria curtisiae</i> King	NEx	EN
Angiosperm	Annonaceae	<i>Uvaria excelsa</i> (Hook.f. & Thomson) King	Not Listed	NEx
Angiosperm	Annonaceae	<i>Uvaria grandiflora</i> Roxb. ex Hornem.	VU	VU
Angiosperm	Annonaceae	<i>Uvaria griffithii</i> L.L.Zhou et al.	VU	VU
Angiosperm	Annonaceae	<i>Uvaria hirsuta</i> Jack	VU	VU
Angiosperm	Annonaceae	<i>Uvaria leptopoda</i> (King) J.Sinclair	CR	CR
Angiosperm	Annonaceae	<i>Uvaria littoralis</i> (Blume) Blume	Not Listed	LC
Angiosperm	Annonaceae	<i>Uvaria lobbiana</i> Hook.f. & Thomson	NEx	CR
Angiosperm	Annonaceae	<i>Uvaria micrantha</i> (A.DC.) Hook.f. & Thomson	Not Listed	CR
Angiosperm	Annonaceae	<i>Uvaria pauciovulata</i> Hook.f. & Thomson	CR	CR
Angiosperm	Annonaceae	<i>Xylopia caudata</i> Hook.f. & Thomson var. <i>caudata</i>	VU	EN
Angiosperm	Annonaceae	<i>Xylopia dicarpa</i> Hook.f. & Thomson	Not Listed	CR
Angiosperm	Annonaceae	<i>Xylopia ferruginea</i> (Hook.f. & Thomson) Baill.	Not Listed	EN
Angiosperm	Annonaceae	<i>Xylopia fusca</i> Maingay ex Hook.f. & Thomson	CR	CR
Angiosperm	Annonaceae	<i>Xylopia magna</i> Maingay ex Hook.f. & Thomson	CR	CR
Angiosperm	Annonaceae	<i>Xylopia malayana</i> Hook.f. & Thomson	Not Listed	VU
Angiosperm	Annonaceae	<i>Xylopia oxyantha</i> (Hook.f. & Thomson) Hook.f. & Thomson	Not Listed	CR
Angiosperm	Apiaceae	<i>Centella asiatica</i> (L.) Urb.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Alstonia angustifolia</i> Wall. ex A.DC.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Alstonia angustiloba</i> Miq.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Alstonia pneumatophora</i> Backer ex Den Berger	CR	CR
Angiosperm	Apocynaceae	<i>Alstonia spatulata</i> Blume	VU	EN
Angiosperm	Apocynaceae	<i>Alyxia reinwardtii</i> Blume	NEx	LC
Angiosperm	Apocynaceae	<i>Anodendron candolleanum</i> Wight	CR	DD
Angiosperm	Apocynaceae	<i>Anodendron parviflorum</i> (Roxb.) I.M.Turner	Not Listed	DD
Angiosperm	Apocynaceae	<i>Cerbera manghas</i> L.	CR	CR
Angiosperm	Apocynaceae	<i>Cerbera odollam</i> Gaertn.	VU	VU
Angiosperm	Apocynaceae	<i>Chonemorpha fragrans</i> (Moon) Alston	CR	CR
Angiosperm	Apocynaceae	<i>Cynanchum ovalifolium</i> Wight	VU	CR
Angiosperm	Apocynaceae	<i>Dischidia acutifolia</i> Maingay ex Hook.f.	Not Listed	CR
Angiosperm	Apocynaceae	<i>Dischidia albida</i> Griff.	CR	NEx
Angiosperm	Apocynaceae	<i>Dischidia albiflora</i> Griff.	NEx	NEx
Angiosperm	Apocynaceae	<i>Dischidia bengalensis</i> Colebr.	NEx	CR
Angiosperm	Apocynaceae	<i>Dischidia cochleata</i> Blume	CR	NEx
Angiosperm	Apocynaceae	<i>Dischidia complex</i> Griff.	NEx	NEx
Angiosperm	Apocynaceae	<i>Dischidia hirsuta</i> (Blume) Decne.	NEx	CR
Angiosperm	Apocynaceae	<i>Dischidia major</i> (Vahl) Merr.	NEx	LC
Angiosperm	Apocynaceae	<i>Dischidia nummularia</i> R.Br.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Dyera costulata</i> (Miq.) Hook.f.	Not Listed	VU
Angiosperm	Apocynaceae	<i>Epigynum ridleyi</i> King & Gamble	CR	CR
Angiosperm	Apocynaceae	<i>Finlaysonia obovata</i> Wall.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Apocynaceae	<i>Gongreos wallichii</i> (Wight) Rodda et al.	Not Listed	CR
Angiosperm	Apocynaceae	<i>Gymnanthera oblonga</i> (Burm.f.) P.S.Green	CR	CR
Angiosperm	Apocynaceae	<i>Hoya campanulata</i> Blume	NEx	NEx
Angiosperm	Apocynaceae	<i>Hoya caudata</i> Hook.f.	Not Listed	CR
Angiosperm	Apocynaceae	<i>Hoya coriacea</i> Blume	NEx	CR
Angiosperm	Apocynaceae	<i>Hoya coronaria</i> Blume	NEx	CR
Angiosperm	Apocynaceae	<i>Hoya diversifolia</i> Blume	CR	VU
Angiosperm	Apocynaceae	<i>Hoya finlaysonii</i> Wight	NEx	NEx
Angiosperm	Apocynaceae	<i>Hoya lacunosa</i> Blume	EN	CR
Angiosperm	Apocynaceae	<i>Hoya latifolia</i> G.Don	EN	LC
Angiosperm	Apocynaceae	<i>Hoya obtusifolia</i> Wight	NEx	CR
Angiosperm	Apocynaceae	<i>Hoya revoluta</i> Wight ex Hook.f.	NEx	NEx
Angiosperm	Apocynaceae	<i>Hoya scortechinii</i> King & Gamble	Not Listed	CR
Angiosperm	Apocynaceae	<i>Hoya verticillata</i> (Vahl) G.Don	Not Listed	LC
Angiosperm	Apocynaceae	<i>Hoya wallichii</i> (Wight) C.M.Burton	Not Listed	NEx
Angiosperm	Apocynaceae	<i>Jasminanthes maingayi</i> (Hook.f.) Rodda	NEx	CR
Angiosperm	Apocynaceae	<i>Kibatalia maingayi</i> (Hook.f.) Woodson	CR	CR
Angiosperm	Apocynaceae	<i>Kopsia singapurensis</i> Ridl.	CR	CR
Angiosperm	Apocynaceae	<i>Leuconotis griffithii</i> Hook.f.	VU	LC
Angiosperm	Apocynaceae	<i>Melodinus orientalis</i> Blume	NEx	NEx
Angiosperm	Apocynaceae	<i>Micrechites lancifolius</i> (Hook.f.) D.J.Middleton & Livsh.	Not Listed	CR
Angiosperm	Apocynaceae	<i>Micrechites serpyllifolius</i> (Blume) Kosterm.	CR	EN
Angiosperm	Apocynaceae	<i>Ochrosia oppositifolia</i> (Lam.) K.Schum.	NEx	NEx
Angiosperm	Apocynaceae	<i>Parsonia alboflavescens</i> (Dennst.) Mabb.	CR	CR
Angiosperm	Apocynaceae	<i>Parsonia curvisepala</i> K.Schum.	Not Listed	NEx
Angiosperm	Apocynaceae	<i>Sarcolobus globosus</i> Wall.	NEx	NEx
Angiosperm	Apocynaceae	<i>Secamone griffithii</i> (Decne.) Klack.	NEx	NEx
Angiosperm	Apocynaceae	<i>Secamone maingayi</i> (Hook.f.) Rodda	NEx	CR
Angiosperm	Apocynaceae	<i>Strophanthus caudatus</i> (L.) Kurz	CR	EN
Angiosperm	Apocynaceae	<i>Strophanthus singaporianus</i> (Wall. ex G.Don) Gilg	NEx	NEx
Angiosperm	Apocynaceae	<i>Tabernaemontana corymbosa</i> Roxb. ex Wall.	EN	EN
Angiosperm	Apocynaceae	<i>Tabernaemontana pauciflora</i> Blume	VU	EN
Angiosperm	Apocynaceae	<i>Urceola brachysepala</i> Hook.f.	EN	LC
Angiosperm	Apocynaceae	<i>Urceola elastica</i> Roxb.	CR	CR
Angiosperm	Apocynaceae	<i>Urceola laevigata</i> (Juss.) D.J.Middleton & Livsh.	CR	NEx
Angiosperm	Apocynaceae	<i>Urceola lucida</i> (A.DC.) Benth. & Hook.f. ex Kurz	NEx	NEx
Angiosperm	Apocynaceae	<i>Urceola polyneura</i> (Hook.f.) D.J.Middleton & Livsh.	CR	CR
Angiosperm	Apocynaceae	<i>Urceola torulosa</i> Hook.f.	EN	LC
Angiosperm	Apocynaceae	<i>Vincetoxicum flexuosum</i> (R.Br.) Kuntze var. <i>tenuis</i> (Blume) Schneidt et al.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Vincetoxicum globiferum</i> (Hook.f.) Kuntze	CR	CR
Angiosperm	Apocynaceae	<i>Willughbeia angustifolia</i> (Miq.) Markgr.	NEx	NEx
Angiosperm	Apocynaceae	<i>Willughbeia coriacea</i> Wall.	Not Listed	LC
Angiosperm	Apocynaceae	<i>Willughbeia edulis</i> Roxb.	NEx	CR
Angiosperm	Apocynaceae	<i>Willughbeia flavescens</i> Dyer ex Hook.f.	CR	CR
Angiosperm	Apocynaceae	<i>Willughbeia tenuiflora</i> Dyer ex Hook.f.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Apocynaceae	<i>Wrightia laevis</i> Hook.f.	CR	CR
Angiosperm	Aquifoliaceae	<i>Ilex cymosa</i> Blume	Not Listed	LC
Angiosperm	Aquifoliaceae	<i>Ilex macrophylla</i> Wall. ex Hook.f., nom. illeg. hom.	VU	CR
Angiosperm	Aquifoliaceae	<i>Ilex maingayi</i> Hook.f.	EN	NEx
Angiosperm	Aquifoliaceae	<i>Ilex nervulosa</i> (Loes.) S.Andrews	Not Listed	NEx
Angiosperm	Araceae	<i>Aglaonema griffithii</i> Schott	NEx	NEx
Angiosperm	Araceae	<i>Aglaonema nebulosum</i> N.E.Br.	VU	EN
Angiosperm	Araceae	<i>Aglaonema nitidum</i> (Jack) Kunth	VU	VU
Angiosperm	Araceae	<i>Aglaonema simplex</i> Blume	Not Listed	VU
Angiosperm	Araceae	<i>Alocasia longiloba</i> Miq.	Not Listed	LC
Angiosperm	Araceae	<i>Amorphophallus prainii</i> Hook.f.	CR	NEx
Angiosperm	Araceae	<i>Amydrium medium</i> (Zoll. & Moritzi) Nicolson	EN	EN
Angiosperm	Araceae	<i>Anadendrum montanum</i> (Blume) Schott	VU	VU
Angiosperm	Araceae	<i>Cryptocoryne ciliata</i> (Roxb.) Fisch. ex Schott	NEx	NEx
Angiosperm	Araceae	<i>Cryptocoryne griffithii</i> Schott	CR	CR
Angiosperm	Araceae	<i>Cyrtosperma merkusii</i> (Hassk.) Schott	VU	VU
Angiosperm	Araceae	<i>Epipremnum giganteum</i> (Roxb.) Schott	Not Listed	LC
Angiosperm	Araceae	<i>Homalomena coeruleascens</i> Jungh. ex Miq.	EN	NEx
Angiosperm	Araceae	<i>Homalomena griffithii</i> (Schott) Hook.f.	VU	DD
Angiosperm	Araceae	<i>Homalomena humilis</i> (Jack) Hook.f.	EN	CR
Angiosperm	Araceae	<i>Homalomena nathanielii</i> S.Y.Wong & P.C.Boyce	Not Listed	CR
Angiosperm	Araceae	<i>Homalomena pontederiifolia</i> Griff. ex Hook.f.	Not Listed	DD
Angiosperm	Araceae	<i>Homalomena rostrata</i> Griff.	EN	NEx
Angiosperm	Araceae	<i>Lasia spinosa</i> (L.) Thwaites	VU	EN
Angiosperm	Araceae	<i>Lemna tenera</i> Kurz	NEx	NEx
Angiosperm	Araceae	<i>Pothos venustus</i> (Wall. ex C.DC.) A.Hay & P.C.Boyce	VU	CR
Angiosperm	Araceae	<i>Rhaphidophora burkilliana</i> Ridl.	CR	CR
Angiosperm	Araceae	<i>Rhaphidophora korthalsii</i> Schott	VU	VU
Angiosperm	Araceae	<i>Rhaphidophora lobbii</i> Schott	VU	VU
Angiosperm	Araceae	<i>Rhaphidophora maingayi</i> Hook.f.	VU	EN
Angiosperm	Araceae	<i>Rhaphidophora minor</i> Hook.f.	VU	VU
Angiosperm	Araceae	<i>Rhaphidophora sylvestris</i> (Blume) Engl.	Not Listed	CR
Angiosperm	Araceae	<i>Schismatoglottis lowiae</i> S.Y.Wong & P.C.Boyce	VU	VU
Angiosperm	Araceae	<i>Schismatoglottis pantiensis</i> S.Y.Wong et al.	VU	VU
Angiosperm	Araceae	<i>Scindapsus hederaceus</i> Miq.	Not Listed	LC
Angiosperm	Araceae	<i>Scindapsus lucens</i> Bogner & P.C.Boyce	Not Listed	CR
Angiosperm	Araceae	<i>Scindapsus pictus</i> Hassk.	Not Listed	EN
Angiosperm	Araliaceae	<i>Arthrophyllum jackianum</i> (G.Don) Frodin	Not Listed	LC
Angiosperm	Araliaceae	<i>Heptapleurum cephalotes</i> C.B.Clarke	Not Listed	NEx
Angiosperm	Araliaceae	<i>Heptapleurum ellipticum</i> (Blume) Seem.	VU	EN
Angiosperm	Araliaceae	<i>Heptapleurum hullettii</i> King	CR	CR
Angiosperm	Araliaceae	<i>Heptapleurum lanceolatum</i> (Ridl.) Lowry & G.M.Plunkett	NEx	NEx
Angiosperm	Araliaceae	<i>Heptapleurum oxyphyllum</i> (Miq.) Seem.	NEx	NEx
Angiosperm	Araliaceae	<i>Heptapleurum ridleyi</i> King	NEx	NEx
Angiosperm	Araliaceae	<i>Hydrocotyle sibthorpioides</i> Lam.	Not Listed	LC
Angiosperm	Araliaceae	<i>Trevesia burckii</i> Boerl.	CR	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Arecaceae	<i>Calamus crinitus</i> (Blume) Miq. subsp. <i>sabut</i> (Becc.) A.J.Hend.	CR	EN
Angiosperm	Arecaceae	<i>Calamus densiflorus</i> Becc.	NEx	CR
Angiosperm	Arecaceae	<i>Calamus diepenhorstii</i> Miq.	EN	EN
Angiosperm	Arecaceae	<i>Calamus erinaceus</i> (Becc.) Becc. subsp.	VU	LC
Angiosperm	Arecaceae	<i>Calamus gracilipes</i> Miq.	VU	VU
Angiosperm	Arecaceae	<i>Calamus hirsutus</i> (Blume) Miq. subsp. <i>hirsutus</i>	VU	VU
Angiosperm	Arecaceae	<i>Calamus insignis</i> Griff.	CR	CR
Angiosperm	Arecaceae	<i>Calamus javensis</i> Blume	NEx	EN
Angiosperm	Arecaceae	<i>Calamus leptopus</i> Griff.	CR	CR
Angiosperm	Arecaceae	<i>Calamus lobbianus</i> Becc.	CR	CR
Angiosperm	Arecaceae	<i>Calamus longipes</i> Griff.	VU	CR
Angiosperm	Arecaceae	<i>Calamus melanochaetes</i> (Blume) Miq.	VU	VU
Angiosperm	Arecaceae	<i>Calamus micracanthus</i> Griff.	CR	CR
Angiosperm	Arecaceae	<i>Calamus micranthus</i> Blume	NEx	NEx
Angiosperm	Arecaceae	<i>Calamus oblongus</i> Reinw. ex Blume subsp. <i>depressiusculus</i> (Miq. ex H.Wendl.) A.J.Hend.	CR	CR
Angiosperm	Arecaceae	<i>Calamus ornatus</i> Blume	NEx	CR
Angiosperm	Arecaceae	<i>Calamus oxleyanus</i> Teijsm. & Binn. ex Miq.	CR	CR
Angiosperm	Arecaceae	<i>Calamus periacanthus</i> (Miq.) Miq.	CR	EN
Angiosperm	Arecaceae	<i>Calamus plicatus</i> Blume	CR	CR
Angiosperm	Arecaceae	<i>Calamus ridleyanus</i> Becc.	CR	CR
Angiosperm	Arecaceae	<i>Caryota mitis</i> Lour.	Not Listed	LC
Angiosperm	Arecaceae	<i>Cyrtostachys renda</i> Blume	CR	CR
Angiosperm	Arecaceae	<i>Eleiodoxa conferta</i> (Griff.) Burret	VU	VU
Angiosperm	Arecaceae	<i>Iguanura geometromorphis</i> Mart.	CR	CR
Angiosperm	Arecaceae	<i>Korthalsia echinometra</i> Becc.	CR	CR
Angiosperm	Arecaceae	<i>Korthalsia flagellaris</i> Miq.	CR	CR
Angiosperm	Arecaceae	<i>Korthalsia laciniosa</i> (Griff.) Mart.	NEx	NEx
Angiosperm	Arecaceae	<i>Korthalsia rigida</i> Blume	CR	CR
Angiosperm	Arecaceae	<i>Korthalsia rostrata</i> Blume	EN	EN
Angiosperm	Arecaceae	<i>Korthalsia scortechinii</i> Becc.	NEx	NEx
Angiosperm	Arecaceae	<i>Licuala ferruginea</i> Becc.	EN	VU
Angiosperm	Arecaceae	<i>Licuala spinosa</i> Wurmb	VU	LC
Angiosperm	Arecaceae	<i>Licuala triphylla</i> Griff.	NEx	NEx
Angiosperm	Arecaceae	<i>Myrialepis paradoxa</i> (Kurz) J.Dransf.	CR	VU
Angiosperm	Arecaceae	<i>Nenga pumila</i> H.Wendl. ex Schaedtler var. <i>pachystachya</i> (Blume) Fernando	CR	CR
Angiosperm	Arecaceae	<i>Nypa fruticans</i> Wurmb	VU	VU
Angiosperm	Arecaceae	<i>Oncosperma horridum</i> (Griff.) Scheff.	VU	VU
Angiosperm	Arecaceae	<i>Oncosperma tigillarium</i> (Jack) Ridl.	VU	LC
Angiosperm	Arecaceae	<i>Orania sylvicola</i> (Griff.) H.E.Moore	CR	CR
Angiosperm	Arecaceae	<i>Pholidocarpus kingianus</i> (Becc.) Ridl.	NEx	DD
Angiosperm	Arecaceae	<i>Pinanga auriculata</i> Becc. var. <i>leucocarpa</i>	Not Listed	NEx
Angiosperm	Arecaceae	<i>Pinanga disticha</i> (Roxb.) Blume ex H.Wendl.	NEx	NEx
Angiosperm	Arecaceae	<i>Pinanga limosa</i> Ridl.	NEx	NEx
Angiosperm	Arecaceae	<i>Pinanga malaiana</i> (Mart.) Scheff.	NEx	CR
Angiosperm	Arecaceae	<i>Pinanga simplicifrons</i> (Miq.) Becc.	NEx	CR
Angiosperm	Arecaceae	<i>Pinanga singaporense</i> Ridl.	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Arecaceae	<i>Pinanga subruminata</i> Becc.	NEx	NEx
Angiosperm	Arecaceae	<i>Plectocomia elongata</i> Mart. ex Blume	VU	LC
Angiosperm	Arecaceae	<i>Plectocomiopsis geminiflora</i> (Griff.) Becc.	Not Listed	CR
Angiosperm	Arecaceae	<i>Rhopaloblaste singaporenensis</i> (Becc.) Benth. & Hook.f.	CR	CR
Angiosperm	Arecaceae	<i>Salacca affinis</i> Griff.	NEx	CR
Angiosperm	Aristolochiaceae	<i>Aristolochia jackii</i> Steud.	NEx	NEx
Angiosperm	Aristolochiaceae	<i>Thottea grandiflora</i> Rottb.	VU	VU
Angiosperm	Aristolochiaceae	<i>Thottea praetermissa</i> T.L.Yao	CR	CR
Angiosperm	Asparagaceae	<i>Dracaena brachystachys</i> Hook.f.	NEx	CR
Angiosperm	Asparagaceae	<i>Dracaena breviflora</i> Ridl.	Not Listed	CR
Angiosperm	Asparagaceae	<i>Dracaena cantleyi</i> Baker	VU	EN
Angiosperm	Asparagaceae	<i>Dracaena elliptica</i> Thunb.	CR	CR
Angiosperm	Asparagaceae	<i>Dracaena granulata</i> Hook.f.	VU	EN
Angiosperm	Asparagaceae	<i>Dracaena maingayi</i> Hook.f.	VU	EN
Angiosperm	Asparagaceae	<i>Dracaena porteri</i> Baker	Not Listed	LC
Angiosperm	Asparagaceae	<i>Dracaena singapurensis</i> Ridl.	NEx	CR
Angiosperm	Asparagaceae	<i>Dracaena umbratica</i> Ridl.	VU	VU
Angiosperm	Asparagaceae	<i>Peliosanthes teta</i> Andrews subsp. <i>humilis</i> (Andrews) Jessop ex Gandhi	VU	EN
Angiosperm	Asphodelaceae	<i>Dianella ensifolia</i> (L.) Redouté	Not Listed	LC
Angiosperm	Asteraceae	<i>Acmella paniculata</i> (Wall. ex DC.) R.K.Jansen	Not Listed	NEx
Angiosperm	Asteraceae	<i>Adenostemma viscosum</i> J.R.Forst. & G.Forst.	Not Listed	NEx
Angiosperm	Asteraceae	<i>Blumea balsamifera</i> (L.) DC.	NEx	CR
Angiosperm	Asteraceae	<i>Blumea lacera</i> (Burm.f.) DC.	Not Listed	LC
Angiosperm	Asteraceae	<i>Blumea riparia</i> DC.	Not Listed	LC
Angiosperm	Asteraceae	<i>Emilia sonchifolia</i> (L.) DC.	Not Listed	LC
Angiosperm	Asteraceae	<i>Enydra fluctuans</i> Lour.	Not Listed	NEx
Angiosperm	Asteraceae	<i>Gynura procumbens</i> (Lour.) Merr.	CR	CR
Angiosperm	Asteraceae	<i>Mikania cordata</i> (Burm.f.) B.L.Rob.	Not Listed	NEx
Angiosperm	Asteraceae	<i>Pluchea indica</i> (L.) Less.	Not Listed	LC
Angiosperm	Asteraceae	<i>Sphaeranthus africanus</i> L.	Not Listed	NEx
Angiosperm	Asteraceae	<i>Vernonia arborea</i> Buch.-Ham.	VU	CR
Angiosperm	Asteraceae	<i>Vernonia cinerea</i> (L.) Less.	Not Listed	LC
Angiosperm	Asteraceae	<i>Vernonia patula</i> (Aiton) Merr.	Not Listed	NEx
Angiosperm	Asteraceae	<i>Wollastonia biflora</i> (L.) DC.	Not Listed	LC
Angiosperm	Bignoniaceae	<i>Deplanchea bancana</i> (Scheff.) Steenis	NEx	CR
Angiosperm	Bignoniaceae	<i>Dolichandrone spathacea</i> (L.f.) K.Schum.	CR	CR
Angiosperm	Bignoniaceae	<i>Fernandoa adenophylla</i> (Wall. ex G.Don) Steenis	Not Listed	NEx
Angiosperm	Bignoniaceae	<i>Pajanelia longifolia</i> (Willd.) K.Schum.	NEx	NEx
Angiosperm	Bignoniaceae	<i>Radermachera quadripinnata</i> (Blanco) Seem. subsp. <i>lobbii</i> (Teijsm. & Binn.) I.M.Turner	CR	CR
Angiosperm	Bignoniaceae	<i>Stereospermum tetragonum</i> DC.	CR	NEx
Angiosperm	Bonnetiaceae	<i>Ploiarium elegans</i> Korth.	Not Listed	LC
Angiosperm	Boraginaceae	<i>Cordia dichotoma</i> G.Forst.	CR	NEx
Angiosperm	Boraginaceae	<i>Cordia subcordata</i> Lam.	CR	CR
Angiosperm	Boraginaceae	<i>Heliotropium bibianum</i> Craven	NEx	NEx
Angiosperm	Burmanniaceae	<i>Burmannia championii</i> Thwaites	CR	NEx
Angiosperm	Burmanniaceae	<i>Burmannia coelestis</i> D.Don	Not Listed	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Burmanniaceae	<i>Burmannia wallichii</i> (Miers) Hook.f.	Not Listed	NEx
Angiosperm	Burmanniaceae	<i>Gymnosiphon aphyllus</i> Blume	NEx	NEx
Angiosperm	Burseraceae	<i>Canarium grandifolium</i> (Ridl.) H.J.Lam	CR	CR
Angiosperm	Burseraceae	<i>Canarium littorale</i> Blume	Not Listed	EN
Angiosperm	Burseraceae	<i>Canarium patentinervium</i> Miq.	EN	EN
Angiosperm	Burseraceae	<i>Canarium pilosum</i> A.W.Benn.	EN	VU
Angiosperm	Burseraceae	<i>Dacryodes costata</i> (A.W.Benn.) H.J.Lam	EN	EN
Angiosperm	Burseraceae	<i>Dacryodes incurvata</i> (Engl.) H.J.Lam	Not Listed	CR
Angiosperm	Burseraceae	<i>Dacryodes laxa</i> (A.W.Benn.) H.J.Lam	EN	EN
Angiosperm	Burseraceae	<i>Dacryodes longifolia</i> (King) H.J.Lam	CR	CR
Angiosperm	Burseraceae	<i>Dacryodes nervosa</i> (H.J.Lam) Leen.	Not Listed	CR
Angiosperm	Burseraceae	<i>Dacryodes puberula</i> (A.W.Benn.) H.J.Lam	Not Listed	NEx
Angiosperm	Burseraceae	<i>Dacryodes rostrata</i> (Blume) H.J.Lam	VU	VU
Angiosperm	Burseraceae	<i>Dacryodes rugosa</i> (Blume) H.J.Lam var. <i>rugosa</i>	CR	CR
Angiosperm	Burseraceae	<i>Santiria apiculata</i> A.W.Benn. var. <i>apiculata</i>	Not Listed	LC
Angiosperm	Burseraceae	<i>Santiria conferta</i> A.W.Benn.	CR	CR
Angiosperm	Burseraceae	<i>Santiria griffithii</i> (Hook.f.) Engl.	Not Listed	EN
Angiosperm	Burseraceae	<i>Santiria laevigata</i> Blume	VU	VU
Angiosperm	Burseraceae	<i>Santiria rubiginosa</i> Blume var. <i>rubiginosa</i>	VU	EN
Angiosperm	Burseraceae	<i>Santiria tomentosa</i> Blume	EN	CR
Angiosperm	Burseraceae	<i>Triomma malaccensis</i> Hook.f.	EN	CR
Angiosperm	Calophyllaceae	<i>Calophyllum biflorum</i> M.R.Hend. & Wyatt-Sm.	NEx	NEx
Angiosperm	Calophyllaceae	<i>Calophyllum calaba</i> L. var. <i>bracteatum</i> (Wight) P.F.Stevens	NEx	NEx
Angiosperm	Calophyllaceae	<i>Calophyllum costulatum</i> M.R.Hend. & Wyatt-Sm.	NEx	NEx
Angiosperm	Calophyllaceae	<i>Calophyllum dispar</i> P.F.Stevens	CR	CR
Angiosperm	Calophyllaceae	<i>Calophyllum ferrugineum</i> Ridl. var. <i>ferrugineum</i>	Not Listed	LC
Angiosperm	Calophyllaceae	<i>Calophyllum inophyllum</i> L.	CR	EN
Angiosperm	Calophyllaceae	<i>Calophyllum lanigerum</i> Miq. var. <i>austrocoriaceum</i> (Whitmore) P.F.Stevens	EN	EN
Angiosperm	Calophyllaceae	<i>Calophyllum macrocarpum</i> Hook.f.	CR	CR
Angiosperm	Calophyllaceae	<i>Calophyllum pulcherrimum</i> Wall. ex Choisy	Not Listed	LC
Angiosperm	Calophyllaceae	<i>Calophyllum rigidum</i> Miq.	CR	NEx
Angiosperm	Calophyllaceae	<i>Calophyllum rubiginosum</i> M.R.Hend. & Wyatt-Sm.	EN	EN
Angiosperm	Calophyllaceae	<i>Calophyllum rufigemmatum</i> M.R.Hend. & Wyatt-Sm. ex P.F.Stevens	EN	EN
Angiosperm	Calophyllaceae	<i>Calophyllum sundaicum</i> P.F.Stevens	CR	CR
Angiosperm	Calophyllaceae	<i>Calophyllum tetrapterum</i> Miq. var. <i>tetrapterum</i>	VU	VU
Angiosperm	Calophyllaceae	<i>Calophyllum teysmannii</i> Miq. var. <i>teysmannii</i>	VU	VU
Angiosperm	Calophyllaceae	<i>Calophyllum wallichianum</i> Planch. & Triana var. <i>incrassatum</i> (M.R.Hend. & Wyatt-Sm.) P.F.Stevens	VU	VU
Angiosperm	Calophyllaceae	<i>Kayea elegans</i> King	CR	CR
Angiosperm	Calophyllaceae	<i>Kayea ferruginea</i> Pierre	Not Listed	NEx
Angiosperm	Campanulaceae	<i>Lobelia zeylanica</i> L.	Not Listed	CR
Angiosperm	Cannabaceae	<i>Gironniera hirta</i> Ridl.	NEx	NEx
Angiosperm	Cannabaceae	<i>Gironniera nervosa</i> Planch.	Not Listed	LC
Angiosperm	Cannabaceae	<i>Gironniera parvifolia</i> Planch.	EN	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Cannabaceae	<i>Gironniera subaequalis</i> Planch.	EN	EN
Angiosperm	Cannabaceae	<i>Trema angustifolium</i> (Planch.) Blume	NEx	CR
Angiosperm	Cannabaceae	<i>Trema cannabina</i> Lour.	Not Listed	LC
Angiosperm	Cannabaceae	<i>Trema tomentosum</i> (Roxb.) H.Hara	Not Listed	VU
Angiosperm	Capparaceae	<i>Capparis micracantha</i> DC. subsp. <i>korthalsiana</i> (Miq.) M.Jacobs	CR	CR
Angiosperm	Cardiopteridaceae	<i>Gonocaryum gracile</i> Miq.	EN	CR
Angiosperm	Casuarinaceae	<i>Casuarina equisetifolia</i> L.	Not Listed	LC
Angiosperm	Celastraceae	<i>Celastrus monospermoides</i> Loes.	Not Listed	CR
Angiosperm	Celastraceae	<i>Elaeodendron viburnifolium</i> (Juss.) Merr.	CR	CR
Angiosperm	Celastraceae	<i>Euonymus indicus</i> B.Heyne ex Wall.	NEx	NEx
Angiosperm	Celastraceae	<i>Glyptopetalum quadrangulare</i> Prain ex King	NEx	NEx
Angiosperm	Celastraceae	<i>Gymnosporia littoralis</i> (Backer) Jordaan	NEx	CR
Angiosperm	Celastraceae	<i>Kokoona littoralis</i> M.A.Lawson	NEx	NEx
Angiosperm	Celastraceae	<i>Kokoona reflexa</i> (M.A.Lawson) Ding Hou	CR	CR
Angiosperm	Celastraceae	<i>Loeseneriella macrantha</i> (Korth.) A.C.Sm.	NEx	CR
Angiosperm	Celastraceae	<i>Lophopetalum beccarianum</i> Pierre	CR	CR
Angiosperm	Celastraceae	<i>Lophopetalum multinervium</i> Ridl.	EN	EN
Angiosperm	Celastraceae	<i>Lophopetalum pallidum</i> M.A.Lawson	Not Listed	CR
Angiosperm	Celastraceae	<i>Lophopetalum wightianum</i> Arn.	VU	EN
Angiosperm	Celastraceae	<i>Reissantia indica</i> (Willd.) N.Hallé	NEx	NEx
Angiosperm	Celastraceae	<i>Salacia chinensis</i> L.	VU	CR
Angiosperm	Celastraceae	<i>Salacia exsculpta</i> Korth.	CR	CR
Angiosperm	Celastraceae	<i>Salacia grandiflora</i> Kurz	CR	CR
Angiosperm	Celastraceae	<i>Salacia korthalsiana</i> Miq.	CR	CR
Angiosperm	Celastraceae	<i>Salacia macrophylla</i> Blume	VU	VU
Angiosperm	Celastraceae	<i>Salacia maingayi</i> M.A.Lawson	NEx	CR
Angiosperm	Celastraceae	<i>Salacia viminea</i> Wall. ex M.A.Lawson	CR	CR
Angiosperm	Centroplacaceae	<i>Bhesa paniculata</i> Arn.	Not Listed	LC
Angiosperm	Centroplacaceae	<i>Bhesa robusta</i> (Roxb.) Ding Hou	VU	VU
Angiosperm	Chloranthaceae	<i>Chloranthus officinalis</i> Blume	CR	CR
Angiosperm	Chrysobalanaceae	<i>Angelesia splendens</i> Korth.	Not Listed	VU
Angiosperm	Chrysobalanaceae	<i>Atuna excelsa</i> (Jack) Kosterm. subsp. <i>excelsa</i>	CR	CR
Angiosperm	Chrysobalanaceae	<i>Maranthes corymbosa</i> Blume	EN	VU
Angiosperm	Chrysobalanaceae	<i>Parastemon urophyllus</i> (Wall. ex A.DC.) A.DC.	EN	CR
Angiosperm	Chrysobalanaceae	<i>Parinari costata</i> (Korth.) Blume subsp. <i>costata</i>	CR	NEx
Angiosperm	Chrysobalanaceae	<i>Parinari elmeri</i> Merr.	Not Listed	CR
Angiosperm	Chrysobalanaceae	<i>Parinari oblongifolia</i> Hook.f.	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia atroviridis</i> Griff. ex T.Anderson	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia bancana</i> Miq. var. <i>bancana</i>	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia bancana</i> Miq. var. <i>curtisii</i> (Ridl.) Whitmore	Not Listed	DD
Angiosperm	Clusiaceae	<i>Garcinia brevirostris</i> Scheff.	VU	VU
Angiosperm	Clusiaceae	<i>Garcinia celebica</i> L.	EN	EN
Angiosperm	Clusiaceae	<i>Garcinia forbesii</i> King	CR	EN
Angiosperm	Clusiaceae	<i>Garcinia griffithii</i> T.Anderson	EN	EN
Angiosperm	Clusiaceae	<i>Garcinia maingayi</i> Hook.f. var. <i>stylosa</i> King	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia mangostana</i> L. var. <i>malaccensis</i> (Hook.f.) Nazre	Not Listed	CR
Angiosperm	Clusiaceae	<i>Garcinia merguensis</i> Wight	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Clusiaceae	<i>Garcinia nervosa</i> (Miq.) Miq.	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia nigrolineata</i> Planch. ex T.Anderson	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia parvifolia</i> (Miq.) Miq.	Not Listed	LC
Angiosperm	Clusiaceae	<i>Garcinia pyrifera</i> Ridl.	NEx	NEx
Angiosperm	Clusiaceae	<i>Garcinia rostrata</i> (Hassk.) Miq.	CR	CR
Angiosperm	Clusiaceae	<i>Garcinia scortechnii</i> King	CR	EN
Angiosperm	Clusiaceae	<i>Garcinia urophylla</i> Scort. ex King	Not Listed	DD
Angiosperm	Combretaceae	<i>Combretum sundaicum</i> Miq.	VU	VU
Angiosperm	Combretaceae	<i>Combretum tetralophum</i> C.B.Clarke	CR	CR
Angiosperm	Combretaceae	<i>Lumnitzera littorea</i> (Jack) Voigt	EN	EN
Angiosperm	Combretaceae	<i>Lumnitzera racemosa</i> Willd.	EN	EN
Angiosperm	Combretaceae	<i>Terminalia catappa</i> L.	Not Listed	LC
Angiosperm	Combretaceae	<i>Terminalia citrina</i> (Gaertn.) Roxb.	Not Listed	CR
Angiosperm	Combretaceae	<i>Terminalia phellocarpa</i> King	CR	NEx
Angiosperm	Combretaceae	<i>Terminalia subspathulata</i> King	CR	CR
Angiosperm	Commelinaceae	<i>Amischotolype gracilis</i> (Ridl.) I.M.Turner	Not Listed	LC
Angiosperm	Commelinaceae	<i>Amischotolype marginata</i> (Blume) Hassk.	CR	CR
Angiosperm	Commelinaceae	<i>Commelina attenuata</i> Vahl	NEx	NEx
Angiosperm	Commelinaceae	<i>Floscopa scandens</i> Lour.	Not Listed	NEx
Angiosperm	Commelinaceae	<i>Murdannia vaginata</i> (L.) G.Brückn.	Not Listed	NEx
Angiosperm	Commelinaceae	<i>Pollia secundiflora</i> (Blume) Bakh.f.	NEx	NEx
Angiosperm	Connaraceae	<i>Agelaea borneensis</i> (Hook.f.) Merr.	VU	LC
Angiosperm	Connaraceae	<i>Agelaea macrophylla</i> (Zoll.) Leenhh.	CR	LC
Angiosperm	Connaraceae	<i>Cnestis palala</i> (Lour.) Merr.	Not Listed	VU
Angiosperm	Connaraceae	<i>Connarus ferrugineus</i> Jack	CR	CR
Angiosperm	Connaraceae	<i>Connarus grandis</i> Jack	CR	CR
Angiosperm	Connaraceae	<i>Connarus monocarpus</i> L.	CR	CR
Angiosperm	Connaraceae	<i>Connarus paniculatus</i> Roxb.	NEx	CR
Angiosperm	Connaraceae	<i>Connarus semidecandrus</i> Jack	CR	CR
Angiosperm	Connaraceae	<i>Ellipanthus tomentosus</i> Kurz var. <i>tomentosus</i>	CR	CR
Angiosperm	Connaraceae	<i>Rourea acutipetala</i> Miq.	NEx	CR
Angiosperm	Connaraceae	<i>Rourea asplenifolia</i> (G.Schellenb.) Jongkind	CR	LC
Angiosperm	Connaraceae	<i>Rourea fulgens</i> Planch.	VU	EN
Angiosperm	Connaraceae	<i>Rourea mimosoides</i> (Vahl) Planch.	EN	LC
Angiosperm	Connaraceae	<i>Rourea minor</i> (Gaertn.) Merr.	CR	VU
Angiosperm	Connaraceae	<i>Rourea rugosa</i> Planch.	NEx	NEx
Angiosperm	Convolvulaceae	<i>Argyreia ridleyi</i> (Prain) Prain ex Ooststr.	CR	CR
Angiosperm	Convolvulaceae	<i>Bonamia semidigyna</i> (Roxb.) Hallier f.	Not Listed	CR
Angiosperm	Convolvulaceae	<i>Camonea pilosa</i> (Houtt.) A.R.Simões & Staples	Not Listed	CR
Angiosperm	Convolvulaceae	<i>Cuscuta australis</i> R.Br.	Not Listed	NEx
Angiosperm	Convolvulaceae	<i>Erycibe festiva</i> Prain	NEx	CR
Angiosperm	Convolvulaceae	<i>Erycibe griffithii</i> C.B.Clarke	CR	CR
Angiosperm	Convolvulaceae	<i>Erycibe leucoxylonoides</i> King ex Ridl.	Not Listed	VU
Angiosperm	Convolvulaceae	<i>Erycibe maingayi</i> C.B.Clarke	NEx	DD
Angiosperm	Convolvulaceae	<i>Erycibe malaccensis</i> C.B.Clarke	CR	CR
Angiosperm	Convolvulaceae	<i>Erycibe tomentosa</i> Blume	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Evolvulus alsinoides</i> (L.) L.	Not Listed	NEx
Angiosperm	Convolvulaceae	<i>Ipomoea aquatica</i> Forssk.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Ipomoea littoralis</i> Blume	Not Listed	DD

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Convolvulaceae	<i>Ipomoea mauritiana</i> Jacq.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Ipomoea obscura</i> (L.) Ker Gawl.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Ipomoea pes-caprae</i> (L.) R.Br.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Ipomoea pes-tigridis</i> L.	Not Listed	CR
Angiosperm	Convolvulaceae	<i>Ipomoea sagittifolia</i> Burm.f.	Not Listed	NEx
Angiosperm	Convolvulaceae	<i>Ipomoea violacea</i> L.	Not Listed	DD
Angiosperm	Convolvulaceae	<i>Lepistemon cf. binectarifer</i> (Wall.) Kuntze	Not Listed	DD
Angiosperm	Convolvulaceae	<i>Merremia hederacea</i> (Burm.f.) Hallier f.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Merremia hirta</i> (L.) Merr.	Not Listed	LC
Angiosperm	Convolvulaceae	<i>Neuropeltis cf. racemosa</i> Wall.	CR	DD
Angiosperm	Convolvulaceae	<i>Xenostegia tridentata</i> (L.) D.F.Austin & Staples	Not Listed	LC
Angiosperm	Cornaceae	<i>Alangium denudatum</i> (Bloemb.) W.J.de Wilde & Duyfjes	Not Listed	CR
Angiosperm	Cornaceae	<i>Alangium frutescens</i> Zoll. & Moritzi var. <i>frutescens</i>	CR	CR
Angiosperm	Cornaceae	<i>Alangium griffithii</i> (C.B.Clarke) Harms	CR	EN
Angiosperm	Cornaceae	<i>Alangium longiflorum</i> Merr. var. <i>hirsutum</i> (Bloemb.) W.J.de Wilde & Duyfjes	Not Listed	CR
Angiosperm	Cornaceae	<i>Alangium meyeri</i> Merr. var. <i>meyeri</i>	CR	NEx
Angiosperm	Cornaceae	<i>Alangium nobile</i> (C.B.Clarke) Harms	CR	CR
Angiosperm	Cornaceae	<i>Alangium ridleyi</i> King	NEx	CR
Angiosperm	Costaceae	<i>Cheilocostus globosus</i> (Blume) C.D.Specht	NEx	CR
Angiosperm	Costaceae	<i>Cheilocostus speciosus</i> (J.Koenig) C.D.Specht	Not Listed	CR
Angiosperm	Crypteroniaceae	<i>Crypteronia rubiflora</i> (Griff.) Ormerod	CR	CR
Angiosperm	Ctenolophonaceae	<i>Ctenolophon parvifolius</i> Oliv.	CR	CR
Angiosperm	Cucurbitaceae	<i>Gymnopetalum scabrum</i> (Lour.) W.J.de Wilde & Duyfjes	Not Listed	LC
Angiosperm	Cucurbitaceae	<i>Trichosanthes borneensis</i> Cogn.	VU	NEx
Angiosperm	Cucurbitaceae	<i>Trichosanthes elmeri</i> Merr.	VU	EN
Angiosperm	Cucurbitaceae	<i>Trichosanthes quinquangulata</i> A.Gray	VU	EN
Angiosperm	Cucurbitaceae	<i>Trichosanthes tricuspidata</i> Lour. subsp. <i>javanica</i> Duyfjes & Pruesapan	VU	EN
Angiosperm	Cucurbitaceae	<i>Trichosanthes wawrae</i> Cogn.	VU	EN
Angiosperm	Cymodoceaceae	<i>Cymodocea rotundata</i> Asch. & Schweinf.	CR	CR
Angiosperm	Cymodoceaceae	<i>Cymodocea serrulata</i> (R.Br.) Asch. & Magnus	EN	EN
Angiosperm	Cymodoceaceae	<i>Halodule uninervis</i> (Forssk.) Asch.	VU	VU
Angiosperm	Cymodoceaceae	<i>Syringodium isoetifolium</i> (Asch.) Dandy	EN	EN
Angiosperm	Cyperaceae	<i>Actinoscirpus grossus</i> (L.f.) Goethg. & D.A.Simpson	Not Listed	CR
Angiosperm	Cyperaceae	<i>Bulbostylis barbata</i> (Rottb.) C.B.Clarke	Not Listed	CR
Angiosperm	Cyperaceae	<i>Bulbostylis thouarsii</i> (Roem. & Schult.) Lye ex Veldkamp & Verloove	Not Listed	VU
Angiosperm	Cyperaceae	<i>Carex cryptostachys</i> Brongn.	CR	CR
Angiosperm	Cyperaceae	<i>Cyperus albescens</i> (Steud.) Larridon & Govaerts	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus brevifolius</i> (Rottb.) Endl. ex Hassk.	Not Listed	VU
Angiosperm	Cyperaceae	<i>Cyperus compactus</i> Retz.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus compressus</i> L.	Not Listed	VU
Angiosperm	Cyperaceae	<i>Cyperus cuspidatus</i> Kunth	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus cyperinus</i> (Retz.) Valck.Sur.	Not Listed	EN
Angiosperm	Cyperaceae	<i>Cyperus cyperoides</i> (L.) Kuntze	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Cyperaceae	<i>Cyperus difformis</i> L.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus diffusus</i> Vahl	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus digitatus</i> Roxb.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus distans</i> L.f.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus dubius</i> Rottb.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus elatus</i> L.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus flavidus</i> Retz.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus haspan</i> L.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus imbricatus</i> Retz.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus iria</i> L.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus javanicus</i> Houtt.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus leptocarpus</i> (F.Muell.) Bauters	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus malaccensis</i> Lam.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus mindorensis</i> (Steud.) Huygh	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus neochinensis</i> (Tang & F.T.Wang) Bauters	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus pedunculatus</i> (R.Br.) J.Kern	Not Listed	VU
Angiosperm	Cyperaceae	<i>Cyperus pilosus</i> Vahl	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus polystachyos</i> Rottb.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus procerus</i> Rottb.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus pumilus</i> L.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus radians</i> Nees & Meyen ex Kunth	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus rotundus</i> L.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus sanguinolentus</i> Vahl	Not Listed	CR
Angiosperm	Cyperaceae	<i>Cyperus stolonifer</i> Retz.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Cyperus tenuiculmis</i> Boeckeler	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus tenuifolius</i> (Steud.) Dandy	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Cyperus tenuispica</i> Steud.	Not Listed	DD
Angiosperm	Cyperaceae	<i>Cyperus trialatus</i> (Boeckeler) J.Kern	Not Listed	LC
Angiosperm	Cyperaceae	<i>Diplacrum carincinum</i> R.Br.	Not Listed	VU
Angiosperm	Cyperaceae	<i>Eleocharis dulcis</i> (Burm.f.) Trin. ex Hensch.	Not Listed	VU
Angiosperm	Cyperaceae	<i>Eleocharis geniculata</i> (L.) Roem. & Schult.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Eleocharis ochrostachys</i> Steud.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Eleocharis retroflexa</i> (Poir.) Urb. subsp. <i>chaetaria</i> (Roem. & Schult.) T.Koyama	Not Listed	CR
Angiosperm	Cyperaceae	<i>Eleocharis spiralis</i> (Rottb.) Roem. & Schult.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Fimbristylis acuminata</i> Vahl	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis complanata</i> (Retz.) Link	Not Listed	VU
Angiosperm	Cyperaceae	<i>Fimbristylis cymosa</i> R.Br.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis dichotoma</i> (L.) Vahl	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis dura</i> (Zoll. & Moritz) Merr.	CR	CR
Angiosperm	Cyperaceae	<i>Fimbristylis ferruginea</i> (L.) Vahl	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis fusca</i> (Nees) Benth. ex C.B.Clarke	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Fimbristylis griffithii</i> Boeckeler	Not Listed	CR
Angiosperm	Cyperaceae	<i>Fimbristylis leptoclada</i> Benth.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Fimbristylis littoralis</i> Gaudich.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis nutans</i> (Retz.) Vahl	NEx	NEx
Angiosperm	Cyperaceae	<i>Fimbristylis obtusata</i> (C.B.Clarke) Ridl.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Fimbristylis ovata</i> (Burm.f.) J.Kern	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis pauciflora</i> R.Br.	CR	LC

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Cyperaceae	<i>Fimbristylis polytrichoides</i> (Retz.) R.Br.	VU	VU
Angiosperm	Cyperaceae	<i>Fimbristylis schoenoides</i> (Retz.) Vahl	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis tetragona</i> R.Br.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis tristachya</i> R.Br.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Fimbristylis umbellaris</i> (Lam.) Vahl	Not Listed	VU
Angiosperm	Cyperaceae	<i>Fuirena ciliaris</i> (L.) Roxb.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Fuirena umbellata</i> Rottb.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Gahnia tristis</i> Nees	Not Listed	LC
Angiosperm	Cyperaceae	<i>Hypolytrum nemorum</i> (Vahl) P.Beauv. var. <i>nemorum</i>	Not Listed	LC
Angiosperm	Cyperaceae	<i>Hypolytrum nemorum</i> (Vahl) P.Beauv. var. <i>proliferum</i> (Boeckeler) J.Kern	Not Listed	VU
Angiosperm	Cyperaceae	<i>Lepironia articulata</i> (Retz.) Domin	NEx	CR
Angiosperm	Cyperaceae	<i>Machaerina rubiginosa</i> (Biehler) T.Koyama	NEx	NEx
Angiosperm	Cyperaceae	<i>Mapania bancana</i> (Miq.) Ridl.	CR	NEx
Angiosperm	Cyperaceae	<i>Mapania cuspidata</i> (Miq.) Uittien	VU	VU
Angiosperm	Cyperaceae	<i>Mapania enodis</i> (Miq.) C.B.Clarke	CR	NEx
Angiosperm	Cyperaceae	<i>Mapania kurzii</i> C.B.Clarke	EN	EN
Angiosperm	Cyperaceae	<i>Mapania lorea</i> Uittien	NEx	CR
Angiosperm	Cyperaceae	<i>Mapania palustris</i> (Hassk. ex Steud.) Fern.-Vill. var. <i>palustris</i>	EN	CR
Angiosperm	Cyperaceae	<i>Mapania squamata</i> (Kurz) C.B.Clarke	NEx	CR
Angiosperm	Cyperaceae	<i>Mapania wallichii</i> C.B.Clarke	NEx	NEx
Angiosperm	Cyperaceae	<i>Rhynchospora corymbosa</i> (L.) Britton	Not Listed	LC
Angiosperm	Cyperaceae	<i>Rhynchospora malasica</i> C.B.Clarke	NEx	NEx
Angiosperm	Cyperaceae	<i>Rhynchospora rubra</i> (Lour.) Makino	Not Listed	VU
Angiosperm	Cyperaceae	<i>Rhynchospora rugosa</i> (Vahl) Gale subsp. <i>brownii</i> (Roem. & Schult.) T.Koyama	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Schoenoplectiella mucronata</i> (L.) J.Jung & H.K.Chi	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Schoenus calostachyus</i> (R.Br.) Roem. & Schult.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Scirpodendron ghaeri</i> (Gaertn.) Merr.	NEx	NEx
Angiosperm	Cyperaceae	<i>Scleria biflora</i> Roxb.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Scleria ciliaris</i> Nees	Not Listed	LC
Angiosperm	Cyperaceae	<i>Scleria corymbosa</i> Roxb.	NEx	NEx
Angiosperm	Cyperaceae	<i>Scleria levis</i> Retz.	Not Listed	LC
Angiosperm	Cyperaceae	<i>Scleria oblata</i> S.T.Blake ex J.Kern	Not Listed	LC
Angiosperm	Cyperaceae	<i>Scleria poiformis</i> Retz.	Not Listed	NEx
Angiosperm	Cyperaceae	<i>Scleria purpurascens</i> Steud.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Scleria rugosa</i> R.Br.	Not Listed	CR
Angiosperm	Cyperaceae	<i>Scleria sumatrensis</i> Retz.	VU	LC
Angiosperm	Cyperaceae	<i>Scleria terrestris</i> (L.) Fassett	EN	EN
Angiosperm	Daphniphyllaceae	<i>Daphniphyllum griffithianum</i> (Wight) Noltie	CR	CR
Angiosperm	Dichapetalaceae	<i>Dichapetalum sordidum</i> (Hook.f.) Leenh.	NEx	CR
Angiosperm	Dilleniaceae	<i>Dillenia excelsa</i> (Jack) Gilg var. <i>tomentella</i> (Martelli) Masam.	CR	CR
Angiosperm	Dilleniaceae	<i>Dillenia grandifolia</i> Wall. ex Hook.f. & Thomson	EN	EN
Angiosperm	Dilleniaceae	<i>Dillenia pulchella</i> (Jack) Gilg	CR	CR
Angiosperm	Dilleniaceae	<i>Dillenia reticulata</i> King	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Dilleniaceae	<i>Dillenia suffruticosa</i> (Griff. ex Hook.f. & Thomson) Martelli	Not Listed	LC
Angiosperm	Dilleniaceae	<i>Tetracera akara</i> (Burm.f.) Merr.	VU	VU
Angiosperm	Dilleniaceae	<i>Tetracera arborescens</i> Jack	EN	CR
Angiosperm	Dilleniaceae	<i>Tetracera fragifolia</i> Blume var. <i>borneensis</i> (Miq.) Hoogland	VU	CR
Angiosperm	Dilleniaceae	<i>Tetracera indica</i> (Christm. & Panz.) Merr.	Not Listed	LC
Angiosperm	Dilleniaceae	<i>Tetracera macrophylla</i> Wall. ex Hook.f. & Thomson	VU	VU
Angiosperm	Dilleniaceae	<i>Tetracera maingayi</i> Hoogland	Not Listed	VU
Angiosperm	Dilleniaceae	<i>Tetracera scandens</i> (L.) Merr.	Not Listed	EN
Angiosperm	Dioscoreaceae	<i>Dioscorea hispida</i> Dennst.	CR	CR
Angiosperm	Dioscoreaceae	<i>Dioscorea kingii</i> R.Knuth	Not Listed	CR
Angiosperm	Dioscoreaceae	<i>Dioscorea laurifolia</i> Wall. ex Hook.f.	Not Listed	LC
Angiosperm	Dioscoreaceae	<i>Dioscorea polyclades</i> Hook.f.	CR	CR
Angiosperm	Dioscoreaceae	<i>Dioscorea prainiana</i> R.Knuth	CR	NEx
Angiosperm	Dioscoreaceae	<i>Dioscorea pyrifolia</i> Kunth	Not Listed	LC
Angiosperm	Dioscoreaceae	<i>Dioscorea stenomeriflora</i> Prain & Burkitt	NEx	CR
Angiosperm	Dioscoreaceae	<i>Dioscorea tenuifolia</i> Ridl.	NEx	LC
Angiosperm	Dipterocarpaceae	<i>Anisoptera laevis</i> Ridl.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Anisoptera marginata</i> Korth.	Not Listed	NEx
Angiosperm	Dipterocarpaceae	<i>Anisoptera megistocarpa</i> Slooten	CR	CR
Angiosperm	Dipterocarpaceae	<i>Anthoshorea bracteolata</i> (Dyer) P.S.Ashton & J.Heck.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Anthoshorea gratissima</i> (Wall. ex Kurz) P.S.Ashton & J.Heck.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Cotylelobium lanceolatum</i> Craib	CR	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus chartaceus</i> Symington	Not Listed	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus condorensis</i> Pierre subsp. <i>penangianus</i> (Foxw.) P.S.Ashton & Luu	CR	EN
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus cornutus</i> Dyer	CR	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus elongatus</i> Korth.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus grandiflorus</i> (Blanco) Blanco	VU	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus kerrii</i> King	VU	NEx
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus kunstleri</i> King	CR	EN
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus palembanicus</i> Slooten	CR	CR
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus sublamellatus</i> Foxw.	VU	EN
Angiosperm	Dipterocarpaceae	<i>Dipterocarpus tempehes</i> Slooten	CR	CR
Angiosperm	Dipterocarpaceae	<i>Hopea ferruginea</i> Parijs	Not Listed	CR
Angiosperm	Dipterocarpaceae	<i>Hopea griffithii</i> Kurz	CR	EN
Angiosperm	Dipterocarpaceae	<i>Hopea mengarawan</i> Miq.	EN	EN
Angiosperm	Dipterocarpaceae	<i>Hopea sangal</i> Korth.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Neobalanocarpus heimii</i> (King) P.S.Ashton	NEx	NEx
Angiosperm	Dipterocarpaceae	<i>Richetia gibbosa</i> (Brandis) P.S.Ashton & J.Heck.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Rubroshorea curtisiae</i> (Dyer ex King) P.S.Ashton & J.Heck. subsp. <i>curtisiae</i>	VU	EN
Angiosperm	Dipterocarpaceae	<i>Rubroshorea johorensis</i> (Foxw.) P.S.Ashton & J.Heck.	Not Listed	CR
Angiosperm	Dipterocarpaceae	<i>Rubroshorea leprosula</i> (Miq.) P.S.Ashton & J.Heck.	VU	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Dipterocarpaceae	<i>Rubroshorea macroptera</i> (Dyer) P.S.Ashton & J.Heck. subsp. <i>macroptera</i>	VU	VU
Angiosperm	Dipterocarpaceae	<i>Rubroshorea ovalis</i> (Korth.) P.S.Ashton & J.Heck. subsp. <i>ovalis</i>	CR	CR
Angiosperm	Dipterocarpaceae	<i>Rubroshorea parvifolia</i> (Dyer) P.S.Ashton & J.Heck.	EN	CR
Angiosperm	Dipterocarpaceae	<i>Rubroshorea pauciflora</i> (King) P.S.Ashton & J.Heck.	VU	EN
Angiosperm	Dipterocarpaceae	<i>Rubroshorea platycarpa</i> (F. Heim) P.S.Ashton & J.Heck.	CR	CR
Angiosperm	Dipterocarpaceae	<i>Shorea ochrophloia</i> Strugnell ex Symington	CR	CR
Angiosperm	Dipterocarpaceae	<i>Shorea sumatrana</i> (Slooten ex Thorenaar) Desch	Not Listed	CR
Angiosperm	Dipterocarpaceae	<i>Vatica maingayi</i> Dyer	CR	CR
Angiosperm	Dipterocarpaceae	<i>Vatica odorata</i> (Griff.) Symington subsp. <i>odorata</i>	Not Listed	CR
Angiosperm	Dipterocarpaceae	<i>Vatica pauciflora</i> (Korth.) Blume	CR	CR
Angiosperm	Dipterocarpaceae	<i>Vatica ridleyana</i> Brandis	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros argentea</i> Griff.	EN	CR
Angiosperm	Ebenaceae	<i>Diospyros buxifolia</i> (Blume) Hiern	VU	CR
Angiosperm	Ebenaceae	<i>Diospyros clavigera</i> C.B.Clarke	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros coriacea</i> Hiern	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros diepenhorstii</i> Miq.	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros ferrea</i> (Willd.) Bakh.	CR	NEx
Angiosperm	Ebenaceae	<i>Diospyros lanceifolia</i> Roxb.	Not Listed	LC
Angiosperm	Ebenaceae	<i>Diospyros latisepala</i> Ridl.	NEx	NEx
Angiosperm	Ebenaceae	<i>Diospyros maingayi</i> (Hiern) Bakh.	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros oblonga</i> Wall. ex G.Don	VU	EN
Angiosperm	Ebenaceae	<i>Diospyros siamang</i> Bakh.	NEx	NEx
Angiosperm	Ebenaceae	<i>Diospyros styraciformis</i> King & Gamble	VU	CR
Angiosperm	Ebenaceae	<i>Diospyros subrhomboidea</i> King & Gamble	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros sumatrana</i> Miq.	CR	CR
Angiosperm	Ebenaceae	<i>Diospyros venosa</i> Wall. ex A.DC.	CR	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus acmosepalus</i> Stapf ex Ridl.	CR	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus ferrugineus</i> (Jack) Steud. subsp. <i>ferrugineus</i>	Not Listed	VU
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus floribundus</i> Blume	EN	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus griffithii</i> (Wight) A.Gray	NEx	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus macrocerus</i> (Turcz.) Merr. subsp. <i>macrocerus</i>	CR	NEx
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus mastersii</i> King	Not Listed	LC
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus nitidus</i> Jack var. <i>nitidus</i>	VU	VU
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus obtusus</i> Blume subsp. <i>apiculatus</i> (Mast.) Coode	CR	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus palembanicus</i> (Miq.) Corner	CR	CR
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus pedunculatus</i> Wall. ex Mast.	Not Listed	LC
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus petiolatus</i> (Jack) Wall.	Not Listed	LC
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus polystachyus</i> Wall. ex Müll.Berol.	VU	VU
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus salicifolius</i> King	Not Listed	VU
Angiosperm	Elaeocarpaceae	<i>Elaeocarpus stipularis</i> Blume var. <i>stipularis</i>	VU	VU
Angiosperm	Elaeocarpaceae	<i>Sloanea javanica</i> (Miq.) Szyszyl. ex K.Schum.	CR	CR
Angiosperm	Ericaceae	<i>Rhododendron longiflorum</i> Lindl.	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Ericaceae	<i>Styphelia malayana</i> (Jack) J.J.Sm.	NEx	NEx
Angiosperm	Ericaceae	<i>Vaccinium leptanthum</i> Miq. f. <i>malayanum</i> Sleumer	NEx	NEx
Angiosperm	Ericaceae	<i>Vaccinium bracteatum</i> Thunb.	NEx	NEx
Angiosperm	Ericaceae	<i>Vaccinium littoreum</i> Miq.	NEx	NEx
Angiosperm	Eriocaulaceae	<i>Eriocaulon truncatum</i> Buch.-Ham. ex Mart. var. <i>florensense</i> Z.X.Zhang	Not Listed	CR
Angiosperm	Eriocaulaceae	<i>Eriocaulon truncatum</i> Buch.-Ham. ex Mart. var. <i>truncatum</i>	Not Listed	LC
Angiosperm	Eriocaulaceae	<i>Eriocaulon willdenovianum</i> Moldenke	Not Listed	VU
Angiosperm	Erythroxylaceae	<i>Erythroxylum cuneatum</i> (Miq.) Kurz	Not Listed	LC
Angiosperm	Escalloniaceae	<i>Polyosma fragrans</i> (Wall.) Benn.	NEx	NEx
Angiosperm	Escalloniaceae	<i>Polyosma kingiana</i> Schltr.	CR	CR
Angiosperm	Escalloniaceae	<i>Polyosma ridleyi</i> King	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Agrostistachys gaudichaudii</i> Müll.Arg.	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Agrostistachys sessilifolia</i> (Kurz) Pax & K.Hoffm.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Alchornea rugosa</i> (Lour.) Müll.Arg.	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Alchornea tiliifolia</i> (Benth.) Müll.Arg.	CR	CR
Angiosperm	Euphorbiaceae	<i>Blumeodendron kurzii</i> (Hook.f.) J.J.Sm.	Not Listed	CR
Angiosperm	Euphorbiaceae	<i>Blumeodendron subrotundifolium</i> (Elmer) Merr.	Not Listed	EN
Angiosperm	Euphorbiaceae	<i>Blumeodendron tokbrai</i> (Blume) Kurz	VU	NEx
Angiosperm	Euphorbiaceae	<i>Cheirosa montana</i> Blume	NEx	CR
Angiosperm	Euphorbiaceae	<i>Clauxylon indicum</i> (Reinw. ex Blume) Hassk.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Clauxylon longifolium</i> (Blume) Endl. ex Hassk.	NEx	CR
Angiosperm	Euphorbiaceae	<i>Croton adumbratus</i> Croizat	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Croton caudatus</i> Geiseler	Not Listed	VU
Angiosperm	Euphorbiaceae	<i>Croton erythrostachys</i> Hook.f.	Not Listed	NEx
Angiosperm	Euphorbiaceae	<i>Croton griffithii</i> Hook.f.	Not Listed	CR
Angiosperm	Euphorbiaceae	<i>Croton heterocarpus</i> Müll.Arg.	CR	NEx
Angiosperm	Euphorbiaceae	<i>Croton laevifolius</i> Blume	EN	EN
Angiosperm	Euphorbiaceae	<i>Endospermum diadenum</i> (Miq.) Airy Shaw	VU	VU
Angiosperm	Euphorbiaceae	<i>Endospermum peltatum</i> Merr.	VU	VU
Angiosperm	Euphorbiaceae	<i>Endospermum quadriloculare</i> Pax & K.Hoffm.	Not Listed	NEx
Angiosperm	Euphorbiaceae	<i>Euphorbia atoto</i> G.Forst.	Not Listed	VU
Angiosperm	Euphorbiaceae	<i>Excoecaria agallocha</i> L.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Gymnanthes borneensis</i> (Pax & K.Hoffm.) Esser	Not Listed	NEx
Angiosperm	Euphorbiaceae	<i>Hancea penangensis</i> (Müll.Arg.) S.E.C.Sierra et al.	CR	CR
Angiosperm	Euphorbiaceae	<i>Koilodepas longifolium</i> Hook.f.	VU	VU
Angiosperm	Euphorbiaceae	<i>Macaranga bancana</i> (Miq.) Müll.Arg.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Macaranga conifera</i> (Rchb.f. & Zoll.) Müll.Arg.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Macaranga gigantea</i> (Rchb.f. & Zoll.) Müll.Arg.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Macaranga griffithiana</i> Müll.Arg.	VU	VU
Angiosperm	Euphorbiaceae	<i>Macaranga heynei</i> I.M.Johnst.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Macaranga hullettii</i> King ex Hook.f.	CR	CR
Angiosperm	Euphorbiaceae	<i>Macaranga hypoleuca</i> (Rchb.f. & Zoll.) Müll.Arg.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Macaranga lowii</i> King ex Hook.f.	VU	VU
Angiosperm	Euphorbiaceae	<i>Macaranga puncticulata</i> Gage	Not Listed	NEx
Angiosperm	Euphorbiaceae	<i>Macaranga recurvata</i> Gage	CR	CR
Angiosperm	Euphorbiaceae	<i>Macaranga trichocarpa</i> (Zoll.) Müll.Arg.	EN	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Euphorbiaceae	<i>Mallotus macrostachyus</i> (Miq.) Müll.Arg.	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Mallotus paniculatus</i> (Lam.) Müll.Arg.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Megistostigma glabratum</i> (Kurz) Govaerts	NEx	NEx
Angiosperm	Euphorbiaceae	<i>Micrococca mercurialis</i> (L.) Benth.	Not Listed	CR
Angiosperm	Euphorbiaceae	<i>Neoscortechinia kingii</i> (Hook.f.) Pax & K.Hoffm.	CR	CR
Angiosperm	Euphorbiaceae	<i>Neoscortechinia philippinensis</i> (Merr.) Welzen	Not Listed	CR
Angiosperm	Euphorbiaceae	<i>Neoscortechinia sumatrensis</i> S.Moore	Not Listed	CR
Angiosperm	Euphorbiaceae	<i>Paracroton pendulus</i> (Hassk.) Miq.	CR	CR
Angiosperm	Euphorbiaceae	<i>Pimelodendron griffithianum</i> (Müll.Arg.) Benth. ex Hook.f.	VU	VU
Angiosperm	Euphorbiaceae	<i>Plukenetia corniculata</i> Sm.	NEx	CR
Angiosperm	Euphorbiaceae	<i>Ptychopyxis bacciformis</i> Croizat	Not Listed	NEx
Angiosperm	Euphorbiaceae	<i>Ptychopyxis caput-medusae</i> (Hook.f.) Ridl.	CR	CR
Angiosperm	Euphorbiaceae	<i>Ptychopyxis costata</i> Miq. var. <i>oblanceolata</i> Airy Shaw	CR	CR
Angiosperm	Euphorbiaceae	<i>Shirakiopsis indica</i> (Willd.) Esser	NEx	CR
Angiosperm	Euphorbiaceae	<i>Suregada glomerulata</i> (Blume) Baill.	CR	CR
Angiosperm	Euphorbiaceae	<i>Triadica cochinchinensis</i> Lour.	Not Listed	LC
Angiosperm	Euphorbiaceae	<i>Trigonostemon longifolius</i> Baill. ex Müll.Arg.	CR	CR
Angiosperm	Euphorbiaceae	<i>Trigonostemon scopulatus</i> R.Y.Yu & Welzen	CR	CR
Angiosperm	Fabaceae	<i>Adenanthera malayana</i> Kosterm. subsp. <i>malayana</i>	VU	EN
Angiosperm	Fabaceae	<i>Aganope heptaphylla</i> (L.) Polhill	CR	CR
Angiosperm	Fabaceae	<i>Aganope thyrsiflora</i> (Benth.) Polhill	VU	EN
Angiosperm	Fabaceae	<i>Albizia pedicellata</i> Baker ex Benth.	CR	CR
Angiosperm	Fabaceae	<i>Albizia retusa</i> Benth. subsp. <i>retusa</i>	NEx	CR
Angiosperm	Fabaceae	<i>Albizia splendens</i> Miq.	EN	EN
Angiosperm	Fabaceae	<i>Alysicarpus vaginalis</i> (L.) DC.	Not Listed	LC
Angiosperm	Fabaceae	<i>Archidendron clypearia</i> (Jack) I.C.Nielsen var. <i>clypearia</i>	Not Listed	LC
Angiosperm	Fabaceae	<i>Archidendron contortum</i> (Mart.) I.C.Nielsen	VU	EN
Angiosperm	Fabaceae	<i>Archidendron ellipticum</i> (Blume) I.C.Nielsen subsp. <i>ellipticum</i>	VU	EN
Angiosperm	Fabaceae	<i>Archidendron globosum</i> (Blume) I.C.Nielsen	CR	CR
Angiosperm	Fabaceae	<i>Archidendron jiringa</i> (Jack) I.C.Nielsen	VU	VU
Angiosperm	Fabaceae	<i>Archidendron microcarpum</i> (Benth.) I.C.Nielsen	EN	EN
Angiosperm	Fabaceae	<i>Brachypterum scandens</i> (Roxb.) Wight & Arn. ex CR Miq.	CR	CR
Angiosperm	Fabaceae	<i>Canavalia cathartica</i> Thouars	Not Listed	LC
Angiosperm	Fabaceae	<i>Canavalia rosea</i> (Sw.) DC.	Not Listed	LC
Angiosperm	Fabaceae	<i>Crotalaria quinquefolia</i> L.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Crotalaria uncinella</i> Lam.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Cynometra ramiflora</i> L.	CR	CR
Angiosperm	Fabaceae	<i>Dalbergia candenatensis</i> (Dennst.) Prain	Not Listed	LC
Angiosperm	Fabaceae	<i>Dalbergia havilandii</i> Prain	Not Listed	NEx
Angiosperm	Fabaceae	<i>Dalbergia hullettii</i> Prain	NEx	NEx
Angiosperm	Fabaceae	<i>Dalbergia junghuhnii</i> Benth.	CR	CR
Angiosperm	Fabaceae	<i>Dalbergia parviflora</i> Roxb.	NEx	CR
Angiosperm	Fabaceae	<i>Dalbergia rostrata</i> Hassk.	Not Listed	LC
Angiosperm	Fabaceae	<i>Dalbergia velutina</i> Benth. var. <i>maingayi</i> Prain	CR	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Fabaceae	<i>Dendrolobium umbellatum</i> (L.) Benth.	Not Listed	LC
Angiosperm	Fabaceae	<i>Derris amoena</i> Benth.	VU	LC
Angiosperm	Fabaceae	<i>Derris montana</i> Benth.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Derris trifoliata</i> Lour.	Not Listed	LC
Angiosperm	Fabaceae	<i>Dialium indum</i> L. var. <i>bursa</i> (de Wit) Rojo ex Kessler & Sidiy.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Dialium indum</i> L. var. <i>indum</i>	CR	CR
Angiosperm	Fabaceae	<i>Dialium platysepalum</i> Baker	CR	CR
Angiosperm	Fabaceae	<i>Entada spiralis</i> Ridl.	CR	VU
Angiosperm	Fabaceae	<i>Flemingia strobilifera</i> (L.) W.T.Aiton	Not Listed	CR
Angiosperm	Fabaceae	<i>Grona heterocarpus</i> (L.) H.Ohashi & K.Ohashi var. <i>heterocarpus</i>	Not Listed	CR
Angiosperm	Fabaceae	<i>Grona heterocarpus</i> (L.) H.Ohashi & K.Ohashi var. <i>strigosa</i> (Meeuwen) H.Ohashi & K.Ohashi	Not Listed	VU
Angiosperm	Fabaceae	<i>Grona heterophylla</i> (Willd.) H.Ohashi & K.Ohashi	Not Listed	LC
Angiosperm	Fabaceae	<i>Grona ovalifolia</i> (Prain) H.Ohashi et al.	Not Listed	CR
Angiosperm	Fabaceae	<i>Grona triflora</i> (L.) H.Ohashi & K.Ohashi	Not Listed	LC
Angiosperm	Fabaceae	<i>Guilandina bonduc</i> L.	CR	CR
Angiosperm	Fabaceae	<i>Indigofera zollingeriana</i> Miq.	CR	CR
Angiosperm	Fabaceae	<i>Intsia bijuga</i> (Colebr.) Kuntze	CR	CR
Angiosperm	Fabaceae	<i>Intsia palembanica</i> Miq.	CR	CR
Angiosperm	Fabaceae	<i>Koompassia malaccensis</i> Maingay ex Benth.	EN	EN
Angiosperm	Fabaceae	<i>Kunstleria ridleyi</i> Prain	EN	EN
Angiosperm	Fabaceae	<i>Mezoneuron andamanicum</i> Prain	Not Listed	NEx
Angiosperm	Fabaceae	<i>Mezoneuron sumatranum</i> (Roxb.) Wight & Arn. ex Voigt	CR	CR
Angiosperm	Fabaceae	<i>Millettia borneensis</i> Adema	Not Listed	NEx
Angiosperm	Fabaceae	<i>Millettia pinnata</i> (L.) Panigrahi	EN	EN
Angiosperm	Fabaceae	<i>Millettia xylocarpa</i> Miq.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Mucuna acuminata</i> Graham ex Baker	NEx	NEx
Angiosperm	Fabaceae	<i>Mucuna biplicata</i> Teijsm. & Binn. ex Kurz	Not Listed	CR
Angiosperm	Fabaceae	<i>Mucuna gigantea</i> (Willd.) DC. subsp. <i>gigantea</i>	NEx	CR
Angiosperm	Fabaceae	<i>Ormocarpum cochinchinense</i> (Lour.) Merr.	NEx	CR
Angiosperm	Fabaceae	<i>Ormosia bancana</i> (Miq.) Prain	EN	CR
Angiosperm	Fabaceae	<i>Ormosia macrodisca</i> Baker	CR	CR
Angiosperm	Fabaceae	<i>Ormosia sumatrana</i> (Miq.) Prain	NEx	CR
Angiosperm	Fabaceae	<i>Padbruggea dasypylla</i> Miq.	NEx	CR
Angiosperm	Fabaceae	<i>Parkia speciosa</i> Hassk.	VU	VU
Angiosperm	Fabaceae	<i>Peltophorum pterocarpum</i> (DC.) Backer ex K.Heyne	CR	CR
Angiosperm	Fabaceae	<i>Phanera semibifida</i> (Roxb.) Benth. var. <i>semibifida</i>	VU	LC
Angiosperm	Fabaceae	<i>Senegalia kekapur</i> (I.C.Nielsen) Maslin et al.	NEx	CR
Angiosperm	Fabaceae	<i>Serianthes grandiflora</i> Benth.	CR	CR
Angiosperm	Fabaceae	<i>Sindora coriacea</i> (Baker) Prain	CR	CR
Angiosperm	Fabaceae	<i>Sindora echinocalyx</i> Prain	Not Listed	CR
Angiosperm	Fabaceae	<i>Sindora velutina</i> Baker	Not Listed	CR
Angiosperm	Fabaceae	<i>Sindora wallichii</i> Benth.	CR	CR
Angiosperm	Fabaceae	<i>Sophora tomentosa</i> L.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Fabaceae	<i>Spatholobus acuminatus</i> Benth.	Not Listed	NEx
Angiosperm	Fabaceae	<i>Spatholobus dubius</i> Prain	Not Listed	NEx
Angiosperm	Fabaceae	<i>Spatholobus ferrugineus</i> (Zoll. & Moritzi) Benth. var. <i>ferrugineus</i>	Not Listed	LC
Angiosperm	Fabaceae	<i>Spatholobus maingayi</i> Prain	NEx	CR
Angiosperm	Fabaceae	<i>Spatholobus ridleyi</i> Prain	CR	CR
Angiosperm	Fabaceae	<i>Ticanto crista</i> (L.) R.Clark & Gagnon	VU	LC
Angiosperm	Fabaceae	<i>Vigna marina</i> (Burm.) Merr.	Not Listed	LC
Angiosperm	Fabaceae	<i>Whitfordiodendron erianthum</i> (Benth.) Dunn	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis inermis</i> (Lindl.) Benth. & Hook.f.	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis javanica</i> (Blume) A.DC.	NEx	NEx
Angiosperm	Fagaceae	<i>Castanopsis lucida</i> (Nees) Soepadmo	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis malaccensis</i> Gamble	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis megacarpa</i> Gamble	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis nepheliooides</i> King ex Hook.f.	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis schefferiana</i> Hance	CR	CR
Angiosperm	Fagaceae	<i>Castanopsis wallichii</i> King ex Hook.f.	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus bennettii</i> (Miq.) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus cantleyanus</i> (King ex Hook.f.) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus conocarpus</i> (Oudem.) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus cyclophorus</i> (Endl.) A.Camus	NEx	NEx
Angiosperm	Fagaceae	<i>Lithocarpus elegans</i> (Blume) Hatus. ex	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus encleisacarpus</i> (Korth.) A.Camus	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus ewyckii</i> (Korth.) Rehder	EN	EN
Angiosperm	Fagaceae	<i>Lithocarpus gracilis</i> (Korth.) Soepadmo	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus hystrix</i> (Korth.) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus lucidus</i> (Roxb.) Rehder	EN	CR
Angiosperm	Fagaceae	<i>Lithocarpus sundaicus</i> (Blume) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Lithocarpus wallichianus</i> (Lindl. ex Hance) Rehder	CR	CR
Angiosperm	Fagaceae	<i>Quercus argentata</i> Korth.	CR	CR
Angiosperm	Flagellariaceae	<i>Flagellaria indica</i> L.	Not Listed	LC
Angiosperm	Gelsemiaceae	<i>Pteleocarpa lamponga</i> (Miq.) Bakh. ex K.Heyne	NEx	NEx
Angiosperm	Gentianaceae	<i>Cryptophyllum fragrans</i> (Roxb.) DC.	Not Listed	LC
Angiosperm	Gentianaceae	<i>Cryptophyllum giganteum</i> (Ridl.) Ridl.	NEx	CR
Angiosperm	Gentianaceae	<i>Fagraea auriculata</i> Jack	CR	CR
Angiosperm	Gentianaceae	<i>Fagraea ridleyi</i> King & Gamble	NEx	CR
Angiosperm	Gentianaceae	<i>Fagraea splendens</i> Blume	NEx	CR
Angiosperm	Gentianaceae	<i>Limahlania crenulata</i> (Maingay ex C.B.Clarke) K.M.Wong & Sugumaran	Not Listed	NEx
Angiosperm	Gentianaceae	<i>Utania austromalayensis</i> Sugumaran	Not Listed	NEx
Angiosperm	Gentianaceae	<i>Utania nervosa</i> K.M.Wong & Sugumaran	Not Listed	VU
Angiosperm	Gentianaceae	<i>Utania racemosa</i> (Jack ex Wall.) Sugumaran	EN	CR
Angiosperm	Gentianaceae	<i>Utania volubilis</i> (Wall.) Sugumaran var. <i>volubilis</i>	Not Listed	EN
Angiosperm	Gesneriaceae	<i>Aeschynanthus albidus</i> (Blume) Steud.	CR	CR
Angiosperm	Gesneriaceae	<i>Aeschynanthus pulcher</i> (Blume) G.Don	NEx	CR
Angiosperm	Gesneriaceae	<i>Aeschynanthus radicans</i> Jack	NEx	NEx
Angiosperm	Gesneriaceae	<i>Aeschynanthus wallichii</i> R.Br.	CR	CR
Angiosperm	Gesneriaceae	<i>Codonoboaea platypus</i> (C.B.Clarke) C.L.Lim	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Gesneriaceae	<i>Codonoboea puncticulata</i> (Ridl.) C.L.Lim	NEx	NEx
Angiosperm	Gesneriaceae	<i>Cyrtandra pendula</i> Blume	CR	CR
Angiosperm	Goodeniaceae	<i>Scaevola taccada</i> (Gaertn.) Roxb.	Not Listed	LC
Angiosperm	Hanguanaceae	<i>Hanguana neglecta</i> Škorničk. & Niissalo	VU	EN
Angiosperm	Hanguanaceae	<i>Hanguana nitens</i> Siti Nurfazilah et al.	Not Listed	CR
Angiosperm	Hanguanaceae	<i>Hanguana podzolicola</i> Siti Nurfazilah et al.	VU	CR
Angiosperm	Hanguanaceae	<i>Hanguana rubinea</i> Škorničk. & P.C.Boyce	VU	CR
Angiosperm	Hanguanaceae	<i>Hanguana triangulata</i> Škorničk. & P.C.Boyce	VU	CR
Angiosperm	Hernandiaceae	<i>Hernandia nymphaeifolia</i> (C.Presl) Kubitzki	NEx	NEx
Angiosperm	Hernandiaceae	<i>Illigera trifoliata</i> (Griff.) Dunn	NEx	NEx
Angiosperm	Hydrocharitaceae	<i>Blyxa japonica</i> (Miq.) Maxim. ex Asch. & Gürke var. <i>japonica</i>	Not Listed	CR
Angiosperm	Hydrocharitaceae	<i>Enhalus acoroides</i> (L.f.) Royle	VU	CR
Angiosperm	Hydrocharitaceae	<i>Halophila beccarii</i> Asch.	CR	EN
Angiosperm	Hydrocharitaceae	<i>Halophila decipiens</i> Ostenf.	Not Listed	CR
Angiosperm	Hydrocharitaceae	<i>Halophila minor</i> (Zoll.) Hartog	VU	CR
Angiosperm	Hydrocharitaceae	<i>Halophila ovalis</i> (R.Br.) Hook.f.	VU	LC
Angiosperm	Hydrocharitaceae	<i>Halophila spinulosa</i> (R.Br.) Asch.	CR	CR
Angiosperm	Hydrocharitaceae	<i>Thalassia hemprichii</i> (Ehrenb.) Asch.	CR	EN
Angiosperm	Hydroleaceae	<i>Hydrolea zeylanica</i> (L.) Vahl	NEx	NEx
Angiosperm	Hypericaceae	<i>Cratoxylum arborescens</i> (Vahl) Blume	VU	EN
Angiosperm	Hypericaceae	<i>Cratoxylum cochinchinense</i> (Lour.) Blume	EN	EN
Angiosperm	Hypericaceae	<i>Cratoxylum formosum</i> (Jack) Benth. & Hook.f. ex Dyer	EN	EN
Angiosperm	Hypericaceae	<i>Cratoxylum maingayi</i> Dyer	CR	CR
Angiosperm	Hypoxidaceae	<i>Curculigo capitulata</i> (Lour.) Kuntze	CR	CR
Angiosperm	Hypoxidaceae	<i>Curculigo latifolia</i> W.T.Aiton	VU	VU
Angiosperm	Icacinaceae	<i>Iodes cirrhosa</i> Turcz.	CR	CR
Angiosperm	Icacinaceae	<i>Iodes ovalis</i> Blume	EN	VU
Angiosperm	Icacinaceae	<i>Iodes velutina</i> King	Not Listed	CR
Angiosperm	Icacinaceae	<i>Phytocrene bracteata</i> Wall.	VU	VU
Angiosperm	Icacinaceae	<i>Phytocrene oblonga</i> Wall.	Not Listed	CR
Angiosperm	Irvingiaceae	<i>Irvingia malayana</i> Oliv. ex A.W.Benn.	CR	CR
Angiosperm	Ixonanthaceae	<i>Ixonanthes icosandra</i> Jack	VU	VU
Angiosperm	Ixonanthaceae	<i>Ixonanthes reticulata</i> Jack	Not Listed	LC
Angiosperm	Juglandaceae	<i>Engelhardia serrata</i> Blume	NEx	CR
Angiosperm	Lamiaceae	<i>Anisomeles indica</i> (L.) Kuntze	Not Listed	CR
Angiosperm	Lamiaceae	<i>Callicarpa longifolia</i> Lam.	NEx	VU
Angiosperm	Lamiaceae	<i>Callicarpa pentandra</i> Roxb.	Not Listed	NEx
Angiosperm	Lamiaceae	<i>Clerodendrum deflexum</i> Wall.	VU	LC
Angiosperm	Lamiaceae	<i>Clerodendrum disparifolium</i> Blume	Not Listed	LC
Angiosperm	Lamiaceae	<i>Clerodendrum myrmecophilum</i> Ridl.	NEx	NEx
Angiosperm	Lamiaceae	<i>Clerodendrum villosum</i> Blume	VU	LC
Angiosperm	Lamiaceae	<i>Coleus scutellarioides</i> (L.) Benth.	Not Listed	CR
Angiosperm	Lamiaceae	<i>Gmelina elliptica</i> Sm.	EN	EN
Angiosperm	Lamiaceae	<i>Peronema canescens</i> Jack	NEx	NEx
Angiosperm	Lamiaceae	<i>Premna serratifolia</i> L.	VU	LC
Angiosperm	Lamiaceae	<i>Premna trichostoma</i> Miq.	NEx	NEx
Angiosperm	Lamiaceae	<i>Sphenodesme pentandra</i> Jack var. <i>pentandra</i>	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Lamiaceae	<i>Teijsmanniodendron coriaceum</i> (C.B.Clarke) Kosterm.	CR	CR
Angiosperm	Lamiaceae	<i>Teijsmanniodendron pteropodum</i> (Miq.) Bakh.	NEx	CR
Angiosperm	Lamiaceae	<i>Vitex gamosepala</i> Griff.	CR	NEx
Angiosperm	Lamiaceae	<i>Vitex pinnata</i> L.	Not Listed	LC
Angiosperm	Lamiaceae	<i>Vitex rotundifolia</i> L.f.	Not Listed	NEx
Angiosperm	Lamiaceae	<i>Vitex trifolia</i> L.	Not Listed	CR
Angiosperm	Lamiaceae	<i>Vitex vestita</i> Wall. ex Walp.	CR	CR
Angiosperm	Lamiaceae	<i>Volkameria inermis</i> L.	Not Listed	LC
Angiosperm	Lauraceae	<i>Actinodaphne glomerata</i> (Blume) Nees	CR	CR
Angiosperm	Lauraceae	<i>Actinodaphne macrophylla</i> (Blume) Nees	NEx	CR
Angiosperm	Lauraceae	<i>Actinodaphne malaccensis</i> Hook.f.	EN	EN
Angiosperm	Lauraceae	<i>Actinodaphne pruinosa</i> Nees	EN	EN
Angiosperm	Lauraceae	<i>Alseodaphne bancana</i> Miq.	CR	CR
Angiosperm	Lauraceae	<i>Alseodaphne intermedia</i> Kosterm.	CR	CR
Angiosperm	Lauraceae	<i>Alseodaphne nigrescens</i> (Gamble) Kosterm.	NEx	NEx
Angiosperm	Lauraceae	<i>Beilschmiedia kunstleri</i> Gamble	CR	CR
Angiosperm	Lauraceae	<i>Beilschmiedia madang</i> (Blume) Blume	EN	VU
Angiosperm	Lauraceae	<i>Cassytha filiformis</i> L.	Not Listed	LC
Angiosperm	Lauraceae	<i>Cinnamomum iners</i> (Reinw. ex Nees & T.Nees) Blume	Not Listed	LC
Angiosperm	Lauraceae	<i>Cinnamomum javanicum</i> Blume	CR	CR
Angiosperm	Lauraceae	<i>Cinnamomum subavenium</i> Miq.	NEx	NEx
Angiosperm	Lauraceae	<i>Cryptocarya ferrea</i> Blume	CR	EN
Angiosperm	Lauraceae	<i>Cryptocarya griffithiana</i> Wight	CR	EN
Angiosperm	Lauraceae	<i>Cryptocarya impressa</i> Miq.	CR	CR
Angiosperm	Lauraceae	<i>Cryptocarya kurzii</i> Hook.f.	NEx	CR
Angiosperm	Lauraceae	<i>Cryptocarya malayana</i> de Kok	NEx	NEx
Angiosperm	Lauraceae	<i>Cryptocarya nitens</i> (Blume) Koord. & Valeton	Not Listed	CR
Angiosperm	Lauraceae	<i>Cryptocarya rugulosa</i> Hook.f.	CR	CR
Angiosperm	Lauraceae	<i>Dehaasia cuneata</i> (Blume) Blume	Not Listed	CR
Angiosperm	Lauraceae	<i>Dehaasia incrassata</i> (Jack) Nees	CR	CR
Angiosperm	Lauraceae	<i>Endiandra maingayi</i> Hook.f.	Not Listed	CR
Angiosperm	Lauraceae	<i>Lindera lucida</i> (Blume) Boerl.	VU	VU
Angiosperm	Lauraceae	<i>Litsea accedens</i> (Blume) Boerl.	EN	EN
Angiosperm	Lauraceae	<i>Litsea aff. maingayi</i> Hook.f.	Not Listed	DD
Angiosperm	Lauraceae	<i>Litsea castanea</i> Hook.f.	EN	EN
Angiosperm	Lauraceae	<i>Litsea cordata</i> (Jack) Hook.f.	CR	CR
Angiosperm	Lauraceae	<i>Litsea costalis</i> (Nees) Kosterm.	CR	CR
Angiosperm	Lauraceae	<i>Litsea elliptica</i> Blume	Not Listed	LC
Angiosperm	Lauraceae	<i>Litsea erectinervia</i> Kosterm.	CR	CR
Angiosperm	Lauraceae	<i>Litsea ferruginea</i> (Blume) Blume	CR	CR
Angiosperm	Lauraceae	<i>Litsea gracilipes</i> Hook.f.	NEx	NEx
Angiosperm	Lauraceae	<i>Litsea grandis</i> (Nees) Hook.f.	EN	EN
Angiosperm	Lauraceae	<i>Litsea lanceolata</i> (Blume) Kosterm.	NEx	NEx
Angiosperm	Lauraceae	<i>Litsea lancifolia</i> (Roxb. ex Nees) Fern.-Vill. var. <i>lancifolia</i>	CR	EN
Angiosperm	Lauraceae	<i>Litsea machilifolia</i> Gamble	CR	CR
Angiosperm	Lauraceae	<i>Litsea myristicifolia</i> (Wall. ex Nees) Hook.f.	CR	CR
Angiosperm	Lauraceae	<i>Litsea resinosa</i> Blume	Not Listed	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Lauraceae	<i>Litsea ridleyi</i> Gamble	EN	EN
Angiosperm	Lauraceae	<i>Litsea robusta</i> Blume	CR	NEx
Angiosperm	Lauraceae	<i>Litsea sphaerocarpa</i> Blume	Not Listed	DD
Angiosperm	Lauraceae	<i>Litsea tomentosa</i> Blume	Not Listed	NEx
Angiosperm	Lauraceae	<i>Litsea umbellata</i> (Lour.) Merr.	VU	VU
Angiosperm	Lauraceae	<i>Machilus declinatus</i> (Blume) de Kok	CR	NEx
Angiosperm	Lauraceae	<i>Machilus rimosus</i> (Blume) Blume	Not Listed	NEx
Angiosperm	Lauraceae	<i>Neolitsea cassia</i> (L.) Kosterm.	VU	LC
Angiosperm	Lauraceae	<i>Nothaphoebe coriacea</i> (Kosterm.) Kosterm.	NEx	NEx
Angiosperm	Lauraceae	<i>Nothaphoebe umbelliflora</i> (Blume) Blume	Not Listed	LC
Angiosperm	Lauraceae	<i>Phoebe grandis</i> (Nees) Merr.	CR	CR
Angiosperm	Lauraceae	<i>Phoebe macrophylla</i> (Nees) Blume	Not Listed	NEx
Angiosperm	Lecythidaceae	<i>Barringtonia asiatica</i> (L.) Kurz	CR	CR
Angiosperm	Lecythidaceae	<i>Barringtonia conoidea</i> Griff.	NEx	NEx
Angiosperm	Lecythidaceae	<i>Barringtonia macrostachya</i> (Jack) Kurz	CR	CR
Angiosperm	Lecythidaceae	<i>Barringtonia racemosa</i> (L.) Spreng.	CR	CR
Angiosperm	Lecythidaceae	<i>Barringtonia reticulata</i> (Blume) Miq.	CR	CR
Angiosperm	Lecythidaceae	<i>Planchonia grandis</i> Ridl.	NEx	CR
Angiosperm	Lentibulariaceae	<i>Utricularia punctata</i> Wall. ex A.DC.	Not Listed	NEx
Angiosperm	Lentibulariaceae	<i>Utricularia uliginosa</i> Vahl	NEx	CR
Angiosperm	Linaceae	<i>Indorouchera griffithiana</i> (Planch.) Hallier f.	Not Listed	LC
Angiosperm	Linderniaceae	<i>Artanema longifolium</i> (L.) Vatke	Not Listed	NEx
Angiosperm	Linderniaceae	<i>Lindernia anagallis</i> (Burm.f.) Pennell	Not Listed	CR
Angiosperm	Linderniaceae	<i>Lindernia ruelloides</i> (Colsm.) Pennell	Not Listed	NEx
Angiosperm	Loganiaceae	<i>Mitrasacme pygmaea</i> R.Br. var. <i>pygmaea</i>	Not Listed	CR
Angiosperm	Loganiaceae	<i>Norrisia major</i> Soler.	CR	CR
Angiosperm	Loganiaceae	<i>Strychnos</i> cf. <i>axillaris</i> Colebr.	NEx	DD
Angiosperm	Loganiaceae	<i>Strychnos ignatii</i> P.J.Bergius	VU	LC
Angiosperm	Loganiaceae	<i>Strychnos maingayi</i> C.B.Clarke	CR	CR
Angiosperm	Loganiaceae	<i>Strychnos pubescens</i> C.B.Clarke	NEx	CR
Angiosperm	Loganiaceae	<i>Strychnos ridleyi</i> King & Gamble	NEx	EX
Angiosperm	Loranthaceae	<i>Amylotheca duthieana</i> (King) Danser	NEx	NEx
Angiosperm	Loranthaceae	<i>Barathranthus axanthus</i> (Korth.) Miq.	NEx	NEx
Angiosperm	Loranthaceae	<i>Dendrophthoe curvata</i> (Blume) Miq.	NEx	NEx
Angiosperm	Loranthaceae	<i>Dendrophthoe pentandra</i> (L.) Miq.	Not Listed	LC
Angiosperm	Loranthaceae	<i>Elytranthe albida</i> (Blume) Blume	NEx	NEx
Angiosperm	Loranthaceae	<i>Elytranthe arnottiana</i> (Korth.) Miq.	NEx	NEx
Angiosperm	Loranthaceae	<i>Helixanthera coccinea</i> (Jack) Danser	NEx	NEx
Angiosperm	Loranthaceae	<i>Helixanthera parasitica</i> Lour.	NEx	NEx
Angiosperm	Loranthaceae	<i>Macrosolen cochinchinensis</i> (Lour.) Tiegh.	Not Listed	LC
Angiosperm	Loranthaceae	<i>Macrosolen papillosum</i> (Gamble) Danser	NEx	NEx
Angiosperm	Loranthaceae	<i>Macrosolen retusus</i> (Jack) Miq.	Not Listed	CR
Angiosperm	Loranthaceae	<i>Scurrula ferruginea</i> (Roxb. ex Jack) Danser	Not Listed	VU
Angiosperm	Loranthaceae	<i>Scurrula parasitica</i> L.	CR	CR
Angiosperm	Loranthaceae	<i>Taxillus chinensis</i> (DC.) Danser	CR	CR
Angiosperm	Lythraceae	<i>Pemphis acidula</i> J.R.Forst. & G.Forst.	CR	CR
Angiosperm	Lythraceae	<i>Sonneratia alba</i> Sm.	Not Listed	LC
Angiosperm	Lythraceae	<i>Sonneratia caseolaris</i> (L.) Engl.	CR	CR
Angiosperm	Lythraceae	<i>Sonneratia ovata</i> Backer	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Magnoliaceae	<i>Magnolia elegans</i> (Blume) H.Keng	CR	CR
Angiosperm	Magnoliaceae	<i>Magnolia macklottii</i> (Korth.) Dandy var. <i>beccariana</i> (A.Agostini) Noot.	NEx	NEx
Angiosperm	Magnoliaceae	<i>Magnolia singapurensis</i> (Ridl.) H.Keng	EN	CR
Angiosperm	Magnoliaceae	<i>Magnolia villosa</i> (Miq.) H.Keng	CR	CR
Angiosperm	Malpighiaceae	<i>Aspidopterys concava</i> (Wall.) A.Juss.	EN	EN
Angiosperm	Malpighiaceae	<i>Hiptage sericea</i> Hook.f.	CR	CR
Angiosperm	Malpighiaceae	<i>Tristellateia australasiae</i> A.Rich.	EN	EN
Angiosperm	Malvaceae	<i>Abutilon indicum</i> (L.) Sweet	Not Listed	CR
Angiosperm	Malvaceae	<i>Brownlowia argentata</i> Kurz	NEx	NEx
Angiosperm	Malvaceae	<i>Brownlowia teresa</i> (L.) Kosterm.	EN	CR
Angiosperm	Malvaceae	<i>Bytneria maingayi</i> Mast.	CR	EN
Angiosperm	Malvaceae	<i>Coelostegia griffithii</i> Benth.	CR	CR
Angiosperm	Malvaceae	<i>Commersonia bartramia</i> (L.) Merr.	Not Listed	LC
Angiosperm	Malvaceae	<i>Durio griffithii</i> (Mast.) Bakh.	EN	EN
Angiosperm	Malvaceae	<i>Durio singaporensis</i> Ridl.	VU	CR
Angiosperm	Malvaceae	<i>Grewia laevigata</i> Vahl	VU	VU
Angiosperm	Malvaceae	<i>Heritiera borneensis</i> (Merr.) Kosterm.	CR	CR
Angiosperm	Malvaceae	<i>Heritiera elata</i> Ridl.	EN	CR
Angiosperm	Malvaceae	<i>Heritiera littoralis</i> Aiton	EN	EN
Angiosperm	Malvaceae	<i>Heritiera simplicifolia</i> (Mast.) Kosterm.	EN	EN
Angiosperm	Malvaceae	<i>Hibiscus tiliaceus</i> L.	Not Listed	LC
Angiosperm	Malvaceae	<i>Kleinhowia hospita</i> L.	NEx	NEx
Angiosperm	Malvaceae	<i>Melochia corchorifolia</i> L.	Not Listed	LC
Angiosperm	Malvaceae	<i>Melochia umbellata</i> (Houtt.) Stapf	Not Listed	CR
Angiosperm	Malvaceae	<i>Microcos antidesmifolia</i> (King) Burret var. <i>antidesmifolia</i>	Not Listed	CR
Angiosperm	Malvaceae	<i>Microcos globulifera</i> (Mast.) Burret	NEx	NEx
Angiosperm	Malvaceae	<i>Microcos hirsuta</i> (Korth.) Burret	CR	CR
Angiosperm	Malvaceae	<i>Microcos latifolia</i> Burret	EN	EN
Angiosperm	Malvaceae	<i>Microcos tomentosa</i> Sm.	Not Listed	CR
Angiosperm	Malvaceae	<i>Neesia altissima</i> (Blume) Blume	NEx	NEx
Angiosperm	Malvaceae	<i>Neesia malayana</i> Bakh.	NEx	CR
Angiosperm	Malvaceae	<i>Neesia synandra</i> Mast.	VU	CR
Angiosperm	Malvaceae	<i>Pentace triptera</i> Mast.	EN	EN
Angiosperm	Malvaceae	<i>Pterocymbium tubulatum</i> (Mast.) Pierre	CR	CR
Angiosperm	Malvaceae	<i>Pterospermum diversifolium</i> Blume	NEx	CR
Angiosperm	Malvaceae	<i>Pterospermum sumatranum</i> Miq.	CR	CR
Angiosperm	Malvaceae	<i>Scaphium affine</i> (Mast.) Pierre	EN	EN
Angiosperm	Malvaceae	<i>Scaphium linearicarpum</i> (Mast.) Pierre	CR	CR
Angiosperm	Malvaceae	<i>Sida cordifolia</i> L.	Not Listed	LC
Angiosperm	Malvaceae	<i>Sida rhombifolia</i> L. subsp. <i>rhombifolia</i>	Not Listed	LC
Angiosperm	Malvaceae	<i>Sterculia coccinea</i> Jack	VU	EN
Angiosperm	Malvaceae	<i>Sterculia cordata</i> Blume	CR	CR
Angiosperm	Malvaceae	<i>Sterculia gilva</i> Miq.	CR	CR
Angiosperm	Malvaceae	<i>Sterculia macrophylla</i> Vent.	CR	CR
Angiosperm	Malvaceae	<i>Sterculia parviflora</i> Roxb. ex G.Don	CR	CR
Angiosperm	Malvaceae	<i>Sterculia rubiginosa</i> Vent.	VU	VU
Angiosperm	Malvaceae	<i>Thespesia populnea</i> (L.) Sol. ex Corrêa	Not Listed	LC

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Marantaceae	<i>Donax canniformis</i> (G.Forst.) K.Schum.	EN	CR
Angiosperm	Marantaceae	<i>Phrynum hirtum</i> Ridl.	Not Listed	CR
Angiosperm	Marantaceae	<i>Stachyphrynum latifolium</i> (Blume) K.Schum.	EN	EN
Angiosperm	Marantaceae	<i>Stachyphrynum parvum</i> Ridl.	EN	CR
Angiosperm	Melastomataceae	<i>Diplectria divaricata</i> (Willd.) Kuntze	CR	CR
Angiosperm	Melastomataceae	<i>Diplectria stipularis</i> (Blume) Kuntze	NEx	NEx
Angiosperm	Melastomataceae	<i>Diplectria viminalis</i> (Jack) Kuntze	CR	EN
Angiosperm	Melastomataceae	<i>Dissochaeta annulata</i> Hook.f. ex Triana	VU	CR
Angiosperm	Melastomataceae	<i>Dissochaeta biligulata</i> Korth.	VU	CR
Angiosperm	Melastomataceae	<i>Dissochaeta gracilis</i> (Jack) Blume	VU	VU
Angiosperm	Melastomataceae	<i>Dissochaeta pallida</i> (Jack) Blume	EN	EN
Angiosperm	Melastomataceae	<i>Dissochaeta punctulata</i> Hook.f. ex Triana	VU	EN
Angiosperm	Melastomataceae	<i>Lijndenia laurina</i> Zoll. & Moritzi	CR	CR
Angiosperm	Melastomataceae	<i>Macrolenes echinulata</i> (Naudin) Bakh.f.	CR	CR
Angiosperm	Melastomataceae	<i>Medinilla crassifolia</i> (Reinw. ex Blume) Blume	NEx	NEx
Angiosperm	Melastomataceae	<i>Medinilla radicans</i> (Blume) Blume	NEx	NEx
Angiosperm	Melastomataceae	<i>Medinilla rubicunda</i> (Jack) Blume	Not Listed	NEx
Angiosperm	Melastomataceae	<i>Melastoma malabathricum</i> L.	Not Listed	LC
Angiosperm	Melastomataceae	<i>Melastoma molle</i> (C.B.Clarke) Wall. ex Cogn.	Not Listed	NEx
Angiosperm	Melastomataceae	<i>Memecylon acuminatissimum</i> Blume	Not Listed	CR
Angiosperm	Melastomataceae	<i>Memecylon acuminatum</i> Sm. var. <i>acuminatum</i>	NEx	CR
Angiosperm	Melastomataceae	<i>Memecylon amplexicaule</i> Roxb.	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon campanulatum</i> C.B.Clarke	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon cantleyi</i> Ridl.	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon durum</i> Cogn.	NEx	NEx
Angiosperm	Melastomataceae	<i>Memecylon edule</i> Roxb. var. <i>edule</i>	EN	EN
Angiosperm	Melastomataceae	<i>Memecylon excelsum</i> Blume	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon floridum</i> Ridl.	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon fruticosum</i> King	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon garciniooides</i> Blume	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon lancifolium</i> Ridl.	NEx	NEx
Angiosperm	Melastomataceae	<i>Memecylon lilacinum</i> Zoll. & Moritzi	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon minutiflorum</i> Miq.	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon oleifolium</i> Blume	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon ovatum</i> Sm.	EN	EN
Angiosperm	Melastomataceae	<i>Memecylon paniculatum</i> Jack	CR	CR
Angiosperm	Melastomataceae	<i>Memecylon pseudomegacarpum</i> M.Hughes	EN	CR
Angiosperm	Melastomataceae	<i>Memecylon pubescens</i> (C.B.Clarke) King	NEx	CR
Angiosperm	Melastomataceae	<i>Ochthocharis bornensis</i> Blume	NEx	NEx
Angiosperm	Melastomataceae	<i>Ochthocharis javanica</i> Blume	NEx	NEx
Angiosperm	Melastomataceae	<i>Ochthocharis paniculata</i> Korth.	NEx	NEx
Angiosperm	Melastomataceae	<i>Pachycentria constricta</i> (Blume) Blume	CR	NEx
Angiosperm	Melastomataceae	<i>Pachycentria maingayi</i> (C.B.Clarke) J.F.Maxwell	CR	CR
Angiosperm	Melastomataceae	<i>Pachycentria pulverulenta</i> (Jack) Clauzing	CR	CR
Angiosperm	Melastomataceae	<i>Plethiandra sessiliflora</i> (Cogn.) Merr.	NEx	NEx
Angiosperm	Melastomataceae	<i>Pternandra coerulescens</i> Jack	VU	VU
Angiosperm	Melastomataceae	<i>Pternandra echinata</i> Jack	VU	LC
Angiosperm	Melastomataceae	<i>Pternandra tuberculata</i> (Korth.) M.P.Nayar	CR	NEx
Angiosperm	Melastomataceae	<i>Sonerila moluccana</i> Roxb.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Melastomataceae	<i>Sonerila obliqua</i> Korth.	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia crassinervia</i> Kurz ex Hiern	Not Listed	CR
Angiosperm	Meliaceae	<i>Aglaiia cucullata</i> (Roxb.) Pellegr.	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia edulis</i> (Roxb.) Wall.	Not Listed	CR
Angiosperm	Meliaceae	<i>Aglaiia elliptica</i> Blume subsp. <i>elliptica</i>	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia erythrosperma</i> Pannell	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia exstipulata</i> (Griff.) W.Theob.	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia glabriflora</i> Hiern	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia lawii</i> (Wight) C.J.Saldanha subsp. <i>oligocarpa</i> (Miq.) Pannell	Not Listed	CR
Angiosperm	Meliaceae	<i>Aglaiia macrocarpa</i> (Miq.) Pannell	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia meliosmoides</i> Craib	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia multinervis</i> Pannell	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia odoratissima</i> Blume	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia oligophylla</i> Miq.	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia palembanica</i> Miq.	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia rubiginosa</i> (Hiern) Pannell	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia rufinervis</i> (Blume) Bentv.	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia sexipetala</i> Griff.	CR	CR
Angiosperm	Meliaceae	<i>Aglaiia teysmanniana</i> (Miq.) Miq.	NEx	CR
Angiosperm	Meliaceae	<i>Aglaiia tomentosa</i> Teijsm. & Binn. subsp. <i>cordata</i> (Hiern) Pannell	NEx	CR
Angiosperm	Meliaceae	<i>Aphanamixis polystachya</i> (Wall.) R.Parker	EN	LC
Angiosperm	Meliaceae	<i>Aphanamixis sumatrana</i> (Miq.) Harms	NEx	NEx
Angiosperm	Meliaceae	<i>Chisocheton erythrocarpus</i> Hiern	CR	CR
Angiosperm	Meliaceae	<i>Chisocheton macrophyllus</i> King subsp. <i>macrophyllus</i>	NEx	NEx
Angiosperm	Meliaceae	<i>Chisocheton patens</i> Blume	CR	CR
Angiosperm	Meliaceae	<i>Chisocheton pauciflorus</i> King	NEx	NEx
Angiosperm	Meliaceae	<i>Chisocheton pentandrus</i> (Blanco) Merr. subsp. <i>paucijugus</i> (Miq.) Mabb.	CR	NEx
Angiosperm	Meliaceae	<i>Chisocheton sarawakanus</i> (C.DC.) Harms	CR	CR
Angiosperm	Meliaceae	<i>Dysoxylum acutangulum</i> Miq.	NEx	CR
Angiosperm	Meliaceae	<i>Dysoxylum carolinae</i> Mabb.	NEx	NEx
Angiosperm	Meliaceae	<i>Dysoxylum cyrtobotryum</i> Miq.	NEx	CR
Angiosperm	Meliaceae	<i>Dysoxylum flavescens</i> Hiern	CR	NEx
Angiosperm	Meliaceae	<i>Dysoxylum grande</i> Hiern	Not Listed	CR
Angiosperm	Meliaceae	<i>Epicharis cuneata</i> (Hiern) Harms	VU	VU
Angiosperm	Meliaceae	<i>Epicharis densiflora</i> Blume	CR	CR
Angiosperm	Meliaceae	<i>Munronia breviflora</i> (Ridl.) Mabb. & Muellner	NEx	NEx
Angiosperm	Meliaceae	<i>Prasoxylon alliaceum</i> (Blume) M.Roem.	NEx	CR
Angiosperm	Meliaceae	<i>Prasoxylon excelsum</i> (Spreng.) Mabb.	CR	CR
Angiosperm	Meliaceae	<i>Pseudoclausena chrysogyne</i> (Miq.) T.P.Clark	CR	CR
Angiosperm	Meliaceae	<i>Sandoricum beccarianum</i> Baill.	CR	EN
Angiosperm	Meliaceae	<i>Sandoricum koetjape</i> (Burm.f.) Merr.	EN	VU
Angiosperm	Meliaceae	<i>Xylocarpus granatum</i> J.Koenig	Not Listed	LC
Angiosperm	Meliaceae	<i>Xylocarpus moluccensis</i> (Lam.) M.Roem.	EN	EN
Angiosperm	Meliaceae	<i>Xylocarpus rumphii</i> (Kostel.) Mabb.	CR	CR
Angiosperm	Menispermaceae	<i>Albertisia crassa</i> Forman	Not Listed	EN
Angiosperm	Menispermaceae	<i>Arcangelisia flava</i> (L.) Merr.	Not Listed	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Menispermaceae	<i>Coscinium fenestratum</i> (Gaertn.) Colebr.	EN	EN
Angiosperm	Menispermaceae	<i>Cyclea laxiflora</i> Miers	CR	CR
Angiosperm	Menispermaceae	<i>Fibraurea tinctoria</i> Lour.	Not Listed	LC
Angiosperm	Menispermaceae	<i>Hypserpa nitida</i> Miers	NEx	EN
Angiosperm	Menispermaceae	<i>Limacia scandens</i> Lour.	VU	LC
Angiosperm	Menispermaceae	<i>Nephroia orbiculata</i> (L.) L.Lian & Wei Wang	NEx	CR
Angiosperm	Menispermaceae	<i>Pycnarhena fasciculata</i> (Miers) Diels	Not Listed	CR
Angiosperm	Menispermaceae	<i>Stephania capitata</i> (Blume) Spreng.	CR	CR
Angiosperm	Menispermaceae	<i>Tinomiscium petiolare</i> Miers ex Hook.f. & Thomson	EN	VU
Angiosperm	Menispermaceae	<i>Tinospora krispura</i> I.M.Turner	Not Listed	EN
Angiosperm	Menispermaceae	<i>Tinospora macrocarpa</i> Diels	CR	VU
Angiosperm	Menispermaceae	<i>Tinospora singapura</i> I.M.Turner	Not Listed	CR
Angiosperm	Metteniusaceae	<i>Platea latifolia</i> Blume	NEx	CR
Angiosperm	Monimiaceae	<i>Matthaea sancta</i> Blume	EN	EN
Angiosperm	Moraceae	<i>Antiaris toxicaria</i> (J.F.Gmel.) Lesch.	CR	CR
Angiosperm	Moraceae	<i>Artocarpus anisophyllus</i> Miq.	EN	EN
Angiosperm	Moraceae	<i>Artocarpus dadah</i> Miq.	EN	EN
Angiosperm	Moraceae	<i>Artocarpus elasticus</i> Reinw. ex Blume	Not Listed	LC
Angiosperm	Moraceae	<i>Artocarpus fulvicortex</i> F.M.Jarrett	CR	CR
Angiosperm	Moraceae	<i>Artocarpus gomezianus</i> Wall. ex Trécul	CR	NEx
Angiosperm	Moraceae	<i>Artocarpus griffithii</i> (King) Merr.	CR	CR
Angiosperm	Moraceae	<i>Artocarpus hispidus</i> F.M.Jarrett	CR	CR
Angiosperm	Moraceae	<i>Artocarpus kemando</i> Miq.	EN	CR
Angiosperm	Moraceae	<i>Artocarpus lanceifolius</i> Roxb.	CR	EN
Angiosperm	Moraceae	<i>Artocarpus lowii</i> King	CR	CR
Angiosperm	Moraceae	<i>Artocarpus rigidus</i> Blume	VU	EN
Angiosperm	Moraceae	<i>Artocarpus scortechinii</i> King	EN	VU
Angiosperm	Moraceae	<i>Ficus albipila</i> (Miq.) King	NEx	NEx
Angiosperm	Moraceae	<i>Ficus annulata</i> Blume	NEx	NEx
Angiosperm	Moraceae	<i>Ficus apiocarpa</i> (Miq.) Miq.	EN	EN
Angiosperm	Moraceae	<i>Ficus aurata</i> (Miq.) Miq.	VU	LC
Angiosperm	Moraceae	<i>Ficus binnendijkii</i> (Miq.) Miq.	CR	CR
Angiosperm	Moraceae	<i>Ficus bracteata</i> (Miq.) Wall. ex Miq.	CR	NEx
Angiosperm	Moraceae	<i>Ficus callophylla</i> Blume	VU	NEx
Angiosperm	Moraceae	<i>Ficus caulocarpa</i> (Miq.) Miq.	Not Listed	EN
Angiosperm	Moraceae	<i>Ficus chartacea</i> (Kurz) Wall. ex King	VU	VU
Angiosperm	Moraceae	<i>Ficus consociata</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus crassiramea</i> (Miq.) Miq. subsp. <i>crassiramea</i>	CR	CR
Angiosperm	Moraceae	<i>Ficus delosyce</i> Corner	NEx	CR
Angiosperm	Moraceae	<i>Ficus deltoidea</i> Jack	CR	CR
Angiosperm	Moraceae	<i>Ficus excavata</i> King	NEx	NEx
Angiosperm	Moraceae	<i>Ficus fistulosa</i> Reinw. ex Blume	Not Listed	LC
Angiosperm	Moraceae	<i>Ficus glandulifera</i> (Miq.) Wall. ex King	CR	EN
Angiosperm	Moraceae	<i>Ficus globosa</i> Blume	EN	VU
Angiosperm	Moraceae	<i>Ficus grossularioides</i> Burm.f. var. <i>grossularioides</i>	Not Listed	LC
Angiosperm	Moraceae	<i>Ficus heteropleura</i> Blume	Not Listed	LC

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Moraceae	<i>Ficus kerkhovenii</i> Koord. & Valeton	CR	EN
Angiosperm	Moraceae	<i>Ficus kochummeniana</i> C.C.Berg	CR	CR
Angiosperm	Moraceae	<i>Ficus laevis</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus lamponga</i> Miq.	CR	CR
Angiosperm	Moraceae	<i>Ficus lindsayana</i> Beentje	CR	NEx
Angiosperm	Moraceae	<i>Ficus microcarpa</i> L.f.	Not Listed	LC
Angiosperm	Moraceae	<i>Ficus microsyce</i> Ridl.	CR	CR
Angiosperm	Moraceae	<i>Ficus pallescens</i> (Weible) C.C.Berg	CR	CR
Angiosperm	Moraceae	<i>Ficus pellucidopunctata</i> Griff.	NEx	NEx
Angiosperm	Moraceae	<i>Ficus pisocarpa</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus punctata</i> Thunb.	Not Listed	LC
Angiosperm	Moraceae	<i>Ficus recurva</i> Blume var. <i>ribesoides</i> (Miq.) King	CR	EN
Angiosperm	Moraceae	<i>Ficus rosulata</i> C.C.Berg	NEx	CR
Angiosperm	Moraceae	<i>Ficus ruginervia</i> Corner	NEx	CR
Angiosperm	Moraceae	<i>Ficus sagittata</i> Vahl	CR	EN
Angiosperm	Moraceae	<i>Ficus scaberrima</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus scortechnii</i> King	CR	CR
Angiosperm	Moraceae	<i>Ficus sinuata</i> Thunb.	CR	CR
Angiosperm	Moraceae	<i>Ficus stricta</i> (Miq.) Miq.	Not Listed	CR
Angiosperm	Moraceae	<i>Ficus subgelderri</i> Corner	CR	CR
Angiosperm	Moraceae	<i>Ficus subulata</i> Blume	Not Listed	CR
Angiosperm	Moraceae	<i>Ficus sumatrana</i> (Miq.) Miq.	Not Listed	NEx
Angiosperm	Moraceae	<i>Ficus sundaica</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus superba</i> (Miq.) Miq.	EN	EN
Angiosperm	Moraceae	<i>Ficus trichocarpa</i> Blume	CR	CR
Angiosperm	Moraceae	<i>Ficus variegata</i> Blume	Not Listed	LC
Angiosperm	Moraceae	<i>Ficus vasculosa</i> Wall. ex Miq.	VU	VU
Angiosperm	Moraceae	<i>Ficus villosa</i> Blume	CR	EN
Angiosperm	Moraceae	<i>Ficus virens</i> Aiton	CR	EN
Angiosperm	Moraceae	<i>Ficus xylophylla</i> (Miq.) Wall. ex Miq.	CR	CR
Angiosperm	Moraceae	<i>Malaisia scandens</i> (Lour.) Planch.	Not Listed	CR
Angiosperm	Moraceae	<i>Parartocarpus bracteatus</i> (King) Becc.	CR	CR
Angiosperm	Moraceae	<i>Parartocarpus venenosus</i> (Zoll. & Moritzi) Becc.	NEx	NEx
Angiosperm	Moraceae	<i>Sloetia elongata</i> (Miq.) Koord.	VU	LC
Angiosperm	Myricaceae	<i>Morella esculenta</i> (Buch.-Ham. ex D.Don) I.M.Turner	Not Listed	LC
Angiosperm	Myristicaceae	<i>Endocomia canariooides</i> (King) W.J.de Wilde	NEx	CR
Angiosperm	Myristicaceae	<i>Gymnacranthera bancana</i> (Miq.) J.Sinclair	CR	CR
Angiosperm	Myristicaceae	<i>Gymnacranthera farquhariana</i> (Wall. ex Hook.f. & Thomson) Warb. var. <i>eugeniifolia</i> (A.DC.) R.T.A.Schouten	CR	CR
Angiosperm	Myristicaceae	<i>Gymnacranthera farquhariana</i> (Wall. ex Hook.f. & Thomson) Warb. var. <i>farquhariana</i>	CR	EN
Angiosperm	Myristicaceae	<i>Gymnacranthera forbesii</i> (King) Warb. var. <i>forbesii</i>	CR	NEx
Angiosperm	Myristicaceae	<i>Horsfieldia crassifolia</i> (Hook.f. & Thomson) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Horsfieldia grandis</i> (Hook.f.) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Horsfieldia irya</i> (Gaertn.) Warb.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Myristicaceae	<i>Horsfieldia polyspherula</i> (Hook.f.) J.Sinclair var. <i>polyspherula</i>	VU	VU
Angiosperm	Myristicaceae	<i>Horsfieldia punctatifolia</i> J.Sinclair	CR	EN
Angiosperm	Myristicaceae	<i>Horsfieldia sparsa</i> W.J.de Wilde	NEx	EN
Angiosperm	Myristicaceae	<i>Horsfieldia superba</i> (Hook.f. & Thomson) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Horsfieldia tomentosa</i> (Kuntze) Warb.	CR	NEx
Angiosperm	Myristicaceae	<i>Horsfieldia wallichii</i> (Hook.f. & Thomson) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Knema communis</i> J.Sinclair	Not Listed	VU
Angiosperm	Myristicaceae	<i>Knema conferta</i> (King) Warb.	EN	EN
Angiosperm	Myristicaceae	<i>Knema corticosa</i> Lour.	CR	VU
Angiosperm	Myristicaceae	<i>Knema curtisiae</i> (King) Warb. var. <i>paludosa</i> J.Sinclair	EN	CR
Angiosperm	Myristicaceae	<i>Knema furfuracea</i> (Hook.f. & Thomson) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Knema hookeriana</i> (Wall. ex Hook.f. & Thomson) Warb.	CR	CR
Angiosperm	Myristicaceae	<i>Knema intermedia</i> (Blume) Warb.	EN	EN
Angiosperm	Myristicaceae	<i>Knema latericia</i> Elmer subsp. <i>ridleyi</i> (Gand.) W.J.de Wilde	EN	EN
Angiosperm	Myristicaceae	<i>Knema laurina</i> (Blume) Warb. var. <i>laurina</i>	EN	EN
Angiosperm	Myristicaceae	<i>Knema malayana</i> Warb.	EN	EN
Angiosperm	Myristicaceae	<i>Knema rubens</i> (J.Sinclair) W.J.de Wilde	NEx	NEx
Angiosperm	Myristicaceae	<i>Knema sumatrana</i> (Blume) W.J.de Wilde	CR	CR
Angiosperm	Myristicaceae	<i>Myristica cinnamomea</i> King	CR	CR
Angiosperm	Myristicaceae	<i>Myristica crassa</i> King	CR	DD
Angiosperm	Myristicaceae	<i>Myristica elliptica</i> Wall. ex Hook.f. & Thomson	EN	CR
Angiosperm	Myristicaceae	<i>Myristica iners</i> Blume	CR	CR
Angiosperm	Myristicaceae	<i>Myristica lowiana</i> King	CR	NEx
Angiosperm	Myristicaceae	<i>Myristica maingayi</i> Hook.f.	CR	DD
Angiosperm	Myristicaceae	<i>Myristica maxima</i> Warb.	CR	CR
Angiosperm	Myrtaceae	<i>Decaspermum parviflorum</i> (Lam.) A.J.Scott subsp. <i>parviflorum</i>	VU	VU
Angiosperm	Myrtaceae	<i>Decaspermum parviflorum</i> (Lam.) A.J.Scott subsp. <i>quadripartitum</i> J.Parn. & NicLugh.	VU	CR
Angiosperm	Myrtaceae	<i>Melaleuca cajuputi</i> Maton & Sm. ex R.Powell	NEx	DD
Angiosperm	Myrtaceae	<i>Rhodamnia cinerea</i> Jack	Not Listed	LC
Angiosperm	Myrtaceae	<i>Rhodomyrtus tomentosa</i> (Aiton) Hassk.	Not Listed	VU
Angiosperm	Myrtaceae	<i>Syzygium acuminatissimum</i> (Blume) DC.	EN	EN
Angiosperm	Myrtaceae	<i>Syzygium attenuatum</i> (Miq.) Merr. & L.M.Perry var. <i>attenuatum</i>	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium avene</i> Miq.	NEx	NEx
Angiosperm	Myrtaceae	<i>Syzygium borneense</i> (Miq.) Miq.	Not Listed	LC
Angiosperm	Myrtaceae	<i>Syzygium cerasiforme</i> (Blume) Merr. & L.M.Perry	Not Listed	LC
Angiosperm	Myrtaceae	<i>Syzygium chloranthum</i> (Duthie) Merr. & L.M.Perry	CR	EN
Angiosperm	Myrtaceae	<i>Syzygium cinereum</i> (Kurz) Chantar. & J.Parn.	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium claviflorum</i> (Roxb.) Wall. ex Steud. var. <i>claviflorum</i>	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium claviflorum</i> (Roxb.) Wall. ex Steud. var. <i>maingayi</i> (Duthie) Chantar. & J.Parn.	CR	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Myrtaceae	<i>Syzygium conglomeratum</i> (Duthie) I.M.Turner var. <i>conglomeratum</i>	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium duthieanum</i> (King) Masam.	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium filiforme</i> Chantar. & J.Parn.	EN	EN
Angiosperm	Myrtaceae	<i>Syzygium flosculiferum</i> (M.R.Hend.) Sreek.	NEx	NEx
Angiosperm	Myrtaceae	<i>Syzygium formosum</i> (Wall.) Mason	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium glabratum</i> (DC.) Veldkamp	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium glaucum</i> (King) Chantar. & J.Parn.	VU	VU
Angiosperm	Myrtaceae	<i>Syzygium grande</i> (Wight) Walp.	Not Listed	LC
Angiosperm	Myrtaceae	<i>Syzygium griffithii</i> (Duthie) Merr. & L.M.Perry	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium incarnatum</i> (Elmer) Merr. & L.M.Perry	EN	EN
Angiosperm	Myrtaceae	<i>Syzygium inophyllum</i> DC.	CR	NEx
Angiosperm	Myrtaceae	<i>Syzygium kunstleri</i> (King) Bahadur & R.C.Gaur	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium leptostemon</i> (Korth.) Merr. & L.M.Perry	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium leucoxylon</i> Korth.	NEx	NEx
Angiosperm	Myrtaceae	<i>Syzygium linocieroideum</i> (King) I.M.Turner	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium maingayi</i> Chantar. & J.Parn.	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium muelleri</i> (Miq.) Miq.	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium myrtifolium</i> Walp.	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium ngadimanianum</i> (M.R.Hend.) I.M.Turner	EN	CR
Angiosperm	Myrtaceae	<i>Syzygium nigricans</i> (King) Merr. & L.M.Perry	EN	EN
Angiosperm	Myrtaceae	<i>Syzygium oblatum</i> (Roxb.) Wall. ex A.M.Cowan & Cowan var. <i>oblatum</i>	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium pachyphyllum</i> (Kurz) Merr. & L.M.Perry	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium palembanicum</i> Miq.	VU	VU
Angiosperm	Myrtaceae	<i>Syzygium papillosum</i> (Duthie) Merr. & L.M.Perry	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium pauper</i> (Ridl.) I.M.Turner	EN	CR
Angiosperm	Myrtaceae	<i>Syzygium pendens</i> (Duthie) I.M.Turner	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium polyanthum</i> (Wight) Walp.	VU	LC
Angiosperm	Myrtaceae	<i>Syzygium prainianum</i> (King) Chantar. & J.Parn.	Not Listed	CR
Angiosperm	Myrtaceae	<i>Syzygium pustulatum</i> (Duthie) Merr.	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium pycnanthum</i> Merr. & L.M.Perry	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium pyrifolium</i> (Blume) DC.	CR	EN
Angiosperm	Myrtaceae	<i>Syzygium ridleyi</i> (King) Chantar. & J.Parn.	EN	CR
Angiosperm	Myrtaceae	<i>Syzygium rugosum</i> Korth. var. <i>rugosum</i>	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium scortechinii</i> (King) Chantar. & J.Parn. var. <i>scortechinii</i>	NEx	CR
Angiosperm	Myrtaceae	<i>Syzygium singaporense</i> (King) Airy Shaw	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium subcrenatum</i> Merr. & L.M.Perry	NEx	EN
Angiosperm	Myrtaceae	<i>Syzygium subdecussatum</i> (Duthie) I.M.Turner var. <i>subdecussatum</i>	CR	CR
Angiosperm	Myrtaceae	<i>Syzygium syzygioides</i> (Miq.) Merr. & L.M.Perry	VU	LC
Angiosperm	Myrtaceae	<i>Syzygium urophyllum</i> Merr.	NEx	NEx
Angiosperm	Myrtaceae	<i>Syzygium valdevenosum</i> (Duthie) Merr. & L.M.Perry	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Myrtaceae	<i>Syzygium zeylanicum</i> (L.) DC.	Not Listed	LC
Angiosperm	Myrtaceae	<i>Tristaniopsis merguensis</i> (Griff.) Peter G.Wilson & J.T.Waterh.	EN	CR
Angiosperm	Myrtaceae	<i>Tristaniopsis obovata</i> (Benn.) Peter G.Wilson & J.T.Waterh.	CR	CR
Angiosperm	Myrtaceae	<i>Tristaniopsis whiteana</i> (Griff.) Peter G.Wilson & J.T.Waterh.	EN	EN
Angiosperm	Nepenthaceae	<i>Nepenthes ampullaria</i> Jack	VU	VU
Angiosperm	Nepenthaceae	<i>Nepenthes gracilis</i> Korth.	Not Listed	LC
Angiosperm	Nepenthaceae	<i>Nepenthes rafflesiana</i> Jack	VU	VU
Angiosperm	Nymphaeaceae	<i>Barclaya motleyi</i> Hook.f.	CR	CR
Angiosperm	Nyssaceae	<i>Mastixia pentandra</i> Blume subsp. <i>scortechinii</i> (King) K.M.Matthew	CR	CR
Angiosperm	Nyssaceae	<i>Mastixia trichotoma</i> Blume var. <i>maingayi</i> (C.B.Clarke) Danser	CR	CR
Angiosperm	Ochnaceae	<i>Brackenridgea elegantissima</i> (Wall.) Kanis	EN	EN
Angiosperm	Ochnaceae	<i>Brackenridgea palustris</i> Bartell.	CR	NEx
Angiosperm	Ochnaceae	<i>Campylospermum serratulum</i> (Gaertn.) Bittrich & M.C.E.Amaral	Not Listed	VU
Angiosperm	Ochnaceae	<i>Euthemis leucocarpa</i> Jack	NEx	NEx
Angiosperm	Ochnaceae	<i>Euthemis minor</i> Jack	NEx	NEx
Angiosperm	Olacaceae	<i>Anacolosa frutescens</i> (Blume) Blume	NEx	CR
Angiosperm	Olacaceae	<i>Erythropalum scandens</i> Blume	VU	VU
Angiosperm	Olacaceae	<i>Ochanostachys amentacea</i> Mast.	VU	VU
Angiosperm	Olacaceae	<i>Olax imbricata</i> Roxb.	NEx	NEx
Angiosperm	Olacaceae	<i>Scorodocarpus borneensis</i> (Baill.) Becc.	EN	CR
Angiosperm	Olacaceae	<i>Strombosia ceylanica</i> Gardner	Not Listed	LC
Angiosperm	Olacaceae	<i>Strombosia javanica</i> Blume	Not Listed	VU
Angiosperm	Olacaceae	<i>Ximenia americana</i> L.	Not Listed	LC
Angiosperm	Oleaceae	<i>Chionanthus macrocarpus</i> Blume	NEx	NEx
Angiosperm	Oleaceae	<i>Chionanthus ramiflorus</i> Roxb.	CR	CR
Angiosperm	Oleaceae	<i>Jasminum elongatum</i> (P.J.Bergius) Willd.	EN	EN
Angiosperm	Oleaceae	<i>Jasminum griffithii</i> C.B.Clarke	NEx	NEx
Angiosperm	Oleaceae	<i>Jasminum longipetalum</i> King & Gamble	NEx	NEx
Angiosperm	Oleaceae	<i>Olea brachiata</i> (Lour.) Merr.	VU	VU
Angiosperm	Opiliaceae	<i>Cansjera rheedei</i> J.F.Gmel.	VU	LC
Angiosperm	Opiliaceae	<i>Champereia manillana</i> (Blume) Merr.	Not Listed	LC
Angiosperm	Opiliaceae	<i>Lepionurus sylvestris</i> Blume	CR	CR
Angiosperm	Orchidaceae	<i>Acriopsis liliifolia</i> (J.Koenig) Ormerod	CR	CR
Angiosperm	Orchidaceae	<i>Acriopsis ridleyi</i> Hook.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Adenoncos major</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Adenoncos sumatrana</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Aeridostachya robusta</i> (Blume) Brieger	NEx	NEx
Angiosperm	Orchidaceae	<i>Agrostophyllum majus</i> Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Agrostophyllum stipulatum</i> (Griff.) Schltr. subsp. <i>bicuspidatum</i> (J.J.Sm.) Schuit.	NEx	NEx
Angiosperm	Orchidaceae	<i>Agrostophyllum stipulatum</i> (Griff.) Schltr. subsp. <i>stipulatum</i>	NEx	CR
Angiosperm	Orchidaceae	<i>Anoectochilus geniculatus</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Aphyllorchis pallida</i> Blume	NEx	CR
Angiosperm	Orchidaceae	<i>Apostasia nuda</i> R.Br.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Orchidaceae	<i>Apostasia wallichii</i> R.Br.	Not Listed	NEx
Angiosperm	Orchidaceae	<i>Appendicula anceps</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Appendicula cornuta</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Appendicula lucida</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Appendicula uncata</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Arachnis hookeriana</i> (Rchb.f.) Rchb.f.	CR	CR
Angiosperm	Orchidaceae	<i>Arundina graminifolia</i> (D.Don) Hochr.	Not Listed	VU
Angiosperm	Orchidaceae	<i>Brachypeza pallida</i> (Blume) Kocyan & Schuit.	CR	CR
Angiosperm	Orchidaceae	<i>Bromheadia alticola</i> Ridl.	NEx	CR
Angiosperm	Orchidaceae	<i>Bromheadia aporooides</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bromheadia borneensis</i> J.J.Sm. var. <i>longiflora</i> Scheind. & de Vogel	NEx	NEx
Angiosperm	Orchidaceae	<i>Bromheadia finlaysoniana</i> (Lindl.) Miq.	Not Listed	LC
Angiosperm	Orchidaceae	<i>Bromheadia scirpoidea</i> Ridl.	NEx	CR
Angiosperm	Orchidaceae	<i>Bromheadia truncata</i> Seidenf.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bryobium hyacinthoides</i> (Blume) Y.P.Ng & P.J.Cribb	NEx	NEx
Angiosperm	Orchidaceae	<i>Bryobium pudicum</i> (Ridl.) Y.P.Ng & P.J.Cribb	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum aberrans</i> Schltr.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum acuminatum</i> (Ridl.) Ridl.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum apodum</i> Hook.f.	CR	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum botryophorum</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum clandestinum</i> Lindl.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum cleistogamum</i> Ridl.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum concinnum</i> Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum flavescens</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum gracillimum</i> (Rolfe) Rolfe	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum gusdorfii</i> J.J.Sm.	CR	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum lasianthum</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum lepidum</i> (Blume) J.J.Sm.	CR	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum limbatum</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum lobbii</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum macranthum</i> Lindl.	CR	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum macrochilum</i> Rolfe	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum makoyanum</i> (Rchb.f.) Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum maxillare</i> (Lindl.) Rchb.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum medusae</i> (Lindl.) Rchb.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum membranaceum</i> Teijsm. & Binn.	CR	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum ovalifolium</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum patens</i> King ex Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum pileatum</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum praetervisum</i> J.J.Verm.	Not Listed	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum purpurascens</i> Teijsm. & Binn.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum restrepia</i> (Ridl.) Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum ruficaudatum</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum rugosum</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum singaporeanum</i> Schltr.	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum striatellum</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum tenuifolium</i> (Blume) Lindl.	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Orchidaceae	<i>Bulbophyllum trifolium</i> Ridl.	VU	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum trigonopus</i> (Rchb.f.) P.T.Ong	NEx	CR
Angiosperm	Orchidaceae	<i>Bulbophyllum uniflorum</i> (Blume) Hassk.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum vaginatum</i> (Lindl.) Rchb.f.	VU	VU
Angiosperm	Orchidaceae	<i>Bulbophyllum vermiculare</i> Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Bulbophyllum vesiculosum</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Calanthe pulchra</i> (Blume) Lindl.	CR	CR
Angiosperm	Orchidaceae	<i>Calanthe tankervilleae</i> (Banks) M.W.Chase et al.	CR	CR
Angiosperm	Orchidaceae	<i>Callostylis pulchella</i> (Lindl.) S.C.Chen & Z.H.Tsi	NEx	CR
Angiosperm	Orchidaceae	<i>Ceratostylis javanica</i> (Blume) Schuit. et al.	NEx	NEx
Angiosperm	Orchidaceae	<i>Ceratostylis subulata</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Chamaeanthus laciniatus</i> Carr	NEx	NEx
Angiosperm	Orchidaceae	<i>Claderia leontocampus</i> Niissalo	Not Listed	CR
Angiosperm	Orchidaceae	<i>Claderia viridiflora</i> Hook.f.	CR	CR
Angiosperm	Orchidaceae	<i>Cleisostoma halophilum</i> (Ridl.) Garay	NEx	NEx
Angiosperm	Orchidaceae	<i>Cleisostoma scortechinii</i> (Hook.f.) Garay	NEx	NEx
Angiosperm	Orchidaceae	<i>Cleisostoma subulatum</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné bracteosa</i> (Rchb.f.) M.W.Chase & Schuit.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné cumingii</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné foerstermannii</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné mayeriana</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné pallidiflavens</i> (Blume) M.W.Chase & Schuit. var. <i>pallidiflavens</i>	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné rochussenii</i> de Vriese	NEx	CR
Angiosperm	Orchidaceae	<i>Coelogyné septemcostata</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné testacea</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Coelogyné tomentosa</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Corymborkis veratrifolia</i> (Reinw.) Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Crepidium micranthum</i> (Hook.f.) Szlach.	NEx	NEx
Angiosperm	Orchidaceae	<i>Cryptostylis arachnites</i> (Blume) Hassk.	NEx	NEx
Angiosperm	Orchidaceae	<i>Cylindrolobus longerepens</i> (Ridl.) Rauschert	NEx	NEx
Angiosperm	Orchidaceae	<i>Cylindrolobus neglectus</i> (Ridl.) J.J.Wood	NEx	NEx
Angiosperm	Orchidaceae	<i>Cylindrolobus nutans</i> (Lindl.) J.J.Wood	NEx	NEx
Angiosperm	Orchidaceae	<i>Cymbidium atropurpureum</i> (Lindl.) Rolfe	Not Listed	CR
Angiosperm	Orchidaceae	<i>Cymbidium bicolor</i> Lindl. subsp. <i>pubescens</i> (Lindl.) Du Puy & P.J.Cribb	CR	CR
Angiosperm	Orchidaceae	<i>Cymbidium finlaysonianum</i> Lindl.	CR	EN
Angiosperm	Orchidaceae	<i>Cystorchis javanica</i> (Blume) Blume	CR	NEx
Angiosperm	Orchidaceae	<i>Cystorchis variegata</i> Blume	NEx	CR
Angiosperm	Orchidaceae	<i>Dendrobium acerosum</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium aciculare</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium aloifolium</i> (Blume) Rchb.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Dendrobium angustifolium</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium comatum</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium crocatum</i> Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium crumenatum</i> Sw.	Not Listed	LC
Angiosperm	Orchidaceae	<i>Dendrobium dactyloferum</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium flexile</i> Ridl.	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Orchidaceae	<i>Dendrobium grande</i> Hook.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium hendersonii</i> A.D.Hawkes & A.H.Heller	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium hercoglossum</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium indivisum</i> (Blume) Miq.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium indragiriense</i> Schltr.	CR	CR
Angiosperm	Orchidaceae	<i>Dendrobium laciniatum</i> Ridl.	NEx	EX
Angiosperm	Orchidaceae	<i>Dendrobium lamellatum</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium leonis</i> (Lindl.) Rchb.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Dendrobium lobatum</i> (Blume) Miq.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium lobbii</i> Teijsm. & Binn.	CR	CR
Angiosperm	Orchidaceae	<i>Dendrobium longicolle</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium microgaphys</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium pachyphyllum</i> (Kuntze) Bakh.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium pensile</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium planibulbe</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium plicatile</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium prostratum</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium pulchellum</i> Roxb. ex Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium revolutum</i> Lindl.	CR	NEx
Angiosperm	Orchidaceae	<i>Dendrobium salaccense</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium secundum</i> (Blume) Lindl. ex Wall.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium setifolium</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium singaporense</i> A.D.Hawkes & A.H.Heller	NEx	CR
Angiosperm	Orchidaceae	<i>Dendrobium spurium</i> (Blume) J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium stuposum</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium subulatum</i> (Blume) Lindl.	CR	NEx
Angiosperm	Orchidaceae	<i>Dendrobium villosulum</i> Wall. ex Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dendrobium xantholeucum</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Didymoplexiella ornata</i> (Ridl.) Garay	NEx	NEx
Angiosperm	Orchidaceae	<i>Didymoplexis pallens</i> Griff.	CR	DD
Angiosperm	Orchidaceae	<i>Dienia ophrydis</i> (J.Koenig) Seidenf.	NEx	CR
Angiosperm	Orchidaceae	<i>Dilochia wallichii</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Dipodium fragrans</i> P.O'Byrne & J.J.Verm. var. <i>fragrans</i>	NEx	CR
Angiosperm	Orchidaceae	<i>Dipodium paludosum</i> (Griff.) Rchb.f.	CR	NEx
Angiosperm	Orchidaceae	<i>Eria javanica</i> (Sw.) Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Erythrorchis altissima</i> (Blume) Blume	Not Listed	NEx
Angiosperm	Orchidaceae	<i>Eulophia nuda</i> Lindl.	CR	CR
Angiosperm	Orchidaceae	<i>Galeola nudifolia</i> Lour.	CR	CR
Angiosperm	Orchidaceae	<i>Gastrodia javanica</i> (Blume) Lindl.	CR	CR
Angiosperm	Orchidaceae	<i>Grammatophyllum speciosum</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Habenaria singapurensis</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Hetaeria obliqua</i> Blume	NEx	CR
Angiosperm	Orchidaceae	<i>Hetaeria oblongifolia</i> Blume	NEx	CR
Angiosperm	Orchidaceae	<i>Hylophila mollis</i> Lindl.	CR	CR
Angiosperm	Orchidaceae	<i>Lecanorchis malaccensis</i> Ridl.	CR	CR
Angiosperm	Orchidaceae	<i>Lepidogyne longifolia</i> (Blume) Blume	Not Listed	CR
Angiosperm	Orchidaceae	<i>Liparis barbata</i> Lindl.	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Orchidaceae	<i>Liparis elegans</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Liparis ferruginea</i> Lindl.	CR	CR
Angiosperm	Orchidaceae	<i>Liparis tricallosa</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Macodes petola</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Micropera fuscolutea</i> (Lindl.) Garay	NEx	NEx
Angiosperm	Orchidaceae	<i>Microsaccus ampullaceus</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Microsaccus griffithii</i> (C.S.P.Parish & Rchb.f.) Seidenf.	NEx	NEx
Angiosperm	Orchidaceae	<i>Microsaccus javensis</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Microsaccus sumatranus</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Mycaranthes obliqua</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Nephelaphyllum pulchrum</i> Blume	CR	CR
Angiosperm	Orchidaceae	<i>Nervilia singaporensis</i> Niissalo	NEx	EN
Angiosperm	Orchidaceae	<i>Neuwiedia griffithii</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Neuwiedia veratrifolia</i> Blume	CR	EN
Angiosperm	Orchidaceae	<i>Neuwiedia zollingeri</i> Rchb.f. var. <i>singapureana</i> (Wall. ex Baker) de Vogel	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia bertoldi</i> King & Pantl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia dissitiflora</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia equitans</i> (G.Forst.) Mutel	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia lunata</i> (Blume) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia lycopodioides</i> (J.Koenig) Ormerod	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia miniata</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Oberonia stenophylla</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Oxystophyllum carnosum</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Oxystophyllum excavatum</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Oxystophyllum sinuatum</i> (Lindl.) M.A.Clem.	NEx	NEx
Angiosperm	Orchidaceae	<i>Peristylus lacertifer</i> (Lindl.) J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Peristylus maingayi</i> (King & Pantl.) J.J.Wood & Ormerod	NEx	NEx
Angiosperm	Orchidaceae	<i>Phalaenopsis cornu-cervi</i> (Breda) Blume & Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Phreatia plantaginifolia</i> (J.Koenig) Ormerod	NEx	NEx
Angiosperm	Orchidaceae	<i>Pinalia bractescens</i> (Lindl.) Kuntze	NEx	NEx
Angiosperm	Orchidaceae	<i>Pinalia floribunda</i> (Lindl.) Kuntze	NEx	CR
Angiosperm	Orchidaceae	<i>Pinalia tenuiflora</i> (Ridl.) J.J.Wood	NEx	NEx
Angiosperm	Orchidaceae	<i>Plocoglottis gigantea</i> (Hook.f.) J.J.Sm.	CR	CR
Angiosperm	Orchidaceae	<i>Plocoglottis javanica</i> Blume	CR	CR
Angiosperm	Orchidaceae	<i>Plocoglottis lowii</i> Rchb.f.	NEx	CR
Angiosperm	Orchidaceae	<i>Podochilus microphyllus</i> Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Polystachya concreta</i> (Jacq.) Garay & H.R.Sweet	CR	CR
Angiosperm	Orchidaceae	<i>Pomatocalpa diffusum</i> Breda	CR	CR
Angiosperm	Orchidaceae	<i>Renanthera elongata</i> (Blume) Lindl.	NEx	CR
Angiosperm	Orchidaceae	<i>Renanthera histrionica</i> Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Rhynchostylis gigantea</i> (Lindl.) Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Robiquetia spathulata</i> (Blume) J.J.Sm.	CR	CR
Angiosperm	Orchidaceae	<i>Schoenorchis micrantha</i> Reinw. ex Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Schoenorchis secundiflora</i> (Ridl.) J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Spathoglottis plicata</i> Blume	Not Listed	LC
Angiosperm	Orchidaceae	<i>Stereosandra javanica</i> Blume	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Orchidaceae	<i>Stichorkis gibbosa</i> (Finet) J.J.Wood	NEx	NEx
Angiosperm	Orchidaceae	<i>Strongyleria pannea</i> (Lindl.) Schuit. et al.	NEx	NEx
Angiosperm	Orchidaceae	<i>Strongyleria pellipes</i> (Rchb.f. ex Hook.f.) Schuit. et al.	NEx	NEx
Angiosperm	Orchidaceae	<i>Taeniophyllum filiforme</i> J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Taeniophyllum pusillum</i> (Willd.) Seidenf. & Ormerod	CR	CR
Angiosperm	Orchidaceae	<i>Thelasis carinata</i> Blume	NEx	NEx
Angiosperm	Orchidaceae	<i>Thelasis micrantha</i> (Brongn.) J.J.Sm.	NEx	NEx
Angiosperm	Orchidaceae	<i>Thelasis pygmaea</i> (Griff.) Lindl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum acuminatissimum</i> (Blume) Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum amplexicaule</i> (Blume) Rchb.f.	CR	CR
Angiosperm	Orchidaceae	<i>Thrixspermum calceolus</i> (Lindl.) Rchb.f.	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum centipeda</i> Lour.	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum clavatum</i> (J.Koenig) Garay	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum filiforme</i> (Hook.f.) Kuntze	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum scopo</i> (Rchb.f. ex Hook.f.) Holttum	NEx	NEx
Angiosperm	Orchidaceae	<i>Thrixspermum trichoglottis</i> (Hook.f.) Kuntze	CR	CR
Angiosperm	Orchidaceae	<i>Trichotosia gracilis</i> (Hook.f.) Kraenzl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Trichotosia velutina</i> (Lodd. ex Lindl.) Kraenzl.	NEx	CR
Angiosperm	Orchidaceae	<i>Trichotosia vestita</i> (Wall. ex Lindl.) Kraenzl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Tropidia curculigoides</i> Lindl.	NEx	CR
Angiosperm	Orchidaceae	<i>Vanilla griffithii</i> Rchb.f.	VU	EN
Angiosperm	Orchidaceae	<i>Vrydagzynea albida</i> (Blume) Blume	NEx	CR
Angiosperm	Orchidaceae	<i>Vrydagzynea lancifolia</i> Ridl.	NEx	CR
Angiosperm	Orchidaceae	<i>Vrydagzynea tristriata</i> Ridl.	NEx	NEx
Angiosperm	Orchidaceae	<i>Zeuxine clandestina</i> Blume	CR	CR
Angiosperm	Orchidaceae	<i>Zeuxine parvifolia</i> (Ridl.) K.Schum. & Fedde	CR	DD
Angiosperm	Orchidaceae	<i>Zeuxine strateumatica</i> (L.) Schltr.	NEx	CR
Angiosperm	Oxalidaceae	<i>Dapania racemosa</i> Korth.	NEx	CR
Angiosperm	Oxalidaceae	<i>Sarcocapnos griffithii</i> (Planch. ex Hook.f.) Hallier f.	CR	CR
Angiosperm	Oxalidaceae	<i>Sarcocapnos laxa</i> (Ridl.) R.Knuth var. <i>sericea</i> (Ridl.) Veldkamp	CR	CR
Angiosperm	Pandaceae	<i>Galearia fulva</i> (Tul.) Miq.	VU	VU
Angiosperm	Pandaceae	<i>Galearia maingayi</i> Hook.f.	CR	CR
Angiosperm	Pandaceae	<i>Microdesmis caseariifolia</i> Planch. ex Hook.	Not Listed	VU
Angiosperm	Pandanaceae	<i>Benstonea affinis</i> (Kurz) Callm. & Buerki	NEx	CR
Angiosperm	Pandanaceae	<i>Benstonea atrocarpa</i> (Griff.) Callm. & Buerki	EN	EN
Angiosperm	Pandanaceae	<i>Benstonea ornata</i> (Kurz) Callm. & Buerki	EN	EN
Angiosperm	Pandanaceae	<i>Benstonea parva</i> (Ridl.) Callm. & Buerki	CR	EN
Angiosperm	Pandanaceae	<i>Freycinetia angustifolia</i> Blume	CR	CR
Angiosperm	Pandanaceae	<i>Freycinetia confusa</i> Ridl.	NEx	CR
Angiosperm	Pandanaceae	<i>Freycinetia corneri</i> B.C.Stone	NEx	NEx
Angiosperm	Pandanaceae	<i>Freycinetia javanica</i> Blume	NEx	CR
Angiosperm	Pandanaceae	<i>Freycinetia sumatrana</i> Hemsl.	Not Listed	VU
Angiosperm	Pandanaceae	<i>Pandanus houilletii</i> Carrière	CR	CR
Angiosperm	Pandanaceae	<i>Pandanus nitidus</i> (Miq.) Kurz	CR	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Pandanaceae	<i>Pandanus odorifer</i> (Forssk.) Kuntze	Not Listed	LC
Angiosperm	Pandanaceae	<i>Pandanus rostratus</i> Martelli	NEx	NEx
Angiosperm	Pandanaceae	<i>Pandanus yvanii</i> Solms	CR	CR
Angiosperm	Passifloraceae	<i>Adenia cordifolia</i> (Blume) Engl.	EN	EN
Angiosperm	Passifloraceae	<i>Adenia macrophylla</i> (Blume) Koord. var. <i>singaporiana</i> (Wall. ex G.Don) W.J.de Wilde	VU	EN
Angiosperm	Pentaphragmataceae	<i>Pentaphragma ellipticum</i> Poulsen var. <i>ellipticum</i>	VU	CR
Angiosperm	Pentaphylacaceae	<i>Adinandra acuminata</i> Korth.	CR	NEx
Angiosperm	Pentaphylacaceae	<i>Adinandra dumosa</i> Jack	Not Listed	LC
Angiosperm	Pentaphylacaceae	<i>Adinandra integerrima</i> T.Anderson ex Dyer	NEx	CR
Angiosperm	Pentaphylacaceae	<i>Eurya acuminata</i> DC.	Not Listed	LC
Angiosperm	Pentaphylacaceae	<i>Ternstroemia coriacea</i> Scheff.	CR	CR
Angiosperm	Pentaphylacaceae	<i>Ternstroemia palembangensis</i> Kobuski	CR	CR
Angiosperm	Pentaphylacaceae	<i>Ternstroemia penangiana</i> Choisy	NEx	NEx
Angiosperm	Pentaphylacaceae	<i>Ternstroemia wallichiana</i> (Griff.) Engl.	NEx	NEx
Angiosperm	Peraceae	<i>Chaetocarpus castanicarpus</i> (Roxb.) Thwaites	NEx	NEx
Angiosperm	Philydraceae	<i>Philydrum lanuginosum</i> Banks ex Gaertn.	NEx	CR
Angiosperm	Phrymaceae	<i>Cyrtandromoea subsessilis</i> (Miq.) B.L.Burtt	Not Listed	NEx
Angiosperm	Phyllanthaceae	<i>Actephila excelsa</i> (Dalzell) Müll.Arg.	VU	CR
Angiosperm	Phyllanthaceae	<i>Antidesma coriaceum</i> Tul.	VU	EN
Angiosperm	Phyllanthaceae	<i>Antidesma cuspidatum</i> Müll.Arg.	Not Listed	LC
Angiosperm	Phyllanthaceae	<i>Antidesma neurocarpum</i> Miq.	EN	EN
Angiosperm	Phyllanthaceae	<i>Antidesma velutinosum</i> Blume	EN	EN
Angiosperm	Phyllanthaceae	<i>Aporosa benthamiana</i> Hook.f.	VU	VU
Angiosperm	Phyllanthaceae	<i>Aporosa confusa</i> Gage	CR	CR
Angiosperm	Phyllanthaceae	<i>Aporosa falcifera</i> Hook.f.	CR	CR
Angiosperm	Phyllanthaceae	<i>Aporosa frutescens</i> Blume	Not Listed	LC
Angiosperm	Phyllanthaceae	<i>Aporosa globifera</i> Hook.f.	Not Listed	CR
Angiosperm	Phyllanthaceae	<i>Aporosa lucida</i> (Miq.) Airy Shaw var. <i>lucida</i>	CR	VU
Angiosperm	Phyllanthaceae	<i>Aporosa lunata</i> (Miq.) Kurz	CR	CR
Angiosperm	Phyllanthaceae	<i>Aporosa maingayi</i> Hook.f.	EN	EN
Angiosperm	Phyllanthaceae	<i>Aporosa nervosa</i> Hook.f.	VU	EN
Angiosperm	Phyllanthaceae	<i>Aporosa nigricans</i> Hook.f.	EN	CR
Angiosperm	Phyllanthaceae	<i>Aporosa prainiana</i> King ex Gage	VU	VU
Angiosperm	Phyllanthaceae	<i>Aporosa subcaudata</i> Merr.	EN	CR
Angiosperm	Phyllanthaceae	<i>Aporosa symplocoidea</i> (Hook.f.) Gage	Not Listed	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea bracteata</i> Müll.Arg.	CR	VU
Angiosperm	Phyllanthaceae	<i>Baccaurea brevipes</i> Hook.f.	CR	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea macrocarpa</i> (Miq.) Müll.Arg.	CR	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea macrophylla</i> (Müll.Arg.) Müll.Arg.	NEx	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea maingayi</i> Hook.f.	CR	NEx
Angiosperm	Phyllanthaceae	<i>Baccaurea minor</i> Hook.f.	CR	VU
Angiosperm	Phyllanthaceae	<i>Baccaurea motleyana</i> (Müll.Arg.) Müll.Arg.	CR	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea parviflora</i> (Müll.Arg.) Müll.Arg.	Not Listed	LC
Angiosperm	Phyllanthaceae	<i>Baccaurea polyneura</i> Hook.f.	EN	VU
Angiosperm	Phyllanthaceae	<i>Baccaurea pyriformis</i> Gage	NEx	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea racemosa</i> (Reinw.) Müll.Arg.	EN	CR
Angiosperm	Phyllanthaceae	<i>Baccaurea reticulata</i> Hook.f.	CR	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Phyllanthaceae	<i>Baccaurea sumatrana</i> (Miq.) Müll.Arg.	VU	CR
Angiosperm	Phyllanthaceae	<i>Breynia androgyna</i> (L.) Chakrab. & N.P.Balakr.	Not Listed	VU
Angiosperm	Phyllanthaceae	<i>Breynia discigera</i> Müll.Arg.	CR	EN
Angiosperm	Phyllanthaceae	<i>Breynia racemosa</i> (Blume) Müll.Arg.	EN	LC
Angiosperm	Phyllanthaceae	<i>Breynia vitis-idaea</i> (Burm.f.) C.E.C.Fisch.	Not Listed	NEx
Angiosperm	Phyllanthaceae	<i>Bridelia cinnamomea</i> Hook.f.	NEx	CR
Angiosperm	Phyllanthaceae	<i>Bridelia pustulata</i> Hook.f.	CR	CR
Angiosperm	Phyllanthaceae	<i>Bridelia stipularis</i> (L.) Blume	VU	LC
Angiosperm	Phyllanthaceae	<i>Bridelia tomentosa</i> Blume	Not Listed	LC
Angiosperm	Phyllanthaceae	<i>Cleistanthus hirsutulus</i> Hook.f.	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Cleistanthus macrophyllus</i> Hook.f.	CR	CR
Angiosperm	Phyllanthaceae	<i>Cleistanthus malaccensis</i> Hook.f.	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Cleistanthus myrianthus</i> (Hassk.) Kurz	CR	CR
Angiosperm	Phyllanthaceae	<i>Cleistanthus sumatranus</i> (Miq.) Müll.Arg.	VU	VU
Angiosperm	Phyllanthaceae	<i>Emblica officinalis</i> Gaertn.	CR	CR
Angiosperm	Phyllanthaceae	<i>Emblica pachyphyllea</i> (Müll.Arg.) R.W.Bouman	Not Listed	NEx
Angiosperm	Phyllanthaceae	<i>Glochidion borneense</i> (Müll.Arg.) Boerl.	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion glomerulatum</i> (Miq.) Boerl.	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Glochidion kunstlerianum</i> Gage	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Glochidion littorale</i> Blume	EN	EN
Angiosperm	Phyllanthaceae	<i>Glochidion lutescens</i> Blume	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion obscurum</i> (Roxb. ex Willd.) Blume	Not Listed	CR
Angiosperm	Phyllanthaceae	<i>Glochidion perakense</i> Hook.f.	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Glochidion rubrum</i> Blume	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion sericeum</i> (Blume) Zoll. & Moritzi	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion singaporense</i> Gage	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion superbum</i> Baill.	Not Listed	LC
Angiosperm	Phyllanthaceae	<i>Glochidion varians</i> Miq.	NEx	NEx
Angiosperm	Phyllanthaceae	<i>Glochidion wallichianum</i> Müll.Arg.	NEx	CR
Angiosperm	Phyllanthaceae	<i>Glochidion zeylanicum</i> (Gaertn.) A.Juss. var. <i>arborescens</i> (Blume) Chakrab. & M.Gangop.	CR	CR
Angiosperm	Phyllanthaceae	<i>Glochidion zeylanicum</i> (Gaertn.) A.Juss. var. <i>zeylanicum</i>	VU	VU
Angiosperm	Phyllanthaceae	<i>Kirganelia reticulata</i> (Poir.) Baill.	Not Listed	DD
Angiosperm	Phyllanthaceae	<i>Margaritaria indica</i> (Dalzell) Airy Shaw	Not Listed	CR
Angiosperm	Phyllanthaceae	<i>Synostemon bacciformis</i> (L.) G.L.Webster	CR	CR
Angiosperm	Picrodendraceae	<i>Austrobuxus nitidus</i> Miq.	NEx	NEx
Angiosperm	Piperaceae	<i>Piper baccatum</i> Blume	NEx	CR
Angiosperm	Piperaceae	<i>Piper crassipes</i> Korth. ex Miq.	CR	LC
Angiosperm	Piperaceae	<i>Piper curtisii</i> C.DC.	Not Listed	CR
Angiosperm	Piperaceae	<i>Piper lanatum</i> Roxb.	NEx	VU
Angiosperm	Piperaceae	<i>Piper macropiper</i> Pennant	CR	EN
Angiosperm	Piperaceae	<i>Piper maingayi</i> Hook.f.	NEx	CR
Angiosperm	Piperaceae	<i>Piper muricatum</i> Blume	CR	CR
Angiosperm	Piperaceae	<i>Piper obtusissimum</i> Miq.	Not Listed	CR
Angiosperm	Piperaceae	<i>Piper porphyrophyllum</i> (Lindl. ex Blandy) N.E.Br.	EN	CR
Angiosperm	Piperaceae	<i>Piper protractum</i> C.DC.	CR	CR
Angiosperm	Piperaceae	<i>Piper ramipilum</i> C.DC.	Not Listed	EN
Angiosperm	Piperaceae	<i>Piper ribesioides</i> Wall.	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Piperaceae	<i>Piper ridleyi</i> C.DC.	Not Listed	CR
Angiosperm	Piperaceae	<i>Piper rostratum</i> Roxb.	Not Listed	CR
Angiosperm	Piperaceae	<i>Piper sarmentosum</i> Roxb.	Not Listed	LC
Angiosperm	Piperaceae	<i>Piper schizonephros</i> C.DC.	Not Listed	CR
Angiosperm	Pittosporaceae	<i>Pittosporum ridleyi</i> L.W.Cayzer & G.Chandler	VU	VU
Angiosperm	Plantaginaceae	<i>Adenosma caerulea</i> R.Br.	Not Listed	NEx
Angiosperm	Plantaginaceae	<i>Adenosma indiana</i> (Lour.) Merr.	Not Listed	NEx
Angiosperm	Plantaginaceae	<i>Adenosma inopinata</i> Prain	Not Listed	CR
Angiosperm	Plantaginaceae	<i>Adenosma javanica</i> (Blume) Koord.	Not Listed	EN
Angiosperm	Plantaginaceae	<i>Limnophila laxa</i> Benth.	Not Listed	LC
Angiosperm	Plantaginaceae	<i>Limnophila sessiliflora</i> Blume	Not Listed	LC
Angiosperm	Plantaginaceae	<i>Microcarpaea minima</i> (Retz.) Merr.	Not Listed	NEx
Angiosperm	Poaceae	<i>Acroceras munroanum</i> (Balansa) Henrard	Not Listed	NEx
Angiosperm	Poaceae	<i>Acroceras tonkinense</i> (Balansa) C.E.Hubb. ex Bor	Not Listed	CR
Angiosperm	Poaceae	<i>Alloteropsis cimicina</i> (L.) Stapf	Not Listed	LC
Angiosperm	Poaceae	<i>Centotheca lappacea</i> (L.) Desv.	CR	LC
Angiosperm	Poaceae	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	Not Listed	LC
Angiosperm	Poaceae	<i>Cyrtococcum accrescens</i> (Trin.) Stapf	CR	VU
Angiosperm	Poaceae	<i>Cyrtococcum patens</i> (L.) A.Camus	CR	VU
Angiosperm	Poaceae	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria bicornis</i> (Lam.) Roem. & Schult.	Not Listed	CR
Angiosperm	Poaceae	<i>Digitaria ciliaris</i> (Retz.) Koeler	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria fuscescens</i> (J.Presl) Henrard	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria longiflora</i> (Retz.) Pers.	Not Listed	VU
Angiosperm	Poaceae	<i>Digitaria mollicoma</i> (Kunth) Henrard	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria nuda</i> Schumach.	Not Listed	CR
Angiosperm	Poaceae	<i>Digitaria radicosa</i> (J.Presl) Miq.	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria setigera</i> Roth var. <i>calliblepharata</i> (Henrard) Veldkamp	Not Listed	EN
Angiosperm	Poaceae	<i>Digitaria setigera</i> Roth var. <i>setigera</i>	Not Listed	LC
Angiosperm	Poaceae	<i>Digitaria violascens</i> Link	Not Listed	LC
Angiosperm	Poaceae	<i>Dimeria ornithopoda</i> Trin.	Not Listed	LC
Angiosperm	Poaceae	<i>Dinebra chinensis</i> (L.) P.M.Peterson & N.Snow	Not Listed	LC
Angiosperm	Poaceae	<i>Dinebra panicea</i> (Retz.) P.M.Peterson & N.Snow	Not Listed	CR
Angiosperm	Poaceae	<i>Echinochloa colona</i> (L.) Link	Not Listed	LC
Angiosperm	Poaceae	<i>Echinochloa crus-galli</i> (L.) P.Beauv.	Not Listed	CR
Angiosperm	Poaceae	<i>Echinochloa picta</i> (J.Koenig) P.W.Michael	NEx	NEx
Angiosperm	Poaceae	<i>Eleusine indica</i> (L.) Gaertn.	Not Listed	LC
Angiosperm	Poaceae	<i>Eragrostis atrovirens</i> (Desf.) Trin. ex Steud.	Not Listed	LC
Angiosperm	Poaceae	<i>Eragrostis brownii</i> (Kunth) Nees	Not Listed	VU
Angiosperm	Poaceae	<i>Eragrostis cumingii</i> Steud.	Not Listed	LC
Angiosperm	Poaceae	<i>Eragrostis montana</i> Balansa	Not Listed	CR
Angiosperm	Poaceae	<i>Eragrostis pilosa</i> (L.) P.Beauv.	Not Listed	VU
Angiosperm	Poaceae	<i>Eragrostis tenella</i> (L.) P.Beauv.	Not Listed	LC
Angiosperm	Poaceae	<i>Eragrostis unioloides</i> (Retz.) Nees ex Steud.	Not Listed	LC
Angiosperm	Poaceae	<i>Eriachne pallescens</i> R.Br.	VU	LC
Angiosperm	Poaceae	<i>Eriochloa procera</i> (Retz.) C.E.Hubb.	Not Listed	LC

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Poaceae	<i>Eustachys tenera</i> (J.Presl) A.Camus	NEx	NEx
Angiosperm	Poaceae	<i>Gigantochloa ligulata</i> Gamble	CR	CR
Angiosperm	Poaceae	<i>Heteropogon contortus</i> (L.) P.Beauv.	Not Listed	NEx
Angiosperm	Poaceae	<i>Hymenachne amplexicaulis</i> (Rudge) Nees	Not Listed	CR
Angiosperm	Poaceae	<i>Imperata conferta</i> (J.Presl) Ohwi	Not Listed	DD
Angiosperm	Poaceae	<i>Imperata cylindrica</i> (L.) P.Beauv.	Not Listed	LC
Angiosperm	Poaceae	<i>Isachne confusa</i> Ohwi	Not Listed	CR
Angiosperm	Poaceae	<i>Isachne globosa</i> (Thunb.) Kuntze	Not Listed	LC
Angiosperm	Poaceae	<i>Isachne minutula</i> (Gaudich.) Kunth	Not Listed	DD
Angiosperm	Poaceae	<i>Isachne schmidtii</i> Hack.	Not Listed	LC
Angiosperm	Poaceae	<i>Ischaemum barbatum</i> Retz.	Not Listed	LC
Angiosperm	Poaceae	<i>Ischaemum ciliare</i> Retz.	Not Listed	LC
Angiosperm	Poaceae	<i>Ischaemum feildingianum</i> Rendle	Not Listed	NEx
Angiosperm	Poaceae	<i>Ischaemum muticum</i> L.	Not Listed	LC
Angiosperm	Poaceae	<i>Ischaemum rugosum</i> Salisb.	Not Listed	NEx
Angiosperm	Poaceae	<i>Ischaemum timorense</i> Kunth	Not Listed	LC
Angiosperm	Poaceae	<i>Leersia hexandra</i> Sw.	Not Listed	LC
Angiosperm	Poaceae	<i>Lepturus repens</i> (G.Forst.) R.Br.	Not Listed	LC
Angiosperm	Poaceae	<i>Lophatherum gracile</i> Brongn.	Not Listed	LC
Angiosperm	Poaceae	<i>Mnesithea glandulosa</i> (Trin.) de Koning & Sosef	VU	VU
Angiosperm	Poaceae	<i>Ottochloa nodosa</i> (Kunth) Dandy	Not Listed	LC
Angiosperm	Poaceae	<i>Panicum auritum</i> J.Presl ex Nees	Not Listed	NEx
Angiosperm	Poaceae	<i>Panicum luzonense</i> J.Presl	Not Listed	NEx
Angiosperm	Poaceae	<i>Panicum paludosum</i> Roxb.	Not Listed	NEx
Angiosperm	Poaceae	<i>Panicum sarmentosum</i> Roxb.	Not Listed	DD
Angiosperm	Poaceae	<i>Paspalum orbiculare</i> G.Forst.	Not Listed	LC
Angiosperm	Poaceae	<i>Paspalum scrobiculatum</i> L. var. <i>bispicatum</i> Hack. ex Merr.	Not Listed	LC
Angiosperm	Poaceae	<i>Paspalum sumatrense</i> Roth	Not Listed	LC
Angiosperm	Poaceae	<i>Paspalum vaginatum</i> Sw.	Not Listed	LC
Angiosperm	Poaceae	<i>Perotis indica</i> (L.) Kuntze	Not Listed	CR
Angiosperm	Poaceae	<i>Phragmites karka</i> (Retz.) Trin. ex Steud.	Not Listed	DD
Angiosperm	Poaceae	<i>Pogonatherum crinitum</i> (Thunb.) Kunth	Not Listed	LC
Angiosperm	Poaceae	<i>Saccharum arundinaceum</i> Retz.	Not Listed	LC
Angiosperm	Poaceae	<i>Sacciolepis indica</i> (L.) Chase	Not Listed	LC
Angiosperm	Poaceae	<i>Sacciolepis myosuroides</i> (R.Br.) Chase ex E.G.Camus & A.Camus	Not Listed	NEx
Angiosperm	Poaceae	<i>Schizachyrium sanguineum</i> (Retz.) Alston	NEx	CR
Angiosperm	Poaceae	<i>Schizostachyum gracile</i> (Kurz ex Munro) Holtum	NEx	CR
Angiosperm	Poaceae	<i>Schizostachyum latifolium</i> Gamble	NEx	NEx
Angiosperm	Poaceae	<i>Schizostachyum lengguanii</i> K.M.Wong	Not Listed	CR
Angiosperm	Poaceae	<i>Scrotophorum urceolata</i> (Roxb.) Judz.	VU	VU
Angiosperm	Poaceae	<i>Setaria parviflora</i> (Poir.) Kerguélen	Not Listed	LC
Angiosperm	Poaceae	<i>Soejatmia ridleyi</i> (Gamble) K.M.Wong	CR	CR
Angiosperm	Poaceae	<i>Sphaerocaryum malaccense</i> (Trin.) Pilg.	NEx	NEx
Angiosperm	Poaceae	<i>Sporobolus indicus</i> (L.) R.Br. var. <i>flaccidus</i> (Roth) Veldkamp	Not Listed	LC
Angiosperm	Poaceae	<i>Sporobolus indicus</i> (L.) R.Br. var. <i>major</i> (Buse) Baaijens	Not Listed	LC
Angiosperm	Poaceae	<i>Sporobolus virginicus</i> (L.) Kunth	Not Listed	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Poaceae	<i>Themeda arguens</i> (L.) Hack.	Not Listed	DD
Angiosperm	Poaceae	<i>Themeda villosa</i> (Poir.) A.Camus	Not Listed	LC
Angiosperm	Poaceae	<i>Thuarea involuta</i> (G.Forst.) R.Br. ex Sm.	Not Listed	LC
Angiosperm	Poaceae	<i>Urochloa glumaris</i> (Trin.) Veldkamp	Not Listed	NEx
Angiosperm	Poaceae	<i>Urochloa subquadripala</i> (Trin.) R.D.Webster	Not Listed	LC
Angiosperm	Poaceae	<i>Zoysia matrella</i> (L.) Merr.	Not Listed	LC
Angiosperm	Polygonaceae	<i>Epirixanthes papuana</i> J.J.Sm.	Not Listed	NEx
Angiosperm	Polygonaceae	<i>Polygala glaucoidea</i> L.	Not Listed	CR
Angiosperm	Polygonaceae	<i>Securidaca philippinensis</i> Chodat	Not Listed	CR
Angiosperm	Polygonaceae	<i>Xanthophyllum discolor</i> Chodat	EN	EN
Angiosperm	Polygonaceae	<i>Xanthophyllum ellipticum</i> Korth. ex Miq.	CR	CR
Angiosperm	Polygonaceae	<i>Xanthophyllum euryhynchum</i> Miq.	VU	VU
Angiosperm	Polygonaceae	<i>Xanthophyllum flavescent</i> Roxb.	EN	EN
Angiosperm	Polygonaceae	<i>Xanthophyllum obscurum</i> A.W.Benn.	EN	CR
Angiosperm	Polygonaceae	<i>Xanthophyllum stipitatum</i> A.W.Benn. var. <i>amoenum</i> (Chodat) W.J.de Wilde & Duyfjes	CR	CR
Angiosperm	Polygonaceae	<i>Xanthophyllum stipitatum</i> A.W.Benn. var. <i>stipitatum</i>	EN	CR
Angiosperm	Polygonaceae	<i>Xanthophyllum vitellinum</i> (Blume) D.Dietr.	VU	VU
Angiosperm	Primulaceae	<i>Aegiceras corniculatum</i> (L.) Blanco	EN	CR
Angiosperm	Primulaceae	<i>Ardisia complanata</i> Wall.	Not Listed	LC
Angiosperm	Primulaceae	<i>Ardisia crassa</i> C.B.Clarke	NEx	NEx
Angiosperm	Primulaceae	<i>Ardisia crenata</i> Sims	CR	CR
Angiosperm	Primulaceae	<i>Ardisia cymosa</i> Blume	NEx	NEx
Angiosperm	Primulaceae	<i>Ardisia demissa</i> Miq. var. <i>demissa</i>	Not Listed	NEx
Angiosperm	Primulaceae	<i>Ardisia elliptica</i> Thunb.	EN	LC
Angiosperm	Primulaceae	<i>Ardisia eximia</i> Miq.	Not Listed	NEx
Angiosperm	Primulaceae	<i>Ardisia miquelianiana</i> Scheff.	CR	CR
Angiosperm	Primulaceae	<i>Ardisia purpurea</i> Reinw. ex Blume	CR	CR
Angiosperm	Primulaceae	<i>Ardisia ridleyi</i> King & Gamble	NEx	CR
Angiosperm	Primulaceae	<i>Ardisia sessilis</i> Scheff.	NEx	NEx
Angiosperm	Primulaceae	<i>Ardisia teysmanniana</i> Scheff.	EN	EN
Angiosperm	Primulaceae	<i>Ardisia tuberculata</i> Wall. ex A.DC.	CR	CR
Angiosperm	Primulaceae	<i>Ardisia villosa</i> Roxb.	CR	NEx
Angiosperm	Primulaceae	<i>Embelia amentacea</i> C.B.Clarke	NEx	EN
Angiosperm	Primulaceae	<i>Embelia canescens</i> Jack ex Wall. var. <i>glabrescens</i> Ridl.	EN	EN
Angiosperm	Primulaceae	<i>Embelia coriacea</i> Wall. ex A.DC.	CR	CR
Angiosperm	Primulaceae	<i>Embelia fulva</i> Mez	NEx	NEx
Angiosperm	Primulaceae	<i>Embelia lampani</i> Scheff.	EN	CR
Angiosperm	Primulaceae	<i>Embelia ribes</i> Burm.f.	NEx	LC
Angiosperm	Primulaceae	<i>Embelia rugosa</i> (King & Gamble) Ridl.	Not Listed	NEx
Angiosperm	Primulaceae	<i>Labisia pumila</i> (Blume) Fern.-Vill.	VU	VU
Angiosperm	Primulaceae	<i>Maesa leptobotrys</i> Hance	Not Listed	CR
Angiosperm	Primulaceae	<i>Maesa sumatrana</i> Scheff.	Not Listed	VU
Angiosperm	Primulaceae	<i>Myrsine capitellata</i> Wall.	VU	EN
Angiosperm	Proteaceae	<i>Helicia excelsa</i> (Roxb.) Blume	NEx	CR
Angiosperm	Proteaceae	<i>Helicia petiolaris</i> Benn.	CR	NEx
Angiosperm	Proteaceae	<i>Helicia robusta</i> (Roxb.) R.Br. ex Wall.	NEx	NEx
Angiosperm	Putranjivaceae	<i>Drypetes crassipes</i> Pax & K.Hoffm.	Not Listed	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Putranjivaceae	<i>Drypetes laevis</i> (Miq.) Pax & K.Hoffm.	CR	CR
Angiosperm	Putranjivaceae	<i>Drypetes longifolia</i> (Blume) Pax & K.Hoffm.	CR	CR
Angiosperm	Putranjivaceae	<i>Drypetes pendula</i> Ridl.	CR	CR
Angiosperm	Rhamnaceae	<i>Colubrina asiatica</i> (L.) Brongn.	Not Listed	LC
Angiosperm	Rhamnaceae	<i>Smythea lanceata</i> (Tul.) Summerh.	CR	CR
Angiosperm	Rhamnaceae	<i>Smythea macrocarpa</i> Hemsl.	Not Listed	CR
Angiosperm	Rhamnaceae	<i>Ventilago ferruginea</i> Cahen & Utteridge	Not Listed	CR
Angiosperm	Rhamnaceae	<i>Ventilago maingayi</i> M.A.Lawson	Not Listed	CR
Angiosperm	Rhamnaceae	<i>Ventilago malaccensis</i> Ridl.	EN	VU
Angiosperm	Rhamnaceae	<i>Ziziphus calophylla</i> Wall.	VU	VU
Angiosperm	Rhamnaceae	<i>Ziziphus elegans</i> Wall.	CR	CR
Angiosperm	Rhamnaceae	<i>Ziziphus horsfieldii</i> Miq.	EN	CR
Angiosperm	Rhamnaceae	<i>Ziziphus oenopolia</i> (L.) Mill.	NEx	NEx
Angiosperm	Rhizophoraceae	<i>Bruguiera cylindrica</i> (L.) Blume	Not Listed	LC
Angiosperm	Rhizophoraceae	<i>Bruguiera gymnorhiza</i> (L.) Lam. ex Savigny	Not Listed	LC
Angiosperm	Rhizophoraceae	<i>Bruguiera parviflora</i> (Roxb.) Wight & Arn. ex Griff.	EN	EN
Angiosperm	Rhizophoraceae	<i>Bruguiera sexangula</i> (Lour.) Poir.	CR	CR
Angiosperm	Rhizophoraceae	<i>Carallia brachiata</i> (Lour.) Merr.	EN	VU
Angiosperm	Rhizophoraceae	<i>Ceriops tagal</i> (Perr.) C.B.Rob.	VU	VU
Angiosperm	Rhizophoraceae	<i>Ceriops zippeliana</i> Blume	EN	EN
Angiosperm	Rhizophoraceae	<i>Gynotroches axillaris</i> Blume	Not Listed	LC
Angiosperm	Rhizophoraceae	<i>Kandelia candel</i> (L.) Druce	CR	CR
Angiosperm	Rhizophoraceae	<i>Pellacalyx axillaris</i> Korth.	EN	VU
Angiosperm	Rhizophoraceae	<i>Pellacalyx saccardianus</i> Scort.	EN	VU
Angiosperm	Rhizophoraceae	<i>Rhizophora apiculata</i> Blume	Not Listed	LC
Angiosperm	Rhizophoraceae	<i>Rhizophora mucronata</i> Poir.	Not Listed	LC
Angiosperm	Rhizophoraceae	<i>Rhizophora stylosa</i> Griff.	VU	VU
Angiosperm	Rosaceae	<i>Prunus arborea</i> (Blume) Kalkman var. <i>arborea</i>	CR	CR
Angiosperm	Rosaceae	<i>Prunus arborea</i> (Blume) Kalkman var. <i>stipulacea</i> (King) Kalkman	CR	CR
Angiosperm	Rosaceae	<i>Prunus grisea</i> (Blume ex Müll.Berol.) Kalkman var. <i>tomentosa</i> (Koord. & Valeton) Kalkman	CR	CR
Angiosperm	Rosaceae	<i>Prunus polystachya</i> (Hook.f.) Kalkman	Not Listed	LC
Angiosperm	Rosaceae	<i>Rubus moluccanus</i> L. var. <i>angulosus</i> Kalkman	NEx	VU
Angiosperm	Rosaceae	<i>Rubus moluccanus</i> L. var. <i>moluccanus</i>	VU	NEx
Angiosperm	Rubiaceae	<i>Adina eurhyncha</i> (Miq.) Å.Krüger & Löfstrand	VU	VU
Angiosperm	Rubiaceae	<i>Aidia auriculata</i> (Wall.) Ridsdale var. <i>auriculata</i>	CR	CR
Angiosperm	Rubiaceae	<i>Aidia densiflora</i> (Wall.) Masam.	VU	LC
Angiosperm	Rubiaceae	<i>Aidia lancifolia</i> K.M.Wong	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Canthium malayense</i> K.M.Wong	EN	CR
Angiosperm	Rubiaceae	<i>Canthium molle</i> King & Gamble	NEx	CR
Angiosperm	Rubiaceae	<i>Canthiumera robusta</i> K.M.Wong & X.Y.Ng	EN	EN
Angiosperm	Rubiaceae	<i>Chassalia curviflora</i> (Wall.) Thwaites	EN	VU
Angiosperm	Rubiaceae	<i>Chassalia griffithii</i> (Hook.f.) A.P.Davis	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Chassalia pubescens</i> Ridl.	NEx	NEx
Angiosperm	Rubiaceae	<i>Chassalia singapurensis</i> (Ridl.) A.P.Davis	CR	NEx
Angiosperm	Rubiaceae	<i>Coelospermum truncatum</i> (Wall.) Baill. ex K.Schum.	CR	CR
Angiosperm	Rubiaceae	<i>Coptosapelta flavescens</i> Korth.	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Rubiaceae	<i>Coptosapelta griffithii</i> Hook.f.	NEx	CR
Angiosperm	Rubiaceae	<i>Dentella repens</i> (L.) J.R.Forst. & G.Forst.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Dibridsonia conferta</i> (Korth.) K.M.Wong	EN	EN
Angiosperm	Rubiaceae	<i>Discospernum malaccense</i> (Hook.f.) Kuntze	CR	CR
Angiosperm	Rubiaceae	<i>Eumachia montana</i> (Blume) I.M.Turner	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Eumachia rostrata</i> (Blume) I.M.Turner	CR	CR
Angiosperm	Rubiaceae	<i>Gaertnera grisea</i> Hook.f. ex C.B.Clarke	VU	EN
Angiosperm	Rubiaceae	<i>Gaertnera junghuhniana</i> Miq.	NEx	NEx
Angiosperm	Rubiaceae	<i>Gaertnera obesa</i> Hook.f. ex C.B.Clarke	EN	VU
Angiosperm	Rubiaceae	<i>Gaertnera viminea</i> Hook.f. ex C.B.Clarke	CR	CR
Angiosperm	Rubiaceae	<i>Gardenia elata</i> Ridl. var. <i>elata</i>	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Gardenia griffithii</i> Hook.f.	NEx	NEx
Angiosperm	Rubiaceae	<i>Gardenia subcarinata</i> (Corner) Y.W.Low var. <i>subcarinata</i>	CR	CR
Angiosperm	Rubiaceae	<i>Gardenia tubifera</i> Wall.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Gardeniopsis longifolia</i> Miq.	NEx	NEx
Angiosperm	Rubiaceae	<i>Geophila herbacea</i> (Jacq.) K.Schum.	EN	EN
Angiosperm	Rubiaceae	<i>Geophila pilosa</i> H.Pearson	NEx	NEx
Angiosperm	Rubiaceae	<i>Guettarda speciosa</i> L.	EN	EN
Angiosperm	Rubiaceae	<i>Gynochthodes coriacea</i> Blume	VU	LC
Angiosperm	Rubiaceae	<i>Gynochthodes praetermissa</i> W.W.Seah & K.M.Wong	VU	VU
Angiosperm	Rubiaceae	<i>Gynochthodes ridleyi</i> (King & Gamble) Razafim. & B.Bremer	CR	CR
Angiosperm	Rubiaceae	<i>Gynochthodes rigida</i> (Miq.) Razafim. & B.Bremer	NEx	VU
Angiosperm	Rubiaceae	<i>Gynochthodes umbellata</i> (L.) Razafim. & B.Bremer	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis affinis</i> Roem. & Schult.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis angustifolia</i> Cham. & Schltld.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Hedyotis auricularia</i> L.	Not Listed	CR
Angiosperm	Rubiaceae	<i>Hedyotis biflora</i> (L.) Lam.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis capitellata</i> Wall. ex G.Don	CR	LC
Angiosperm	Rubiaceae	<i>Hedyotis corymbosa</i> (L.) Lam.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis diffusa</i> Willd.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis herbacea</i> L.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Hedyotis pinifolia</i> Wall. ex G.Don	VU	EN
Angiosperm	Rubiaceae	<i>Hedyotis prostrata</i> Blume	VU	VU
Angiosperm	Rubiaceae	<i>Hedyotis pumila</i> L.f.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis trinervia</i> (Retz.) Forsyth f.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Hedyotis verticillata</i> (L.) Lam.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Hedyotis vestita</i> R.Br. ex G.Don	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Hydnophytum formicarum</i> Jack	CR	CR
Angiosperm	Rubiaceae	<i>Hypobathrum coniferum</i> (Ridl.) Kiew	NEx	NEx
Angiosperm	Rubiaceae	<i>Ixora concinna</i> R.Br. ex Hook.f.	NEx	NEx
Angiosperm	Rubiaceae	<i>Ixora congesta</i> Roxb.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Ixora grandifolia</i> Zoll. & Moritzi var. <i>grandifolia</i>	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Ixora javanica</i> (Blume) DC. var. <i>retinervia</i> Corner	Not Listed	EN
Angiosperm	Rubiaceae	<i>Ixora lobbii</i> Loudon ex King & Gamble var. <i>lobbii</i>	EN	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Rubiaceae	<i>Ixora pendula</i> Jack var. <i>pendula</i>	EN	EN
Angiosperm	Rubiaceae	<i>Ixora umbellata</i> Valeton var. <i>umbellata</i>	NEx	CR
Angiosperm	Rubiaceae	<i>Jackiopsis ornata</i> (Wall.) Ridsdale	CR	CR
Angiosperm	Rubiaceae	<i>Lasianthus attenuatus</i> Jack var. <i>attenuatus</i>	VU	EN
Angiosperm	Rubiaceae	<i>Lasianthus attenuatus</i> Jack var. <i>minor</i> H.Zhu	VU	EN
Angiosperm	Rubiaceae	<i>Lasianthus chryseus</i> Ridl.	VU	EN
Angiosperm	Rubiaceae	<i>Lasianthus constrictus</i> Wight	EN	EN
Angiosperm	Rubiaceae	<i>Lasianthus ellipticus</i> Wight	CR	NEx
Angiosperm	Rubiaceae	<i>Lasianthus griffithii</i> Wight	CR	CR
Angiosperm	Rubiaceae	<i>Lasianthus hirsutus</i> (Roxb.) Merr.	CR	EN
Angiosperm	Rubiaceae	<i>Lasianthus reticulatus</i> Blume	NEx	CR
Angiosperm	Rubiaceae	<i>Lasianthus ridleyi</i> King & Gamble	VU	EN
Angiosperm	Rubiaceae	<i>Lasianthus scabridus</i> King & Gamble	CR	NEx
Angiosperm	Rubiaceae	<i>Lasianthus stipularis</i> Blume	NEx	NEx
Angiosperm	Rubiaceae	<i>Lasianthus venosus</i> Blume	NEx	NEx
Angiosperm	Rubiaceae	<i>Lecananthus erubescens</i> Jack	NEx	CR
Angiosperm	Rubiaceae	<i>Morinda citrifolia</i> L.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Morinda elliptica</i> (Hook.f.) Ridl.	Not Listed	EN
Angiosperm	Rubiaceae	<i>Mussaenda glabra</i> Vahl	EN	EN
Angiosperm	Rubiaceae	<i>Mussaenda maingayi</i> (Hook.f.) Hemsl. ex T.Durand & B.D.Jacks.	NEx	NEx
Angiosperm	Rubiaceae	<i>Mussaendopsis beccariana</i> Baill.	EN	CR
Angiosperm	Rubiaceae	<i>Mycetia malayana</i> (G.Don) Craib	NEx	NEx
Angiosperm	Rubiaceae	<i>Myrmecodia tuberosa</i> Jack	NEx	NEx
Angiosperm	Rubiaceae	<i>Nauclea officinalis</i> (Pierre ex Pit.) Merr. & Chun	CR	EN
Angiosperm	Rubiaceae	<i>Neonauclea excelsa</i> (Blume) Merr.	NEx	NEx
Angiosperm	Rubiaceae	<i>Neonauclea kranjiensis</i> K.M.Wong & W.W.Seah	NEx	EX
Angiosperm	Rubiaceae	<i>Ochreinauclea maingayi</i> (Hook.f.) Ridsdale	NEx	NEx
Angiosperm	Rubiaceae	<i>Ophiorrhiza singapurensis</i> Ridl.	NEx	CR
Angiosperm	Rubiaceae	<i>Oxyceros bispinosus</i> (Griff.) Tirveng.	EN	LC
Angiosperm	Rubiaceae	<i>Oxyceros drupaceus</i> (C.F.Gaertn.) Ridsdale	NEx	CR
Angiosperm	Rubiaceae	<i>Oxyceros longiflorus</i> (Lam.) T.Yamaz.	VU	LC
Angiosperm	Rubiaceae	<i>Oxyceros penangianus</i> (King & Gamble) Tirveng.	NEx	NEx
Angiosperm	Rubiaceae	<i>Paederia foetida</i> L.	Not Listed	LC
Angiosperm	Rubiaceae	<i>Paederia verticillata</i> Blume	NEx	NEx
Angiosperm	Rubiaceae	<i>Pavetta wallichiana</i> Steud. ex Craib	VU	VU
Angiosperm	Rubiaceae	<i>Porterandia anisophylla</i> (Jack ex Wall.) Ridl.	VU	VU
Angiosperm	Rubiaceae	<i>Prismatomeris glabra</i> (Korth.) Valeton	EN	CR
Angiosperm	Rubiaceae	<i>Prismatomeris tetrandra</i> (Roxb.) K.Schum. subsp. <i>malayana</i> (Ridl.) J.T.Johanss.	EN	CR
Angiosperm	Rubiaceae	<i>Psychotria angulata</i> Korth.	CR	NEx
Angiosperm	Rubiaceae	<i>Psychotria deltata</i> I.M.Turner	Not Listed	EN
Angiosperm	Rubiaceae	<i>Psychotria griffithii</i> Hook.f.	CR	CR
Angiosperm	Rubiaceae	<i>Psychotria helferiana</i> Kurz	CR	CR
Angiosperm	Rubiaceae	<i>Psychotria maingayi</i> Hook.f.	CR	EN
Angiosperm	Rubiaceae	<i>Psychotria malayana</i> Jack	CR	NEx
Angiosperm	Rubiaceae	<i>Psychotria megacoma</i> Miq.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Psychotria morindiflora</i> Wall. ex Hook.f.	Not Listed	CR
Angiosperm	Rubiaceae	<i>Psychotria ovoidea</i> Wall. ex Hook.f.	VU	EN

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Rubiaceae	<i>Psychotria pachyphylla</i> (King & Gamble) Ridl.	Not Listed	CR
Angiosperm	Rubiaceae	<i>Psychotria penangensis</i> Hook.f.	VU	CR
Angiosperm	Rubiaceae	<i>Psychotria polycarpa</i> (Miq.) Hook.f.	CR	CR
Angiosperm	Rubiaceae	<i>Psychotria ridleyi</i> King & Gamble	CR	CR
Angiosperm	Rubiaceae	<i>Psychotria sarmentosoides</i> Valeton	CR	NEx
Angiosperm	Rubiaceae	<i>Psychotria scortechinii</i> King & Gamble	CR	NEx
Angiosperm	Rubiaceae	<i>Psydrax approximatus</i> (Korth.) Mahyuni & K.M.Wong	CR	VU
Angiosperm	Rubiaceae	<i>Psydrax lucidulus</i> (Miq.) Mahyuni & K.M.Wong	VU	VU
Angiosperm	Rubiaceae	<i>Psydrax sumatranus</i> (Miq.) Mahyuni	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Psydrax undulatifolius</i> K.M.Wong & Mahyuni	CR	NEx
Angiosperm	Rubiaceae	<i>Saprosma glomerulata</i> King & Gamble	CR	CR
Angiosperm	Rubiaceae	<i>Schradera membranacea</i> (King) Puff et al. subsp. <i>membranacea</i>	CR	CR
Angiosperm	Rubiaceae	<i>Schradera polysperma</i> (Jack) Puff et al.	NEx	NEx
Angiosperm	Rubiaceae	<i>Scyphiphora hydrophylacea</i> C.F.Gaertn.	Not Listed	EN
Angiosperm	Rubiaceae	<i>Singaporandia macrophylla</i> (Hook.f.) K.M.Wong	VU	VU
Angiosperm	Rubiaceae	<i>Spermacoce hispida</i> L.	Not Listed	DD
Angiosperm	Rubiaceae	<i>Spermacoce ocyoides</i> Burm.f.	Not Listed	NEx
Angiosperm	Rubiaceae	<i>Spermacoce parviceps</i> (Ridl.) I.M.Turner	Not Listed	CR
Angiosperm	Rubiaceae	<i>Tarenna adpressa</i> (King) Merr.	CR	NEx
Angiosperm	Rubiaceae	<i>Tarenna costata</i> (Miq.) Merr.	CR	CR
Angiosperm	Rubiaceae	<i>Tarenna fragrans</i> (Blume) Koord. & Valeton	EN	EN
Angiosperm	Rubiaceae	<i>Tarenna mollis</i> (Hook.f.) B.L.Rob.	CR	CR
Angiosperm	Rubiaceae	<i>Tarenna odorata</i> (Roxb.) B.L.Rob.	CR	CR
Angiosperm	Rubiaceae	<i>Tarenna ridleyi</i> (H.Pearson ex Ridl.) Ridl.	NEx	NEx
Angiosperm	Rubiaceae	<i>Tarenna stellulata</i> (Hook.f.) Ridl.	CR	NEx
Angiosperm	Rubiaceae	<i>Timonius finlaysonianus</i> (Wall. ex G.Don) Hook.f.	CR	CR
Angiosperm	Rubiaceae	<i>Timonius flavescent</i> (Jack) Baker	CR	CR
Angiosperm	Rubiaceae	<i>Timonius wallichianus</i> Valeton	Not Listed	LC
Angiosperm	Rubiaceae	<i>Timonius wrayi</i> King & Gamble	NEx	NEx
Angiosperm	Rubiaceae	<i>Uncaria acida</i> (W.Hunter) W.Hunter ex Roxb. var. <i>acida</i>	NEx	EN
Angiosperm	Rubiaceae	<i>Uncaria attenuata</i> Korth.	NEx	CR
Angiosperm	Rubiaceae	<i>Uncaria borneensis</i> Havil.	Not Listed	CR
Angiosperm	Rubiaceae	<i>Uncaria callophylla</i> Blume ex Korth.	NEx	VU
Angiosperm	Rubiaceae	<i>Uncaria canescens</i> Korth.	Not Listed	CR
Angiosperm	Rubiaceae	<i>Uncaria cordata</i> (Lour.) Merr.	EN	EN
Angiosperm	Rubiaceae	<i>Uncaria elliptica</i> R.Br. ex G.Don	Not Listed	CR
Angiosperm	Rubiaceae	<i>Uncaria lanosa</i> Wall. var. <i>glabrata</i> (Blume) Ridsdale	CR	CR
Angiosperm	Rubiaceae	<i>Uncaria longiflora</i> (Poir.) Merr. var. <i>pteropoda</i> (Miq.) Ridsdale	CR	EN
Angiosperm	Rubiaceae	<i>Uncaria roxburghiana</i> Korth.	NEx	EN
Angiosperm	Rubiaceae	<i>Urophyllum arboreum</i> (Reinw.) Korth.	CR	VU
Angiosperm	Rubiaceae	<i>Urophyllum corymbosum</i> (Blume) Korth.	NEx	NEx
Angiosperm	Rubiaceae	<i>Urophyllum glabrum</i> Wall.	VU	VU
Angiosperm	Rubiaceae	<i>Urophyllum griffithianum</i> (Wight) Hook.f.	VU	VU
Angiosperm	Rubiaceae	<i>Urophyllum hirsutum</i> (Wight) Hook.f.	EN	VU
Angiosperm	Rubiaceae	<i>Urophyllum malayense</i> K.M.Wong	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Rubiaceae	<i>Urophyllum streptopodium</i> Wall. ex Hook.f.	VU	VU
Angiosperm	Rutaceae	<i>Clausena excavata</i> Burm.f.	Not Listed	LC
Angiosperm	Rutaceae	<i>Glycosmis chlorosperma</i> (Blume) Spreng. var. <i>chlorosperma</i>	VU	VU
Angiosperm	Rutaceae	<i>Glycosmis lanceolata</i> (Blume) D.Dietr.	NEx	NEx
Angiosperm	Rutaceae	<i>Glycosmis puberula</i> Lindl. ex Oliv.	Not Listed	NEx
Angiosperm	Rutaceae	<i>Luvunga crassifolia</i> Tanaka	CR	EN
Angiosperm	Rutaceae	<i>Macluroidendron porteri</i> (Hook.f.) T.G.Hartley	VU	EN
Angiosperm	Rutaceae	<i>Melicope glabra</i> (Blume) T.G.Hartley	VU	EN
Angiosperm	Rutaceae	<i>Melicope hookeri</i> T.G.Hartley	CR	NEx
Angiosperm	Rutaceae	<i>Melicope lunu-ankenda</i> (Gaertn.) T.G.Hartley	CR	EN
Angiosperm	Rutaceae	<i>Merope angulata</i> (Willd.) Swingle	CR	CR
Angiosperm	Rutaceae	<i>Paramignya scandens</i> (Griff.) Craib var. <i>ridleyi</i> (Burkill) Swingle	CR	CR
Angiosperm	Rutaceae	<i>Tetraclatia tetrandra</i> (Roxb.) Merr.	Not Listed	NEx
Angiosperm	Rutaceae	<i>Zanthoxylum myriacanthum</i> Wall. ex Hook.f.	Not Listed	NEx
Angiosperm	Rutaceae	<i>Zanthoxylum nitidum</i> (Roxb.) DC.	Not Listed	NEx
Angiosperm	Sabiaceae	<i>Meliosma lanceolata</i> Blume	CR	CR
Angiosperm	Sabiaceae	<i>Meliosma pinnata</i> (Roxb.) Maxim. subsp. <i>ridleyi</i> (King) Beusekom	NEx	CR
Angiosperm	Sabiaceae	<i>Meliosma simplicifolia</i> (Roxb.) Walp. subsp. <i>fruticosa</i> (Blume) Beusekom	CR	CR
Angiosperm	Sabiaceae	<i>Sabia erratica</i> Water	NEx	CR
Angiosperm	Salicaceae	<i>Casearia capitellata</i> Blume	CR	CR
Angiosperm	Salicaceae	<i>Casearia lobbiana</i> Turcz.	CR	CR
Angiosperm	Salicaceae	<i>Casearia macrocarpa</i> C.B.Clarke	NEx	CR
Angiosperm	Salicaceae	<i>Flacourtie rukam</i> Zoll. & Moritzi	VU	VU
Angiosperm	Salicaceae	<i>Homalium grandiflorum</i> Benth.	CR	CR
Angiosperm	Salicaceae	<i>Osmelia grandistipulata</i> Slooten	NEx	EN
Angiosperm	Salicaceae	<i>Scopolia macrophylla</i> (Wight & Arn.) Clos	NEx	CR
Angiosperm	Santalaceae	<i>Dendrotrophe buxifolia</i> (Blume) Miq.	VU	CR
Angiosperm	Santalaceae	<i>Dendrotrophe varians</i> (Blume) Miq.	VU	EN
Angiosperm	Santalaceae	<i>Scleropyrum pentandrum</i> (Dennst.) Mabb.	CR	CR
Angiosperm	Santalaceae	<i>Viscum articulatum</i> Burm.f.	Not Listed	EN
Angiosperm	Santalaceae	<i>Viscum ovalifolium</i> Wall. ex DC.	Not Listed	EN
Angiosperm	Sapindaceae	<i>Acer laurinum</i> Hassk.	Not Listed	CR
Angiosperm	Sapindaceae	<i>Allophylus cobbe</i> (L.) Forsyth f.	Not Listed	LC
Angiosperm	Sapindaceae	<i>Arytera litoralis</i> Blume	CR	CR
Angiosperm	Sapindaceae	<i>Dimocarpus lichi</i> Lour.	Not Listed	DD
Angiosperm	Sapindaceae	<i>Dodonaea viscosa</i> Jacq.	NEx	CR
Angiosperm	Sapindaceae	<i>Guioa bijuga</i> (Hiern) Radlk.	CR	CR
Angiosperm	Sapindaceae	<i>Guioa pleuropteris</i> (Blume) Radlk.	VU	LC
Angiosperm	Sapindaceae	<i>Guioa pubescens</i> (Zoll. & Moritzi) Radlk.	VU	LC
Angiosperm	Sapindaceae	<i>Lepisanthes fruticosa</i> (Roxb.) Leenh.	Not Listed	CR
Angiosperm	Sapindaceae	<i>Lepisanthes rubiginosa</i> (Roxb.) Leenh.	Not Listed	LC
Angiosperm	Sapindaceae	<i>Lepisanthes senegalensis</i> (Juss. ex Poir.) Leenh.	CR	CR
Angiosperm	Sapindaceae	<i>Mischocarpus pentapetalus</i> (Roxb.) Radlk.	NEx	CR
Angiosperm	Sapindaceae	<i>Mischocarpus sundaicus</i> Blume	VU	CR
Angiosperm	Sapindaceae	<i>Nephelium costatum</i> Hiern	CR	DD

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Sapindaceae	<i>Nephelium cuspidatum</i> Blume var. <i>eriopetalum</i> (Miq.) Leenh.	EN	CR
Angiosperm	Sapindaceae	<i>Nephelium laurinum</i> Blume	NEx	CR
Angiosperm	Sapindaceae	<i>Nephelium maingayi</i> Hiern	Not Listed	CR
Angiosperm	Sapindaceae	<i>Paranephelium macrophyllum</i> King	CR	CR
Angiosperm	Sapindaceae	<i>Pometia pinnata</i> J.R.Forst. & G.Forst.	EN	EN
Angiosperm	Sapindaceae	<i>Trigonachras acuta</i> (Hiern) Radlk.	EN	CR
Angiosperm	Sapindaceae	<i>Xerospermum laevigatum</i> Radlk. subsp. <i>laevigatum</i>	CR	NEx
Angiosperm	Sapindaceae	<i>Xerospermum noronhianum</i> (Blume) Blume	CR	EN
Angiosperm	Sapotaceae	<i>Donella lanceolata</i> (Blume) Aubrév.	CR	CR
Angiosperm	Sapotaceae	<i>Madhuca decipiens</i> J.Sinclair	NEx	CR
Angiosperm	Sapotaceae	<i>Madhuca kingiana</i> (Brace ex King & Gamble) H.J.Lam	EN	CR
Angiosperm	Sapotaceae	<i>Madhuca malaccensis</i> (C.B.Clarke) H.J.Lam	CR	CR
Angiosperm	Sapotaceae	<i>Madhuca motleyana</i> (de Vries) J.F.Macbr.	CR	CR
Angiosperm	Sapotaceae	<i>Madhuca sericea</i> (Miq.) H.J.Lam	CR	CR
Angiosperm	Sapotaceae	<i>Madhuca sessilis</i> (King & Gamble) Baehni	NEx	NEx
Angiosperm	Sapotaceae	<i>Palaquium gutta</i> (Hook.) Baill.	CR	CR
Angiosperm	Sapotaceae	<i>Palaquium hexandrum</i> (Griff.) Baill.	CR	CR
Angiosperm	Sapotaceae	<i>Palaquium impressinervium</i> Ng	Not Listed	CR
Angiosperm	Sapotaceae	<i>Palaquium microphyllum</i> King & Gamble	CR	CR
Angiosperm	Sapotaceae	<i>Palaquium obovatum</i> (Griff.) Engl. var. <i>obovatum</i>	VU	VU
Angiosperm	Sapotaceae	<i>Palaquium oxleyanum</i> Pierre	NEx	CR
Angiosperm	Sapotaceae	<i>Palaquium ridleyi</i> King & Gamble	NEx	NEx
Angiosperm	Sapotaceae	<i>Palaquium rostratum</i> (Miq.) Burck	CR	CR
Angiosperm	Sapotaceae	<i>Palaquium xanthochymum</i> (de Vries) Pierre ex Burck	CR	CR
Angiosperm	Sapotaceae	<i>Payena lucida</i> A.DC.	CR	CR
Angiosperm	Sapotaceae	<i>Payena maingayi</i> C.B.Clarke	CR	CR
Angiosperm	Sapotaceae	<i>Payena obscura</i> Burck	CR	CR
Angiosperm	Sapotaceae	<i>Planchonella chartacea</i> (F.Muell. ex Benth.) H.J.Lam	CR	CR
Angiosperm	Sapotaceae	<i>Planchonella maingayi</i> (C.B.Clarke) P.Royen	EN	CR
Angiosperm	Sapotaceae	<i>Planchonella malaccensis</i> (C.B.Clarke) Swenson	VU	EN
Angiosperm	Sapotaceae	<i>Planchonella obovata</i> (R.Br.) Pierre	VU	LC
Angiosperm	Sapotaceae	<i>Sarcosperma paniculatum</i> (King) Stapf & King	NEx	CR
Angiosperm	Schisandraceae	<i>Kadsura scandens</i> (Blume) Blume	CR	CR
Angiosperm	Schisandraceae	<i>Kadsura verrucosa</i> (Gagnep.) A.C.Sm.	CR	CR
Angiosperm	Simaroubaceae	<i>Ailanthus integrifolia</i> Lam.	CR	CR
Angiosperm	Simaroubaceae	<i>Brucea javanica</i> (L.) Merr.	VU	CR
Angiosperm	Simaroubaceae	<i>Eurycoma longifolia</i> Jack	CR	EN
Angiosperm	Simaroubaceae	<i>Samadera indica</i> Gaertn.	NEx	CR
Angiosperm	Smilacaceae	<i>Smilax calophylla</i> Wall. ex A.DC.	EN	EN
Angiosperm	Smilacaceae	<i>Smilax corbularia</i> Kunth var. <i>woodii</i> (Merr.) T.Koyama	Not Listed	NEx
Angiosperm	Smilacaceae	<i>Smilax leucophylla</i> Blume	EN	EN
Angiosperm	Smilacaceae	<i>Smilax megacarpa</i> A.DC.	NEx	EN
Angiosperm	Smilacaceae	<i>Smilax myosotiflora</i> A.DC.	VU	VU

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Smilacaceae	<i>Smilax setosa</i> Miq.	Not Listed	LC
Angiosperm	Smilacaceae	<i>Smilax sumatrensis</i> (A.DC.) P.Li & C.X.Fu	NEx	CR
Angiosperm	Solanaceae	<i>Lycianthes biflora</i> (Lour.) Bitter	Not Listed	NEx
Angiosperm	Staphyleaceae	<i>Turpinia sphaerocarpa</i> Hassk.	CR	CR
Angiosperm	Stemonaceae	<i>Stemona curtisiae</i> Hook.f.	Not Listed	CR
Angiosperm	Stemonuraceae	<i>Cantleya corniculata</i> (Becc.) R.A.Howard	NEx	NEx
Angiosperm	Stemonuraceae	<i>Gomphandra quadrifida</i> (Blume) Sleumer	VU	LC
Angiosperm	Stemonuraceae	<i>Stemonurus malaccensis</i> (Mast.) Sleumer	CR	CR
Angiosperm	Stemonuraceae	<i>Stemonurus scorpioides</i> Becc.	CR	CR
Angiosperm	Styracaceae	<i>Styrax benzoin</i> Dryand. var. <i>benzoin</i>	CR	CR
Angiosperm	Styracaceae	<i>Styrax crotonoides</i> C.B.Clarke subsp. <i>crotonoides</i>	NEx	NEx
Angiosperm	Symplocaceae	<i>Symplocos adenophylla</i> Wall. ex G.Don	EN	EN
Angiosperm	Symplocaceae	<i>Symplocos barringtonifolia</i> Brand	NEx	NEx
Angiosperm	Symplocaceae	<i>Symplocos celastrifolia</i> Griff. ex C.B.Clarke	NEx	NEx
Angiosperm	Symplocaceae	<i>Symplocos fasciculata</i> Zoll.	VU	VU
Angiosperm	Symplocaceae	<i>Symplocos henschelii</i> (Moritzi) Benth. ex C.B.Clarke var. <i>maingayi</i> (Benth. ex C.B.Clarke) Noot.	Not Listed	NEx
Angiosperm	Symplocaceae	<i>Symplocos lucida</i> Wall. ex G.Don	NEx	NEx
Angiosperm	Symplocaceae	<i>Symplocos odoratissima</i> (Blume) Choisy ex Zoll. var. <i>odoratissima</i>	NEx	CR
Angiosperm	Symplocaceae	<i>Symplocos rubiginosa</i> Wall. ex A.DC.	EN	EN
Angiosperm	Taccaceae	<i>Tacca cristata</i> Jack	VU	VU
Angiosperm	Taccaceae	<i>Tacca leontopetaloides</i> (L.) Kuntze	CR	CR
Angiosperm	Theaceae	<i>Polyspora multinervis</i> (King) Orel et al.	EN	EN
Angiosperm	Theaceae	<i>Polyspora penangensis</i> (Ridl.) Niissalo & L.M.Choo	CR	EN
Angiosperm	Theaceae	<i>Polyspora singaporeana</i> (Wall. ex Ridl.) Niissalo & L.M.Choo	EN	EN
Angiosperm	Theaceae	<i>Pyrenaria acuminata</i> Planch. ex Choisy	EN	CR
Angiosperm	Thismiaceae	<i>Thismia aseroe</i> Becc.	NEx	CR
Angiosperm	Thismiaceae	<i>Thismia fumida</i> Ridl.	NEx	NEx
Angiosperm	Thymelaeaceae	<i>Aquilaria hirta</i> Ridl.	NEx	CR
Angiosperm	Thymelaeaceae	<i>Aquilaria malaccensis</i> Lam.	VU	VU
Angiosperm	Thymelaeaceae	<i>Aquilaria microcarpa</i> Baill.	CR	CR
Angiosperm	Thymelaeaceae	<i>Enkleia malaccensis</i> Griff.	CR	CR
Angiosperm	Thymelaeaceae	<i>Gonostylus confusus</i> Airy Shaw	EN	EN
Angiosperm	Thymelaeaceae	<i>Gonostylus maingayi</i> Hook.f.	CR	CR
Angiosperm	Thymelaeaceae	<i>Linostoma pauciflorum</i> Griff.	EN	EN
Angiosperm	Torricelliaceae	<i>Aralidium pinnatifidum</i> (Jungh. & de Vriese) Miq.	NEx	CR
Angiosperm	Trigoniaceae	<i>Trigoniastrum hypoleucum</i> Miq.	NEx	CR
Angiosperm	Triuridaceae	<i>Sciaphila maculata</i> Miers	NEx	NEx
Angiosperm	Triuridaceae	<i>Sciaphila tenella</i> Blume	NEx	NEx
Angiosperm	Urticaceae	<i>Laportea interrupta</i> (L.) Chew	Not Listed	LC
Angiosperm	Urticaceae	<i>Nothocnide mollissima</i> (Wedd.) Chew	NEx	NEx
Angiosperm	Urticaceae	<i>Poikilospermum cordifolium</i> (Barg.-Petr.) Merr.	NEx	CR
Angiosperm	Urticaceae	<i>Poikilospermum microstachys</i> (Barg.-Petr.) Merr.	NEx	NEx
Angiosperm	Urticaceae	<i>Poikilospermum suaveolens</i> (Blume) Merr.	VU	VU
Angiosperm	Urticaceae	<i>Procris repens</i> (Lour.) B.J.Conn & Hadiah	NEx	NEx

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Violaceae	<i>Rinorea anguifera</i> (Lour.) Kuntze	CR	CR
Angiosperm	Violaceae	<i>Rinorea javanica</i> (Blume) Kuntze	Not Listed	NEx
Angiosperm	Violaceae	<i>Rinorea lanceolata</i> (Roxb.) Kuntze	NEx	CR
Angiosperm	Vitaceae	<i>Ampelocissus ascendiflora</i> Latiff	NEx	CR
Angiosperm	Vitaceae	<i>Ampelocissus cinnamomea</i> (Wall.) Planch.	NEx	CR
Angiosperm	Vitaceae	<i>Ampelocissus elegans</i> Gagnep.	EN	VU
Angiosperm	Vitaceae	<i>Ampelocissus gracilis</i> (Wall.) Planch.	EN	EN
Angiosperm	Vitaceae	<i>Ampelocissus polystachya</i> (Wall. ex M.A.Lawson) Planch.	CR	CR
Angiosperm	Vitaceae	<i>Ampelocissus thrysiflora</i> (Blume) Planch.	NEx	CR
Angiosperm	Vitaceae	<i>Causonis japonica</i> (Thunb.) Raf.	Not Listed	EN
Angiosperm	Vitaceae	<i>Causonis maritima</i> (Jackes) Jackes	Not Listed	LC
Angiosperm	Vitaceae	<i>Causonis trifolia</i> (L.) Mabb. & J.Wen	VU	DD
Angiosperm	Vitaceae	<i>Cayratia mollissima</i> (Wall.) Gagnep.	EN	EN
Angiosperm	Vitaceae	<i>Cayratia novemfolia</i> (Wall. ex M.A.Lawson) Gagnep.	CR	CR
Angiosperm	Vitaceae	<i>Cissus hastata</i> Miq.	Not Listed	LC
Angiosperm	Vitaceae	<i>Cissus nodosa</i> Blume	CR	VU
Angiosperm	Vitaceae	<i>Cissus repens</i> Lam.	CR	VU
Angiosperm	Vitaceae	<i>Cissus rostrata</i> (Miq.) Korth. ex Planch.	CR	CR
Angiosperm	Vitaceae	<i>Leea aequata</i> L.	NEx	NEx
Angiosperm	Vitaceae	<i>Leea angulata</i> Korth. ex Miq.	CR	CR
Angiosperm	Vitaceae	<i>Leea indica</i> (Burm.f.) Merr.	Not Listed	LC
Angiosperm	Vitaceae	<i>Leea rubra</i> Blume	NEx	NEx
Angiosperm	Vitaceae	<i>Nothocissus spicifera</i> (Griff.) Latiff	CR	CR
Angiosperm	Vitaceae	<i>Pterisanthes cissoides</i> Blume	NEx	CR
Angiosperm	Vitaceae	<i>Pterisanthes eriopoda</i> (Miq.) Planch.	CR	CR
Angiosperm	Vitaceae	<i>Pterisanthes polita</i> (Miq.) M.A.Lawson	CR	CR
Angiosperm	Vitaceae	<i>Tetrastigma curtisii</i> (Ridl.) Suess.	CR	CR
Angiosperm	Vitaceae	<i>Tetrastigma dichotomum</i> (Blume) Planch.	Not Listed	CR
Angiosperm	Vitaceae	<i>Tetrastigma latiflui</i> Veldkamp	CR	CR
Angiosperm	Vitaceae	<i>Tetrastigma leucostaphyllum</i> (Dennst.) Alston	NEx	CR
Angiosperm	Xyridaceae	<i>Xyris complanata</i> R.Br.	Not Listed	CR
Angiosperm	Xyridaceae	<i>Xyris pauciflora</i> Willd.	NEx	CR
Angiosperm	Zingiberaceae	<i>Alpinia aquatica</i> (Retz.) Roscoe	CR	CR
Angiosperm	Zingiberaceae	<i>Alpinia conchigera</i> Griff.	NEx	NEx
Angiosperm	Zingiberaceae	<i>Alpinia rafflesiana</i> Wall. ex Baker	NEx	CR
Angiosperm	Zingiberaceae	<i>Amomum latiflorum</i> (Ridl.) Škorničk. & Hlavatá	CR	EN
Angiosperm	Zingiberaceae	<i>Conamomum xanthophlebium</i> (Baker) Škorničk. & A.D.Poulsen	CR	CR
Angiosperm	Zingiberaceae	<i>Etlingera maingayi</i> (Baker) R.M.Sm.	Not Listed	CR
Angiosperm	Zingiberaceae	<i>Etlingera punicea</i> (Roxb.) R.M.Sm.	CR	CR
Angiosperm	Zingiberaceae	<i>Globba leucantha</i> Miq. var. <i>peninsularis</i> Holttum	CR	CR
Angiosperm	Zingiberaceae	<i>Globba pendula</i> Roxb.	NEx	CR
Angiosperm	Zingiberaceae	<i>Hornstedtia conica</i> Ridl.	CR	CR
Angiosperm	Zingiberaceae	<i>Hornstedtia leonurus</i> (J.Koenig) Retz.	CR	VU
Angiosperm	Zingiberaceae	<i>Hornstedtia scyphifera</i> (J.Koenig) Steud. var. <i>scyphifera</i>	VU	VU
Angiosperm	Zingiberaceae	<i>Plagiostachys lateralis</i> (Ridl.) Ridl.	NEx	CR

Major Group	Family	Taxon Name	RDB2	RDB3
Angiosperm	Zingiberaceae	<i>Plagiostachys mucida</i> Holttum	NEx	NEx
Angiosperm	Zingiberaceae	<i>Sundamomum hastilabium</i> (Ridl.) A.D.Poulsen & M.F.Newman	NEx	CR
Angiosperm	Zingiberaceae	<i>Zingiber griffithii</i> Baker	EN	CR
Angiosperm	Zingiberaceae	<i>Zingiber puberulum</i> Ridl. var. <i>chryseum</i> (Ridl.) Holttum	EN	NEx
Angiosperm	Zingiberaceae	<i>Zingiber puberulum</i> Ridl. var. <i>puberulum</i>	EN	EN
Angiosperm	Zingiberaceae	<i>Zingiber singapurens</i> Škorničk.	Not Listed	CR

Checklist of Fungi Species with their Category of Threat Status for Singapore

Prepared by Serena M.L. Lee, Amy M.F. Choong

Family	Taxon Name	Common Name	RDB2	RDB3
Agaricaceae	<i>Agaricus trisulphuratus</i> Berk	Scaly Tangerine Fungus	Not Listed	LC
Agaricaceae	<i>Chlorophyllum molybdites</i> (G.Mey.) Massee	Green-spored Parasol; False Parasol	Not Listed	LC
Agaricaceae	<i>Clarkeinda trachodes</i> (Berk.) Singer		Not Listed	VU
Agaricaceae	<i>Coniolepiota spongodes</i> (Berk. & Broome) Vellinga		Not Listed	LC
Agaricaceae	<i>Leucocoprinus fragilissimus</i> (Ravenel ex Berk. & M.A.Curtis) Pat	Fragile Dapperling	Not Listed	LC
Agaricaceae	<i>Tulostoma exasperatum</i> Mont	Spiny-stalked Puffball	Not Listed	LC
Amanitaceae	<i>Amanita cinctipes</i> Corner & Bas		Not Listed	VU
Amanitaceae	<i>Amanita hemibapha</i> subsp. <i>similis</i> (Boedijn) Corner & Bas	Boedijn's Slender Caesar	Not Listed	VU
Amanitaceae	<i>Amanita malayensis</i> L.P.Tang, Zhu L.Yang & S.S.Lee	Malayan Amanita	Not Listed	VU
Amanitaceae	<i>Amanita mira</i> Corner & Bas		Not Listed	LC
Amanitaceae	<i>Amanita obsita</i> Corner & Bas		Not Listed	LC
Amanitaceae	<i>Amanita pilosella</i> Corner & Bas		Not Listed	VU
Amanitaceae	<i>Amanita princeps</i> Corner & Bas		Not Listed	VU
Amanitaceae	<i>Amanita sculpta</i> Corner & Bas	Sculptured Toadstool	Not Listed	CR
Amanitaceae	<i>Amanita sycnopyramis</i> Corner & Bas		Not Listed	VU
Auriculariaceae	<i>Auricularia mesenterica</i> (Dicks.) Pers	Tripe Fungus	Not Listed	LC
Auriculariales [in.sed]	<i>Elmerina sclerodontia</i> (Mont. & Berk.) Miettinen & Spirin	Rambutan Fungus	Not Listed	LC
Boletaceae	<i>Austroboletus mucosus</i> (Corner) Wolfe	Mucus Bolete	Not Listed	VU
Boletaceae	<i>Boletellus dissiliens</i> (Corner) Pegler & T.W.K.Young		Not Listed	CR
Boletaceae	<i>Boletellus emodensis</i> (Berk.) Singer	Shaggy Cop Bolete	Not Listed	LC
Boletaceae	<i>Fistulinella nana</i> (Massee) E.Horak		Not Listed	CR
Boletaceae	<i>Heimioporus retisporus</i> (Pat. & C.F.Baker) E.Horak		Not Listed	VU
Boletaceae	<i>Ionosporus longipes</i> (Massee) O.Khmelnitsky, Davoodian, Raspé, S.M.L.Lee		Not Listed	LC
Boletaceae	<i>Pseudoaustroboletus valens</i> (Corner) Y.C.Li & Zhu L.Yang	Ghost Bolete	Not Listed	EN
Boletaceae	<i>Pulveroboletus frians</i> (Corner) Singer		Not Listed	CR
Boletaceae	<i>Pulveroboletus icterinus</i> Berk. & M.A.Curtis	Chrome-yellow Bolete	Not Listed	LC
Boletaceae	<i>Spongipora temasekensis</i> G.Wu, S.M.L.Lee, E.Horak & Zhu L.Yang	Singapore Bolete	Not Listed	VU
Boletaceae	<i>Strobilomyces velutipes</i> Cooke & Massee	Velvet Old Man of the Woods	Not Listed	VU
Boletaceae	<i>Tylопilus ballouii</i> (Peck) Singer	Burnt-orange Bolete	Not Listed	VU
Boletaceae	<i>Tylопilus cervinicoccineus</i> (Corner) E.Horak		Not Listed	VU
Boletinellaceae	<i>Boletinellus meruloides</i> (Schwein.) Murrill	Ash-tree Bolete	Not Listed	LC
Bondarzewiaceae	<i>Stecchericium seriatum</i> (Lloyd) Maas Geest		Not Listed	VU
Cantharellaceae	<i>Cantharellus lateritius</i> (Berk.) Singer	Smooth Chanterelle	Not Listed	LC
Coniophoraceae	<i>Gyrodontium sacchari</i> (Spreng.) Hjortstam		Not Listed	LC
Dacrymycetaceae	<i>Dacryopinax spathularia</i> (Schwein.) G.W.Martin	Sweet Osmanthus Ear; Fan-shaped Jelly Fungus	Not Listed	LC

Family	Taxon Name	Common Name	RDB2	RDB3
Diplocystidiaceae	<i>Astraeus odoratus</i> Phosri, Watling, M.P.Martín & Whalley		Not Listed	VU
Entolomataceae	<i>Entoloma burkilliae</i> Massee		Not Listed	LC
Entolomataceae	<i>Entoloma columbinum</i> Corner & E.Horak		Not Listed	LC
Entolomataceae	<i>Entoloma flavidum</i> (Massee) Corner & E.Horak		Not Listed	LC
Entolomataceae	<i>Entoloma murrayi</i> (Berk. & M.A.Curtis) Sacc. & P.Syd		Not Listed	CR
Entolomataceae	<i>Entoloma purpureum</i> Petch		Not Listed	DD
Fomitopsidaceae	<i>Rhodofomitopsis feei</i> (Fr.) B.K.Cui, M.L.Han & Y.C.Dai		Not Listed	LC
Ganodermataceae	<i>Ganoderma boninense</i> Pat		Not Listed	DD
Ganodermataceae	<i>Ganoderma ellipsoideum</i> Hapuar., T.C.Wen & K.D.Hyde		Not Listed	DD
Ganodermataceae	<i>Ganoderma mastoporum</i> (Lév.) Pat		Not Listed	DD
Ganodermataceae	<i>Ganoderma nasalanense</i> Hapuar., Pheng. & K.D.Hyde		Not Listed	DD
Ganodermataceae	<i>Ganoderma philippii</i> (Bres. & Henn. ex Sacc.) Bres		Not Listed	DD
Ganodermataceae	<i>Ganoderma sichuanense</i> J.D.Zhao & X.Q.Zhang		Not Listed	DD
Ganodermataceae	<i>Ganoderma subresinosum</i> (Murrill) C.J.Humphrey		Not Listed	DD
Ganodermataceae	<i>Ganoderma tropicum</i> (Jungh.) Bres		Not Listed	DD
Ganodermataceae	<i>Ganoderma weberianum</i> (Bres. & Henn. ex Sacc.) Steyaert		Not Listed	DD
Ganodermataceae	<i>Ganoderma williamsianum</i> Murrill		Not Listed	DD
Ganodermataceae	<i>Sanguinoderma rugosum</i> (Blume & T.Nees) Y.F.Sun, D.H.Costa & B.K.Cui		Not Listed	LC
Ganodermataceae	<i>Tomophagus colossus</i> (Fr.) Murrill		Not Listed	LC
Geastraceae	<i>Geastrum mirabile</i> Mont		Not Listed	LC
Geoglossaceae	<i>Trichoglossum variabile</i> (E.J.Durand) Nannf	Earth Tongue	Not Listed	VU
Gomphaceae	<i>Gloeocantharellus echinosporus</i> Corner		Not Listed	CR
Hydnaceae	<i>Craterellus cf. tubaeformis</i> (Fr.) Quél	Yellowfoot; Winter Mushroom; Funnel Chanterelle	Not Listed	DD
Hydnaceae	<i>Craterellus cornucopioides</i> var. <i>mediosporus</i> Corner	Tropical Black Trumpet	Not Listed	VU
Hydnaceae	<i>Hydnus elatum</i> Massé		Not Listed	LC
Hygrophoraceae	<i>Hygrocybe firma</i> (Berk. & Broome) Singer		Not Listed	LC
Hygrophoraceae	<i>Hygrocybe griseonigricans</i> C.Q.Wang & T.H.Li		Not Listed	VU
Hymenogastraceae	<i>Hebeloma parvisporum</i> O.S.Pedersen, Læssøe, Beker & U.Eberh		Not Listed	VU
Hypocreaceae	<i>Trichoderma cornu-damae</i> (Pat.) Z.X.Zhu & W.Y.Zhuang	Poison Fire Coral	Not Listed	LC
Hypoxylaceae	<i>Daldinia concentrica</i> (Bolton) Ces. & De Not	King Alfred's Cake	Not Listed	LC
Lycoperdaceae	<i>Calvatia cyathiformis</i> (Bosc) Morgan	Purple-spored Puffball	Not Listed	LC
Lycoperdaceae	<i>Calvatia holothurioides</i> Rebrev		Not Listed	LC
Lyophyllaceae	<i>Praearthromyces corneri</i> D.Stubbe, T.J.Baroni, T.W.Kuyper & van de Peppel		Not Listed	CR
Marasmiaceae	<i>Crinipellis actinophora</i> (Berk. & Broome) Singer		Not Listed	VU

Family	Taxon Name	Common Name	RDB2	RDB3
Marasmiaceae	<i>Crinipellis brunneipurpurea</i> Corner	Purple Crinipellis	Not Listed	VU
Marasmiaceae	<i>Crinipellis malesiana</i> Kerekes, Desjardin & Vikinesw		Not Listed	VU
Marasmiaceae	<i>Marasmius elaeocephalus</i> Singer		Not Listed	LC
Marasmiaceae	<i>Marasmius guyanensis</i> Mont		Not Listed	LC
Marasmiaceae	<i>Marasmius neotrichotus</i> Niveiro, N.A.Ramírez & Antonín		Not Listed	VU
Marasmiaceae	<i>Marasmius palmivorus</i> Sharples	Oil Palm Bunch Rot	Not Listed	LC
Marasmiaceae	<i>Marasmius pellucidus</i> Berk. & Broome		Not Listed	LC
Marasmiaceae	<i>Marasmius tenuissimus</i> (Sacc.) Singer		Not Listed	VU
Meripilaceae	<i>Rigidoporus microporus</i> (Sw.) Overeem		Not Listed	LC
Meripilaceae	<i>Rigidoporus pendulus</i> Ryvarden		Not Listed	LC
Meruliaceae	<i>Climacodon dubitativus</i> (Lloyd) Ryvarden		Not Listed	LC
Mycenaceae	<i>Mycena chlorophos</i> (Berk. & M.A.Curtis) Sacc	Green Pepe	Not Listed	LC
Mycenaceae	<i>Mycena roseilignicola</i> Corner	Rosy Mycena	Not Listed	LC
Mycenaceae	<i>Filibolletus manipularis</i> (Berk.) Singer	Luminous Porecap	Not Listed	LC
Mycenaceae	<i>Panellus luminescens</i> (Corner) Corner		Not Listed	LC
Nidulariaceae	<i>Cyathus stercoreus</i> (Schwein.) De Toni	Dung-loving Bird's Nest Fungus	Not Listed	CR
Nidulariaceae	<i>Cyathus subglobisporus</i> R.L.Zhao, Desjardin & K.D.Hyde	Common Bird's Nest Fungus	Not Listed	LC
Omphalotaceae	<i>Neonothopanus nambi</i> (Speg.) R.H.Petersen & Krisai		Not Listed	LC
Ophiocordycipitaceae	<i>Ophiocordyceps sphecocephala</i> (Klotzsch ex Berk.) G.H.Sung, J.M.Sung, Hywel-Jones		Not Listed	VU
Panaceae	<i>Panus ciliatus</i> (Lév.) T.W.May & A.E.Wood		Not Listed	VU
Panaceae	<i>Panus kinabaluensis</i> Corner		Not Listed	VU
Panaceae	<i>Panus lecomtei</i> (Fr.) Corner	Hairy Oyster	Not Listed	LC
Panaceae	<i>Panus natarajanianus</i> Senthil		Not Listed	VU
Panaceae	<i>Panus similis</i> (Berk. & Broome) T.W.May & A.E.Wood		Not Listed	VU
Panaceae	<i>Panus velutinus</i> (Fr.) Sacc		Not Listed	VU
Phallaceae	<i>Lysurus mokusin</i> (L.) Fr	Lantern Stinkhorn	Not Listed	LC
Phallaceae	<i>Mutinus bambusinus</i> (Zoll.) E.Fisch	Bamboo Stinkhorn	Not Listed	VU
Phallaceae	<i>Phallus atrovolvatus</i> Kreisel & Calonge		Not Listed	LC
Phallaceae	<i>Phallus indusiatus</i> Vent	Bridal Veil Stinkhorn; Bamboo Pith Fungus	Not Listed	LC
Phallaceae	<i>Phallus multicolor</i> (Berk. & Broome) Cooke		Not Listed	LC
Physalaciaceae	<i>Cryptotrama asprata</i> (Berk.) Redhead & Ginns	Golden-scruffy Collybia	Not Listed	CR
Physalaciaceae	<i>Oudemansiella canarii</i> (Jungh.) Höhn	Tropical Porcelain Fungus	Not Listed	NE
Physalaciaceae	<i>Physalacia sulphurea</i> (Corner) Singer		Not Listed	LC
Pleurotaceae	<i>Pleurotus djamor</i> (Rumph. ex Fr.) Boedijn	Pink Oyster Mushroom	Not Listed	LC
Pleurotaceae	<i>Pleurotus giganteus</i> (Berk.) Karun. & K.D.Hyde		Not Listed	LC
Polyporaceae	<i>Lentinus concentricus</i> Karun., K.D.Hyde & Zhu L.Yang		Not Listed	VU
Polyporaceae	<i>Lentinus polychrous</i> Lév		Not Listed	LC
Polyporaceae	<i>Lentinus sajor-caju</i> (Fr.) Fr	Vegetable-wood	Not Listed	LC
Polyporaceae	<i>Lentinus squarrosulus</i> Mont		Not Listed	LC

Family	Taxon Name	Common Name	RDB2	RDB3
Polyporaceae	<i>Lentinus tuberregium</i> (Fr.) Fr		Not Listed	CR
Polyporaceae	<i>Cubamyces menziesii</i> (Berk.) Lücking		Not Listed	LC
Polyporaceae	<i>Earliella scabrosa</i> (Pers.) Gilb. & Ryvarden		Not Listed	LC
Polyporaceae	<i>Favolus acervatus</i> (Lloyd) Sotome & T.Hatt		Not Listed	LC
Polyporaceae	<i>Favolus eos</i> (Corner) Zmitr		Not Listed	CR
Polyporaceae	<i>Funalia aspera</i> (Jungh.) Zmitr. & Malysheva		Not Listed	LC
Polyporaceae	<i>Hexagonia apiaria</i> (Pers.) Fr		Not Listed	LC
Polyporaceae	<i>Hexagonia tenuis</i> Speg		Not Listed	LC
Polyporaceae	<i>Microporus affinis</i> (Blume & T.Nees) Kuntze		Not Listed	LC
Polyporaceae	<i>Microporus xanthopus</i> (Fr.) Kuntze	Yellow Stemmed Micropore	Not Listed	LC
Polyporaceae	<i>Pycnoporus sanguineus</i> (L.) Murrill	Cinnabar Bracket	Not Listed	LC
Polyporaceae	<i>Trametes elegans</i> (Spreng.) Fr	White Maze Polypore	Not Listed	LC
Polyporaceae	<i>Truncospora ochroleuca</i> (Berk.) Pilát		Not Listed	LC
Psathyrellaceae	<i>Coprinellus disseminatus</i> (Pers.) J.E.Lange	Fairy Inkcaps	Not Listed	LC
Psathyrellaceae	<i>Coprinopsis pachyderma</i> (Bogart) Redhead, Vilgalys & Moncalvo		Not Listed	LC
Psathyrellaceae	<i>Lacrymaria malayana</i> S.M.L. Lee & Voto		Not Listed	LC
Psathyrellaceae	<i>Narcissea cardiaspora</i> (Bender) Voto	Ticker Inkcaps	Not Listed	LC
Psathyrellaceae	<i>Parasola psathyrelloides</i> K.G.G.Ganga & Manim		Not Listed	LC
Psathyrellaceae	<i>Psathyrella floriformis</i> (Hauskn.) Voto		Not Listed	LC
Pyronemataceae	<i>Trichaleurina javanica</i> (Rehm) M.Carbone, Agnello & P.Alvarado	Peanut Butter Cup Fungus	Not Listed	LC
Pyronemataceae	<i>Scutellinia scutellata</i> (L.) Lambotte	Eyelash Fungi	Not Listed	LC
Russulaceae	<i>Lactarius brunneocinnamomeus</i> Paloi, Verbeken & K.Acharya	Milkcap	Not Listed	LC
Russulaceae	<i>Lactarius politus</i> Wisitr. & K.D.Hyde	Milkcap	Not Listed	LC
Russulaceae	<i>Lactifluus bicolor</i> (Massee) Verbeken	Milkcap	Not Listed	CR
Russulaceae	<i>Russula alboareolata</i> Hongo	Brittle-gill	Not Listed	VU
Russulaceae	<i>Russula bellissima</i> Manz & F.Hampe	Pink Brittle-gill	Not Listed	LC
Sarcoscyphaceae	<i>Cookeina speciosa</i> (Fr.) Dennis	Tropical Elf Cup	Not Listed	VU
Sarcoscyphaceae	<i>Cookeina tricholoma</i> (Mont.) Kuntze	Bristly Tropical Cup	Not Listed	EN
Schizophyllaceae	<i>Schizophyllum commune</i> Fr	Split-gill Fungus	Not Listed	LC
Sclerodermataceae	<i>Pisolithus albus</i> (Cooke & Massee) Priest		Not Listed	CR
Sclerodermataceae	<i>Scleroderma columnare</i> Berk. & Broome	Earthball	Not Listed	VU
Sclerodermataceae	<i>Scleroderma leptopodium</i> Pat. & Har	Earthball	Not Listed	VU
Sclerodermataceae	<i>Scleroderma sinnamariense</i> Mont	Yellow Earthball	Not Listed	LC
Serpulaceae	<i>Serpula similis</i> (Berk. & Broome) Ginns		Not Listed	LC
Sirobasidiaceae	<i>Sirobasidium magnum</i> Boedijn	Tropical Witches' Butter	Not Listed	LC
Steccherinaceae	<i>Nigroporus vinosus</i> (Berk.) Murrill		Not Listed	LC
Stereaceae	<i>Stereum lobatum</i> (Kunze ex Fr.) Fr		Not Listed	LC
Tremellaceae	<i>Tremella fuciformis</i> Berk	Snow Fungus; White Jelly Mushroom; Bai Mu Er	Not Listed	LC

Checklist of Porifera Species with their Category of Threat Status for Singapore

Prepared by Lim Swee Cheng

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Chondrosiidae	<i>Chondrosia</i>	<i>corticata</i>	Thiele, 1900		Not Listed	LC
Chondrosiidae	<i>Chondrilla</i>	<i>australiensis</i>	Carter, 1873		Not Listed	LC
Chondrosiidae	<i>Chondrilla</i>	<i>mixta</i>	Schulze, 1877		Not Listed	LC
Iantheillidae	<i>Hexadella</i>	<i>indica</i>	Dendy, 1905		Not Listed	LC
Pseudoceratinidae	<i>Pseudoceratina</i>	<i>purpurea</i>	(Carter, 1880)		Not Listed	LC
Darwinellidae	<i>Chelonaplysilla</i>	<i>erecta</i>	(Row, 1911)		Not Listed	LC
Dysideidae	<i>Dysidea</i>	<i>frondosa</i>	Bergquist, 1995		Not Listed	LC
Dysideidae	<i>Lamellodysidea</i>	<i>herbacea</i>	(Keller, 1889)		Not Listed	LC
Irciniidae	<i>Ircinia</i>	<i>irregularis</i>	(Poléjaeff, 1884)		Not Listed	LC
Irciniidae	<i>Ircinia</i>	<i>ramosa</i>	(Keller, 1889)		Not Listed	LC
Spongiidae	<i>Coscinoderma</i>	<i>matthewsi</i>	(Lendenfeld, 1886)		Not Listed	LC
Spongiidae	<i>Hippospongia</i>	<i>mollissima</i>	Lendenfeld, 1889		Not Listed	DD
Spongiidae	<i>Hyattella</i>	<i>intestinalis</i>	(Lamarck, 1814)		Not Listed	LC
Spongiidae	<i>Hyattella</i>	<i>tubaria</i>	(Lamarck, 1814)		Not Listed	LC
Spongiidae	<i>Spongia (Spongia)</i>	<i>ceylonensis</i>	Dendy, 1905	Bath Sponge	Not Listed	LC
Thorectidae	<i>Dactylospongia</i>	<i>elegans</i>	(Thiele, 1899)		Not Listed	LC
Thorectidae	<i>Hyrtios</i>	<i>erectus</i>	(Keller, 1889)		Not Listed	LC
Thorectidae	<i>Lendenfeldia</i>	<i>chondrodes</i>	(De Laubenfels, 1954)		Not Listed	LC
Thorectidae	<i>Luffariella</i>	<i>variabilis</i>	(Poléjaeff, 1884)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i> (<i>Callyspongia</i>)	<i>ramosa</i>	(Gray, 1843)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i> (<i>Callyspongia</i>)	<i>serpentina</i>	(Lamarck, 1814)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i> (<i>Callyspongia</i>)	<i>diffusa</i>	(Ridley, 1884)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i> (<i>Callyspongia</i>)	<i>fibrosa</i>	(Ridley & Dendy, 1886)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i> (<i>Callyspongia</i>)	<i>samarensis</i>	(Wilson, 1925)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i> (<i>Cladochalina</i>)	<i>spinosissima</i>	(Dendy, 1887)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i> (<i>Euplacella</i>)	<i>cf. communis</i>	(Carter, 1881)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i> (<i>Toxochalina</i>)	<i>dendyi</i>	(Burton, 1931)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i> (<i>Toxochalina</i>)	<i>folioides</i>	(Bowerbank, 1875)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i>	<i>aurantiaca</i>	(Lendenfeld, 1887)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i>	<i>euplax</i>	(Lendenfeld, 1887)		Not Listed	DD
Callyspongiidae	<i>Callyspongia</i>	<i>globosa</i>	Pulitzer-Finali, 1982		Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Callyspongiidae	<i>Callyspongia</i>	<i>joubini</i>	(Topsent, 1897)		Not Listed	LC
Callyspongiidae	<i>Callyspongia</i>	<i>spinulosa</i>	(Lendenfeld, 1887)		Not Listed	DD
Chalinidae	<i>Haliclona (Gellius)</i>	<i>amboinensis</i>	(Lévi, 1961)		Not Listed	LC
Chalinidae	<i>Haliclona (Gellius)</i>	<i>cymaeformis</i>	(Esper, 1794)		Not Listed	LC
Chalinidae	<i>Haliclona (Rhizoniera)</i>	<i>australis</i>	(Lendenfeld, 1888)		Not Listed	DD
Chalinidae	<i>Haliclona</i>	<i>baeri</i>	(Wilson, 1925)		Not Listed	LC
Chalinidae	<i>Haliclona</i>	<i>koremella</i>	De Laubenfels, 1954		Not Listed	DD
Niphatidae	<i>Gelliodes</i>	<i>fibulata</i>	(Carter, 1881)		Not Listed	LC
Niphatidae	<i>Gelliodes</i>	<i>spinosella</i>	Thiele, 1899		Not Listed	DD
Petrosiidae	<i>Acanthostrongylophora</i>	<i>ingens</i>	(Thiele, 1899)		Not Listed	LC
Petrosiidae	<i>Neopetrosia</i>	<i>carbonaria</i>	(Lamarck, 1814)		Not Listed	LC
Petrosiidae	<i>Neopetrosia</i>	<i>compacta</i>	(Ridley & Dendy, 1886)		Not Listed	DD
Petrosiidae	<i>Neopetrosia</i>	<i>chaliformis</i>	(Thiele, 1899)		Not Listed	LC
Petrosiidae	<i>Neopetrosia</i>	<i>similis</i>	(Ridley & Dendy, 1886)		Not Listed	DD
Petrosiidae	<i>Petrosia (Petrosia)</i>	<i>hoeksemai</i>	De Voogd & Van Soest, 2002		Not Listed	LC
Petrosiidae	<i>Xestospongia</i>	<i>testudinaria</i>	(Lamarck, 1815)	Barrel Sponge	Not Listed	LC
Petrosiidae	<i>Xestospongia</i>	<i>vansoesti</i>	Nishiyama & Bakus, 2000		Not Listed	LC
Phloeodictyidae	<i>Oceanapia</i>	<i>sagittaria</i>	(Sollas, 1902)		Not Listed	LC
Phloeodictyidae	<i>Siphonodictyon</i>	<i>maldivense</i>	(Calcinai et al., 2007)		Not Listed	LC
Phloeodictyidae	<i>Siphonodictyon</i>	<i>mucosum</i>	Bergquist, 1965		Not Listed	LC
Scopalinidae	<i>Stylissa</i>	<i>carteri</i>	(Dendy, 1889)		Not Listed	LC
Scopalinidae	<i>Stylissa</i>	<i>massa</i>	(Carter, 1887)		Not Listed	LC
Raspailiidae	<i>Echinodictyum</i>	<i>asperum</i>	Ridley & Dendy, 1886		Not Listed	LC
Raspailiidae	<i>Echinodictyum</i>	<i>conulosum</i>	Kieschnick, 1900		Not Listed	LC
Raspailiidae	<i>Echinodictyum</i>	<i>lacunosum</i>	Kieschnick, 1901		Not Listed	DD
Raspailiidae	<i>Echinodictyum</i>	<i>mesenterinum</i>	(Lamarck, 1814)		Not Listed	LC
Raspailiidae	<i>Raspailia (Parasyringella)</i>	<i>nuda</i>	Hentschel, 1911		Not Listed	LC
Raspailiidae	<i>Thrinacophora</i>	<i>cervicornis</i>	Ridley & Dendy, 1886		Not Listed	LC
Desmanthidae	<i>Desmanthus</i>	<i>rhabdophorus</i>	(Hentschel, 1912)		Not Listed	LC
Dictyonellidae	<i>Acanthella</i>	<i>cavernosa</i>	Dendy, 1922		Not Listed	LC
Biemnidae	<i>Biemna</i>	<i>fortis</i>	(Topsent, 1897)		Not Listed	LC
Ancorinidae	<i>Ecionemia</i>	<i>acervus</i>	Bowerbank, 1864		Not Listed	LC
Ancorinidae	<i>Jaspis</i>	<i>splendens</i>	(De Laubenfels, 1954)		Not Listed	LC
Ancorinidae	<i>Rhabdastrella</i>	<i>globostellata</i>	(Carter, 1883)		Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Ancorinidae	<i>Stelletta</i>	<i>clavosa</i>	Ridley, 1884		Not Listed	LC
Geodiidae	<i>Geodia</i>	<i>distincta</i>	Lindgren, 1897		Not Listed	LC
Geodiidae	<i>Geodia</i>	<i>picteti</i>	(Topsent, 1897)		Not Listed	LC
Theonellidae	<i>Theonella</i>	<i>cylindrica</i>	Wilson, 1925		Not Listed	LC
Theonellidae	<i>Theonella</i>	<i>laena</i>	Lim & Tan, 2016		Not Listed	LC
Tetillidae	<i>Cinachyrella</i>	<i>arabica</i>	(Carter, 1869)		Not Listed	DD
Tetillidae	<i>Cinachyrella</i>	<i>australiensis</i>	(Carter, 1886)		Not Listed	LC
Tetillidae	<i>Craniella</i>	<i>abracadabra</i>	De Laubenfels, 1954		Not Listed	LC
Tetillidae	<i>Paratetilla</i>	<i>bacca</i>	(Selenka, 1867)		Not Listed	LC
Agelasidae	<i>Agelas</i>	<i>cavernosa</i>	Thiele, 1903		Not Listed	LC
Agelasidae	<i>Prosüberites</i>	<i>oleteira</i>	De Laubenfels, 1957		Not Listed	LC
Acarnidae	<i>Acarnus</i>	<i>primigenius</i>	Hiemstra & Hooper, 1991		Not Listed	LC
Acarnidae	<i>Acarnus</i>	<i>ternatus</i>	Ridley, 1884		Not Listed	LC
Acarnidae	<i>Acarnus</i>	<i>wolfgangi</i>	Keller, 1889		Not Listed	LC
Acarnidae	<i>Damiria</i>	<i>simplex</i>	Keller, 1891		Not Listed	LC
Crambeidae	<i>Monanchora</i>	<i>clathrata</i>	Carter, 1883		Not Listed	LC
Crambeidae	<i>Monanchora</i>	<i>unguiculata</i>	(Dendy, 1922)		Not Listed	LC
Coelosphaeridae	<i>Forcepia</i> <i>(Foecepia)</i>	<i>vansoesti</i>	Lim et al., 2012		Not Listed	LC
Guitaridae	<i>Tetrapocillon</i>	<i>patbergquistae</i>	Fromont et al., 2011		Not Listed	LC
Iotrochotidae	<i>Iotrochota</i>	<i>baculifera</i>	Ridley, 1884		Not Listed	LC
Iotrochotidae	<i>Iotrochota</i>	<i>purpurea</i>	(Bowerbank, 1875)		Not Listed	LC
Isodictyidae	<i>Coelocarteria</i>	<i>singaporesis</i>	(Carter, 1883)		Not Listed	LC
Microcionidae	<i>Clathria</i> (<i>Clathria</i>)	<i>transiens</i>	Hallmann, 1912		Not Listed	DD
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>cervicornis</i>	(Thiele, 1903)		Not Listed	LC
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>filifera</i>	(Ridley & Dendy, 1886)		Not Listed	DD
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>reinwardti</i>	Vosmaer, 1880		Not Listed	LC
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>robusta</i>	(Dendy, 1922)		Not Listed	DD
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>toxifera</i>	(Hentschel, 1912)		Not Listed	LC
Microcionidae	<i>Clathria</i> <i>(Thalysias)</i>	<i>vulpina</i>	(Lamarck, 1814)		Not Listed	LC
Microcionidae	<i>Clathria</i> <i>(Wilsonella)</i>	<i>foraminifera</i>	(Burton & Rao, 1932)		Not Listed	LC
Microcionidae	<i>Clathria</i> <i>(Wilsonella)</i>	<i>tuberosa</i>	(Bowerbank, 1875)		Not Listed	LC
Microcionidae	<i>Holopsmamma</i>	<i>laminaefavosa</i>	(Carter, 1885)		Not Listed	DD
Mycalidae	<i>Mycale</i> <i>(Aegogropila)</i>	<i>crassissima</i>	(Dendy, 1905)		Not Listed	LC
Mycalidae	<i>Mycale</i> <i>(Aegogropila)</i>	<i>sulevoidea</i>	Sollas, 1902		Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Mycalidae	<i>Mycale</i> (<i>Carmia</i>)	<i>murrayi</i>	(Ridley & Dendy, 1886)		Not Listed	DD
Mycalidae	<i>Mycale</i> (<i>Mycale</i>)	<i>grandis</i>	Gray, 1867		Not Listed	LC
Mycalidae	<i>Mycale</i> (<i>Mycale</i>)	<i>indica</i>	(Carter, 1887)		Not Listed	LC
Mycalidae	<i>Mycale</i> (<i>Mycale</i>)	<i>sulcata</i>	Hentschel, 1911		Not Listed	LC
Mycalidae	<i>Mycale</i> (<i>Zygomycale</i>)	<i>parishii</i>	(Bowerbank, 1875)		Not Listed	LC
Myxillidae	<i>Psammochela</i>	<i>psammodes</i>	(Hentschel, 1911)		Not Listed	LC
Clionaidae	<i>Cliona</i>	<i>orientalis</i>	Thiele, 1900		Not Listed	LC
Clionaidae	<i>Cliona</i>	<i>patera</i>	(Hardwicke, 1820)	Neptune's Cup Sponge	Not Listed	CR
Clionaidae	<i>Cliona</i>	<i>utricularis</i>	Calcinai, Bavestrello & Cerrano, 2005		Not Listed	LC
Clionaidae	<i>Spheciospongia</i>	<i>inconstans</i>	(Dendy, 1887)		Not Listed	LC
Clionaidae	<i>Spheciospongia</i>	<i>lacunosa</i>	(Kieschnick, 1898)		Not Listed	DD
Clionaidae	<i>Spheciospongia</i>	<i>purpurea</i>	(Lamarck, 1815)		Not Listed	DD
Clionaidae	<i>Spheciospongia</i>	<i>vagabunda</i>	(Ridley, 1884)		Not Listed	LC
Spirastrellidae	<i>Spirastrella</i>	<i>decumbens</i>	Ridley, 1884		Not Listed	LC
Placospongiidae	<i>Placospongia</i>	<i>carinata</i>	(Bowerbank, 1858)		Not Listed	LC
Placospongiidae	<i>Placospongia</i>	<i>melobesioides</i>	Gray, 1867		Not Listed	LC
Tethiyidae	<i>Tethya</i>	<i>robusta</i>	(Bowerbank, 1873)		Not Listed	LC
Tethiyidae	<i>Tethycometes</i>	<i>radicosa</i>	Lim & Tan, 2008		Not Listed	LC
Suberitidae	<i>Aaptos</i>	<i>suberitoides</i>	(Brøndsted, 1934)		Not Listed	LC
Suberitidae	<i>Pseudosuberites</i>	<i>cava</i>	Sollas, 1902		Not Listed	LC
Suberitidae	<i>Suberites</i>	<i>diversicolor</i>	Becking & Lim, 2009		Not Listed	LC
Suberitidae	<i>Terpios</i>	<i>cruciata</i>	(Dendy, 1905)		Not Listed	LC
Suberitidae	<i>Terpios</i>	<i>granulosa</i>	Bergquist, 1967		Not Listed	LC
Halichondriidae	<i>Amorphinopsis</i>	<i>excavans</i>	Carter, 1887		Not Listed	LC
Halichondriidae	<i>Axinyssa</i>	<i>pitys</i>	(De Laubenfels, 1954)		Not Listed	DD
Halichondriidae	<i>Epipolasis</i>	<i>suluensis</i>	(Wilson, 1925)		Not Listed	LC
Halichondriidae	<i>Halichondria</i> (<i>Halichondria</i>)	<i>cartilaginea</i>	(Esper, 1794)		Not Listed	LC
Spongillidae	<i>Eunapius</i>	<i>conifer</i>	(Annandale, 1916)		Not Listed	LC
Clathrinidae	<i>Clathrina</i>	<i>flexilis</i>	(Haeckel, 1872)		Not Listed	DD
Clathrinidae	<i>Clathrina</i>	<i>sororcula</i>	Van Soest & De Voogd, 2015		Not Listed	LC
Jenkinidae	<i>Anamixilla</i>	<i>singaporensis</i>	Van Soest & De Voogd, 2015		Not Listed	LC
Jenkinidae	<i>Uteopsis</i>	<i>argentea</i>	(Poléjaeff, 1883)		Not Listed	LC

Checklist of Cnidaria (non-Scleractinia) Species with their Category of Threat Status for Singapore

Prepared by Yap Wei Liang Nicholas, Oh Ren Min, Iffah Iesa

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Discosomidae	<i>Rhodactis</i>	<i>indosinensis</i>	Carlgren, 1943	Carpet / White-tip Corallimorph	Not Listed	LC
Discosomidae	<i>Rhodactis</i>	<i>inchoata</i>	Carlgren, 1943	Frilled Corallimorph	Not Listed	LC
Discosomidae	<i>Discosoma</i>	<i>nummiforme</i>	Rüppell & Leuckart, 1828	Beaded / Stubby Corallimorph	Not Listed	LC
Discosomidae	<i>Discosoma</i>	spp.		Striped Corallimorph	Not Listed	DD
Corallimorphidae	<i>Corynactis</i>	spp.		Ball-tip Corallimorph	Not Listed	DD
Discosomidae	<i>Platyoanthus</i>	<i>mussoides</i>	Saville-Kent, 1893	Ridged Corallimorph	Not Listed	DD
Ricordeidae	<i>Ricordea</i>	<i>yuma</i>	Carlgren, 1900	Stubby Corallimorph	Not Listed	DD
Capnidae	<i>Actinoporus</i>	<i>elongatus</i>	Gosse, 1860	Very Long Anemone	Not Listed	DD
Actinodendridae	<i>Actinodendron</i>	<i>arboreum</i>	(Quoy & Gaimard, 1833)	Christmas Tree / Fire Anemone	Not Listed	LC
Actinodendridae	<i>Actinostephanus</i>	<i>haeckeli</i>	Kwietniewski, 1897	Haeckel's Anemone	Not Listed	LC
Aliciidae	<i>Alicia</i>	sp.		Alicia Anemone	Not Listed	DD
Actiniidae	<i>Anthopleura</i>	<i>buddemeieri</i>	Fautin, 2005	Pink-spotted Bead Anemone	Not Listed	EN
Actiniidae	<i>Anthopleura</i>	<i>dixoniana</i>	(Haddon & Shackleton, 1893)	Banded Bead Anemone	Not Listed	LC
Actiniidae	<i>Anthopleura</i>	<i>handi</i>	Dunn, 1978	Banded Bead	Not Listed	LC
Actiniidae	<i>Anthopleura</i>	<i>nigrescens</i>	(Verrill, 1928)	Banded Bead	Not Listed	LC
Boloceroididae	<i>Boloceroides</i>	<i>mcmurrichi</i>	(Kwietniewski, 1898)	Swimming Anemone	Not Listed	LC
Actiniidae	<i>Bunodosoma</i>	<i>goanense</i>	den Hartog & Vennam, 1993	Burgundy Anemone	Not Listed	LC
Actiniidae	<i>Cancriosicia</i>	<i>expansa</i>	Stimpson, 1856		Not Listed	DD
Thalassianthidae	<i>Cryptodendrum</i>	<i>adhaesivum</i>	Milne Edwards, 1857	Pizza Anemone	Not Listed	CR
Diadumenidae	<i>Diadumene</i>	<i>lineata</i>	(Verrill, 1869)	Lined Bead Anemone	Not Listed	LC
Diadumenidae	<i>Diadumene</i>	sp.		Lined Bead Anemone	Not Listed	DD
Actiniidae	<i>Dofleinia</i>	<i>armata</i>	Wassilieff, 1908	Glass Anemone	Not Listed	LC
Actiniidae	<i>Entacmaea</i>	<i>quadricolor</i>	(Leuckart in Rüppell & Leuckart, 1828)	Bubble-tipped Anemone	Not Listed	LC
Stichodactylidae	<i>Heteractis</i>	<i>crispa</i>	(Hemprich & Ehrenberg in Ehrenberg, 1834)	Leathery Anemone	Not Listed	EN
Stichodactylidae	<i>Heteractis</i>	<i>magnifica</i>	(Quoy & Gaimard, 1833)	Magnificent Anemone	Not Listed	LC
Heteranthidae	<i>Heteranthus</i>	<i>verruculatus</i>	Klunzinger, 1877	Sand Anemone	Not Listed	VU
Hormathiidae	<i>Calliactis</i>	sp.		Big Hermit Hitching Anemone	Not Listed	DD
Actiniidae	<i>Isactinia</i>	<i>citrina</i>	(Haddon & Shackleton, 1893)	Neon / Posy Anemone	Not Listed	LC
Actiniidae	<i>Macroductyla</i>	<i>aspera</i>	(Haddon & Shackleton, 1893)	Glass Anemone	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Actiniidae	<i>Macrodactyla</i>	<i>doreensis</i>	(Quoy & Gaimard, 1833)	Snaky Anemone	Not Listed	EN
Haloclavidae	<i>Metapeachia</i>	<i>tropica</i>	(Panikkar, 1938)	White Peachia Anemone	Not Listed	LC
Nemanthidae	<i>Nemanthus</i>	sp.		Wrapper Anemone	Not Listed	DD
Actiniidae	<i>Paracondylactis</i>	<i>hertwigi</i>	(Wassilieff, 1908)	Striped Sand Anemone	Not Listed	DD
Actiniidae	<i>Paracondylactis</i>	<i>sinensis</i>	Carlgren, 1934	Pearly Anemone	Not Listed	DD
Actiniidae	<i>Paracondylactis</i>	<i>singaporense</i>	(England, 1987)	Striped Bead Anemone	Not Listed	DD
Aiptasiidae	<i>Paraiptasia</i>	<i>radiata</i>	(Stimpson, 1856)	Snail Hitching Anemone	Not Listed	LC
Haliactiidae	<i>Pelocoetes</i>	<i>exul</i>	(Annandale, 1907)	Branched Tentacle Mangrove Anemone	Not Listed	CR
Phymanthidae	<i>Phymanthus</i>	<i>pinnulatus</i>	Martens in Klunzinger, 1877	Banded Frilly / Frilly / Plain Frilly / Sand / Smooth Anemone	Not Listed	LC
Phymanthidae	<i>Phymanthus</i>	<i>rhizophorae</i>	(Mitchell, 1890)	Filly / Six-Point Frilly / Sand Anemone	Not Listed	LC
Haliactiidae	<i>Stephensonactis</i>	<i>ornata</i>	Panikkar, 1936	Petal-Mouthed Mangrove Anemone	Not Listed	DD
Stichodactylidae	<i>Stichodactyla</i>	<i>gigantea</i>	(Forssakål, 1775)	Carpet / Giant Carpet Anemone	Not Listed	LC
Stichodactylidae	<i>Stichodactyla</i>	<i>mertensi</i>	Brandt, 1835	Merten's Carpet Anemone	Not Listed	EN
Stichodactylidae	<i>Stichodactyla</i>	<i>haddoni</i>	(Saville-Kent, 1893)	Carpet / Haddon's Carpet Anemone	Not Listed	LC
Stichodactylidae	<i>Stichodactyla</i>	<i>tapetum</i>	(Hemprich & Ehrenberg in Ehrenberg, 1834)	Carpet / Mini Carpet Anemone	Not Listed	LC
Haloclavidae	<i>Synpeachia</i>	<i>temasek</i>	Yap, Fautin, Ramos & Tan, 2014	Brown Peachia Anemone	Not Listed	CR
Thalassianthidae	<i>Thalassianthus</i>	sp.			Not Listed	DD
Edwardsiidae	<i>Edwardsianthus</i>	<i>pudicus</i>	(Klunzinger, 1877)		Not Listed	DD
Edwardsiidae	<i>Scolanthus</i>	<i>armatus</i>	(Carlgren, 1931)		Not Listed	DD
Aliciidae	<i>Triactis</i>	<i>producta</i>	Klunzinger, 1877		Not Listed	DD
Actiniidae	<i>Gyraeactis</i>	<i>excavata</i>	Boveri, 1893		Not Listed	DD
Actiniidae	<i>Mesactinia</i>	<i>ganensis</i>	England, 1987		Not Listed	DD
Helioporidae	<i>Heliopora</i>	<i>coerulea</i>	Pallas, 1766	Blue Coral	Not Listed	LC
Alcyoniidae	<i>Cladiella</i>	<i>hartogi</i>	Benayahu & Chou, 2010		Not Listed	DD
Alcyoniidae	<i>Cladiella</i>	<i>pachyclados</i>	Klunzinger, 1887		Not Listed	DD
Alcyoniidae	<i>Lobophytum</i>	<i>crassum</i>	von Marenzeller, 1886		Not Listed	DD
Alcyoniidae	<i>Lobophytum</i>	<i>pauciflorum</i>	Ehrenberg, 1834		Not Listed	DD
Alcyoniidae	<i>Lobophytum</i>	<i>sarcophyoides</i>	Moser, 1919		Not Listed	DD
Alcyoniidae	<i>Sarcophyton</i>	<i>crassocaule</i>	Moser, 1919		Not Listed	DD
Alcyoniidae	<i>Sarcophyton</i>	<i>ehrenbergi</i>	von Marenzeller, 1886		Not Listed	DD
Alcyoniidae	<i>Sarcophyton</i>	<i>glaucum</i>	Quoy & Gaimard, 1833		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Alcyoniidae	<i>Sarcophyton</i>	<i>tenuispiculatum</i>	Thomson & Dean, 1931		Not Listed	DD
Alcyoniidae	<i>Sarcophyton</i>	<i>trocheliophorum</i>	von Marenzeller, 1886		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>abrupta</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>brassica</i>	May, 1898	Starry Leathery Coral	Not Listed	LC
Alcyoniidae	<i>Sinularia</i>	<i>capillosa</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>compressa</i>	Tixier Durivault, 1945		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>depressa</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>erecta</i>	Tixier Durivault, 1945		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>exilis</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>gibberosa</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>hirta</i>	Pratt, 1903		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>lochmodes</i>	Kolonko, 1926		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>microclavata</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Sinularia</i>	<i>triangula</i>	Tixier Durivault, 1970		Not Listed	DD
Alcyoniidae	<i>Studeriotes</i>	<i>spinosa</i>	Thomson & Dean, 1931		Not Listed	DD
Xeniidae	<i>Sansiba</i>	<i>flava</i>	May, 1898	Broad Feathery Soft Coral	Not Listed	LC
Briareidae	<i>Briareum</i>	<i>excavatum</i>	Natting, 1911		Not Listed	DD
Bougainvilliidae	<i>Thamnostoma</i>	<i>macrostomum</i>	Haeckel, 1879		Not Listed	DD
Porpitidae	<i>Porpita</i>	<i>porpita</i>	(Linnaeus, 1758)	Blue Button Jellyfish	Not Listed	DD
Zancleidae	<i>Zanclea</i>	sp.			Not Listed	DD
Aequoreidae	<i>Aequorea</i>	<i>conica</i>	Browne, 1905		Not Listed	DD
Aequoreidae	<i>Aequorea</i>	<i>parva</i>	Browne, 1905		Not Listed	DD
Aequoreidae	<i>Aequorea</i>	<i>pensilis</i>	(Haeckel, 1879)		Not Listed	DD
Campanulariidae	<i>Clytia</i>	sp.			Not Listed	DD
Eirenidae	<i>Eirene</i>	<i>hexanemalis</i>	(Goette, 1886)	Eirene Jellyfish	Not Listed	DD
Phialuciidae	<i>Phialicum</i>	<i>mbengha</i>	(Agassiz & Mayer, 1899)		Not Listed	DD
Abylidiae	<i>Ceratocymba</i>	<i>leuckarti</i>	(Huxley, 1859)		Not Listed	DD
Diphyidae	<i>Diphyes</i>	<i>bojani</i>	(Eschscholtz, 1825)		Not Listed	DD
Diphyidae	<i>Diphyes</i>	<i>chamissonis</i>	Huxley, 1859		Not Listed	DD
Diphyidae	<i>Lensia</i>	sp.	Totton, 1932		Not Listed	DD
Physaliidae	<i>Physalia</i>	sp.		Blue Bottle Jellyfish	Not Listed	DD
Geryoniidae	<i>Liriope</i>	<i>tetraphylla</i>	(Chamisso & Eysenhardt, 1821)	Jewel Jellyfish	Not Listed	DD
Olindiasidae	<i>Craspedacusta</i>	<i>sowerbii</i>	Lankester, 1880	Freshwater Jellyfish	Not Listed	LC
Solmundaeginidae	<i>Solmundella</i>	sp.			Not Listed	DD
Cuninidae	<i>Cunina</i>	<i>duplicata</i>	Maas, 1893		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Nausithoidae	<i>Nausithoe</i>	<i>punctata</i>	Kölliker, 1853		Not Listed	DD
Linuchidae	<i>Linuche</i>	<i>unguiculata</i>	(Swartz, 1788)	Thimble Jellyfish	Not Listed	DD
Pelagiidae	<i>Chrysaora</i>	<i>chinensis</i>	Vanhöffen, 1888	Ribbon Jellyfish	Not Listed	LC
Pelagiidae	<i>Chrysaora</i>	<i>melanaster</i>	Brandt, 1835	Ribbon Jellyfish	Not Listed	NE
Pelagiidae	<i>Pelagia</i>	sp.		Purple-striped Jellyfish	Not Listed	DD
Pelagiidae	<i>Sanderia</i>	<i>malayensis</i>	Goette, 1886		Not Listed	DD
Cyaneidae	<i>Cyanea</i>	<i>lamarckii</i>	Péron & Lesueur, 1810	Lion's Mane Jellyfish	Not Listed	DD
Ulmariidae	<i>Aurelia</i>	<i>aurita</i>	(Linnaeus, 1758)	Moon Jellyfish	Not Listed	DD
Ulmariidae	<i>Ulmaris</i>	<i>snelliusi</i>	Stiasny, 1935		Not Listed	DD
Cassiopeidae	<i>Cassiopea</i>	<i>andromeda</i>	(Forsskål, 1775)	Upside-down Jellyfish	Not Listed	DD
Cassiopeidae	<i>Cassiopea</i>	<i>xamachana</i>	Bigelow, 1892	Upside-down Jellyfish	Not Listed	NE
Cepheidae	<i>Cephea</i>	<i>octostyla</i>	(Forskål, 1775)	Crown Jellyfish	Not Listed	DD
Cepheidae	<i>Netrostoma</i>	<i>dumokurooa</i>	(Agassiz & Mayer, 1899)	Crown Jellyfish	Not Listed	DD
Mastigiidae	<i>Mastigias</i>	<i>ocellatus</i>	(Modeer, 1791)	Golden Jellyfish	Not Listed	DD
Mastigiidae	<i>Mastigias</i>	<i>papua</i>	(Lesson, 1830)	Golden Jellyfish	Not Listed	DD
Mastigiidae	<i>Mastigias</i>	<i>sidereus</i>	Chun, 1896	Golden Jellyfish	Not Listed	DD
Mastigiidae	<i>Phyllorhiza</i>	<i>punctata</i>	von Lendenfeld, 1884	White-spotted Jellyfish	Not Listed	VU
Leptobrachidae	<i>Thysanostoma</i>	sp.	Agassiz, 1862	Lavender Tiger Jellyfish	Not Listed	NE
Catostylidae	<i>Acromitus</i>	<i>hardenbergi</i>	Stiasny, 1934	River Jellyfish	Not Listed	DD
Catostylidae	<i>Acromitus</i>	sp.		Mangrove Jellyfish	Not Listed	VU
Catostylidae	<i>Catostylus</i>	sp.	Agassiz, 1862	Fat-armed Jellyfish	Not Listed	DD
Carukiidae	<i>Morbakka</i>	sp.	Gershwin, 2008		Not Listed	DD
Carybdeidae	<i>Carybdea</i>	sp.	Péron & Lesueur, 1810	Sea Wasp	Not Listed	DD
Tripedaliidae	<i>Tripedalia</i>	<i>cystophora</i>	Conant, 1897	Mangrove Box Jellyfish	Not Listed	DD
Chiropodidae	<i>Chironex</i>	sp.		Multi-tentacled Box Jellyfish	Not Listed	DD
Chiropsalmidae	<i>Chiropsoides</i>	<i>quadrigatus</i>	(Haeckel, 1880)	Multi-tentacled Box Jellyfish	Not Listed	NE
Chiropsalmidae	<i>Chiropsella</i>	sp.		Multi-tentacled Box Jellyfish	Not Listed	DD

Checklist of Cnidaria (Scleractinia) Species with their Category of Threat Status for Singapore
 Prepared by Lionel Ng Chin Soon, Samuel Chan Yong Kit, Rosa Cecilia Poquita-Du, Huang Danwei

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Lobophylliidae	<i>Acanthastrea</i>	<i>echinata</i>	(Dana, 1846)	Brain coral	Not Listed	LC
Lobophylliidae	<i>Acanthastrea</i>	<i>rotundoflora</i>	Chevalier, 1975	Brain coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>abrotanoides</i>	(Lamarck, 1816)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>aculeus</i>	(Dana, 1846)	Bottlebrush coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>acuminata</i>	(Verrill, 1864)		Not Listed	VU
Acroporidae	<i>Acropora</i>	<i>anthocercis</i>	(Brook, 1893)		Not Listed	VU
Acroporidae	<i>Acropora</i>	<i>aspera</i>	(Dana, 1846)	Green staghorn coral	Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>austera</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>cerealis</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>chesterfieldensis</i>	Veron & Wallace, 1984		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>cytherea</i>	(Dana, 1846)	Table coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>dendrum</i>	(Bassett-Smith, 1890)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>digitifera</i>	(Dana, 1846)	Staghorn coral	Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>divaricata</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>donei</i>	Veron & Wallace, 1984	Purple-tipped acropora	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>elseyi</i>	(Brook, 1892)	Bottlebrush coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>florida</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>glaucha</i>	(Brook, 1893)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>grandis</i>	(Brook, 1892)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>granulosa</i>	(Milne Edwards, 1860)	Tubular table coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>horrida</i>	(Dana, 1846)	Blue staghorn coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>humilis</i>	(Dana, 1846)	Finger coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>hyacinthus</i>	(Dana, 1846)	Brush coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>intermedia</i>	(Brook, 1891)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>latistella</i>	(Brook, 1892)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>longicyathus</i>	(Milne Edwards, 1860)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>loripes</i>	(Brook, 1892)	Blue tip coral	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>lutkeni</i>	Crossland, 1952		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>microclados</i>	(Ehrenberg, 1834)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>microphthalma</i>	(Verrill, 1869)	Small staghorn coral	Not Listed	LC
Acroporidae	<i>Acropora</i>	<i>millepora</i>	(Ehrenberg, 1834)	Plate acropora	Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>muricata</i>	(Linnaeus, 1758)	Staghorn coral	Not Listed	LC
Acroporidae	<i>Acropora</i>	<i>nana</i>	(Studer, 1879)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>nasuta</i>	(Dana, 1846)	Branching staghorn coral	Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>palmerae</i>	Wells, 1954		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>polystoma</i>	(Brook, 1891)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Acroporidae	<i>Acropora</i>	<i>pulchra</i>	(Brook, 1891)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>robusta</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>samoensis</i>	(Brook, 1891)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>secale</i>	(Studer, 1878)	Purple tip acropora	Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>selago</i>	(Studer, 1879)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>solitaryensis</i>	Veron & Wallace, 1984		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>spicifera</i>	(Dana, 1846)		Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>subglabra</i>	(Brook, 1891)		Not Listed	EN
Acroporidae	<i>Acropora</i>	<i>subulata</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>tenuis</i>	(Dana, 1846)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>valenciennesi</i>	(Milne Edwards, 1860)		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>valida</i>	(Dana, 1846)		Not Listed	LC
Acroporidae	<i>Acropora</i>	<i>verweyi</i>	Veron & Wallace, 1984		Not Listed	DD
Acroporidae	<i>Acropora</i>	<i>willisae</i>	Veron & Wallace, 1984		Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>allingi</i>	Hoffmeister, 1925	Net coral	Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>catalai</i>	Wells, 1968	Branching flowerpot coral	Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>excelsa</i>	Verrill, 1864		Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>fenestrata</i>	(Lamarck, 1816)	Flower coral	Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>marionensis</i>	Veron & Pichon, 1982		Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>spongiosa</i>	Dana, 1846		Not Listed	DD
Acroporidae	<i>Alveopora</i>	<i>tizardi</i>	Bassett-Smith, 1890		Not Listed	DD
Merulinidae	<i>Astrea</i>	<i>annuligera</i>	Milne Edwards & Haime, 1849		Not Listed	DD
Merulinidae	<i>Astrea</i>	<i>curta</i>	Dana, 1846		Not Listed	DD
Acroporidae	<i>Astreopora</i>	<i>cucullata</i>	Lamberts, 1980		Not Listed	DD
Acroporidae	<i>Astreopora</i>	<i>expansa</i>	(Brüggemann, 1877)		Not Listed	DD
Acroporidae	<i>Astreopora</i>	<i>gracilis</i>	Bernard, 1896		Not Listed	NT
Acroporidae	<i>Astreopora</i>	<i>incrustans</i>	Bernard, 1896		Not Listed	DD
Acroporidae	<i>Astreopora</i>	<i>listeri</i>	Bernard, 1896	Starflower coral	Not Listed	NT
Acroporidae	<i>Astreopora</i>	<i>myriophthalma</i>	(Lamarck, 1816)	Porous star coral	Not Listed	LC
Poritidae	<i>Bernardpora</i>	<i>stutchburyi</i>	(Wells, 1955)	Anemone coral	Not Listed	LC
Merulinidae	<i>Caulastraea</i>	<i>echinulata</i>	(Milne Edwards & Haime, 1849)		Not Listed	NT
Merulinidae	<i>Caulastraea</i>	<i>furcata</i>	Dana, 1846		Not Listed	DD
Dendrophylliidae	<i>Cladopsammia</i>	<i>gracilis</i>	(Milne Edwards & Haime, 1848)		Not Listed	DD
Merulinidae	<i>Coelastrea</i>	<i>aspera</i>	(Verrill, 1866)		Not Listed	LC
Merulinidae	<i>Coelastrea</i>	<i>palauensis</i>	(Yabe & Sugiyama, 1936)		Not Listed	DD
Coscinaraeidae	<i>Coscinaraea</i>	<i>columna</i>	(Dana, 1846)		Not Listed	LC
Coscinaraeidae	<i>Coscinaraea</i>	<i>exesa</i>	(Dana, 1846)	Wrinkle coral	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Fungiidae	<i>Ctenactis</i>	<i>albitentaculata</i>	Hoeksema, 1989	Feather mushroom coral	Not Listed	DD
Fungiidae	<i>Ctenactis</i>	<i>crassa</i>	(Dana, 1846)	Feather mushroom coral	Not Listed	NT
Fungiidae	<i>Ctenactis</i>	<i>echinata</i>	(Pallas, 1766)	Feather mushroom coral	Not Listed	LC
Fungiidae	<i>Cycloseris</i>	<i>costulata</i>	(Ortmann, 1889)		Not Listed	DD
Fungiidae	<i>Cycloseris</i>	<i>explanulata</i>	(van der Horst, 1922)		Not Listed	DD
Fungiidae	<i>Cycloseris</i>	<i>mokai</i>	(Hoeksema, 1989)		Not Listed	DD
Fungiidae	<i>Cycloseris</i>	<i>vaughani</i>	(Boschma, 1923)		Not Listed	DD
Merulinidae	<i>Cyphastrea</i>	<i>chalcidicum</i>	(Forskål, 1775)	Meteor coral	Not Listed	LC
Merulinidae	<i>Cyphastrea</i>	<i>microphthalma</i>	(Lamarck, 1816)	Meteor coral	Not Listed	LC
Merulinidae	<i>Cyphastrea</i>	<i>seralia</i>	(Forskål, 1775)		Not Listed	LC
Fungiidae	<i>Danafungia</i>	<i>horrida</i>	(Dana, 1846)		Not Listed	DD
Fungiidae	<i>Danafungia</i>	<i>scruposa</i>	(Klunzinger, 1879)		Not Listed	LC
Diploastreidae	<i>Diploastrea</i>	<i>heliopora</i>	(Lamarck, 1816)	Double-star coral	Not Listed	LC
Merulinidae	<i>Dipsastraea</i>	<i>amicorum</i>	(Milne Edwards & Haime, 1849)	Basket coral	Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>danai</i>	(Milne Edwards & Haime, 1857)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>favus</i>	(Forskål, 1775)		Not Listed	LC
Merulinidae	<i>Dipsastraea</i>	<i>helianthoides</i>	(Wells, 1954)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>laxa</i>	(Klunzinger, 1879)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>lizardensis</i>	(Veron, Pichon & Wijsman-Best, 1977)		Not Listed	LC
Merulinidae	<i>Dipsastraea</i>	<i>maritima</i>	(Nemenzo, 1971)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>matthaii</i>	(Vaughan, 1918)		Not Listed	LC
Merulinidae	<i>Dipsastraea</i>	<i>maxima</i>	(Veron, Pichon & Wijsman-Best, 1977)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>mirabilis</i>	(Yabe & Sugiyama, 1941)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>pallida</i>	(Dana, 1846)	Knob coral	Not Listed	VU
Merulinidae	<i>Dipsastraea</i>	<i>rotumana</i>	(Gardiner, 1899)		Not Listed	DD
Merulinidae	<i>Dipsastraea</i>	<i>speciosa</i>	(Dana, 1846)		Not Listed	LC
Merulinidae	<i>Dipsastraea</i>	<i>veroni</i>	(Moll & Best, 1984)		Not Listed	DD
Lobophylliidae	<i>Echinophyllia</i>	<i>aspera</i>	(Ellis & Solander, 1786)	Flat lettuce coral	Not Listed	LC
Lobophylliidae	<i>Echinophyllia</i>	<i>echinoporoides</i>	Veron & Pichon, 1980	Red stone coral	Not Listed	LC
Lobophylliidae	<i>Echinophyllia</i>	<i>glabra</i>	Nemenzo, 1959	Chalice coral	Not Listed	VU
Merulinidae	<i>Echinopora</i>	<i>gemmacea</i>	(Lamarck, 1816)	Hedgehog coral	Not Listed	LC
Merulinidae	<i>Echinopora</i>	<i>hirsutissima</i>	Milne Edwards & Haime, 1849	Prickly-pored coral	Not Listed	DD
Merulinidae	<i>Echinopora</i>	<i>horrida</i>	Dana, 1846	Hedgehog coral	Not Listed	LC
Merulinidae	<i>Echinopora</i>	<i>lamellosa</i>	(Esper, 1795)	Blue chalice coral	Not Listed	LC
Merulinidae	<i>Echinopora</i>	<i>pacifica</i>	Veron, 1990	Hedgehog coral	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Euphylliidae	<i>Euphyllia</i>	<i>glabrescens</i>	(Chamisso & Eysenhardt, 1821)	Torch anchor coral	Not Listed	DD
Merulinidae	<i>Favites</i>	<i>abdita</i>	(Ellis & Solander, 1786)	Large star coral	Not Listed	LC
Merulinidae	<i>Favites</i>	<i>chinensis</i>	(Verrill, 1866)		Not Listed	LC
Merulinidae	<i>Favites</i>	<i>colemani</i>	(Veron, 2000)		Not Listed	DD
Merulinidae	<i>Favites</i>	<i>complanata</i>	(Ehrenberg, 1834)	Large star coral	Not Listed	LC
Merulinidae	<i>Favites</i>	<i>flexuosa</i>	(Dana, 1846)		Not Listed	VU
Merulinidae	<i>Favites</i>	<i>halicora</i>	(Ehrenberg, 1834)		Not Listed	LC
Merulinidae	<i>Favites</i>	<i>magnstellata</i>	(Milne Edwards & Haime, 1849)		Not Listed	NT
Merulinidae	<i>Favites</i>	<i>paraflexuosus</i>	Veron, 2000		Not Listed	DD
Merulinidae	<i>Favites</i>	<i>pentagona</i>	(Esper, 1795)		Not Listed	LC
Merulinidae	<i>Favites</i>	<i>rotundata</i>	Veron, Pichon & Wijsman-Best, 1977		Not Listed	DD
Merulinidae	<i>Favites</i>	<i>valenciennesi</i>	(Milne Edwards & Haime, 1849)		Not Listed	LC
Euphylliidae	<i>Fimbriaphyllia</i>	<i>ancora</i>	(Veron & Pichon, 1980)	Brain anchor coral	Not Listed	LC
Euphylliidae	<i>Fimbriaphyllia</i>	<i>divisa</i>	(Veron & Pichon, 1980)	Frogspawn coral	Not Listed	VU
Euphylliidae	<i>Fimbriaphyllia</i>	<i>paraancora</i>	(Veron, 1990)	Branching anchor coral	Not Listed	DD
Euphylliidae	<i>Fimbriaphyllia</i>	<i>paradivisa</i>	(Veron, 1990)	Frogspawn coral	Not Listed	DD
Fungiidae	<i>Fungia</i>	<i>fungites</i>	(Linnaeus, 1758)	Common mushroom coral	Not Listed	LC
Euphylliidae	<i>Galaxea</i>	<i>astreata</i>	(Lamarck, 1816)	Galaxy coral	Not Listed	LC
Euphylliidae	<i>Galaxea</i>	<i>fascicularis</i>	(Linnaeus, 1767)	Galaxy coral	Not Listed	LC
Agariciidae	<i>Gardineroseris</i>	<i>planulata</i>	(Dana, 1846)	Honeycomb coral	Not Listed	DD
Merulinidae	<i>Goniastrea</i>	<i>edwardsi</i>	Chevalier, 1971		Not Listed	LC
Merulinidae	<i>Goniastrea</i>	<i>favulus</i>	(Dana, 1846)		Not Listed	LC
Merulinidae	<i>Goniastrea</i>	<i>minuta</i>	Veron, 2000		Not Listed	DD
Merulinidae	<i>Goniastrea</i>	<i>pectinata</i>	(Ehrenberg, 1834)		Not Listed	LC
Merulinidae	<i>Goniastrea</i>	<i>retiformis</i>	(Lamarck, 1816)		Not Listed	LC
Merulinidae	<i>Goniastrea</i>	<i>stelligera</i>	(Dana, 1846)		Not Listed	DD
Poritidae	<i>Goniopora</i>	<i>columna</i>	Dana, 1846	Anemone coral	Not Listed	LC
Poritidae	<i>Goniopora</i>	<i>djiboutiensis</i>	Vaughan, 1907	Flowerpot coral	Not Listed	NT
Poritidae	<i>Goniopora</i>	<i>eclipsensis</i>	Veron & Pichon, 1982		Not Listed	DD
Poritidae	<i>Goniopora</i>	<i>fruticosa</i>	Saville-Kent, 1891		Not Listed	DD
Poritidae	<i>Goniopora</i>	<i>lobata</i>	Milne Edwards, 1860	Flowerpot true red coral	Not Listed	LC
Poritidae	<i>Goniopora</i>	<i>pandoraensis</i>	Veron & Pichon, 1982	Branching flowerpot coral	Not Listed	LC
Poritidae	<i>Goniopora</i>	<i>pedunculata</i>	Quoy & Gimard, 1833		Not Listed	DD
Poritidae	<i>Goniopora</i>	<i>pendulus</i>	Veron, 1985		Not Listed	DD
Poritidae	<i>Goniopora</i>	<i>somaliensis</i>	Vaughan, 1907		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Poritidae	<i>Goniopora</i>	<i>stokesi</i>	Milne Edwards & Haime, 1851	Daisy coral	Not Listed	NT
Poritidae	<i>Goniopora</i>	<i>tenuidens</i>	(Quelch, 1886)	Blue purple goniopora	Not Listed	DD
Fungiidae	<i>Heliofungia</i>	<i>actiniformis</i>	(Quoy & Gaimard, 1833)	Sunflower mushroom coral	Not Listed	NT
Fungiidae	<i>Herpolitha</i>	<i>limax</i>	(Esper, 1797)	Tongue mushroom coral	Not Listed	LC
Lobophylliidae	<i>Homophyllia</i>	<i>bowerbanki</i>	(Milne Edwards & Haime, 1857)	Brain coral	Not Listed	DD
Merulinidae	<i>Hydnophora</i>	<i>exesa</i>	(Pallas, 1766)		Not Listed	LC
Merulinidae	<i>Hydnophora</i>	<i>grandis</i>	Gardiner, 1904	Spine coral	Not Listed	NT
Merulinidae	<i>Hydnophora</i>	<i>microconos</i>	(Lamarck, 1816)		Not Listed	DD
Merulinidae	<i>Hydnophora</i>	<i>rigida</i>	(Dana, 1846)		Not Listed	NT
Acroporidae	<i>Isopora</i>	<i>brueggemanni</i>	(Brook, 1893)		Not Listed	DD
Acroporidae	<i>Isopora</i>	<i>palifera</i>	(Lamarck, 1816)	Catch bowl coral	Not Listed	DD
Leptastreidae	<i>Leptastrea</i>	<i>purpurea</i>	(Dana, 1846)		Not Listed	LC
Leptastreidae	<i>Leptastrea</i>	<i>transversa</i>	Klunzinger, 1879	Crust coral	Not Listed	LC
Merulinidae	<i>Leptoria</i>	<i>phrygia</i>	(Ellis & Solander, 1786)		Not Listed	LC
Agariciidae	<i>Leptoseris</i>	<i>explanata</i>	Yabe & Sugiyama, 1941		Not Listed	VU
Agariciidae	<i>Leptoseris</i>	<i>hawaiensis</i>	Vaughan, 1907	Porcelain coral	Not Listed	DD
Agariciidae	<i>Leptoseris</i>	<i>scabra</i>	Vaughan, 1907	Rough plate coral	Not Listed	DD
Fungiidae	<i>Lithophyllum</i>	<i>concinna</i>	(Verrill, 1864)		Not Listed	LC
Fungiidae	<i>Lithophyllum</i>	<i>repanda</i>	(Dana, 1846)		Not Listed	LC
Fungiidae	<i>Lithophyllum</i>	<i>scabra</i>	(Döderlein, 1901)		Not Listed	LC
Fungiidae	<i>Lithophyllum</i>	<i>undulatum</i>	Rehberg, 1892		Not Listed	LC
Fungiidae	<i>Lobactis</i>	<i>scutaria</i>	(Lamarck, 1801)		Not Listed	DD
Lobophylliidae	<i>Lobophyllia</i>	<i>agaricia</i>	(Milne Edwards & Haime, 1849)	Grooved brain coral	Not Listed	LC
Lobophylliidae	<i>Lobophyllia</i>	<i>corymbosa</i>	(Forskål, 1775)	Lobed brain coral	Not Listed	LC
Lobophylliidae	<i>Lobophyllia</i>	<i>flabelliformis</i>	Veron, 2000		Not Listed	DD
Lobophylliidae	<i>Lobophyllia</i>	<i>hataii</i>	Yabe, Sugiyama & Eguchi, 1936	Lobed brain coral	Not Listed	VU
Lobophylliidae	<i>Lobophyllia</i>	<i>hemprichii</i>	(Ehrenberg, 1834)	Lobed brain coral	Not Listed	LC
Lobophylliidae	<i>Lobophyllia</i>	<i>radians</i>	(Milne Edwards & Haime, 1849)	Grooved brain coral	Not Listed	LC
Lobophylliidae	<i>Lobophyllia</i>	<i>recta</i>	(Dana, 1846)	Grooved brain coral	Not Listed	LC
Lobophylliidae	<i>Lobophyllia</i>	<i>valenciennesii</i>	(Milne Edwards & Haime, 1849)	Grooved brain coral	Not Listed	DD
Pocilloporidae	<i>Madracis</i>	<i>kirbyi</i>	Veron & Pichon, 1976	Ten coral	Not Listed	DD
Merulinidae	<i>Merulina</i>	<i>ampliata</i>	(Ellis & Solander, 1786)		Not Listed	LC
Merulinidae	<i>Merulina</i>	<i>scabricula</i>	Dana, 1846		Not Listed	LC
Lobophylliidae	<i>Micromussa</i>	<i>amakusensis</i>	(Veron, 1990)		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>aequituberculata</i>	Bernard, 1897		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Acroporidae	<i>Montipora</i>	<i>angulata</i>	(Lamarck, 1816)		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>capricornis</i>	Veron, 1985		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>corbettensis</i>	Veron & Wallace, 1984		Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>crassituberculata</i>	Bernard, 1897		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>danae</i>	Milne Edwards & Haime, 1851	Poker star <i>montipora</i>	Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>digitata</i>	(Dana, 1846)		Not Listed	VU
Acroporidae	<i>Montipora</i>	<i>efflorescens</i>	Bernard, 1897		Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>foliosa</i>	(Pallas, 1766)	Cabbage coral	Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>grisea</i>	Bernard, 1897		Not Listed	VU
Acroporidae	<i>Montipora</i>	<i>hispida</i>	(Dana, 1846)		Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>hoffmeisteri</i>	Wells, 1954		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>informis</i>	Bernard, 1897		Not Listed	LC
Acroporidae	<i>Montipora</i>	<i>millepora</i>	Crossland, 1952		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>mollis</i>	Bernard, 1897		Not Listed	LC
Acroporidae	<i>Montipora</i>	<i>monasteriata</i>	(Forskål, 1775)		Not Listed	LC
Acroporidae	<i>Montipora</i>	<i>peltiformis</i>	Bernard, 1897		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>spongodes</i>	Bernard, 1897		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>spumosa</i>	(Lamarck, 1816)		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>stellata</i>	Bernard, 1897	Velvet branch coral	Not Listed	LC
Acroporidae	<i>Montipora</i>	<i>tuberculosa</i>	(Lamarck, 1816)		Not Listed	NT
Acroporidae	<i>Montipora</i>	<i>turgescens</i>	Bernard, 1897		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>undata</i>	Bernard, 1897		Not Listed	VU
Acroporidae	<i>Montipora</i>	<i>venosa</i>	(Ehrenberg, 1834)		Not Listed	DD
Acroporidae	<i>Montipora</i>	<i>verrucosa</i>	(Lamarck, 1816)		Not Listed	LC
Merulinidae	<i>Mycedium</i>	<i>elephantotus</i>	(Pallas, 1766)		Not Listed	LC
Oulastreidae	<i>Oulastrea</i>	<i>crispata</i>	(Lamarck, 1816)	Zebra coral	Not Listed	LC
Merulinidae	<i>Oulophyllia</i>	<i>bennettae</i>	(Veron, Pichon & Wijsman-Best, 1977)	Intermediate valley coral	Not Listed	DD
Merulinidae	<i>Oulophyllia</i>	<i>crispa</i>	(Lamarck, 1816)		Not Listed	LC
Lobophyllidae	<i>Oxypora</i>	<i>crassispinosa</i>	Nemenzo, 1979	Porous lettuce coral	Not Listed	DD
Lobophyllidae	<i>Oxypora</i>	<i>echinata</i>	(Saville Kent, 1871)		Not Listed	LC
Lobophyllidae	<i>Oxypora</i>	<i>lacera</i>	(Verrill, 1864)	Ragged chalice coral	Not Listed	NT
Agariciidae	<i>Pachyseris</i>	<i>rugosa</i>	(Lamarck, 1801)	Castle coral	Not Listed	LC
Agariciidae	<i>Pachyseris</i>	<i>speciosa</i>	(Dana, 1846)	Castle coral	Not Listed	LC
Merulinidae	<i>Paragoniastrea</i>	<i>australensis</i>	(Milne Edwards & Haime, 1857)		Not Listed	LC
Merulinidae	<i>Paragoniastrea</i>	<i>russelli</i>	(Wells, 1954)		Not Listed	DD
Agariciidae	<i>Pavona</i>	<i>cactus</i>	(Forskål, 1775)	Cactus coral	Not Listed	VU
Agariciidae	<i>Pavona</i>	<i>clavus</i>	Dana, 1846	Shoulderblade coral	Not Listed	DD
Agariciidae	<i>Pavona</i>	<i>decussata</i>	(Dana, 1846)	Cactus coral	Not Listed	NT
Agariciidae	<i>Pavona</i>	<i>explanulata</i>	(Lamarck, 1816)	Peacock coral	Not Listed	LC
Agariciidae	<i>Pavona</i>	<i>frondifera</i>	(Lamarck, 1816)	Leaf coral	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Agariciidae	<i>Pavona</i>	<i>varians</i>	(Verrill, 1864)	Fungus coral	Not Listed	VU
Merulinidae	<i>Pectinia</i>	<i>alcicornis</i>	(Saville Kent, 1871)	Antler coral	Not Listed	NT
Merulinidae	<i>Pectinia</i>	<i>crassa</i>	Ditlev, 2003		Not Listed	LC
Merulinidae	<i>Pectinia</i>	<i>lactuca</i>	(Pallas, 1766)	Carnation coral	Not Listed	NT
Merulinidae	<i>Pectinia</i>	<i>paeonia</i>	(Dana, 1846)		Not Listed	LC
Plerogyridae	<i>Physogyra</i>	<i>lichtensteinii</i>	(Milne Edwards & Haime, 1851)	Pearl bubble coral	Not Listed	VU
Merulinidae	<i>Physophyllia</i>	<i>ayleni</i>	(Wells, 1934)		Not Listed	DD
Merulinidae	<i>Platygyra</i>	<i>daedalea</i>	(Ellis & Solander, 1786)	Brain coral	Not Listed	LC
Merulinidae	<i>Platygyra</i>	<i>lamellina</i>	(Ehrenberg, 1834)	Lesser valley coral	Not Listed	VU
Merulinidae	<i>Platygyra</i>	<i>pini</i>	Chevalier, 1975		Not Listed	LC
Merulinidae	<i>Platygyra</i>	<i>ryukyuensis</i>	Yabe & Sugiyama, 1935	Maze brain coral	Not Listed	DD
Merulinidae	<i>Platygyra</i>	<i>sinensis</i>	(Milne Edwards & Haime, 1849)		Not Listed	LC
Merulinidae	<i>Platygyra</i>	<i>verweyi</i>	Wijsman-Best, 1976		Not Listed	NT
Euphylliidae	<i>Plerogyra</i>	<i>sinuosa</i>	(Dana, 1846)	Pearl bubble coral	Not Listed	VU
Plesiastreidae	<i>Plesiastrea</i>	<i>versipora</i>	(Lamarck, 1816)	Pock-marked coral	Not Listed	DD
Fungiidae	<i>Pleuractis</i>	<i>granulosa</i>	(Klunzinger, 1879)		Not Listed	DD
Fungiidae	<i>Pleuractis</i>	<i>moluccensis</i>	(Van der Horst, 1919)		Not Listed	NT
Fungiidae	<i>Pleuractis</i>	<i>paumotensis</i>	(Stutchbury, 1833)	Elongate mushroom coral	Not Listed	NT
Pocilloporidae	<i>Pocillopora</i>	<i>acuta</i>	Lamarck, 1816	Cauliflower coral	Not Listed	LC
Pocilloporidae	<i>Pocillopora</i>	cf. <i>verrucosa</i>	(Ellis and Solander, 1786)	Cauliflower coral	Not Listed	DD
Fungiidae	<i>Podabacia</i>	<i>crustacea</i>	(Pallas, 1766)	Bracket mushroom coral	Not Listed	LC
Fungiidae	<i>Podabacia</i>	<i>kunzmanni</i>	Hoeksema, 2009	Bracket mushroom coral	Not Listed	DD
Fungiidae	<i>Podabacia</i>	<i>motuporensis</i>	Veron, 1990	Bracket mushroom coral	Not Listed	DD
Fungiidae	<i>Polyphyllia</i>	<i>talpina</i>	(Lamarck, 1801)	Mole mushroom coral	Not Listed	VU
Poritidae	<i>Porites</i>	<i>australiensis</i>	Vaughan, 1918		Not Listed	LC
Poritidae	<i>Porites</i>	<i>cylindrica</i>	Dana, 1846	Yellow finger coral	Not Listed	VU
Poritidae	<i>Porites</i>	<i>deformis</i>	Nemenzo, 1955		Not Listed	DD
Poritidae	<i>Porites</i>	<i>lichen</i>	(Dana, 1846)	Lichen coral	Not Listed	DD
Poritidae	<i>Porites</i>	<i>lobata</i>	Dana, 1846	Lobe coral	Not Listed	LC
Poritidae	<i>Porites</i>	<i>lutea</i>	Milne Edwards & Haime, 1851		Not Listed	LC
Poritidae	<i>Porites</i>	<i>monticulosa</i>	Dana, 1846		Not Listed	DD
Poritidae	<i>Porites</i>	<i>murrayensis</i>	Vaughan, 1918		Not Listed	DD
Poritidae	<i>Porites</i>	<i>nigrescens</i>	Dana, 1846		Not Listed	DD
Poritidae	<i>Porites</i>	<i>rus</i>	(Forskål, 1775)		Not Listed	NT
Poritidae	<i>Porites</i>	<i>solida</i>	(Forskål, 1775)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Poritidae	<i>Porites</i>	<i>stephensi</i>	Crossland, 1952		Not Listed	DD
Poritidae	<i>Porites</i>	<i>vauhanii</i>	Crossland, 1952		Not Listed	DD
Psammocoridae	<i>Psammocora</i>	<i>contigua</i>	(Esper, 1794)	Crinkled sandpaper coral	Not Listed	NT
Psammocoridae	<i>Psammocora</i>	<i>haiiana</i>	Milne Edwards & Haime, 1851	Boulder sandpaper coral	Not Listed	LC
Psammocoridae	<i>Psammocora</i>	<i>nierstraszii</i>	Van der Horst, 1921	Boulder sandpaper coral	Not Listed	VU
Psammocoridae	<i>Psammocora</i>	<i>profundacella</i>	Gardiner, 1898	Boulder sandpaper coral	Not Listed	DD
Rhizangiidae	<i>Pseudosiderastrea</i>	<i>tayamai</i>	Yabe & Sugiyama, 1935	Neat hexagonal coral	Not Listed	LC
Merulinidae	<i>Scapophyllia</i>	<i>cylindrica</i>	Milne Edwards & Haime, 1849	Columniform crust coral	Not Listed	VU
Pocilloporidae	<i>Seriatopora</i>	<i>hystricula</i>	Dana, 1846	Thin bird's nest coral	CR	NEx
Astrocoeniidae	<i>Stylocoeniella</i>	<i>armata</i>	(Ehrenberg, 1834)	Thorn coral	Not Listed	DD
Pocilloporidae	<i>Stylophora</i>	<i>pistillata</i>	Esper, 1792	Smooth cauliflower coral	CR	CR
Merulinidae	<i>Trachyphyllia</i>	<i>geoffroyi</i>	(Audouin, 1826)	Open brain coral	Not Listed	EN
Dendrophylliidae	<i>Tubastraera</i>	<i>aurea</i>	(Quoy & Gaimard, 1833)		Not Listed	DD
Dendrophylliidae	<i>Tubastraera</i>	<i>coccinea</i>	Lesson, 1830	Orange cup coral	Not Listed	DD
Dendrophylliidae	<i>Tubastraera</i>	<i>diaphana</i>	(Dana, 1846)	Black cup coral	Not Listed	LC
Dendrophylliidae	<i>Tubastraera</i>	<i>micranthus</i>	(Ehrenberg, 1834)	Black turret coral	Not Listed	LC
Dendrophylliidae	<i>Turbinaria</i>	<i>frondens</i>	(Dana, 1846)	Yellow cup coral	Not Listed	LC
Dendrophylliidae	<i>Turbinaria</i>	<i>irregularis</i>	Bernard, 1896		Not Listed	DD
Dendrophylliidae	<i>Turbinaria</i>	<i>mesenterina</i>	(Lamarck, 1816)	Vase coral	Not Listed	LC
Dendrophylliidae	<i>Turbinaria</i>	<i>peltata</i>	(Esper, 1794)	Pagoda coral	Not Listed	LC
Dendrophylliidae	<i>Turbinaria</i>	<i>radicalis</i>	Bernard, 1896		Not Listed	DD
Dendrophylliidae	<i>Turbinaria</i>	<i>reniformis</i>	Bernard, 1896	Yellow scroll coral	Not Listed	NT
Dendrophylliidae	<i>Turbinaria</i>	<i>stellulata</i>	(Lamarck, 1816)		Not Listed	DD

Checklist of Polycladida Species with their Category of Threat Status for Singapore

Prepared by Tan Koh Siang, Samantha J.W. Tong, Rene S.L. Ong

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Pseudocerotidae	<i>Pseudoceros</i>	<i>bifurcus</i>	Prudhoe, 1989	Racing-stripe Flatworm	Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>caeruleocinctus</i>	Hyman, 1959		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>concinnus</i>	(Collingwood, 1876)	Blue-lined Flatworm	Not Listed	VU
Pseudocerotidae	<i>Pseudoceros</i>	cf. <i>cruentus</i>	Newman & Cannon, 1998		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>duplicinectus</i>	Prudhoe, 1989		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>indicus</i>	Newman & Schupp, 2002	Blue-dotted Margined Flatworm	Not Listed	VU
Pseudocerotidae	<i>Pseudoceros</i>	<i>laingensis</i>	Newman & Cannon, 1998	Purple-spotted Flatworm	Not Listed	VU
Pseudocerotidae	<i>Pseudoceros</i>	<i>microcelis</i>	Prudhoe, 1989		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>meenae</i>	Dixit, Sivaperuman & Raghunathan, 2018		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>paralaticlavus</i>	Newman & Cannon, 1994		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	cf. <i>prudhoei</i>	Newman & Cannon, 1994		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	cf. <i>rubronanus</i>	Newman & Cannon, 1998		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>rubrotentaculatus</i>	Kaburaki, 1923		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>scintillatus</i>	Newman & Cannon, 1994		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	cf. <i>stimpsoni</i>	Newman & Cannon, 1998		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	cf. <i>gamblei</i>	Laidlaw, 1902		Not Listed	DD
Pseudocerotidae	<i>Pseudoceros</i>	<i>susanae</i>	Newman & Anderson, 1997		Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>bajae</i>	(Hyman, 1953)		Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>bedfordi</i>	(Laidlaw, 1903)	Persian Carpet Flatworm	Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>damawan</i>	Newman & Cannon, 1994		Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>flowersi</i>	Newman & Cannon, 1997	Olive Flatworm	Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>fulgor</i>	Newman & Cannon, 1994	Fine-lined Flatworm	Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>hancockanus</i>	(Collingwood, 1876)		Not Listed	VU
Pseudocerotidae	<i>Pseudobiceros</i>	<i>hymaniae</i>	Newman & Cannon, 1997		Not Listed	DD
Pseudocerotidae	<i>Pseudobiceros</i>	<i>stellae</i>	Newman & Cannon, 1994		Not Listed	VU
Pseudocerotidae	<i>Pseudobiceros</i>	cf. <i>kryptos</i>	Newman & Cannon, 1997		Not Listed	DD
Pseudocerotidae	<i>Acanthozoon</i>	sp. 1		Golden-speckled Flatworm	Not Listed	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Pseudocerotidae	<i>Thysanozoon</i>	<i>lagidium</i>	Marcus, 1949		Not Listed	DD
Pseudocerotidae	<i>Thysanozoon</i>	<i>nigropapillosum</i>	(Hyman, 1959)	Golden-spotted Flatworm	Not Listed	DD
Pseudocerotidae	<i>Thysanozoon</i>	<i>nigrum</i>	Girard, 1851		Not Listed	DD
Pseudocerotidae	<i>Tytthosceros</i>	<i>lizardensis</i>	Newman & Cannon, 1996	Olive Flatworm	Not Listed	VU
Pseudocerotidae	<i>Nymphozoon</i>	<i>bayeri</i>	Hyman, 1959	Bayeri's Flatworm	Not Listed	DD
Pseudocerotidae	<i>Nymphozoon</i>	<i>orsaki</i>	Newman & Cannon, 1996		Not Listed	DD
Pseudocerotidae	<i>Phrikoceros</i>	<i>baibaiye</i>	Newman & Cannon, 1996	Ruby Flatworm	Not Listed	DD
Euryleptidae	<i>Cycloporus</i>	<i>venetus</i>	Newman & Cannon, 2002		Not Listed	DD
Euryleptidae	<i>Eurylepta</i>	<i>aurantiaca</i>	Heath & McGregor, 1912		Not Listed	DD
Euryleptidae	<i>Maritigrella</i>	<i>fuscapunctata</i>	(Prudhoe, 1978)		Not Listed	DD
Euryleptidae	<i>Maritigrella</i>	<i>virgulata</i>	Newman & Cannon, 2000		Not Listed	DD
Pericelididae	<i>Pericelis</i>	<i>beyerleyana</i>	(Collingwood, 1876)		Not Listed	DD
Callioplanidae	<i>Meixneria</i>	cf. <i>furva</i>	Bock, 1913		DD	DD
Limnostylochidae	<i>Limnostylochus</i>	sp.		Mangrove Flatworm	Not Listed	DD
Gnesiocerotidae	<i>Gnesioceros</i>	cf. <i>sargassicola</i>	(Mertens, 1833)	Sargassum Flatworm	Not Listed	DD

Checklist of Marine Annelida Species with their Category of Threat Status for Singapore

Prepared by Lee Yen-Ling, Ang Hwee Peng, Chuar Cheah Hoay, Gayathri D/O Sivananthan

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Alciopidae	<i>Naiades</i>	<i>cantrainii</i>	Delle Chiaje, 1830		Not Listed	NE
Amphinomidae	<i>Chloelia</i>	<i>flava</i>	(Pallas, 1766)		Not Listed	NE
Amphinomidae	<i>Chloelia</i>	<i>parva</i>	Baird, 1870		Not Listed	NE
Amphinomidae	<i>Eurythoe</i>	<i>complanata</i>	(Pallas, 1766)		Not Listed	NE
Aphroditidae	<i>Pontogenia</i>	<i>indica</i>	Grube, 1878		Not Listed	NE
Aspidosiphonidae	<i>Aspidosiphon</i> <i>(Aspidosiphon)</i>	<i>muelleri muelleri</i>	Diesing, 1851		Not Listed	NE
Aspidosiphonidae	<i>Aspidosiphon</i> <i>(Paraspidosiphon)</i>	<i>steenstrupii</i>	Diesing, 1859		Not Listed	NE
Chaetopteridae	<i>Chaetopterus</i>	<i>appendiculatus</i>	Grube, 1874	Fairy Tubeworm	EN	NT
Eunicidae	<i>Eunice</i>	<i>aphroditois</i>	(Pallas, 1788)		Not Listed	NE
Eunicidae	<i>Eunice</i>	<i>coccinoides</i>	Augener, 1922		Not Listed	NE
Eunicidae	<i>Eunice</i>	<i>grubei</i>	Gravier, 1900		Not Listed	NE
Eunicidae	<i>Eunice</i>	<i>hirschi</i>	Fauchald, 1992		Not Listed	NE
Eunicidae	<i>Eunice</i>	<i>nesiotes</i>	(Chamberlin, 1919)		Not Listed	NE
Eunicidae	<i>Euniphsya</i>	<i>aculeata</i>	Wesenberg-Lund, 1949		Not Listed	NE
Eunicidae	<i>Leodice</i>	<i>antennata</i>	(Savigny in Lamarck, 1818)		Not Listed	NE
Eunicidae	<i>Lysidice</i>	<i>collaris</i>	Grube, 1870		Not Listed	NE
Eunicidae	<i>Marphysa</i>	<i>disjuncta</i>	Hartman, 1961		Not Listed	NE
Eunicidae	<i>Marphysa</i>	<i>macintoshii</i>	Crossland, 1903		Not Listed	NE
Eunicidae	<i>Marphysa</i>	<i>mossambica</i>	(Peters, 1854)		Not Listed	NE
Flabelligeridae	<i>Pherusa</i>	<i>monroi</i>	(Day, 1957)		Not Listed	NE
Glyceridae	<i>Glycera</i>	<i>nicobarica</i>	Grube, 1868		Not Listed	NE
Glyceridae	<i>Glycera</i>	<i>tridactyla</i>	Schmarda, 1861		Not Listed	NE
Goniadidae	<i>Goniada</i>	<i>cf. maculata</i>	Örsted, 1843		Not Listed	NE
Goniadidae	<i>Goniada</i>	<i>japonica</i>	Izuka, 1912		Not Listed	NE
Hesionidae	<i>Leocrates</i>	<i>claparedii</i>	(Costa in Claparède, 1868)		Not Listed	NE
Hesionidae	<i>Oxydromus</i>	<i>latifrons</i>	(Grube, 1878)		Not Listed	NE
Iphionidae	<i>Iphione</i>	<i>muricata</i>	(Savigny in Lamark, 1818)		Not Listed	NE
Lumbrineridae	<i>Lumbrineris</i>	<i>hartmani</i>	(Day, 1953)		Not Listed	NE
Maldanidae	<i>Euclymene</i>	<i>lombricoides</i>	(Quatrefages, 1865)		Not Listed	NE
Myzostomatidae	<i>Contramyzostoma</i>	<i>bialatum</i>	Eeckhaut & Jangoux, 1995		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>brachiatum</i>	Graff, 1877		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>capitocutis</i>	Eeckhaut, van den Spiegel & Grygier, 1994		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>elegans</i>	Graff, 1877		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>horologium</i>	Graff, 1884		Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Myzostomatidae	<i>Myzostoma</i>	<i>jagersteni</i>	Eeckhaut, van den Spiegel & Grygier, 1994		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>longicirrum</i>	Graff, 1887		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>singaporense</i>	Eeckhaut, van den Spiegel & Grygier, 1994		Not Listed	NE
Myzostomatidae	<i>Myzostoma</i>	<i>stochoeides</i>	Atkins, 1927		Not Listed	NE
Nephtyidae	<i>Aglaophamus</i>	<i>dibranchis</i>	(Grube, 1877)		Not Listed	NE
Nephtyidae	<i>Micronephrys</i>	<i>sphaerocirrata</i>	(Wesenberg-Lund, 1949)		Not Listed	NE
Nereididae	<i>Ceratonereis</i>	<i>mirabilis</i>	Kinberg, 1866		Not Listed	NE
Nereididae	<i>Compostetia</i>	<i>hircincola</i>	(Eisig, 1870)		Not Listed	NE
Nereididae	<i>Dendronereides</i>	<i>heteropoda</i>	Southern, 1921		Not Listed	NE
Nereididae	<i>Dendronereides</i>	<i>zululandica</i>	Day, 1951		Not Listed	NE
Nereididae	<i>Dendronereis</i>	<i>arborifera</i>	(Peters, 1855)		Not Listed	NE
Nereididae	<i>Gymnonereis</i>	<i>fauveli</i>	(Pillai, 1961)		Not Listed	NE
Nereididae	<i>Leonnates</i>	<i>decipiens</i>	Fauvel, 1929		Not Listed	NE
Nereididae	<i>Leonnates</i>	<i>jousseaumei</i>	Gravier, 1911		Not Listed	NE
Nereididae	<i>Leonnates</i>	<i>stephensonii</i>	Rullier, 1965		Not Listed	NE
Nereididae	<i>Neanthes</i>	<i>glandicincta</i>	Southern, 1921		Not Listed	NE
Nereididae	<i>Neanthes</i>	<i>wilsonchani</i>	Lee & Glasby, 2015		Not Listed	NE
Nereididae	<i>Paraleonnates</i>	<i>uschakovi</i>	Khlebovitch & Wu, 1967		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>aibuhitensis</i>	Grube, 1878		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>barbara</i>	Monro, 1926		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>brevicirris</i>	(Grube, 1878)		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>perspicillata</i>	Grube, 1878		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>rhombodonta</i>	Wu, Sun & Yang, 1981		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>singaporiensis</i>	(Grube, 1878)		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>striolata</i>	Grube, 1878		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>vancaurica</i>	(Ehlers, 1868)		Not Listed	NE
Nereididae	<i>Perinereis</i>	<i>viridis</i>	Glasby & Hsieh, 2006		Not Listed	NE
Nereididae	<i>Tylonereis</i>	<i>bogoyawlenskyi</i>	Fauvel, 1911		Not Listed	NE
Nereididae	<i>Tylonereis</i>	<i>heterochaeta</i>	Tan & Chou, 1994		Not Listed	NE
Oenonidae	<i>Arabella</i>	<i>iricolor</i>	(Montague, 1804)		Not Listed	NE
Oenonidae	<i>Oenone</i>	<i>fulgida</i>	(Savigny in Lamarck, 1818)		Not Listed	NE
Onuphidae	<i>Diopatra</i>	<i>claparedii</i>	Grube, 1878		Not Listed	NE
Onuphidae	<i>Diopatra</i>	<i>neapolitana</i>	Delle Chiaje, 1841		Not Listed	NE
Onuphidae	<i>Onuphis</i>	<i>punggolensis</i>	Tan & Chou, 1998		Not Listed	NE
Opheliidae	<i>Ophelina</i>	<i>acuminata</i>	Örsted, 1843		Not Listed	NE
Oweniidae	<i>Owenia</i>	<i>fusiformis</i>	Delle Chiaje, 1841		Not Listed	NE
Phascolionidae	<i>Phascolion (Isomya)</i>	<i>convestitum</i>	Sluiter, 1902		Not Listed	NE
Phascolionidae	<i>Phascolion (Phascolion)</i>	<i>hibridum</i>	Murina, 1981		Not Listed	NE
Phascolosomatidae	<i>Antillesoma</i>	<i>antillarum</i>	(Grube, 1858)		Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Phascolosomatidae	<i>Apionsoma</i> (<i>Apionsoma</i>)	<i>trichocephalus</i>	Sluiter, 1902		Not Listed	NE
Phascolosomatidae	<i>Phascolosoma</i> (<i>Phascolosoma</i>)	<i>arcuatum</i>	(Gray, 1828)		Not Listed	NE
Phascolosomatidae	<i>Phascolosoma</i> (<i>Phascolosoma</i>)	<i>nigrescens</i>	(Keferstein, 1865)		Not Listed	NE
Phascolosomatidae	<i>Phascolosoma</i> (<i>Phascolosoma</i>)	<i>scolops</i>	(Selenka & de Man, 1883)		Not Listed	NE
Phyllodocidae	<i>Eteone</i>	<i>siphondonta</i>	(Delle Chiaje, 1822)		Not Listed	NE
Phyllodocidae	<i>Eulalia</i>	<i>magalhaensis</i>	Kinberg (1866)		Not Listed	NE
Phyllodocidae	<i>Phyllodoce</i>	<i>madeirensis</i>	Langerhans, 1880		Not Listed	NE
Pilargidae	<i>Sigambra</i>	<i>pettiboneae</i>	Hartmann-Schröder, 1979		Not Listed	NE
Poecilochaetidae	<i>Poecilochaetus</i>	<i>serpens</i>	Allen, 1904		Not Listed	NE
Polynoidae	<i>Gaudichaudius</i>	<i>cimex</i>	(de Quatrefages, 1866)		Not Listed	NE
Polynoidae	<i>Lepidonotus</i>	<i>squamatus</i>	(Linnaeus, 1767)		Not Listed	NE
Polynoidae	<i>Paralepidonotus</i>	<i>ampulliferus</i>	(Grube, 1878)		Not Listed	NE
Sabellidae	<i>Hypsicomus</i>	<i>phaeotaenia</i>	(Schmarda, 1861)		Not Listed	NE
Sabellidae	<i>Potamilla</i>	<i>leptochaeta</i>	Southern, 1921		Not Listed	NE
Sabellidae	<i>Pseudopotamilla</i>	<i>reniformis</i>	Bruguière, 1789		Not Listed	NE
Sabellidae	<i>Sabellastarte</i>	<i>spectabilis</i>	(Grube, 1878)		Not Listed	NE
Sipunculidae	<i>Siphonosoma</i>	<i>cumanense</i>	(Keferstein, 1867)		Not Listed	NE
Sipunculidae	<i>Sipunculus</i> (<i>Sipunculus</i>)	<i>nudus</i>	Linnaeus, 1766		Not Listed	NE
Sipunculidae	<i>Sipunculus</i> (<i>Sipunculus</i>)	<i>robustus</i>	Keferstein, 1865		Not Listed	NE
Spionidae	<i>Malacoceros</i>	<i>indicus</i>	(Fauvel, 1928)		Not Listed	NE
Spionidae	<i>Prionospio</i>	<i>komaeti</i>	Hylleberg & Nateewathana, 1991		Not Listed	NE
Spionidae	<i>Prionospio</i>	<i>malayensis</i>	Hylleberg & Nateewathana, 1991		Not Listed	NE
Spionidae	<i>Prionospio</i>	<i>malmgreni</i>	Claparède, 1870		Not Listed	NE
Syllidae	<i>Haplosyllis</i>	<i>spongicola</i>	(Grube, 1855)		Not Listed	NE
Syllidae	<i>Syllis</i>	<i>gracilis</i>	Grube, 1840		Not Listed	NE
Syllidae	<i>Syllis</i>	<i>solida</i>	Grube, 1878		Not Listed	NE
Terebellidae	<i>Nicolea</i>	<i>gracilibranchis</i>	(Grube, 1878)		Not Listed	NE
Thelepodidae	<i>Thelepus</i>	<i>gracilis</i>	(Kinberg, 1855)		Not Listed	NE
Trichobranchidae	<i>Terebellides</i>	<i>stroemi</i>	Sars, 1835		Not Listed	NE

Checklist of Mollusca Species with their Category of Threat Status for Singapore

Prepared by Tan Siong Kiat, Tan Koh Siang

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Chitonidae	<i>Acanthopleura</i>	<i>gemmata</i>	(Blainville, 1825)	Gemmatus chiton; Jewelled chiton	EN	NT
Arcidae	<i>Arca</i>	<i>navicularis</i>	Bruguière, 1789	Indo-Pacific ark	Not Listed	DD
Arcidae	<i>Barbatia</i>	<i>amygdalumtostum</i>	(Röding, 1798)	Burnt-almond ark	Not Listed	LC
Arcidae	<i>Tegillarca</i>	<i>granosa</i>	(Linnaeus, 1758)	Granular ark; Blood cockle; Bloody cockle; Si Ham [Cantonese]; Ham [Hokkien]	Not Listed	DD
Arcidae	<i>Tegillarca</i>	<i>nodifera</i>	(von Martens, 1860)		Not Listed	LC
Arcidae	<i>Trisidos</i>	<i>tortuosa</i>	(Linnaeus, 1758)	Twisted ark; Propellor ark	Not Listed	LC
Noetiidae	<i>Striarca</i>	<i>symmetrica</i>	(Reeve, 1844)	Symmetrical ark	Not Listed	LC
Limopsidae	<i>Limopsis</i>	<i>excancellata</i>	Sacco, 1898		Not Listed	NEx
Mytilidae	<i>Arcuatula</i>	<i>senhousia</i>	(Benson in Cantor, 1842)		Not Listed	DD
Mytilidae	<i>Modiolus</i>	<i>modulaoides</i>	(Röding, 1798)		Not Listed	DD
Mytilidae	<i>Perna</i>	<i>viridis</i>	(Linnaeus, 1758)	Green mussel; Green-lipped mussel; Asian green mussel	Not Listed	LC
Mytilidae	<i>Septifer</i>	<i>bilocularis</i>	(Linnaeus, 1758)		Not Listed	LC
Mytilidae	<i>Vignadula</i>	<i>mangle</i>	(Ockelmann, 1983)	Black mussel	Not Listed	DD
Nuculidae	<i>Ennucula</i>	<i>cumingii</i>	(Hinds, 1843)		Not Listed	DD
Yoldiidae	<i>Orthoyoldia</i>	<i>serotina</i>	(Hinds, 1843)		Not Listed	DD
Yoldiidae	<i>Orthoyoldia</i>	<i>tenella</i>	(Hinds, 1843)		Not Listed	DD
Ostreidae	<i>Saccostrea</i>	<i>cuccullata</i>	(Born, 1778)	Hooded oyster; Hooded rock oyster; Tiram [Malay]; Tiram batu [Malay]	Not Listed	LC
Ostreidae	<i>Magallana</i>	<i>bilineata</i>	(Röding, 1798)	Slipper oyster	Not Listed	LC
Isognomonidae	<i>Isognomon</i>	<i>ephippium</i>	(Linnaeus, 1758)	Saddle tree oyster	Not Listed	LC
Isognomonidae	<i>Isognomon</i>	<i>isognomum</i>	(Linnaeus, 1758)	Wader tree oyster	Not Listed	LC
Isognomonidae	<i>Isognomon</i>	<i>spathulatus</i>	(Reeve, 1858)		Not Listed	LC
Pteriidae	<i>Pinctada</i>	<i>nigra</i>	(Gould, 1850)	Black pearl oyster	Not Listed	DD
Malleidae	<i>Malleus</i>	<i>malleus</i>	(Linnaeus, 1758)	Hammer oyster; Black hammer oyster	Not Listed	DD
Malleidae	<i>Malleus</i>	<i>albus</i>	Lamarck, 1819	White hammer oyster; Ukas keris [Malay]	Not Listed	LC
Malleidae	<i>Malleus</i>	<i>regula</i>	(Forsskål in Niebuhr, 1775)		Not Listed	LC
Pinnidae	<i>Pinna</i>	<i>atropurpurea</i>	G. B. Sowerby I, 1825		VU	NT
Pinnidae	<i>Atrina</i>	<i>vexillum</i>	(Born, 1778)	Flag pen-shell	VU	NT

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Anomiidae	<i>Enigmonia</i>	<i>aenigmatica</i>	(Holten, 1802)		Not Listed	NT
Limidae	<i>Lima</i>	<i>vulgaris</i>	(Link, 1807)	Common file clam	Not Listed	LC
Limidae	<i>Limaria</i>	<i>fragilis</i>	(Gmelin, 1791)	Fragile file clam	Not Listed	LC
Pectinidae	<i>Amusium</i>	<i>pleuronectes</i>	(Linnaeus, 1758)	Asian moon scallop	Not Listed	NEx
Pectinidae	<i>Volachlamys</i>	<i>singaporina</i>	(G. B. Sowerby II, 1842)	Singapore scallop	Not Listed	LC
Pectinidae	<i>Coralichlamys</i>	<i>madreporarum</i>	(G.B. Sowerby II, 1842)		Not Listed	NT
Pectinidae	<i>Decatopecten</i>	<i>radula</i>	(Linnaeus, 1758)	Flatribbed scallop	Not Listed	LC
Pectinidae	<i>Pedum</i>	<i>spondyloideum</i>	(Gmelin, 1791)		Not Listed	DD
Lucinidae	<i>Austriella</i>	<i>corrugata</i>	(Deshayes, 1843)		Not Listed	LC
Carditidae	<i>Cardita</i>	<i>variegata</i>	(Bruguière, 1792)	Rectangular false cockle; Variegated cardita	Not Listed	LC
Crassatellidae	<i>Bathyformus</i>	<i>radiatus</i>	(G. B. Sowerby I, 1825)		Not Listed	LC
Cardiidae	<i>Fragum</i>	<i>unedo</i>	(Linnaeus, 1758)	Strawberry cockle	Not Listed	NT
Cardiidae	<i>Corculum</i>	<i>cardissa</i>	(Linnaeus, 1758)	True heart cockle	Not Listed	NT
Cardiidae	<i>Vasticardium</i>	<i>flavum</i>	(Linnaeus, 1758)	Pacific yellow cockle	Not Listed	LC
Cardiidae	<i>Vasticardium</i>	<i>pectiniforme</i>	(Born, 1780)		Not Listed	LC
Cardiidae	<i>Tridacna</i>	<i>crocea</i>	Lamarck, 1819	Crocus giant clam; Boring giant clam	Not Listed	EN
Cardiidae	<i>Tridacna</i>	<i>gigas</i>	(Linnaeus, 1758)	Giant clam	Not Listed	NEx
Cardiidae	<i>Tridacna</i>	<i>maxima</i>	(Röding, 1798)	Elongate giant clam	Not Listed	CR
Cardiidae	<i>Tridacna</i>	<i>squamosa</i>	Lamarck, 1819	Fluted giant clam; Kima [Malay]	EN	CR
Cardiidae	<i>Hippopus</i>	<i>hippopus</i>	(Linnaeus, 1758)	Horse hoof clam; bear paw clam	Not Listed	NEx
Donacidae	<i>Donax</i>	<i>faba</i>	Gmelin, 1791	Pacific bean donax	Not Listed	LC
Tellinidae	<i>Dallitellina</i>	<i>rostrata</i>	(Linnaeus, 1758)	Rostrate tellin	Not Listed	VU
Tellinidae	<i>Tellinella</i>	<i>virgata</i>	(Linnaeus, 1758)	Virgate tellin	Not Listed	LC
Tellinidae	<i>Macalia</i>	<i>bruguieri</i>	(Hanley, 1844)		Not Listed	LC
Psammobiidae	<i>Asaphis</i>	<i>violascens</i>	(Forsskål in Niebuhr, 1775)	Violet asaphis; Pacific asaphis	Not Listed	LC
Psammobiidae	<i>Gari</i>	<i>togata</i>	(Deshayes, 1855)		Not Listed	LC
Semelidae	<i>Semele</i>	<i>carnicolor</i>	(Hanley, 1845)		Not Listed	LC
Cyrenidae	<i>Geloina</i>	<i>coaxans</i>	(Gmelin, 1791)	Lokan (Malay)	Not Listed	LC
Mactridae	<i>Mactra</i>	<i>grandis</i>	Gmelin, 1791		Not Listed	LC
Mesodesmatidae	<i>Atactodea</i>	<i>striata</i>	(Gmelin, 1791)		Not Listed	LC
Mesodesmatidae	<i>Coecella</i>	<i>horsfieldii</i>	Gray, 1853		Not Listed	NT
Trapezidae	<i>Neotrapezium</i>	<i>sublaevigatum</i>	(Lamarck, 1819)		Not Listed	LC
Veneridae	<i>Anomalodiscus</i>	<i>squamosus</i>	(Linnaeus, 1758)	Squamose venus	Not Listed	LC
Veneridae	<i>Circe</i>	<i>undatina</i>	(Lamarck, 1818)		Not Listed	LC
Veneridae	<i>Gafrarium</i>	<i>pectinatum</i>	(Linnaeus, 1758)	Comb venus	Not Listed	LC
Veneridae	<i>Gafrarium</i>	<i>divaricatum</i>	(Gmelin, 1791)	Forked venus	Not Listed	LC
Veneridae	<i>Marcia</i>	<i>hiantina</i>	(Lamarck, 1818)		Not Listed	LC
Veneridae	<i>Marcia</i>	<i>japonica</i>	(Gmelin, 1791)		Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Veneridae	<i>Marcia</i>	<i>recens</i>	(Holten, 1802)		Not Listed	LC
Veneridae	<i>Paratapes</i>	<i>undulatus</i>	(Born, 1778)	Undulate venus	Not Listed	LC
Veneridae	<i>Protapes</i>	<i>gallus</i>	(Gmelin, 1791)	Rooster venus	Not Listed	LC
Veneridae	<i>Tapes</i>	<i>literatus</i>	(Linnaeus, 1758)	Lettered venus	Not Listed	LC
Corbulidae	<i>Potamocorbula</i>	<i>nimbosa</i>	(Hanley, 1843)		Not Listed	NEx
Pholadidae	<i>Barnea</i>	<i>manilensis</i>	(Philippi, 1847)	Manila piddock	Not Listed	NEx
Gastrochaenidae	<i>Gastrochaena</i>	<i>cuneiformis</i>	Spengler, 1783		Not Listed	DD
Penicillidae	<i>Verpa</i>	<i>penis</i>	(Linnaeus, 1758)	Common watering pot shell	NEx	VU
Cuspidariidae	<i>Cardiomya</i>	<i>singaporensis</i>	(Hinds, 1843)		Not Listed	DD
Laevidentalidae	<i>Laevidentalium</i>	<i>eburneum</i>	(Linnaeus, 1767)	Ivory tusk	Not Listed	LC
Nacellidae	<i>Cellana</i>	<i>testudinaria</i>	(Linnaeus, 1758)	Turtle limpet	Not Listed	DD
Fissurellidae	<i>Diodora</i>	<i>singaporensis</i>	(Reeve, 1850)	Singapore keyhole limpet	Not Listed	LC
Fissurellidae	<i>Scutus</i>	<i>unguis</i>	(Linnaeus, 1758)		EN	LC
Haliotidae	<i>Haliotis</i>	<i>asinina</i>	(Linnaeus, 1758)		EN	DD
Haliotidae	<i>Haliotis</i>	<i>clathrata</i>	Reeve, 1846		EN	DD
Haliotidae	<i>Haliotis</i>	<i>varia</i>	(Linnaeus, 1758)		EN	DD
Haliotidae	<i>Haliotis</i>	<i>ovina</i>	(Gmelin, 1791)		EN	DD
Haliotidae	<i>Haliotis</i>	<i>planata</i>	(G.B.Sowerby II, 1882)		EN	DD
Chilodontaidae	<i>Euchelus</i>	<i>atratus</i>	(Gmelin, 1791)		Not Listed	LC
Chilodontaidae	<i>Perrinia</i>	<i>elisa</i>	(Gould, 1849)		Not Listed	DD
Trochidae	<i>Trochus</i>	<i>maculatus</i>	Linnaeus, 1758	Maculated top-shell	Not Listed	LC
Trochidae	<i>Trochus</i>	<i>radiatus</i>	Gmelin, 1791	Radiated top-shell	Not Listed	LC
Trochidae	<i>Chrysostoma</i>	<i>paradoxum</i>	(Born, 1778)		Not Listed	LC
Trochidae	<i>Monodonta</i>	<i>labio</i>	(Linnaeus, 1758)	Thick-lipped top-shell; Toothed top-shell	Not Listed	LC
Trochidae	<i>Umboonium</i>	<i>vestiarium</i>	(Linnaeus, 1758)	Button top-shell; Common button top	VU	NT
Tegulidae	<i>Rochia</i>	<i>maxima</i>	(Koch in Philippi, 1844)	Great top-shell	VU	LC
Tegulidae	<i>Tectus</i>	<i>pyramis</i>	(Born, 1778)	Pyramid top-shell; Siput tudong [Malay]	Not Listed	CR
Angariidae	<i>Angaria</i>	<i>delphinus</i>	(Linnaeus, 1758)	Common delphinula; Dolphin shell	Not Listed	LC
Turbinidae	<i>Turbo</i>	<i>petholatus</i>	Linnaeus, 1758	Tapestry turban	EN	VU
Turbinidae	<i>Turbo</i>	<i>bruneus</i>	(Röding, 1798)	Brown Pacific turban; Brown dwarf turban	Not Listed	LC
Turbinidae	<i>Astralium</i>	<i>calcar</i>	(Linnaeus, 1758)	Spurred star shell	Not Listed	LC
Neritidae	<i>Nerita</i>	<i>albicilla</i>	Linnaeus, 1758	Ox-palate nerite	Not Listed	LC
Neritidae	<i>Nerita</i>	<i>articulata</i>	Gould, 1847	Lined nerite	Not Listed	LC
Neritidae	<i>Nerita</i>	<i>chamaeleon</i>	Linnaeus, 1758	Chameleon nerite	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Neritidae	<i>Nerita</i>	<i>histrio</i>	Linnaeus, 1758	Scaly nerite	Not Listed	LC
Neritidae	<i>Nerita</i>	<i>planospira</i>	Anton, 1838	Flat-spired nerite	VU	NT
Neritidae	<i>Neripteron</i>	<i>cornucopia</i>	(Benson, 1836)		Not Listed	LC
Neritidae	<i>Neripteron</i>	<i>violaceum</i>	(Gmelin, 1791)	Violet nerite	Not Listed	LC
Neritidae	<i>Clithon</i>	<i>faba</i>	(G.B. Sowerby I, 1836)	Bean nerite	Not Listed	LC
Neritidae	<i>Clithon</i>	<i>oualaniense</i>	(Lesson, 1831)	Guamanian nerite	VU	LC
Cerithiidae	<i>Cerithium</i>	<i>coraliump</i>	Kiener, 1841	Coral cerith	Not Listed	LC
Cerithiidae	<i>Cerithium</i>	<i>traillii</i>	G.B. Sowerby II, 1855	Traill's cerith	EN	NT
Cerithiidae	<i>Cerithium</i>	<i>nodulosum</i>	Bruguière, 1792	Giant knobbed cerith	Not Listed	VU
Cerithiidae	<i>Cerithium</i>	<i>zonatum</i>	(W. Wood, 1828)		Not Listed	LC
Cerithiidae	<i>Clypeomorus</i>	<i>petrosa</i>	(W. Wood, 1828)	Stony cerith	Not Listed	NT
Cerithiidae	<i>Rhinoclavis</i>	<i>aspera</i>	(Linnaeus, 1758)	Rough vertagus	Not Listed	EN
Cerithiidae	<i>Rhinoclavis</i>	<i>vertagus</i>	(Linnaeus, 1767)	Common vertagus	Not Listed	EN
Cerithiidae	<i>Rhinoclavis</i>	<i>sinensis</i>	(Gmelin, 1791)	Obelisk vertagus	Not Listed	LC
Planaxidae	<i>Planaxis</i>	<i>sulcatus</i>	(Born, 1778)	Furrowed clusterwink	Not Listed	LC
Planaxidae	<i>Fissilabia</i>	<i>decollata</i>	(Quoy & Gaimard, 1833)		Not Listed	DD
Potamididae	<i>Cerithidea</i>	<i>obtusa</i>	(Lamarck, 1822)	Obtuse horn-shell; Chut-chut [Hokkien]; Belitung [Malay]	Not Listed	LC
Potamididae	<i>Cerithidea</i>	<i>quoyii</i>	(Hombron & Jacquinot, 1848)		Not Listed	LC
Potamididae	<i>Pirenella</i>	<i>alata</i>	(Philippi, 1849)	Winged horn-shell	Not Listed	LC
Potamididae	<i>Pirenella</i>	<i>cingulata</i>	(Gmelin, 1791)	Girdled horn-shell	Not Listed	LC
Potamididae	<i>Telescopium</i>	<i>telescopium</i>	(Linnaeus, 1758)	Telescope snail; Telescope horn-shell; Telescope mud creeper; Berongan [Malay]; K'ua Ca Teng [Hokkien]	Not Listed	LC
Potamididae	<i>Terebralia</i>	<i>palustris</i>	(Linnaeus, 1767)	Mud creeper; Mangrove whelk	Not Listed	EN
Potamididae	<i>Terebralia</i>	<i>sulcata</i>	(Born, 1778)	Sulcate planaxis	Not Listed	LC
Turritellidae	<i>Turritella</i>	<i>terebra</i>	(Linnaeus, 1758)	Tower screw-shell; screw shell	VU	DD
Littorinidae	<i>Echinolittorina</i>	<i>malaccana</i>	(Jonas & Philippi in Philippi, 1847)		Not Listed	LC
Littorinidae	<i>Echinolittorina</i>	<i>melanacme</i>	(E.A. Smith, 1876)		Not Listed	LC
Littorinidae	<i>Echinolittorina</i>	<i>vidua</i>	(Gould, 1859)		Not Listed	LC
Littorinidae	<i>Littoraria</i>	<i>carinifera</i>	(Menke, 1830)		Not Listed	LC
Littorinidae	<i>Littoraria</i>	<i>conica</i>	(Philippi, 1846)		Not Listed	LC
Littorinidae	<i>Littoraria</i>	<i>melanostoma</i>	(J.E. Gray, 1839)		Not Listed	LC
Littorinidae	<i>Littoraria</i>	<i>vespacea</i>	D.G. Reid, 1986		Not Listed	LC
Calyptaeidae	<i>Ergaea</i>	<i>walshi</i>	(Reeve, 1859)		Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Cypraeidae	<i>Cypraea</i>	<i>tigris</i>	(Linnaeus, 1758)	Tiger cowrie	EN	VU
Cypraeidae	<i>Eclogavena</i>	<i>quadrimaculata</i>	(J.E. Gray, 1824)	Four-spotted cowrie	Not Listed	NT
Cypraeidae	<i>Erronea</i>	<i>errones</i>	(Linnaeus, 1758)		Not Listed	LC
Cypraeidae	<i>Erronea</i>	<i>onyx</i>	(Linnaeus, 1758)		Not Listed	LC
Cypraeidae	<i>Erronea</i>	<i>ovum</i>	(Linnaeus, 1758)		Not Listed	LC
Cypraeidae	<i>Mauritia</i>	<i>arabica</i>	(Linnaeus, 1758)	Arabian cowrie	VU	LC
Cypraeidae	<i>Monetaria</i>	<i>moneta</i>	(Linnaeus (1758)	Money cowrie	Not Listed	CR
Cypraeidae	<i>Monetaria</i>	<i>annulus</i>	(Linnaeus, 1758)	Gold-ring cowrie	EN	CR
Cypraeidae	<i>Naria</i>	<i>miliaris</i>	(Gmelin, 1791)	Millet cowrie	Not Listed	LC
Naticidae	<i>Notocochlis</i>	<i>tigrina</i>	(Röding, 1798)	Tiger moon	Not Listed	LC
Naticidae	<i>Tanea</i>	<i>lineata</i>	(Röding, 1798)	Lined moon	Not Listed	LC
Naticidae	<i>Polinices</i>	<i>mammilla</i>	(Linnaeus, 1758)	Pear-shaped moon	Not Listed	LC
Truncatellidae	<i>Truncatella</i>	<i>guerinii</i>	A. Villa & J. Villa, 1841		Not Listed	EN
Strombidae	<i>Lambis</i>	<i>lambis</i>	(Linnaeus, 1758)	Common spider conch	VU	NT
Strombidae	<i>Euprotomus</i>	<i>aratrum</i>	(Röding, 1798)		CR	DD
Strombidae	<i>Laevistrombus</i>	<i>turturilla</i>	(Röding, 1798)	Pearl conch; Gonggong [Malay]; Siput gonggong [Malay]; Gonggong betina [Malay]	Not Listed	LC
Strombidae	<i>Canarium</i>	<i>urceus</i>	(Linnaeus, 1758)	Little bear conch; Siput gonggong [Malay]; Gonggong [Malay]; Gonggong jantan [Malay]	VU	LC
Cassidae	<i>Phalium</i>	<i>glaucum</i>	(Linnaeus, 1758)	Grey bonnet	EN	NT
Bursidae	<i>Bufonaria</i>	<i>rana</i>	(Linnaeus, 1758)	Common frog shell	Not Listed	LC
Cymatiidae	<i>Gyrineum</i>	<i>natator</i>	(Röding, 1798)		Not Listed	LC
Triviidae	<i>Trivirostra</i>	<i>oryza</i>	(Lamarck, 1810)		EN	NT
Xenophoridae	<i>Stellaria</i>	<i>solaris</i>	(Linnaeus, 1764)	Sunburst carrier	Not Listed	DD
Pisaniidae	<i>Engina</i>	<i>armillata</i>	(Reeve, 1846)		Not Listed	LC
Pisaniidae	<i>Pollia</i>	<i>fumosa</i>	(Dillwyn, 1817)		Not Listed	LC
Melongenidae	<i>Volegalea</i>	<i>cochlidium</i>	(Linnaeus, 1758)	Spiral melongena	Not Listed	LC
Melongenidae	<i>Volema</i>	<i>myristica</i>	Röding, 1798	Nutmeg melongena	Not Listed	VU
Columbellidae	<i>Euplica</i>	<i>scripta</i>	(Lamarck, 1822)		Not Listed	LC
Columbellidae	<i>Pardalinops</i>	<i>testudinaria</i>	(Link, 1807)		Not Listed	LC
Columbellidae	<i>Pictocolumbella</i>	<i>ocellata</i>	(Link, 1807)		Not Listed	LC
Columbellidae	<i>Pseudanachis</i>	<i>basedowi</i>	(Hedley, 1918)		Not Listed	LC
Nassariidae	<i>Nassaria</i>	<i>acuminata</i>	(Reeve, 1844)		Not Listed	LC
Nassariidae	<i>Nassaria</i>	<i>pusilla</i>	(Röding, 1798)		Not Listed	LC
Nassariidae	<i>Nassarius</i>	<i>jacksonianus</i>	(Quoy & Gaimard, 1833)		Not Listed	LC
Nassariidae	<i>Nassarius</i>	<i>livescens</i>	(Philippi, 1849)		Not Listed	LC
Nassariidae	<i>Nassarius</i>	<i>olivaceus</i>	(Bruguière, 1789)		Not Listed	LC
Nassariidae	<i>Nassarius</i>	<i>pullus</i>	(Linnaeus, 1758)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Muricidae	<i>Murex</i>	<i>ternispina</i>	Lamarck, 1822	Black-spined murex	Not Listed	VU
Muricidae	<i>Murex</i>	<i>trapa</i>	Röding, 1798	Rare-spined murex	VU	LC
Muricidae	<i>Chicoreus</i>	<i>brunneus</i>	(Link, 1807)	Burnt murex; Adusta murex	Not Listed	LC
Muricidae	<i>Chicoreus</i>	<i>capucinus</i>	(Lamarck, 1822)	Mangrove murex	Not Listed	LC
Muricidae	<i>Chicoreus</i>	<i>ramosus</i>	(Linnaeus, 1758)	Ramoso murex; Giant murex; Branched murex	EN	NT
Muricidae	<i>Chicoreus</i>	<i>torrefactus</i>	(G. B. Sowerby II, 1841)	Firebrand murex; Scorched murex	Not Listed	NT
Muricidae	<i>Drupella</i>	<i>margariticola</i>	(Broderip in Broderip & G.B. Sowerby I, 1833)		Not Listed	LC
Muricidae	<i>Drupella</i>	<i>rugosa</i>	(Born, 1778)	Rugose drupe; Rough rock-shell	Not Listed	NT
Muricidae	<i>Ergalatax</i>	<i>contracta</i>	(Reeve, 1846)		Not Listed	LC
Muricidae	<i>Tenguella</i>	<i>musiva</i>	(Kiener, 1835)	Musical drupe	Not Listed	LC
Muricidae	<i>Indothais</i>	<i>gradata</i>	(Jonas, 1846)		Not Listed	LC
Muricidae	<i>Indothais</i>	<i>rufotincta</i>	K.S. Tan & Sigurdsson, 1996	Red tinted rock shell	Not Listed	LC
Muricidae	<i>Mancinella</i>	<i>echinata</i>	(Blainville, 1832)	Prickly rock-shell	Not Listed	LC
Muricidae	<i>Reishia</i>	<i>bitubercularis</i>	(Lamarck, 1822)	Bituberculate rock- shell	Not Listed	LC
Muricidae	<i>Reishia</i>	<i>clavigera</i>	(Küster, 1860)		Not Listed	LC
Muricidae	<i>Reishia</i>	<i>jubilaea</i>	(K.S. Tan & Sigurdsson, 1990)		Not Listed	LC
Volutidae	<i>Cymbiola</i>	<i>nobilis</i>	(Lightfoot, 1786)	Noble volute	VU	NT
Volutidae	<i>Melo</i>	<i>melo</i>	(Lightfoot, 1786)	Baler shell; Indian volute	EN	VU
Olividae	<i>Oliva</i>	<i>miniacea</i>	(Röding, 1798)	Red-mouthed olive	VU	VU
Conidae	<i>Conus</i>	<i>achatinus</i>	Gmelin, 1791	Turtle cone; Agate cone	Not Listed	DD
Conidae	<i>Conus</i>	<i>consors</i>	G. B. Sowerby I, 1833	Consort cone	VU	VU
Conidae	<i>Conus</i>	<i>textile</i>	Linnaeus, 1758	Textile cone	VU	DD
Clavatulidae	<i>Turricula</i>	<i>javana</i>	(Linnaeus, 1767)	Javanese turrid	Not Listed	LC
Architectonicidae	<i>Architectonica</i>	<i>perspectiva</i>	(Linnaeus, 1758)	Clear sundial	EN	DD
Pyramidellidae	<i>Milda</i>	<i>ventricosa</i>	(Guérin, 1830)		Not Listed	LC
Ellobiidae	<i>Ellobium</i>	<i>aurismidae</i>	(Linnaeus, 1758)	Midas ear cassidula	Not Listed	LC
Ellobiidae	<i>Ellobium</i>	<i>aurisjudae</i>	(Linnaeus, 1758)	Judas ear cassidula	Not Listed	LC
Ellobiidae	<i>Ellobium</i>	<i>scheepmakeri</i>	(Petit de la Saussaye, 1850)		CR	CR
Ellobiidae	<i>Pythia</i>	<i>plicata</i>	(Férussac, 1821)		Not Listed	LC
Ellobiidae	<i>Pythia</i>	<i>scarabaeus</i>	(Linnaeus, 1785)	Common pythia	Not Listed	VU
Ellobiidae	<i>Pythia</i>	<i>trigona</i>	(Troschel, 1838)	Trigonal pythia	Not Listed	LC
Dyakiidae	<i>Quantula</i>	<i>striata</i>	(Gray, 1834)		Not Listed	LC
Ariophantidae	<i>Hemiplecta</i>	<i>keraudrenii</i>	(Hombron & Jacquinot, 1841)		Not Listed	NT

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Camaenidae	<i>Amphidromus</i>	<i>temasek</i>	S.K. Tan, Chan & Panha, 2011	Temasek amphidromus; Jade tree snail; Green tree snail	EN	NT
Camaenidae	<i>Amphidromus</i>	<i>inversus</i>	(O.F. Müller, 1774)	Inverse amphidromus; Brown tree snail	CR	CR
Loliginidae	<i>Sepioteuthis</i>	<i>lessoniana</i>	d'Orbigny, 1826	Bigfin reef squid; Oval squid	Not Listed	LC
Sepiidae	<i>Sepia</i>	<i>aculeata</i>	Van Hasselt, 1835 [in Féruccac & d'Orbigny, 1834-1848]	Needle cuttlefish	Not Listed	LC
Sepiidae	<i>Sepiella</i>	<i>inermis</i>	(van Hasselt, 1835 [in Féruccac & d'Orbigny, 1834-1848])	Spineless cuttlefish	Not Listed	LC

Checklist of Termite & Cockroach Species with their Category of Threat Status for Singapore
 Prepared by Foo Maosheng, Hwang Wei Song

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Blaberidae	<i>Apsidopis</i>	<i>oxyptera</i>	Walker, 1868		Not Listed	DD
Blaberidae	<i>Panesthia</i>	<i>augustipennis</i>	Illiger, 1801		Not Listed	LC
Blaberidae	<i>Panesthia</i>	<i>sinuata</i>	Saussure, 1895		Not Listed	DD
Blaberidae	<i>Perisphaerurus</i>	<i>flexicollis</i>	Walker, 1868		Not Listed	DD
Blaberidae	<i>Pycnoscelus</i>	<i>indicus</i>	Fabricius, 1775		Not Listed	LC
Blaberidae	<i>Pycnoscelus</i>	<i>surinamensis</i>	Linnaeus, 1758		Not Listed	LC
Blaberidae	<i>Salganea</i>	<i>wrayi</i>	Kirby, 1903		Not Listed	DD
Blattidae	<i>Dorylaea</i>	<i>saundersi</i>	Hanitsch, 1923		Not Listed	DD
Ectobiidae	<i>Allacta</i>	<i>diagrammatica</i>	Hanitsch, 1923		Not Listed	DD
Ectobiidae	<i>Allacta</i>	<i>luteomarginata</i>	Hanitsch, 1923		Not Listed	DD
Ectobiidae	<i>Allacta</i>	<i>picturata</i>	Shelford, 1907		Not Listed	DD
Ectobiidae	<i>Anaplectella</i>	<i>aurea</i>	Hanitsch, 1931		Not Listed	DD
Ectobiidae	<i>Balta</i>	<i>jacobsoni</i>	Hebard, 1929		Not Listed	DD
Ectobiidae	<i>Balta</i>	<i>notulata</i>	Stål, 1860		Not Listed	LC
Ectobiidae	<i>Balta</i>	<i>reticulata</i>	Fabricius, 1798		Not Listed	DD
Ectobiidae	<i>Blattella</i>	<i>bisignata</i>	Brunner von Wattenwyl, 1893		Not Listed	DD
Ectobiidae	<i>Episymplece</i>	<i>ridleyi</i>	Shelford, 1907		Not Listed	DD
Ectobiidae	<i>Euhebardula</i>	<i>stellata</i>	Hanitsch, 1923		Not Listed	DD
Ectobiidae	<i>Haplosymploce</i>	<i>pica</i>	Walker, 1868		Not Listed	DD
Ectobiidae	<i>Haplosymploce</i>	<i>reversa</i>	Walker, 1869		Not Listed	DD
Ectobiidae	<i>Malaccina</i>	<i>rufella</i>	Hebard, 1929		Not Listed	DD
Ectobiidae	<i>Malaccina</i>	<i>saundersi</i>	Hanitsch, 1928		Not Listed	DD
Ectobiidae	<i>Malaccina</i>	<i>schali</i>	Roth, 1996		Not Listed	DD
Ectobiidae	<i>Prosoplecta</i>	<i>uniformis</i>	Hebard, 1929		Not Listed	DD
Ectobiidae	<i>Pseudophyllodromia</i>	<i>laticeps</i>	Walker, 1869		Not Listed	DD
Ectobiidae	<i>Scalida</i>	<i>latiusvittata</i>	Brunner von Wattenwyl, 1898		Not Listed	DD
Ectobiidae	<i>Shelfordina</i>	<i>lata</i>	Hanitsch, 1923		Not Listed	DD
Ectobiidae	<i>Symplocodes</i>	<i>ridleyi</i>	Shelford, 1913		Not Listed	DD
Kalotermitidae	<i>Neotermes</i>	<i>tectonae</i>	Dammerman, 1916		Not Listed	DD
Rhinotermitidae	<i>Coptotermes</i>	<i>curvignathus</i>	Holmgren, 1913		Not Listed	LC
Rhinotermitidae	<i>Coptotermes</i>	<i>gestroi</i>	Wasmann, 1896		Not Listed	LC
Rhinotermitidae	<i>Coptotermes</i>	<i>sepangensis</i>	Krishna, 1956		Not Listed	LC
Rhinotermitidae	<i>Coptotermes</i>	<i>travians</i>	Haviland, 1898		Not Listed	LC
Rhinotermitidae	<i>Parrhinotermes</i>	<i>aequalis</i>	Haviland, 1898		Not Listed	DD
Rhinotermitidae	<i>Parrhinotermes</i>	<i>microdentiformis</i>	Thapa, 1982		Not Listed	DD
Rhinotermitidae	<i>Parrhinotermes</i>	<i>pygmaeus</i>	John, 1925		Not Listed	DD
Rhinotermitidae	<i>Prorhinotermes</i>	<i>flavus</i>	Bugnion & Popoff, 1910		Not Listed	DD
Rhinotermitidae	<i>Schedorhinotermes</i>	<i>brevialatus</i>	Haviland, 1898		Not Listed	DD
Rhinotermitidae	<i>Schedorhinotermes</i>	<i>malaccensis</i>	Holmgren, 1913		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Rhinotermitidae	<i>Schedorhinotermes</i>	<i>medioobscurus</i>	Holmgren, 1914		Not Listed	LC
Termitidae	<i>Ancistrotermes</i>	<i>pakistaniicus</i>	Ahmad, 1955		Not Listed	DD
Termitidae	<i>Bulbitermes</i>	<i>borneensis</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Bulbitermes</i>	<i>germanus</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Bulbitermes</i>	<i>perpusillus</i>	John, 1925		Not Listed	DD
Termitidae	<i>Bulbitermes</i>	<i>singaporiensis</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Dicuspidditermes</i>	<i>nemorosus</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Dicuspidditermes</i>	<i>santschii</i>	Silvestri, 1922		Not Listed	DD
Termitidae	<i>Globitermes</i>	<i>globosus</i>	Haviland, 1898		Not Listed	LC
Termitidae	<i>Hospitalitermes</i>	<i>umbrinus</i>	Haviland, 1898		Not Listed	LC
Termitidae	<i>Longipeditermes</i>	<i>longipes</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Macrotermes</i>	<i>carbonarius</i>	Hagen, 1858	Giant Termite	VU	LC
Termitidae	<i>Macrotermes</i>	<i>gilvus</i>	Hagen, 1858		Not Listed	LC
Termitidae	<i>Macrotermes</i>	<i>malaccensis</i>	Haviland, 1898		Not Listed	LC
Termitidae	<i>Microcerotermes</i>	<i>crassus</i>	Snyder, 1934		Not Listed	DD
Termitidae	<i>Microcerotermes</i>	<i>duplex</i>	Desneux, 1904		Not Listed	DD
Termitidae	<i>Microcerotermes</i>	<i>havilandi</i>	Holmgren, 1913		Not Listed	DD
Termitidae	<i>Microcerotermes</i>	<i>sabahensis</i>	Thapa, 1982		Not Listed	DD
Termitidae	<i>Microcerotermes</i>	<i>serratus</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>atripennis</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>havilandi</i>	Desneux, 1904		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>longinasoides</i>	Thapa, 1982		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>matangensis</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>neoparvus</i>	Thapa, 1982		Not Listed	DD
Termitidae	<i>Nasutitermes</i>	<i>proatripennis</i>	Ahmad, 1965		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>denticulatus</i>	Holmgren, 1913		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>grandiceps</i>	Holmgren, 1913		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>javanicus</i>	Holmgren, 1912		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>minutus</i>	Amir, 1975		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>oblongatus</i>	Holmgren, 1913		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>prodives</i>	Thapa, 1982		Not Listed	DD
Termitidae	<i>Odontotermes</i>	<i>sarawakensis</i>	Holmgren, 1913		Not Listed	DD
Termitidae	<i>Pericapritermes</i>	<i>dolichocephalis</i>	John, 1925		Not Listed	DD
Termitidae	<i>Pericapritermes</i>	<i>nitobei</i>	Shiraki, 1909		Not Listed	DD
Termitidae	<i>Procapritermes</i>	<i>sandakanensis</i>	Thapa, 1982		Not Listed	DD
Termitidae	<i>Prohamitermes</i>	<i>mirabilis</i>	Haviland, 1898		Not Listed	DD
Termitidae	<i>Termes</i>	<i>rostratus</i>	Haviland, 1898		Not Listed	DD

Checklist of Beetle Species with their Category of Threat Status for Singapore

Prepared by Cheong Loong Fah, Wan F.A. Jusoh, Ong Xin Rui, Sean Yap

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Carabidae	<i>Agastus</i>	<i>ustulatus</i>	Gestro, 1875		Not Listed	NEx
Carabidae	<i>Catascopus</i>	<i>brachypterus</i>	Chaudoir, 1861		Not Listed	NEx
Carabidae	<i>Catascopus</i>	<i>cupripennis</i>	Thomson, 1858		Not Listed	NEx
Carabidae	<i>Catascopus</i>	<i>punctipennis</i>	Saunders, 1863		Not Listed	NEx
Carabidae	<i>Chlaenius</i>	<i>acroxanthus</i>	Chaudoir, 1876		Not Listed	NEx
Carabidae	<i>Colasidia</i>	<i>malayica</i>	Basilewsky, 1954		Not Listed	DD
Carabidae	<i>Cryptocephalomorpha</i>	<i>gaverei</i>	Ritsema, 1875		Not Listed	DD
Carabidae	<i>Distichus</i>	<i>dicaelus</i>	Chaudoir, 1881		Not Listed	NEx
Carabidae	<i>Eustra</i>	<i>csikii</i>	Jedlicka, 1968		Not Listed	DD
Carabidae	<i>Lachnoderma</i>	<i>tricolor</i>	Andrewes, 1926		Not Listed	DD
Carabidae	<i>Parena</i>	<i>nigrolineata</i>	(Chaudoir, 1852)		Not Listed	DD
Carabidae	<i>Stenaptinus</i>	<i>occipitalis</i>	(Macleay, 1825)		Not Listed	CR
Cicindelidae	<i>Heptodonta</i>	<i>analis</i>	(Fabricius, 1801)		Not Listed	NEx
Cicindelidae	<i>Hypaetha</i>	<i>quadrilineata</i>	(Fabricius, 1781)		Not Listed	NEx
Cicindelidae	<i>Lophyra</i>	<i>fuliginosa</i>	(Dejean, 1826)		Not Listed	VU
Cicindelidae	<i>Therates</i>	<i>batesii</i>	Thomson, 1857		Not Listed	NEx
Cicindelidae	<i>Therates</i>	<i>fleutiauxi</i>	Horn, 1898		Not Listed	CR
Buprestidae	<i>Anthaxia</i> (<i>Merocratus</i>)	<i>miranda</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Anthaxia</i> (<i>Merocratus</i>)	<i>violaceiventris</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Agrilus</i>	<i>albogaster</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Agrilus</i>	<i>amicus</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Agrilus</i>	<i>lancifer</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Agrilus</i>	<i>jankae</i>	Jendek & Grebennikov,		Not Listed	CR
Buprestidae	<i>Agrilus</i>	<i>tristinus</i>	Obenberger, 1924		Not Listed	NEx
Buprestidae	<i>Agrilus</i>	<i>trito</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Belionota</i>	<i>metasticta</i>	(Illiger, 1800)		Not Listed	DD
Buprestidae	<i>Catoxantha</i>	<i>opulenta</i>	(Gory, 1832)		Not Listed	NEx
Buprestidae	<i>Chrysobothris</i>	<i>cyanescens</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Chrysobothris</i>	<i>nigripennis</i>	Deyrolle, 1864		Not Listed	NEx
Buprestidae	<i>Chrysochroa</i>	<i>castelnauii</i>	Deyrolle, 1862		Not Listed	NEx
Buprestidae	<i>Coraebus</i>	<i>collaris</i>	Gory & Laporte, 1839		Not Listed	NEx
Buprestidae	<i>Endelus</i>	<i>baumi</i>	Obenberger, 1929		Not Listed	NEx
Buprestidae	<i>Epidelus</i>	<i>wallacei</i>	(Thomson, 1857)		Not Listed	NEx
Buprestidae	<i>Haplotrinchus</i>	<i>viridis</i>	(Deyrolle, 1864)		Not Listed	DD
Buprestidae	<i>Megaloxantha</i>	<i>hemixantha</i>	(Vollenhoven, 1864)		Not Listed	NEx
Buprestidae	<i>Megaloxantha</i>	<i>purpurascens</i>	(Ritsema, 1879)		Not Listed	NEx

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Cerambycidae	<i>Aegolipton</i>	<i>marginale</i>	(Fabricius, 1775)		Not Listed	NEx
Cerambycidae	<i>Amechana</i>	<i>nobilis</i>	Thomson 1864		Not Listed	NEx
Cerambycidae	<i>Astathes</i> (<i>Tetraophthalmus</i>)	<i>contentiosa</i>	Pascoe, 1867		Not Listed	NEx
Cerambycidae	<i>Astathes</i> (<i>Tetraophthalmus</i>)	<i>terminata</i>	Pascoe, 1857		Not Listed	NEx
Cerambycidae	<i>Bacchisa</i>	<i>albicornis</i>	(Pascoe 1867)		Not Listed	NEx
Cerambycidae	<i>Dorysthenes</i> (<i>Paraphrus</i>)	<i>planicollis</i>	(Bates, 1878)		Not Listed	NEx
Cerambycidae	<i>Entelopes</i>	<i>glauca</i>	Guérin-Méneville, 1844		Not Listed	NEx
Cerambycidae	<i>Epianthe</i>	<i>funesta</i>	Pascoe, 1869		Not Listed	NEx
Cerambycidae	<i>Euryphagus</i>	<i>lundii</i>	Fabricius, 1792		Not Listed	CR
Cerambycidae	<i>Glenea</i>	<i>algebraica</i>	Thomson, 1857		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>coris</i>	Pascoe, 1867		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>juno</i>	Thomson, 1865		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>mathematica</i>	(Thomson, 1857)		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>myrrhis</i>	Pascoe, 1867		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>myrsine</i>	Pascoe, 1867		Not Listed	NEx
Cerambycidae	<i>Glenea</i>	<i>pulchella</i>	Pascoe, 1858		Not Listed	NEx
Cerambycidae	<i>Glenea</i> (<i>Tanylecta</i>)	<i>aegoprepiformis</i>	Breuning, 1950		Not Listed	NEx
Cerambycidae	<i>Hoplocerambyx</i>	<i>spinicornis</i>	(Newman, 1842)		Not Listed	NEx
Cerambycidae	<i>Nepiodes</i>	<i>cinnamomeum</i> <i>ritsemai</i>	(Lameere, 1912)		Not Listed	NEx
Cerambycidae	<i>Notomulciber</i> (<i>Micromulciber</i>)	<i>sexlineatus</i>	Breuning, 1959		Not Listed	CR
Cerambycidae	<i>Oberea</i>	<i>compta</i>	Pascoe, 1867		Not Listed	NEx
Cerambycidae	<i>Ocalemia</i>	<i>vigilans</i>	Pascoe, 1858		Not Listed	NEx
Cerambycidae	<i>Paracyriothasastes</i>	<i>marmoreus</i>	(Pascoe, 1857)		Not Listed	NEx
Cerambycidae	<i>Pseudoparanaspia</i>	<i>lepturooides</i>	(Pascoe, 1869)		Not Listed	NEx
Cerambycidae	<i>Remphan</i>	<i>hopei</i>	Waterhouse, 1836		Not Listed	NEx
Lampyridae	<i>Luciola</i>	<i>singapura</i>	Jusoh & Ballantyne, 2021	Singapore Firefly	Not Listed	CR
Lampyridae	<i>Pteroptyx</i>	<i>bearni</i>	Olivier, 1909	The Comtesse's Bent-winged Firefly	Not Listed	NEx
Lampyridae	<i>Pteroptyx</i>	<i>malaccae</i>	Gorham, 1880		Not Listed	CR
Lampyridae	<i>Pteroptyx</i>	<i>valida</i>	Olivier, 1909	Non- synchronous Bent-winged Firefly	EN	EN
Lampyridae	<i>Pyrocoelia</i>	<i>fumigata</i>	Gorham, 1880		Not Listed	LC
Scarabaeidae	<i>Copris</i>	<i>numa</i>	Lansberge, 1886		Not Listed	NEx
Scarabaeidae	<i>Sisyphus</i>	<i>thoracicus</i>	Sharp, 1875		Not Listed	NEx
Scarabaeidae	<i>Catharsius</i>	<i>renaudpauliani</i>	Ochi & Kon, 1996		Not Listed	NT
Scarabaeidae	<i>Paragymnopleurus</i>	<i>maurus</i>	(Sharp, 1875)		Not Listed	NT

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Scarabaeidae	<i>Caccobius</i>	<i>unicornis</i>	(Fabricius, 1798)		Not Listed	DD
Scarabaeidae	<i>Onthophagus</i>	<i>deliensis</i>	Lansberge, 1885		Not Listed	NT
Scarabaeidae	<i>Onthophagus</i>	<i>trituber</i>	(Wiedemann, 1823)		Not Listed	LC
Scarabaeidae	<i>Onthophagus</i>	<i>vulpes</i>	Harold, 1877		Not Listed	NEx
Scarabaeidae	<i>Chalcosoma</i>	<i>atlas</i>	(Linnaeus, 1758)	Atlas Beetle	Not Listed	CR
Scarabaeidae	<i>Chalcosoma</i>	<i>chiron</i>	(Olivier, 1789)		Not Listed	NEx
Scarabaeidae	<i>Xylotrupes</i>	<i>gideon</i>	(Linnaeus, 1767)	Brown Rhinoceros Beetle	Not Listed	NT
Coccinellidae	<i>Cheiromenes</i>	<i>sexmaculata</i>	Fabricius, 1781		Not Listed	LC
Coccinellidae	<i>Chilocorus</i>	<i>circumdatus</i>	(Gyllenhal in Schönherr, 1808)	Red Chilocorus	Not Listed	LC
Coccinellidae	<i>Coelophora</i>	<i>bissellata</i>	Mulsant, 1850		Not Listed	DD
Coccinellidae	<i>Henosepilachna</i>	<i>indica</i>	(Mulsant, 1850)		Not Listed	LC
Coccinellidae	<i>Heteroneda</i>	<i>billardieri</i>	Crotch, 1871		Not Listed	DD
Coccinellidae	<i>Harmonia</i>	<i>octomaculata</i>	(Fabricius, 1781)		Not Listed	VU
Coccinellidae	<i>Megalocaria</i>	<i>dilatata</i>	(Fabricius, 1775)		Not Listed	VU
Lycidae	<i>Platerodrilus</i>	<i>ruficollis</i>	(Pic, 1942)	Trilobite Larva	EN	VU

Checklist of Diptera (Fly) Species with their Category of Threat Status for Singapore

Prepared by Ang Yuchen

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Asilidae	<i>Heligmoneura</i>	<i>fuscinalonga</i>	Tomasovic & Grootaert, 2008	Assassin fly	Not Listed	VU
Asilidae	<i>Heligmoneura</i>	<i>singaporenensis</i>	Tomasovic & Grootaert, 2008	Assassin fly	Not Listed	VU
Asilidae	<i>Laphria</i>	<i>basifera</i>	(Walker, 1857)	Assassin fly	Not Listed	DD
Asilidae	<i>Laphria</i>	<i>basigutta</i>	Walker, 1857	Assassin fly	Not Listed	DD
Asilidae	<i>Laphria</i>	<i>imbellis</i>	Walker, 1857	Assassin fly	Not Listed	DD
Asilidae	<i>Laphria</i>	<i>inaurea</i>	Walker, 1857	Assassin fly	Not Listed	DD
Asilidae	<i>Laphria</i>	<i>plana</i>	Walker, 1857	Assassin fly	Not Listed	DD
Asilidae	<i>Laphria</i>	<i>sobria</i>	Walker, 1857	Assassin fly	Not Listed	DD
Asilidae	<i>Leptogaster</i>	<i>moluccana</i>	(Doleschall, 1957)	Spider assassin fly	Not Listed	NT
Asilidae	<i>Maira</i>	<i>aenea</i>	(Fabricius, 1805)	Assassin fly	Not Listed	VU
Asilidae	<i>Michotamia</i>	<i>latifascia</i>	(Walker, 1857)	Assassin fly	Not Listed	DD
Asilidae	<i>Michotamia</i>	<i>singaporenensis</i>	Tomasovic & Grootaert, 2008	Assassin fly	Not Listed	EN
Asilidae	<i>Orthogonis</i>	<i>scapularis</i>	(Wiedemann, 1828)	Assassin fly	Not Listed	VU
Asilidae	<i>Pogonosoma</i>	<i>crassipes</i>	(Fabricius, 1805)	Assassin fly	Not Listed	DD
Asilidae	<i>Promachus</i>	<i>amorges</i>	(Walker, 1849)	Assassin fly	Not Listed	VU
Asilidae	<i>Promachus</i>	<i>lineosus</i>	(Walker, 1857)	Assassin fly	Not Listed	DD
Bombyliidae	<i>Petrorossia</i>	<i>fulvula</i>	(Wiedemann, 1821)	Bee fly	Not Listed	DD
Calliphoridae	<i>Hypopygiopsis</i>	<i>fumipennis</i>	(Walker, 1856)	Blow fly	Not Listed	LC
Calliphoridae	<i>Hypopygiopsis</i>	<i>violacea</i>	(Macquart, 1835)	Blow fly	Not Listed	LC
Canacidae	<i>Allocanace</i>	<i>gibba</i>	Munari, 2018	Gibba beach fly	Not Listed	EN
Canacidae	<i>Dasyrhicnoessa</i>	<i>adelpha</i>	Munari, 2005	Beach fly	Not Listed	VU
Canacidae	<i>Dasyrhicnoessa</i>	<i>paraplatypes</i>	Munari, 2018	Beach fly	Not Listed	VU
Canacidae	<i>Dasyrhicnoessa</i>	<i>tripunctata</i>	Sasakawa, 1974	Beach fly	Not Listed	VU
Canacidae	<i>Sigaloethina</i>	<i>phaia</i>	Munari, 2004	Phaia beach fly	Not Listed	VU
Ceratopogonidae	<i>Dasyhelea</i>	<i>ampullariae</i>	Macfie, 1934	Biting midge	Not Listed	NE
Ceratopogonidae	<i>Dasyhelea</i>	<i>biseriatus</i>	Wirth & Beaver, 1979	Biting midge	Not Listed	NE
Ceratopogonidae	<i>Dasyhelea</i>	<i>nepenthicola</i>	Wirth & Beaver, 1979	Biting midge	Not Listed	NE
Ceratopogonidae	<i>Dasyhelea</i>	<i>schizothrix</i>	Lee & Wirth, 1989	Biting midge	Not Listed	NE
Chaoboridae	<i>Chaoborus</i>	<i>flavidulus</i>	Edwards, 1930	Phantom midge	Not Listed	LC
Chaoboridae	<i>Chaoborus</i>	<i>queenslandensis</i>	(Theobald, 1905)	Phantom midge	Not Listed	NT
Chironomidae	<i>Ablabesmyia</i>	<i>notabilis</i>	(Skuse, 1889)	Non-biting midge	Not Listed	NT
Chironomidae	<i>Chironomus</i>	<i>circumdatus</i>	Kieffer, 1916	Non-biting midge	Not Listed	LC
Chironomidae	<i>Chironomus</i>	<i>dissidens</i>	Walker, 1856	Non-biting midge	Not Listed	LC
Chironomidae	<i>Chironomus</i>	<i>javanus</i>	Kieffer, 1924	Non-biting midge	Not Listed	LC
Chironomidae	<i>Chironomus</i>	<i>kiiensis</i>	Tokunaga, 1936	Non-biting midge	Not Listed	LC
Chironomidae	<i>Conochironomus</i>	<i>tobaterdecimus</i>	(Kikuchi & Sasa, 1980)	Non-biting midge	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Chironomidae	<i>Cryptochironomus</i>	<i>fulvus</i>	Johannsen, 1905	Non-biting midge	Not Listed	LC
Chironomidae	<i>Dicrotendipes</i>	<i>flexus</i>	(Johannsen, 1932)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Dicrotendipes</i>	<i>pelechloris</i>	(Kieffer, 1912)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Fittkauimyia</i>	<i>disparipes</i>	Karunakaran, 1969	Non-biting midge	Not Listed	NE
Chironomidae	<i>Kiefferulus</i>	<i>tainanus</i>	(Kieffer, 1912)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Microchironomus</i>	<i>tener</i>	(Kieffer, 1918)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Nilothauma</i>	<i>hibaraquartum</i>	Sasa, 1993	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>convexum</i>	(Johannsen, 1932)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>griseoguttatum</i>	Kieffer, 1921	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>johannseni</i>	Sublette & Sublette, 1973	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>leei</i>	Freeman, 1961	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>masudai</i>	(Tokunaga, 1938)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>nodosum</i>	(Johannsen, 1932)	Non-biting midge	Not Listed	LC
Chironomidae	<i>Polypedilum</i>	<i>nubifer</i>	Skuse, 1889	Non-biting midge	Not Listed	LC
Chironomidae	<i>Procladius</i>	<i>choreus</i>	(Meigen, 1804)	Non-biting midge	Not Listed	NT
Chironomidae	<i>Stenochironomus</i>	<i>tobaduodecimus</i>	Kikuchi & Sasa, 1990	Non-biting midge	Not Listed	LC
Chironomidae	<i>Tanypus</i>	<i>kraatzi</i>	(Kieffer, 1912)	Non-biting midge	Not Listed	NT
Chironomidae	<i>Tanytarsus</i>	<i>formosanus</i>	Kieffer, 1912	Non-biting midge	Not Listed	LC
Chironomidae	<i>Tanytarsus</i>	<i>infundibulus</i>	Chaudhuri & Datta, 1992	Non-biting midge	Not Listed	LC
Chironomidae	<i>Tanytarsus</i>	<i>oscillans</i>	Johannsen, 1932	Non-biting midge	Not Listed	LC
Chironomidae	<i>Tanytarsus</i>	<i>ovatus</i>	Johannsen, 1932	Non-biting midge	Not Listed	LC
Chloropidae	<i>Pseudogaurax</i>	<i>sexnotatus</i>	Ismay & Ang, 2019	Frit fly	Not Listed	VU
Chloropidae	<i>Pseudogaurax</i>	<i>striatus</i>	Ismay & Ang, 2019	Frit fly	Not Listed	VU
Coelopidae	<i>Coelopa</i>	<i>orientalis</i>	Macquart, 1843	Kelp fly	Not Listed	EN
Corethrellidae	<i>Corethrella</i>	<i>calathicola</i>	Edwards, 1930	Frog-biting midge	Not Listed	VU
Culicidae	<i>Aedes</i>	<i>franciscoi</i>	Mattingly, 1959	Aedes mosquito	Not Listed	NE
Culicidae	<i>Aedes</i>	<i>inermis</i>	Colless, 1958	Aedes mosquito	Not Listed	NE
Culicidae	<i>Aedes</i>	<i>litoreus</i>	Colless, 1958	Aedes mosquito	Not Listed	NE
Culicidae	<i>Aedes</i>	<i>niveus</i>	(Ludlow, 1903)	Aedes mosquito	Not Listed	NE
Culicidae	<i>Aedes</i>	<i>pexus</i>	Colless, 1958	Aedes mosquito	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Culicidae	<i>Aedes</i>	<i>subniveus</i>	Edwards, 1922	Aedes mosquito	Not Listed	NE
Culicidae	<i>Aedes</i>	<i>vanus</i>	Colless, 1958	Aedes mosquito	Not Listed	NE
Culicidae	<i>Armigeres</i>	<i>giveni</i>	Edwards, 1926	Mosquito	Not Listed	NE
Culicidae	<i>Culex</i>	<i>brevipalpis</i>	(Theobald, 1905)	Culex mosquito	Not Listed	NE
Culicidae	<i>Culex</i>	<i>curtipalpis</i>	(Edwards, 1914)	Culex mosquito	Not Listed	NE
Culicidae	<i>Culex</i>	<i>hewitti</i>	(Edwards, 1914)	Culex mosquito	Not Listed	NE
Culicidae	<i>Culex</i>	<i>navalis</i>	Edwards, 1926	Culex mosquito	Not Listed	NE
Culicidae	<i>Toxorhynchites</i>	<i>acaudatus</i>	(Leicester, 1908)	Elephant mosquito	Not Listed	NE
Culicidae	<i>Tripteroides</i>	<i>nepenthis</i>	(Edwards, 1915)	Mosquito	Not Listed	NE
Culicidae	<i>Tripteroides</i>	<i>nepenthisimilis</i>	Mattingly, 1981	Mosquito	Not Listed	NE
Culicidae	<i>Tripteroides</i>	<i>tenax</i>	(Meijere, 1910)	Mosquito	Not Listed	NE
Culicidae	<i>Uranotaenia</i>	<i>moultoni</i>	Edwards, 1914	Mosquito	Not Listed	NE
Diopsidae	<i>Teleopsis</i>	<i>dalmanni</i>	(Wiedemann, 1830)	Malayan stalk-eyed fly	Not Listed	VU
Dolichopodidae	<i>Acropsilus</i>	<i>uncinatus</i>	Grootaert & Meuffels, 1986	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Amblypsilopus</i>	<i>abruptus</i>	(Walker, 1859)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chaetogonopteron</i>	<i>chaeturum</i>	Grootaert & Meuffels, 1999	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Chaetogonopteron</i>	<i>vexillum</i>	Bickel, 2013	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chaetogonopterum</i>	<i>laetum</i>	(Becker, 1922)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysosoma</i>	<i>bearni</i>	Parent, 1935	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysosoma</i>	<i>fissum</i>	Becker, 1922	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysosoma</i>	<i>leucopogon</i>	(Wiedemann, 1824)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysosoma</i>	<i>proliiens</i>	(Walker, 1856)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysosoma</i>	<i>vittatum</i>	(Wiedemann, 1819)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Chrysotus</i>	<i>hirsutus</i>	Aldrich, 1896	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Condylostylus</i>	<i>tenebrosus</i>	(Walker, 1857)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Cymatopus</i>	<i>malayensis</i>	Parent, 1935	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Diaphorus</i>	<i>mandarinus</i>	Wiedemann, 1830	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Diaphorus</i>	<i>serenus</i>	Becker, 1922	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Hercostomoides</i>	<i>indonesianus</i>	(Hollis, 1964)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Hercostomus</i>	<i>brevicornis</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Hercostomus</i>	<i>brevidigitalis</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Hercostomus</i>	<i>lanceolatus</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Hercostomus</i>	<i>limosus</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Hercostomus</i>	<i>meieri</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Hercostomus</i>	<i>plumatus</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Hercostomus</i>	<i>singaporenensis</i>	Zhang, Yang & Grootaert, 2008	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Lichtwardtia</i>	<i>formosana</i>	Enderlein, 1912	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Lichtwardtia</i>	<i>nodulata</i>	Grootaert & Tang, 2018	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Lichtwardtia</i>	<i>ziczac</i>	(Wiedemann, 1824)	Long-legged fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Dolichopodidae	<i>Medetera</i>	<i>flavipes</i>	Meigen, 1824	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Medetera</i>	<i>griseocens</i>	de Meijere, 1916	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Medetera</i>	<i>minima</i>	de Meijere, 1916	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Medetera</i>	<i>pumila</i>	de Meijere, 1916	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Medetera</i>	<i>vivida</i>	Becker, 1922	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Microphorella</i>	<i>malaysiana</i>	Shamshev & Grootaert, 2004	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Nanothinophilus</i>	<i>hoplites</i>	Grootaert & Meuffels, 2001	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Nanothinophilus</i>	<i>pauperculus</i>	Grootaert & Meuffels, 1998	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Neurigona</i>	<i>angulata</i>	de Meijere, 1916	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Neurigona</i>	<i>pectinata</i>	Becker, 1922	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Neurigona</i>	<i>squamifera</i>	Parent, 1935	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Neurigona</i>	<i>temasek</i>	Grootaert & Foo, 2019	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Neurigona</i>	<i>timahensis</i>	Grootaert & Foo, 2019	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Ngiraphium</i>	<i>caeruleum</i>	Evenhuis & Grootaert, 2002	Cerulean long-legged fly	Not Listed	VU
Dolichopodidae	<i>Ngiraphium</i>	<i>murphyi</i>	Evenhuis & Grootaert, 2002	Murphy's long-legged fly	VU	EN
Dolichopodidae	<i>Ngiraphium</i>	<i>sivasothii</i>	Evenhuis & Grootaert, 2002	Siva's long-legged fly	Not Listed	NT
Dolichopodidae	<i>Paraclius</i>	<i>abbreviatus</i>	Becker, 1922	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>crassatus</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>digitatus</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>obtus</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>polychaetus</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>serratus</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Paraclius</i>	<i>singaporenensis</i>	Zhang et al., 2007	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Phacaspis</i>	<i>mitis</i>	Grootaert & Meuffels, 2001	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Phacaspis</i>	<i>ornata</i>	Meuffels & Grootaert, 1988	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Plagiozopelma</i>	<i>alutiferum</i>	(Parent, 1934)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Plagiozopelma</i>	<i>lichtwardti</i>	(Enderlein, 1912)	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Protomedetera</i>	<i>singaporenensis</i>	Grootaert & Tang in Tang et al., 2018	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Pseudohercostomus</i>	<i>singaporenensis</i>	Grootaert & Van de Velde, 2021	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Scotiomyia</i>	<i>singaporenensis</i>	Evenhuis & Grootaert, 2002	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Tachytrechus</i>	<i>tessellatus</i>	Macquart, 1842	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Teuchophorus</i>	<i>antennatus</i>	Grootaert, 2006	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Teuchophorus</i>	<i>krabiensis</i>	Meuffels & Grootaert, 2004	Long-legged fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Dolichopodidae	<i>Teuchophorus</i>	<i>limosus</i>	Grootaert, 2006	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Teuchophorus</i>	<i>simplicissimus</i>	Meuffels & Grootaert, 2004	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Teuchophorus</i>	<i>tiomanensis</i>	Grootaert, 2006	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Thinolestris</i>	<i>nigra</i>	Grootaert & Evenhuis, 2006	Long-legged fly	Not Listed	NE
Dolichopodidae	<i>Thinophilus</i>	<i>apicatus</i>	Grootaert, 2018	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>asiobates</i>	Evenhuis & Grootaert, 2002	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>chaetulosus</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>clavatus</i>	Zhu, Yang & Masunaga, 2006	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>comatus</i>	Grootaert, 2018	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>evenhuisi</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>lenachanae</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>longicilia</i>	Evenhuis & Grootaert, 2002	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>meieri</i>	Grootaert & Evenhuis, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>thinophilus</i>	<i>minor</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>murphyi</i>	Evenhuis & Grootaert, 2002	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>nigrilineatus</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>nitens</i>	Grootaert & Meuffels, 2001	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>pallitarsis</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>parmatus</i>	Grootaert & Meuffels, 2001	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>puniamoorthyae</i>	Grootaert, 2018	Long-legged fly	Not Listed	VU
Dolichopodidae	<i>Thinophilus</i>	<i>setiventris</i>	Grootaert & Meuffels, 2001	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>simplex</i>	Grootaert, 2018	Long-legged fly	Not Listed	NT
Dolichopodidae	<i>Thinophilus</i>	<i>superbus</i>	Grootaert, 2018	Superb long-legged fly	Not Listed	EN
Dolichopodidae	<i>Thinophilus</i>	<i>yeoi</i>	Grootaert, 2018	Long-legged fly	Not Listed	NT
Empididae	<i>Empis</i>	<i>producta</i>	Loew, 1857	Dagger fly	Not Listed	NE
Empididae	<i>Empis</i>	<i>vitisalutatoris</i>	Grooteart & Yang, 2009	Dagger fly	Not Listed	NE
Empididae	<i>Empis</i> (<i>Coptophlebia</i>)	<i>producta</i>	Daugeron & Grootaert, 2005	Dagger fly	Not Listed	NE
Ephydriidae	<i>Allotrichoma</i>	<i>alium</i>	Cresson, 1929	Shore fly	Not Listed	NE
Ephydriidae	<i>Donaceus</i>	<i>nigronotatus</i>	Cresson, 1943	Shore fly	Not Listed	NE
Ephydriidae	<i>Glenanthe</i>	<i>ismayi</i>	Mathis, 1992	Shore fly	Not Listed	NE
Ephydriidae	<i>Hecamedoides</i>	<i>setosus</i>	(Meijere, 1916)	Shore fly	Not Listed	NE
Ephydriidae	<i>Limnellia</i>	<i>maculipennis</i>	Malloch, 1925	Shore fly	Not Listed	NE
Ephydriidae	<i>Orasiopa</i>	<i>dora</i>	Zatwarnicki, 2002	Shore fly	Not Listed	NE
Ephydriidae	<i>Paralimna</i>	<i>quadrifascia</i>	(Walker, 1860)	Shore fly	Not Listed	NE
Ephydriidae	<i>Paralimna</i> (<i>Phaiosterna</i>)	<i>lineata</i>	Meijere, 1908	Shore fly	Not Listed	NE
Ephydriidae	<i>Placopsidella</i>	<i>cynocephala</i>	Kertesz, 1901	Shore fly	Not Listed	NE
Ephydriidae	<i>Trypetomima</i>	<i>formosina</i>	(Becker, 1924)	Shore fly	Not Listed	NE
Ephydriidae	<i>Zeros</i>	<i>fractivirgatus</i>	(Lamb, 1912)	Shore fly	Not Listed	NE
Hippoboscidae	<i>Icosta</i> (<i>Ornithoponus</i>)	<i>sensilis</i>	Maa, 1969	Louse fly	Not Listed	NE
Hippoboscidae	<i>Ornithoica</i>	<i>momiyamai</i>	Kishida, 1932	Louse fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Hippoboscidae	<i>Ornithophila</i>	<i>metallica</i>	Schiner, 1864	Louse fly	Not Listed	NE
Hippoboscidae	<i>Pseudolynchia</i>	<i>canariensis</i>	(Macquart, 1839)	Louse fly	Not Listed	NE
Hybotidae	<i>Chersodromia</i>	<i>bulohensis</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	VU
Hybotidae	<i>Chersodromia</i>	<i>nigripennis</i>	Shamshev & Grootaert, 2005	Dance fly	Not Listed	NE
Hybotidae	<i>Chersodromia</i>	<i>singaporenensis</i>	Shamshev & Grootaert, 2005	Dance fly	Not Listed	NE
Hybotidae	<i>Drapetis</i>	<i>laut</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>albicornis</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>asexa</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NT
Hybotidae	<i>Elaphropeza</i>	<i>asiophila</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>bakau</i>	Grootaert & Shamshev, 2015	Bakau dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>biuncinata</i>	(Melander, 1928)	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>chanae</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>chanoides</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>furca</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>gohae</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>kranjiensis</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>lineola</i>	de Meijere, 1911	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>lowioides</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	EN
Hybotidae	<i>Elaphropeza</i>	<i>melanurooides</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	NT
Hybotidae	<i>Elaphropeza</i>	<i>monospina</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>murphyi</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>ngi</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>obscura</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>pallida</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Elaphropeza</i>	<i>semakau</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>shufenae</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>singulata</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	EN
Hybotidae	<i>Elaphropeza</i>	<i>sivasothii</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Hybotidae	<i>Elaphropeza</i>	<i>spicata</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>temasek</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Elaphropeza</i>	<i>ubinensis</i>	Shamshev & Grootaert, 2007	Dance fly	Not Listed	NE
Hybotidae	<i>Platypalpus</i>	<i>singaporenensis</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	VU
Hybotidae	<i>Stilpon</i>	<i>nigripennis</i>	Grootaert & Shamshev, 2012	Dance fly	Not Listed	NE
Hybotidae	<i>Stilpon</i>	<i>ubinensis</i>	Grootaert & Shamshev, 2015	Dance fly	Not Listed	VU
Hybotidae	<i>Syndyas</i>	<i>singaporenensis</i>	Grootaert & Yang, 2009	Dance fly	Not Listed	NE
Keroplatidae	<i>Chiasmoneura</i>	<i>anthracina</i>	Meijere, 1913	Fungus gnat	Not Listed	NE
Keroplatidae	<i>Xenoplatyura</i>	<i>beaveri</i>	Matile, 1979	Nepenthes predatory fungus gnat	Not Listed	VU
Lauxaniidae	<i>Phobeticomyia</i>	<i>lunifera</i>	(Meijere, 1910)	Leaf-litter fly	Not Listed	VU
Lauxaniidae	<i>Phobeticomyia</i>	<i>preapicalis</i>	Malloch, 1929	Leaf-litter fly	Not Listed	VU
Lauxaniidae	<i>Homoneura</i>	<i>singaporica</i>	Shi, Wang & Yang, 2011	Leaf-litter fly	Not Listed	NT
Micropezidae	<i>Mimegralla</i>	<i>confinis</i>	(Walker, 1856)	Stilt-legged fly	Not Listed	DD
Neriidae	<i>Telostylinus</i>	<i>lineolatus</i>	(Wiedemann, 1830)	Banana-stalk fly	Not Listed	NE
Phoridae	<i>Abaristophora</i>	<i>hirticornis</i>	Lengyel & Papp, 2012	Scuttle fly	Not Listed	NE
Phoridae	<i>Endonepenthia</i>	<i>schuitemakeri</i>	Schmitz, 1932	Scuttle fly	Not Listed	NE
Platystomatidae	<i>Pterogenia</i>	<i>glabra</i>	(Walker, 1856)	Signal fly	Not Listed	DD
Platystomatidae	<i>Pterogenia</i>	<i>guttata</i>	(Walker, 1856)	Signal fly	Not Listed	DD
Platystomatidae	<i>Pterogenia</i>	<i>vittata</i>	(Walker, 1856)	Signal fly	Not Listed	DD
Platystomatidae	<i>Pterogenia</i>	<i>zonata</i>	(Walker, 1856)	Signal fly	Not Listed	DD
Platystomatidae	<i>Xarnuta</i>	<i>leucotela</i>	Walker, 1856	Peacock fly	Not Listed	DD
Sarcophagidae	<i>Sarcophaga</i>	<i>martellata</i>	Senior-White, 1924	Flesh fly	Not Listed	NE
Sarcophagidae	<i>Sarcophaga</i>	<i>princeps</i>	Wiedemann, 1830	Flesh fly	Not Listed	NE
Sarcophagidae	<i>Senotainia</i>	<i>navigatrix</i>	Meijere, 1910	Flesh fly	Not Listed	NE
Sciomyzidae	<i>Sepedon</i>	<i>plumbella</i>	Wiedemann, 1830	Snail-killing fly	Not Listed	NT
Sciomyzidae	<i>Sepedon</i>	<i>senex</i>	Wiedemann, 1830	Snail-killing fly	Not Listed	VU
Sepsidae	<i>Allosepsis</i>	<i>testacea</i>	(Walker 1860)	Sepsid fly	Not Listed	NEx
Sepsidae	<i>Meroplus</i>	<i>sauteri</i>	(de Meijere 1913)	Sepsid fly	Not Listed	VU
Sepsidae	<i>Sepsis</i> (<i>Australosepsis</i>)	<i>frontalis</i>	Walker 1860	Sepsid fly	Not Listed	NEx
Sepsidae	<i>Sepsis</i>	<i>coprophila</i>	de Meijere, 1906	Sepsid fly	Not Listed	NEx
Sepsidae	<i>Sepsis</i>	<i>silvicola</i>	Iwasa, 2011	Sepsid fly	Not Listed	VU
Stratiomyidae	<i>Cyphomyia</i>	<i>flaviceps</i>	(Walker, 1856)	Soldier fly	Not Listed	NEx
Stratiomyidae	<i>Hermetia</i>	<i>bicolor</i>	(Walker, 1856)	Soldier fly	Not Listed	NE
Stratiomyidae	<i>Hermetia</i>	<i>illucens</i>	(Linnaeus, 1758)	Soldier fly	Not Listed	NE
Stratiomyidae	<i>Microchrysa</i>	<i>flaviventris</i>	(Wiedemann, 1824)	Soldier fly	Not Listed	NE
Stratiomyidae	<i>Pedinocerops</i>	<i>radians</i>	(Walker, 1857)	Soldier fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Stratiomyidae	<i>Ptecticus</i>	<i>srilankai</i>	Rozkošný & Hauser, 2001	Soldier fly	Not Listed	NE
Stratiomyidae	<i>Tinda</i>	<i>indica</i>	(Walker, 1851)	Soldier fly	Not Listed	NE
Syrphidae	<i>Eosmallota</i>	<i>singularis</i>	(Walker, 1857)	Singular flower fly	Not Listed	VU
Syrphidae	<i>Furcantenna</i>	<i>malayana</i>	Reemer, 2020	Hover fly	Not Listed	DD
Syrphidae	<i>Ischiodon</i>	<i>scutellaris</i>	(Fabricius, 1805)	Hover fly	Not Listed	NE
Syrphidae	<i>Milesia</i>	<i>vespoides</i>	Walker, 1857	Hornet-mimicking hover fly	Not Listed	VU
Syrphidae	<i>Monoceromyia</i>	<i>javana</i>	(Wiedemann, 1824)	Hover fly	Not Listed	NT
Syrphidae	<i>Spheginobaccha</i>	<i>duplex</i>	(Walker, 1857)	Hover fly	Not Listed	DD
Syrphidae	<i>Volucella</i>	<i>trifasciata</i>	Wiedemann, 1830	Hover fly	Not Listed	NE
Tabanidae	<i>Tabanus</i>	<i>tenens</i>	Walker, 1850	Horse fly	Not Listed	NE
Tachinidae	<i>Austrophorocera</i>	<i>grandis</i>	(Macquart, 1851)	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Blepharella</i>	<i>lateralis</i>	Macquart, 1851	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Cavillatrix</i>	<i>equatralis</i>	Shima, 1996	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Ceromya</i>	<i>rotundicornis</i>	(Malloch, 1930)	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Senometopia</i>	<i>muscooides</i>	(Walker, 1856)	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Sumpigaster</i>	<i>equatorialis</i>	(Townsend, 1926)	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Sumpigaster</i>	<i>sumatrensis</i>	Townsend, 1926	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Thecocarcelia</i>	<i>parnarae</i>	Chao, 1976	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Trigonospila</i>	<i>transvittata</i>	(Pandellé, 1896)	Parasitoid fly	Not Listed	NE
Tachinidae	<i>Zambesa</i>	<i>ocypterooides</i>	Walker, 1856	Parasitoid fly	Not Listed	NE
Tephritidae	<i>Acanthonevra</i>	<i>vaga</i>	(Wiedemann, 1830)	Peacock fly	Not Listed	NE
Tephritidae	<i>Adrama</i>	<i>determinata</i>	(Walker, 1856)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>albistrigata</i>	(Meijere, 1911)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>carambolae</i>	Drew & Hancock, 1994	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>caudata</i>	(Fabricius, 1805)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>curcurbitae</i>	(Coquillett, 1899)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>dorsalis</i>	(Hendel, 1912)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>latifrons</i>	(Hendel, 1915)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>limbifera</i>	(Bezzi, 1919)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>nigrotibialis</i>	(Perkins, 1938)	Peacock fly	Not Listed	NE
Tephritidae	<i>Bactrocera</i>	<i>rubigina</i>	(Wang & Zhao, 1989)	Peacock fly	Not Listed	NE
Tephritidae	<i>Carpophthorella</i>	<i>nigrifascia</i>	(Walker, 1860)	Peacock fly	Not Listed	NE
Tephritidae	<i>Diarrhegma</i>	<i>paritii</i>	(Doleschall, 1856)	Peacock fly	Not Listed	NE
Tephritidae	<i>Dioxyna</i>	<i>sororcula</i>	(Wiedemann, 1830)	Peacock fly	Not Listed	NE
Tephritidae	<i>Euphranta</i>	<i>maculifemur</i>	(Meijere, 1924)	Peacock fly	Not Listed	NE
Tephritidae	<i>Euphranta</i>	<i>notabilis</i>	(Wulp, 1880)	Peacock fly	Not Listed	NE
Tephritidae	<i>Euphranta</i>	<i>signatifacies</i>	Hardy, 1981	Peacock fly	Not Listed	NE
Tephritidae	<i>Hardyadrama</i>	<i>excoecariae</i>	Lee, 1991	Peacock fly	Not Listed	NE
Tephritidae	<i>Hardyadrama</i>	<i>magister</i>	(Lee, 1991)	Peacock fly	Not Listed	NE
Tephritidae	<i>Ichneumonosoma</i>	<i>imitans</i>	(Meijere, 1911)	Peacock fly	Not Listed	NE
Tephritidae	<i>Philophylla</i>	<i>fossata</i>	(Fabricius, 1805)	Peacock fly	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Tephritidae	<i>Philophylla</i>	<i>superflucta</i>	(Enderlein, 1911)	Peacock fly	Not Listed	NE
Tephritidae	<i>Platensina</i>	<i>amplipennis</i>	(Walker, 1860)	Peacock fly	Not Listed	NE
Tephritidae	<i>Platensina</i>	<i>tetrica</i>	Hering, 1939	Peacock fly	Not Listed	NE
Tephritidae	<i>Platensina</i>	<i>zodiacalis</i>	(Bezzi, 1913)	Peacock fly	Not Listed	NE
Tephritidae	<i>Rhabdochaeta</i>	<i>asteria</i>	Hendel, 1915	Peacock fly	Not Listed	NE
Tephritidae	<i>Rioxa</i>	<i>lanceolata</i>	Walker, 1856	Peacock fly	Not Listed	NEx
Tephritidae	<i>Rioxa</i>	<i>sexmaculata</i>	(Wulp, 1880)	Peacock fly	Not Listed	VU
Tephritidae	<i>Rioxoptilona</i>	<i>dunlopi</i>	(Wulp, 1880)	Peacock fly	Not Listed	NE
Tephritidae	<i>Scedella</i>	<i>formosella</i>	(Hendel, 1915)	Peacock fly	Not Listed	NE
Tephritidae	<i>Sophira</i>	<i>venusta</i>	Walker, 1856	Peacock fly	Not Listed	DD
Tephritidae	<i>Spathulina</i>	<i>acroleuca</i>	(Schiner, 1868)	Peacock fly	Not Listed	NE
Tephritidae	<i>Sphaeniscus</i>	<i>atilius</i>	(Walker, 1849)	Peacock fly	Not Listed	NE
Tephritidae	<i>Sphaeniscus</i>	<i>quadrincisus</i>	(Wiedemann, 1824)	Peacock fly	Not Listed	NE
Tephritidae	<i>Sphenella</i>	<i>sinensis</i>	Schiner, 1868	Peacock fly	Not Listed	NE
Tephritidae	<i>Themara</i>	<i>ampla</i>	Walker, 1857	Hammerhead fly	Not Listed	NEx
Tephritidae	<i>Themara</i>	<i>maculipennis</i>	(Westwood, 1847)	Hammerhead fly	VU	VU
Tephritidae	<i>Tritaeniopteron</i>	<i>tetraspilotum</i>	Hardy, 1973	Peacock fly	Not Listed	NE
Tipulidae	<i>Hexatoma</i>	<i>pleciooides</i>	(Walker, 1857)	Crane fly	Not Listed	DD

Checklist of Freshwater Aquatic Bug Species with their Category of Threat Status for Singapore

Prepared by Hwang Wei Song, Tran Anh Duc

Family	Genus	Species	Authority	RDB2	RDB3
Gerridae	<i>Amemboa</i>	<i>brevifasciata</i>	Miyamoto, 1967	Not Listed	LC
Gerridae	<i>Amemboa</i>	<i>cristata</i>	Polhemus & Andersen, 1984	Not Listed	DD
Gerridae	<i>Amemboa</i>	<i>riparia</i>	Polhemus & Andersen, 1984	Not Listed	LC
Gerridae	<i>Aquarius</i>	<i>adelaidis</i>	Dohrn, 1860	Not Listed	LC
Gerridae	<i>Cylindrostethus</i>	<i>malayensis</i>	Polhemus, 1994	Not Listed	NEx
Gerridae	<i>Esakia</i>	<i>fernandoi</i>	Cheng, 1966	Not Listed	NEx
Gerridae	<i>Lathriobates</i>	<i>rufus</i>	Polhemus & Polhemus, 1995	Not Listed	NT
Gerridae	<i>Limnogonus</i>	<i>fossarum fossarum</i>	Fabricius, 1775	Not Listed	LC
Gerridae	<i>Limnogonus</i>	<i>hungerfordi</i>	Andersen, 1975	Not Listed	LC
Gerridae	<i>Limnogonus</i>	<i>nitidus</i>	Mayr, 1865	Not Listed	LC
Gerridae	<i>Limnometra</i>	<i>ciliata</i>	Mayr, 1865	Not Listed	LC
Gerridae	<i>Limnometra</i>	<i>insularis</i>	Hungerford & Matsuda, 1958	Not Listed	LC
Gerridae	<i>Limnometra</i>	<i>matsudai</i>	Miyamoto, 1967	Not Listed	DD
Gerridae	<i>Limnometra</i>	<i>octopunctatus</i>	Hungerford, 1955	Not Listed	LC
Gerridae	<i>Limnometra</i>	<i>spinosa</i>	Zettel, 2002	Not Listed	DD
Gerridae	<i>Metrocoris</i>	<i>tenuicornis</i>	Esaki, 1926	Not Listed	LC
Gerridae	<i>Neogerris</i>	<i>assimilis</i>	Andersen, 1975	Not Listed	LC
Gerridae	<i>Ptilomera</i>	<i>tigrina</i>	Uhler, 1860	Not Listed	LC
Gerridae	<i>Rhagodotarsus</i>	<i>kraepelini</i>	Breddin, 1905	Not Listed	LC
Gerridae	<i>Rheumatogonus</i>	<i>intermedius</i>	Hungerford, 1933	Not Listed	LC
Gerridae	<i>Tenagogonus</i>	<i>maai</i>	Hungerford & Matsuda, 1962	Not Listed	LC
Gerridae	<i>Ventidius</i>	<i>distanti</i>	Paiva, 1918	Not Listed	LC
Gerridae	<i>Ventidius</i>	<i>harrisoni</i>	Cheng, 1965	Not Listed	LC
Gerridae	<i>Ventidius</i>	<i>malayensis</i>	Hungerford & Matsuda, 1960	Not Listed	VU
Hebridae	<i>Hebrus</i>	<i>mangrovensis</i>	Polhemus & Polhemus, 1989	Not Listed	VU
Hebridae	<i>Hebrus</i>	<i>nereis</i>	Polhemus & Polhemus, 1989	Not Listed	NT
Hebridae	<i>Hebrus</i>	<i>nipponicus</i>	Horváth, 1929	Not Listed	LC
Hebridae	<i>Hebrus</i>	<i>ullrichi</i>	Zettel, 2004	Not Listed	VU
Hydrometridae	<i>Hydrometra</i>	<i>brevitarsus</i>	Zettel & Yang, 2004	Not Listed	VU
Hydrometridae	<i>Hydrometra</i>	<i>carinata</i>	Polhemus & Polhemus, 1995	Not Listed	VU
Hydrometridae	<i>Hydrometra</i>	<i>chaweewanae</i>	Sites & Polhemus, 2003	Not Listed	VU
Hydrometridae	<i>Hydrometra</i>	<i>longicapitis</i>	Torre Bueno, 1927	Not Listed	LC
Hydrometridae	<i>Hydrometra</i>	<i>maidli</i>	Hungerford & Evans, 1934	Not Listed	LC
Hydrometridae	<i>Hydrometra</i>	<i>okinawana</i>	Drake, 1951	Not Listed	VU
Hydrometridae	<i>Hydrometra</i>	<i>orientalis</i>	Lundblad, 1933	Not Listed	LC
Mesoveliidae	<i>Mesovelia</i>	<i>horvathi</i>	Lundblad, 1933	Not Listed	LC
Mesoveliidae	<i>Mesovelia</i>	<i>vittigera</i>	Horváth, 1895	Not Listed	LC
Mesoveliidae	<i>Nereivelia</i>	<i>murphyi</i>	Polhemus & Polhemus, 1989	Not Listed	NT
Mesoveliidae	<i>Nereivelia</i>	<i>polhemorum</i>	Yang & Murphy, 2011	Not Listed	NT
Veliidae	<i>Microvelia</i>	<i>albolineolata</i>	Torre Bueno, 1927	Not Listed	VU
Veliidae	<i>Microvelia</i>	<i>cameron</i>	Andersen, Yang & Zettel, 2002	Not Listed	LC
Veliidae	<i>Microvelia</i>	<i>douglasi</i>	Scott, 1874	Not Listed	LC

Family	Genus	Species	Authority	RDB2	RDB3
Veliidae	<i>Microvelia</i>	<i>genitalis</i>	Lundblad, 1933	Not Listed	NT
Veliidae	<i>Microvelia</i>	<i>leveillei</i>	Lethierry, 1877	Not Listed	LC
Veliidae	<i>Microvelia</i>	<i>minutissima</i>	Zettel & Tran, 2009	Not Listed	LC
Veliidae	<i>Neoalardus</i>	<i>typicus</i>	Distant, 1903	Not Listed	NT
Veliidae	<i>Pseudovelia</i>	<i>feuerborni</i>	Lundblad, 1933	Not Listed	DD
Veliidae	<i>Pseudovelia</i>	<i>hypodonta</i>	Lundblad, 1933	Not Listed	LC
Veliidae	<i>Rhagovelia</i>	<i>rudischuhii</i>	Zettel, 1993	Not Listed	LC
Veliidae	<i>Rhagovelia</i>	<i>singaporensis</i>	Yang & Polhemus, 1994	Not Listed	LC
Veliidae	<i>Rhagovelia</i>	<i>sondaica</i>	Polhemus & Polhemus, 1988	Not Listed	DD
Veliidae	<i>Rhagovelia</i>	<i>sumatrensis</i>	Lundblad, 1933	Not Listed	LC
Saldidae	<i>Micracanthia</i>	<i>ornatula</i>	(Reuter, 1881)	Not Listed	VU
Saldidae	<i>Saldula</i>	<i>niveolimbata</i>	(Reuter, 1900)	Not Listed	NT
Belostomatidae	<i>Diplonychus</i>	<i>rusticus</i>	(Fabricius, 1781)	Not Listed	LC
Corixidae	<i>Agraptocorixa</i>	<i>hyalinipennis</i>	(Fabricius, 1803)	Not Listed	DD
Gelastocoridae	<i>Nerthra</i>	<i>macrothorax</i>	(Montrouzier, 1855)	Not Listed	NT
Helotrehphidae	<i>Tiphotrephes</i>	<i>indicus</i>	(Distant, 1910)	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>decorata</i>	Lundblad, 1933	Not Listed	DD
Micronectidae	<i>Micronecta</i>	<i>dentifera</i>	Nieser, 2002	Not Listed	NT
Micronectidae	<i>Micronecta</i>	<i>haliploides</i>	Horváth, 1904	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>johorensis</i>	Fernando, 1964	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>ludibunda</i>	Breddin, 1905	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>malayana</i>	Leong, 1966	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>polhemusi</i>	Nieser, 2000	Not Listed	DD
Micronectidae	<i>Micronecta</i>	<i>quadristrigata</i>	Breddin, 1905	Not Listed	LC
Micronectidae	<i>Micronecta</i>	<i>scutellaris</i>	Stål, 1858	Not Listed	LC
Micronectidae	<i>Synaptonecta</i>	<i>issa</i>	(Distant, 1910)	Not Listed	LC
Naucoridae	<i>Ctenipocoris</i>	<i>asiaticus</i>	Montandon, 1897	Not Listed	LC
Naucoridae	<i>Heleocoris</i>	<i>montandoni</i>	Lundblad, 1933	Not Listed	LC
Naucoridae	<i>Naucoris</i>	<i>minutus</i>	Polhemus & Polhemus, 2013	Not Listed	NT
Naucoridae	<i>Naucoris</i>	<i>scutellaris</i>	Stål, 1860	Not Listed	LC
Nepidae	<i>Cercotmetus</i>	<i>asiaticus</i>	Amyot & Serville, 1843	Not Listed	LC
Nepidae	<i>Cercotmetus</i>	<i>brevipes</i>	Montandon, 1909	Not Listed	LC
Nepidae	<i>Laccotrephes</i>	<i>pfeifferiae</i>	(Ferrari, 1888)	Not Listed	NT
Nepidae	<i>Laccotrephes</i>	<i>simulatus</i>	Montandon, 1913	Not Listed	LC
Nepidae	<i>Ranatra</i>	<i>longipes longipes</i>	Stål, 1861	Not Listed	LC
Nepidae	<i>Ranatra</i>	<i>parmata</i>	Mayr, 1865	Not Listed	LC
Nepidae	<i>Ranatra</i>	<i>rafflesi</i>	Tran & D. Polhemus, 2012	Not Listed	LC
Nepidae	<i>Ranatra</i>	<i>varipes</i>	Stål, 1861	Not Listed	LC
Notonectidae	<i>Anisops</i>	<i>barbatus</i>	Brooks, 1951	Not Listed	DD
Notonectidae	<i>Anisops</i>	<i>bouvieri</i>	Kirkaldi, 1904	Not Listed	LC
Notonectidae	<i>Anisops</i>	<i>breddini</i>	Kirkaldy, 1901	Not Listed	LC
Notonectidae	<i>Anisops</i>	<i>exiguus</i>	Horváth, 1919	Not Listed	DD
Notonectidae	<i>Anisops</i>	<i>lansburyi</i>	Leong, 1963	Not Listed	DD
Notonectidae	<i>Anisops</i>	<i>nasutus</i>	Fieber, 1851	Not Listed	DD
Notonectidae	<i>Anisops</i>	<i>niveus</i>	(Fabricius, 1775)	Not Listed	DD

Family	Genus	Species	Authority	RDB2	RDB3
Notonectidae	<i>Anisops</i>	<i>occipitalis</i>	Breddin, 1905	Not Listed	LC
Notonectidae	<i>Anisops</i>	<i>tahitiensis</i>	Lundblad, 1934	Not Listed	LC
Notonectidae	<i>Aphelonecta</i>	<i>gavini</i>	Lansbury, 1966	Not Listed	DD
Notonectidae	<i>Enithares</i>	<i>malayensis</i>	Brooks, 1948	Not Listed	LC
Notonectidae	<i>Enithares</i>	<i>mandalayensis</i>	Distant, 1910	Not Listed	LC
Notonectidae	<i>Nychia</i>	<i>sappho</i>	Kirkaldy, 1901	Not Listed	LC
Ochteridae	<i>Ochterus</i>	<i>marginatus</i>	(Latreille, 1804)	Not Listed	NT
Ochteridae	<i>Ochterus</i>	<i>pseudomarginatus</i>	Polhemus & Polhemus, 2012	Not Listed	VU
Ochteridae	<i>Ochterus</i>	<i>singaporensis</i>	Polhemus & Polhemus, 2012	Not Listed	NT
Pleidae	<i>Paraplea</i>	<i>frontalis</i>	Fieber, 1844	Not Listed	LC
Pleidae	<i>Paraplea</i>	<i>liturata</i>	Fieber, 1844	Not Listed	DD

Checklist of Assassin Bug Species with their Category of Threat Status for Singapore
 Prepared by Hwang Wei Song

Family	Genus	Species	Authority	RDB2	RDB3
Reduviidae	<i>Acanthaspis</i>	<i>quadriannulata</i>	Stål, 1870	Not Listed	VU
Reduviidae	<i>Acanthaspis</i>	<i>inermis</i>	Stål, 1870	Not Listed	DD
Reduviidae	<i>Acanthaspis</i>	<i>signifera</i>	Stål, 1863	Not Listed	VU
Reduviidae	<i>Ademula</i>	<i>reticulata</i>	McAtee & Malloch, 1926	Not Listed	DD
Reduviidae	<i>Agyrius</i>	<i>podagricus</i>	Stål, 1863	Not Listed	DD
Reduviidae	<i>Aulacogenia</i>	<i>patalungae</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Aulacogenia</i>	<i>vicina</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Bagauda</i>	<i>similis</i>	Wygodzinsky, 1966	Not Listed	DD
Reduviidae	<i>Biasticus</i>	<i>eburneus</i>	Miller, 1941	Not Listed	DD
Reduviidae	<i>Canthesancus</i>	<i>gulo</i>	Stål, 1863	Not Listed	VU
Reduviidae	<i>Centrocnemis</i>	<i>malayana</i>	Miller, 1956	Not Listed	DD
Reduviidae	<i>Cosmolestes</i>	<i>picticeps</i>	(Stål, 1859)	Not Listed	LC
Reduviidae	<i>Ectomocoris</i>	<i>atrox</i>	(Stål, 1855)	Not Listed	VU
Reduviidae	<i>Ectomocoris</i>	<i>elegans</i>	(Fabricius, 1803)	Not Listed	DD
Reduviidae	<i>Emesopsis</i>	<i>gaius</i>	McAtee & Malloch, 1926	Not Listed	DD
Reduviidae	<i>Emesopsis</i>	<i>obsoletus</i>	McAtee & Malloch, 1926	Not Listed	DD
Reduviidae	<i>Empicoris</i>	<i>tesselatoides</i>	Wygodzinsky & Usinger, 1960	Not Listed	DD
Reduviidae	<i>Empyrocoris</i>	<i>pelia</i>	(Distant, 1904)	Not Listed	DD
Reduviidae	<i>Euagoras</i>	<i>plagiatus</i>	(Burmeister, 1834)	Not Listed	VU
Reduviidae	<i>Euagoras</i>	<i>sordidatus</i>	Stål, 1866	Not Listed	VU
Reduviidae	<i>Gardena</i>	<i>melinathrum</i>	Dohrn, 1859	Not Listed	VU
Reduviidae	<i>Gardena</i>	<i>muscicapa</i>	(Bergrøth, 1906)	Not Listed	VU
Reduviidae	<i>Haematoloecha</i>	<i>ridleyana</i>	Distant, 1902	Not Listed	DD
Reduviidae	<i>Holoptilus</i>	<i>leprosus</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Inara</i>	<i>alboguttata</i>	Stål, 1863	Not Listed	DD
Reduviidae	<i>Inara</i>	<i>flavopicta</i>	Stål, 1859	Not Listed	LC
Reduviidae	<i>Ischnobaenella</i>	<i>polymela</i>	(Kirkaldy, 1901)	Not Listed	DD
Reduviidae	<i>Lenaeus</i>	<i>pyrrhus</i>	Stål, 1859	Not Listed	DD
Reduviidae	<i>Lisarda</i>	<i>annularis</i>	(Walker, 1873)	Not Listed	VU
Reduviidae	<i>Lisarda</i>	<i>erecta</i>	Distant, 1904	Not Listed	EN
Reduviidae	<i>Lisarda</i>	<i>inornata</i>	(Walker, 1873)	Not Listed	VU
Reduviidae	<i>Lisarda</i>	<i>pallidispina</i>	Stål, 1874	Not Listed	VU
Reduviidae	<i>Lisarda</i>	<i>rhypara</i>	Stål, 1859	Not Listed	VU
Reduviidae	<i>Lisarda</i>	<i>singaporiensis</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Neostaccia</i>	<i>laticollis</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Oncoccephalus</i>	<i>cingalensis</i>	Walker, 1873	Not Listed	DD
Reduviidae	<i>Oncoccephalus</i>	<i>lineosus</i>	Distant, 1904	Not Listed	DD
Reduviidae	<i>Oncoccephalus</i>	<i>annulipes</i>	Stål, 1855	Not Listed	DD
Reduviidae	<i>Oncoccephalus</i>	<i>sarawakensis</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Phryxobotrys</i>	<i>ridicula</i>	Wygodzinsky, 1966	Not Listed	VU
Reduviidae	<i>Physoderes</i>	<i>curculionis</i>	China, 1935	Not Listed	VU
Reduviidae	<i>Ploaria</i>	<i>insolida</i>	(White, 1877)	Not Listed	DD

Family	Genus	Species	Authority	RDB2	RDB3
Reduviidae	<i>Ploiaria</i>	<i>maai</i>	Wygodzinsky, 1966	Not Listed	DD
Reduviidae	<i>Polididus</i>	<i>armatissimus</i>	Stål, 1859	Not Listed	DD
Reduviidae	<i>Polytoxus</i>	<i>fuscovittatus</i>	(Stål, 1859)	Not Listed	DD
Reduviidae	<i>Ptilocerus</i>	<i>subreticulatus</i>	Montandon, 1907	Not Listed	DD
Reduviidae	<i>Ptilocerus</i>	<i>unicolor</i>	Montandon, 1907	Not Listed	DD
Reduviidae	<i>Ptilocerus</i>	<i>venosus</i>	(Walker, 1873)	Not Listed	DD
Reduviidae	<i>Pygolampis</i>	<i>ridleyi</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Rhynocoris</i>	<i>niasensis</i>	Miller, 1941	Not Listed	VU
Reduviidae	<i>Sastrapada</i>	<i>singaporiensis</i>	Miller, 1940	Not Listed	DD
Reduviidae	<i>Scadra</i>	<i>costalis</i>	(Lethierry, 1888)	Not Listed	DD
Reduviidae	<i>Scadra</i>	<i>gemella</i>	Miller, 1953	Not Listed	DD
Reduviidae	<i>Schottus</i>	<i>luteicollis</i>	(Walker, 1873)	Not Listed	VU
Reduviidae	<i>Scipinia</i>	<i>horrida</i>	(Stål, 1843)	Not Listed	DD
Reduviidae	<i>Sycanus</i>	<i>collaris</i>	(Fabricius, 1781)	Not Listed	DD
Reduviidae	<i>Triatoma</i>	<i>rubrofasciata</i>	(De Geer, 1773)	Not Listed	DD
Reduviidae	<i>Tribelocephala</i>	<i>indica</i>	(Walker, 1873)	Not Listed	DD
Reduviidae	<i>Tridemula</i>	<i>pallida</i>	McAtee & Malloch, 1926	Not Listed	DD
Reduviidae	<i>Tridemula</i>	<i>plurima</i>	McAtee & Malloch, 1926	Not Listed	DD
Reduviidae	<i>Valentia</i>	<i>apetala</i>	(Vuillefroy, 1864)	Not Listed	VU
Reduviidae	<i>Velinus</i>	<i>nigrigenu</i>	(Amyot & Serville, 1843)	Not Listed	VU
Reduviidae	<i>Velitra</i>	<i>rubropicta</i>	(Amyot & Serville, 1843)	Not Listed	EN
Reduviidae	<i>Vesbius</i>	<i>purpureus</i>	(Thunberg, 1783)	Not Listed	DD

Checklist of Bee Species with their Category of Threat Status for Singapore

Prepared by John S. Ascher, Zestin W.W. Soh

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Colletidae	Hylaeinae	<i>Hylaeus (Gephyrohylaeus) sandacanensis</i>	Sandakan Masked Bee	Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Indialeus) sp. 1 cf. strenuus (Cameron)</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Indialeus) sp 2</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Nesoprosopis) penangensis</i>	Penang Masked Bee	Native	Not Listed	LC
Colletidae	Hylaeinae	<i>Hylaeus (Nesoprosopis) sp. 1 cf. transversalis Cockerell</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Nesoprosopis) sp. 2</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Nesoprosopis) sp. 3</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (Nesoprosopis) sp. 4</i>		Native	Not Listed	DD
Colletidae	Hylaeinae	<i>Hylaeus (new subgenus nr. Prosopisteron) sp. 1 aff. jacobsoni (Friese)</i>	Singapore Blue Masked Bee	Native	Not Listed	DD
Halictidae	Nomiinae	<i>Lipotriches (Austronomia) goniognatha</i>	Angle-jawed Austral-Nomia	Native	Not Listed	DD
Halictidae	Nomiinae	<i>Lipotriches (Austronomia) takauensis</i>	Takau Austral-Nomia	Native	Not Listed	NT
Halictidae	Nomiinae	<i>Lipotriches (Rhopalomesa) ceratina</i>	Red-waisted Grass-Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Lipotriches (Rhopalomesa) minutula</i>	Minute Grass-Nomia	Native	Not Listed	DD
Halictidae	Nomiinae	<i>Nomia (Acunomia) iridescens</i>	Iridescent Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Nomia (Acunomia) lusoria</i>	Mangrove Nomia	Native	Not Listed	VU
Halictidae	Nomiinae	<i>Nomia (Acunomia) sp. 1 aff. lusoria Cockerell</i>		Native	Not Listed	DD
Halictidae	Nomiinae	<i>Nomia (Acunomia) strigata</i>	Striped Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Nomia (Gnathonomia) thoracica</i>	Felt-topped Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Nomia (Hoplonomia) incerta</i>	Black-waisted Pronged-Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Nomia (Maculonomia) apicalis</i>	Black-tipped Forest-Nomia	Native	Not Listed	CR
Halictidae	Nomiinae	<i>Nomia (Maculonomia) elegans</i>	Elegant Forest-Nomia	Native	Not Listed	NEx
Halictidae	Nomiinae	<i>Nomia (Maculonomia) fuscipennis</i>	Dusky-winged Forest-Nomia	Native	Not Listed	NT
Halictidae	Nomiinae	<i>Nomia (Maculonomia) penangensis</i>	Penang Forest-Nomia	Native	Not Listed	NEx
Halictidae	Nomiinae	<i>Nomia (Maculonomia) sp. 1 aff. apicalis Smith</i>	Spine-thighed Forest-Nomia	Native	Not Listed	LC
Halictidae	Nomiinae	<i>Pseudapis (Pseudapis) siamensis</i>	Siamese Epaulette-Nomia	Native	Not Listed	LC
Halictidae	Halictinae	<i>Ceylalictus (Ceylalictus) communis</i>	Common Ceylalictus	Native	Not Listed	DD
Halictidae	Halictinae	<i>Ceylalictus (Ceylalictus) malayensis</i>	Malay Ceylalictus	Native	Not Listed	DD

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Halictidae	Halictinae	<i>Eupetersia (Nesoeupetersia) malayensis</i>	Malay Smooth-Blood Bee	Native	Not Listed	DD
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) albescens</i>	White Combed-Sweat Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) deliense</i>	Orange-legged Combed-Sweat Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) halictoides</i>	Beach Combed-Sweat Bee	Native	Not Listed	NT
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) semirussatum</i>	Singapore Combed-Sweat Bee	Native	Not Listed	CR
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) vagans</i>	Wandering Combed-Sweat Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) sp. 1 [vagans species group]</i>	Tan-haired Combed-Sweat Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) sp. 2</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Lasioglossum (Ctenonomia) sp. 3 [vagans species group]</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Lasioglossum (Hemihalictus) plasunicum</i>	Plasun's Sweat Bee	Native	Not Listed	DD
Halictidae	Halictinae	<i>Lasioglossum (Homalictus) adonidiae</i>	Palm Plume-vented Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Lasioglossum (Homalictus) sp. 1 aff. latitarse</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Lasioglossum (Homalictus) singapurellum</i>	Singapore Plume-vented Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Patellapis (Pachyhalictus) intricata</i>	Vachal's Reticulate-Furrow Bee	Native	Not Listed	CR
Halictidae	Halictinae	<i>Patellapis (Pachyhalictus) murbanus</i>	Sunda Reticulate-Furrow Bee	Native	Not Listed	LC
Halictidae	Halictinae	<i>Sphecodes duplex</i>	Singapore Blood Bee	Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 2</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 3 cf. redivivus</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 4</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 5 cf. javanicus</i>		Native	Not Listed	DD
		Friese				
Halictidae	Halictinae	<i>Sphecodes sp. 6</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 7 [nr. sp. 5]</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 8 [nr. sp. 5]</i>		Native	Not Listed	DD
Halictidae	Halictinae	<i>Sphecodes sp. 9 [red on thorax]</i>		Native	Not Listed	DD
Megachilidae	Lithurginae	<i>Lithurgus sp. 1</i>	Lesser Woodborer	Native	Not Listed	LC
Megachilidae	Lithurginae	<i>Lithurgus sp. 2 cf. collaris</i>	Greater Woodborer	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Anthidiellum (Pycanthidiellum) smithii smithii</i>	Smith's Rotund-Resin Bee	Native	Not Listed	VU
Megachilidae	Megachilinae	<i>Euaspis polynesia</i>	Asian Chilli-tail	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Euaspis n. sp. 1</i>		Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Heriades (Michenerella) othonis</i>	Indomalayan Armoured-Resin Bee	Native	Not Listed	LC

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Megachilidae	Megachilinae	<i>Coelioxys (Allococelioxys) angulatus</i>	Angulate Sharptail	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Coelioxys (Allococelioxys) sp. 2</i>		Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Coelioxys (Allococelioxys) sp. 3</i>		Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Coelioxys (Callosarissa) confusus</i>	Confusing Sharptail	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Coelioxys (Torridapis) n. sp.</i>		Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) borneana</i>	Bornean Leafcutter	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) conjuncta</i>	Dimorphic Leafcutter	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) laticeps</i>	Broad-headed Leafcutter	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) ramera</i>	Singapore Leafcutter	Native	Not Listed	VU
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) sp. 1 nr. borneana Cameron</i>	Bright-legged Leafcutter	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) sp. 2 [fusciventris species group]</i>	White-gloved Leafcutter	Native	Not Listed	VU
Megachilidae	Megachilinae	<i>Megachile (Aethomegachile) sp. 3 [nr borneana with dark hairs]</i>		Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Paracella) tricincta</i>	Golden-bellied Leafcutter	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Callomegachile) disjuncta</i>	Disjunct Resin Bee	Uncertain	Not Listed	NA
Megachilidae	Megachilinae	<i>Megachile (Callomegachile) fulvipennis</i>	Orange-winged Resin Bee	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Callomegachile) indonesica</i>	Indonesian Resin Bee	Native	Not Listed	VU
Megachilidae	Megachilinae	<i>Megachile (Callomegachile) umbripennis</i>	Shadow-winged Resin Bee	Uncertain	Not Listed	NA
Megachilidae	Megachilinae	<i>Megachile (Callomegachile) sp. 1 [biroi species group]</i>	Yellow-bellied Resin Bee	Native	Not Listed	NT
Megachilidae	Megachilinae	<i>Megachile (Callomegachile s.l.) ornata</i>	Ornate Resin Bee	Native	Not Listed	VU
Megachilidae	Megachilinae	<i>Megachile (Callomegachile s.l.) tuberculata</i>	Tuberculate Resin Bee	Native	Not Listed	NT
Megachilidae	Megachilinae	<i>Megachile (Carinula) stulta</i>	Fiery Resin Bee	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Carinula) butteli</i>	Buttel-Reepen's Resin Bee	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Chelostomoda) moera</i>	Orange-thighed Leafcutter	Native	Not Listed	DD
Megachilidae	Megachilinae	<i>Megachile (Creightonella) atrata</i>	Orange-winged Leafcutter	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Eutricharaea) subrixator</i>	Orange-bellied Leafcutter	Native	Not Listed	LC
Megachilidae	Megachilinae	<i>Megachile (Eutricharaea) sp. 1</i>	White-dusted Leafcutter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Xylocopa (Biluna) iridipennis</i>	Purple-winged Bamboo-Carpenter	Native	DD	DD

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Apidae	Xylocopinae	<i>Xylocopa (Cyaneoderes) caerulea</i>	Cerulean Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Xylocopa (Cyaneoderes) insularis</i>	Blue-sided Carpenter	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Xylocopa (Maiella) aestuans</i>	White-cheeked Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Xylocopa (Maiella) flavonigrescens</i>	Yellow-and-Black Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Xylocopa (Nyctomelitta) myops</i>	Sunda Night-Carpenter	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Xylocopa (Platynopoda) latipes</i>	Broad-handed Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Xylocopa (Zonohirsuta) dejeanii penangensis</i>	Collared Carpenter	Native	Not Listed	EN
Apidae	Xylocopinae	<i>Ceratina (Catoceratina) perforatrix pyramidalis</i>	Plume-vented Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Ceratinidia) accusator</i>	Short-nosed Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Ceratinidia) cognata</i>	Black-topped Small Carpenter	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Ceratina (Ceratinidia) collusor</i>	Companion Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Ceratinidia) lieftincki</i>	Lieftinck's Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Ceratinidia) nigrolateralis incerta</i>	Black-sided Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Lioceratina) ridleyi</i>	Ridley's Small Carpenter	Native	Not Listed	VU
Apidae	Xylocopinae	<i>Ceratina (Neoceratina) dentipes</i>	Tooth-legged Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Pithitis) smaragdula</i>	Emerald Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Pithitis) unimaculata palmerii</i>	One-spotted Small Carpenter	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Ceratina (Xanthoceratina) fuliginosa</i>	Dusky-winged Small Carpenter	Native	Not Listed	VU
Apidae	Xylocopinae	<i>Ceratina (Xanthoceratina) metaria</i>	Bounded Small Carpenter	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Braunsapis breviceps</i>	Short-headed Reed-Cuckoo	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Braunsapis clarihirta</i>	Clear-haired Reed Bee	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Braunsapis cupulifera</i>	Cup-legged Reed Bee	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Braunsapis hewitti</i>	Hewitt's Reed Bee	Native	Not Listed	LC
Apidae	Xylocopinae	<i>Braunsapis philippinensis</i>	Philippine Reed Bee	Native	Not Listed	DD
Apidae	Xylocopinae	<i>Braunsapis puangensis</i>	Puang Reed Bee	Native	Not Listed	LC
Apidae	Nomadinae	<i>Nomada adusta</i>	Singed Nomad Bee	Native	Not Listed	DD
Apidae	Nomadinae	<i>Nomada malayana</i>	Malay Nomad	Native	Not Listed	VU
Apidae	Nomadinae	<i>Nomada penangensis</i>	Penang Nomad	Native	Not Listed	CR
Apidae	Nomadinae	<i>Nomada polyodonta</i>	Many-toothed Nomad	Native	Not Listed	DD
Apidae	Nomadinae	<i>Nomada sandacana</i>	Sandakan Nomad	Native	Not Listed	CR

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Apidae	Apinae	<i>Amegilla (Glossamegilla) insularis</i>	Island Forest-Digger	Native	Not Listed	VU
Apidae	Apinae	<i>Amegilla (Zonamegilla) andrewsi</i>	Sunda Blue-banded Digger	Native	Not Listed	LC
Apidae	Apinae	<i>Amegilla (Zonamegilla) korotonensis</i>	Koroton Blue-banded Digger	Native	Not Listed	LC
Apidae	Apinae	<i>Amegilla (Zonamegilla) flammeozonata</i>	Flame-banded Digger Bee	Native	Not Listed	DD
Apidae	Apinae	<i>Thyreus abdominalis rostratus</i>	Beaked Cloak-and-Dagger Bee	Native	Not Listed	EN
Apidae	Apinae	<i>Thyreus lilacinus</i>	Black-notched Cloak-and-Dagger Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Thyreus himalayensis</i>	Himalayan Cloak-and-Dagger Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Thyreus novae-hollandiae signatus</i>	Indomalayan Cloak-and-Dagger Bee	Native	Not Listed	CR
Apidae	Apinae	<i>Apis (Apis) cerana javana</i>	Asian Honey Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Apis (Megapis) dorsata dorsata</i>	Giant Honey Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Apis (Micrapis) andreniformis</i>	Black Dwarf Honey Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Apis (Micrapis) florea</i>	Red Dwarf Honey Bee	Uncertain	Not Listed	NA
Apidae	Apinae	<i>Geniotrigona thoracica</i>	Long-chinned Stingless Bee	Native	Not Listed	CR
Apidae	Apinae	<i>Heterotrigona (Heterotrigona) itama</i>	Notch-toothed Stingless Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Heterotrigona (Sundatrigona) moorei</i>	Moore's Stingless Bee	Native	Not Listed	NEx
Apidae	Apinae	<i>Homotrigona (Homotrigona) fimbriata</i>	Bristle-faced Stingless Bee	Native	Not Listed	NEx
Apidae	Apinae	<i>Homotrigona (Lophotrigona) canifrons</i>	Woolly Stingless Bee	Native	Not Listed	NEx
Apidae	Apinae	<i>Homotrigona (Tetrigona) apicalis</i>	Milky-tipped Stingless Bee	Native	Not Listed	NT
Apidae	Apinae	<i>Lepidotrigona latipes</i>	Broad-legged Stingless Bee	Native	Not Listed	NEx
Apidae	Apinae	<i>Lepidotrigona terminata</i>	Gold-margined Stingless Bee	Native	Not Listed	VU
Apidae	Apinae	<i>Lisotrigona furva</i>	Dusky Tear Bee	Uncertain	Not Listed	NA
Apidae	Apinae	<i>Tetragonula (Tetragonilla) atripes</i>	Orange-and-black Stingless Bee	Native	Not Listed	NEx
Apidae	Apinae	<i>Tetragonula (Tetragonula) fuscobalteata</i>	Belted Stingless Bee	Native	Not Listed	DD
Apidae	Apinae	<i>Tetragonula (Tetragonula) geissleri</i>	Geissler's Stingless Bee	Native	Not Listed	NT
Apidae	Apinae	<i>Tetragonula (Tetragonula) valdezi</i>	Valdez's Stingless Bee	Native	Not Listed	LC
Apidae	Apinae	<i>Tetragonula (Tetragonula) pagdeni</i>	Pagden's Stingless Bee	Uncertain	Not Listed	NA
Apidae	Apinae	<i>Tetragonula (Tetragonula) testaceitarsis</i>	Testaceous-footed Stingless Bee	Uncertain	Not Listed	NA
Apidae	Apinae	<i>Tetragonula (Tetragonula) laeviceps</i>	Smooth-headed Stingless Bee	Native	Not Listed	NT

Checklist of Aculeate Wasp Species with their Category of Threat Status for Singapore

Prepared by John S. Ascher, John X.Q. Lee, Zestin W.W. Soh

This checklist provides comprehensive coverage of groups such as Vespinae and Sphecidae, but others such as Eumeninae, Scoliinae, and Crabronidae require further attention. Several taxa are treated as morphospecies and are potentially undescribed. Besides listing a few threatened taxa, we designate some wasps that are commonly recorded across land use types as Least Concern. Additional species assessments are planned for the future.

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Vespidae	Stenogastrinae	<i>Eustenogaster gibbosa</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Eustenogaster cf. latebricola</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Eustenogaster hauxwellii</i>		Native	DD	NE
Vespidae	Stenogastrinae	<i>Eustenogaster micans</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Liostenogaster flavolineata</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Liostenogaster nitidipennis</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Liostenogaster varipicta</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Metischnogaster drewseni</i>	Drewsen's Hover Wasp	Native	Not Listed	DD
Vespidae	Stenogastrinae	<i>Parischnogaster mellyi</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Parischnogaster nigricans</i>		Native	Not Listed	NE
Vespidae	Stenogastrinae	<i>Parischnogaster unicuspata</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Polistes sagittarius</i>	Banded Paper Wasp	Native	Not Listed	LC
Vespidae	Polistinae	<i>Polistes stigma</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Polistes tenebris</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Polistes tenebricosus</i>	Dark-winged Paper Wasp	Native	Not Listed	VU
Vespidae	Polistinae	<i>Polistes meadeanus</i>	Meade-Waldo's Paper Wasp	Native	Not Listed	VU
Vespidae	Polistinae	<i>Ropalidia erythrozila</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia flavopicta</i>	Yellow-painted Paper Wasp	Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia marginata</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia stigma</i>	Stigma Small Paper Wasp	Native	Not Listed	LC
Vespidae	Polistinae	<i>Ropalidia sumatrae</i>	Sumatran Small Paper Wasp	Native	Not Listed	LC
Vespidae	Polistinae	<i>Ropalidia rufoplagiata</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia fasciata</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia timida</i>		Native	Not Listed	NE
Vespidae	Polistinae	<i>Ropalidia jacobsoni</i>	Jacobson's Small Paper Wasp	Native	Not Listed	LC
Vespidae	Polistinae	<i>Polybioides raphigastra</i>	Needle-tailed Paper Wasp	Native	Not Listed	DD
Vespidae	Polistinae	<i>Parapolybia varia</i>		Native	Not Listed	NE
Vespidae	Vespinae	<i>Provespa anomala</i>	Anomalous Night Hornet	Native	Not Listed	NT
Vespidae	Vespinae	<i>Vespa affinis</i>	Lesser-banded Hornet	Native	Not Listed	LC

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Vespidae	Vespinae	<i>Vespa analis</i>	Yellow-vented Hornet	Native	Not Listed	LC
Vespidae	Vespinae	<i>Vespa multimaculata</i>	Many-banded Hornet	Native	Not Listed	NEx
Vespidae	Vespinae	<i>Vespa tropica</i>	Greater-banded Hornet	Native	Not Listed	LC
Vespidae	Eumeninae	<i>Eumenes architectus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Eumenes multipictus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Eumenes</i> sp. 1		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Delta pyriforme</i> [ssp. <i>circinale</i>]	Pyriforme Potter Wasp	Native	Not Listed	LC
Vespidae	Eumeninae	<i>Delta esuriens</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Delta campaniforme</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Phimenes flavopictus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Phimenes</i> sp. 1		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Rhynchium haemorrhoidale</i>	Red-tipped Potter Wasp	Native	Not Listed	LC
Vespidae	Eumeninae	<i>Allorhynchium argentatum</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Allorhynchium snelleni</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Antepipona bipustulata</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Antepipona guttata</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Anterhynchium flavolineatum</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Apodynerus troglodytes</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Coeleumenes impavidus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Ectopioglossa sublaevis</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Epsilon manifestum</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Euodynerus trilobus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Knemodynerus complanatus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Lissodynerus laminiger</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Labus amoenus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Labus exiguus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Omicrodes singularis</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Parancistrocerus androcles</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Paraleptomenes miniatus</i>		Uncertain	Not Listed	NE
Vespidae	Eumeninae	<i>Paraleptomenes communis</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus cilicioides</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus heterospilus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus multipictus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus hewitti</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus octolineatus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodyneriellus guttulatus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodynerus</i> <i>monotuberculatus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodynerus ignotus</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Stenodynerus peninsularis</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Subancistrocerus sichelii</i>		Uncertain	Not Listed	NE
Vespidae	Eumeninae	<i>Subancistrocerus</i> [red legs]		Native	Not Listed	NE

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Vespidae	Eumeninae	<i>Subancistrocerus [extra Ubin species different clypeus]</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Subancistrocerus [orange pronotum]</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Gribodia confluenta</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Zethus bakeri</i>		Native	Not Listed	NE
Vespidae	Eumeninae	<i>Zethus</i> sp. 1		Native	Not Listed	NE
Ampulicidae	Ampulicinae	<i>Ampulex compressa</i>		Native	Not Listed	NE
Ampulicidae	Ampulicinae	<i>Ampulex smaragdina</i>		Native	Not Listed	NE
Ampulicidae	Ampulicinae	<i>Ampulex</i> sp. 1		Native	Not Listed	NE
Ampulicidae	Ampulicinae	<i>Ampulex</i> sp. 2		Native	Not Listed	NE
Ampulicidae	Ampulicinae	<i>Ampulex</i> sp. 3		Native	Not Listed	NE
Ampulicidae	Dolichurinae	<i>Dolichurus</i> sp. 1		Native	Not Listed	NE
Ampulicidae	Dolichurinae	<i>Dolichurus</i> sp. 2		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Sphex argentatus</i>	Silver Digger Wasp	Native	Not Listed	VU
Sphecidae	Sphecinae	<i>Sphex diabolicus</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Sphex madasummae</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Sphex sericeus</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Sphex subtruncatus</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Isodontia diodon</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Isodontia severini</i>		Native	Not Listed	NE
Sphecidae	Sphecinae	<i>Prionyx viduatus</i>		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Sceliphron madraspatanum</i>		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Sceliphron coromandelicum</i>		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Sceliphron javanum</i>		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Sceliphron</i> sp. [small, black legs, yellow petiole]		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Chalybion bengalense</i>		Native	Not Listed	NE
Sphecidae	Sceliphrinae	<i>Chalybion sumatranum</i>		Native	Not Listed	NE
Sphecidae	Ammophilinae	<i>Ammophila clavus</i>		Native	Not Listed	NE
Sphecidae	Ammophilinae	<i>Ammophila</i> [small, black]		Native	Not Listed	NE
Sphecidae	Chloriontinae	<i>Chlorion lobatum</i>	Emerald Cricket-Hunter	Native	Not Listed	NT
Crabronidae	Bembecinae	<i>Bembix melanocholica</i>	Melancholic Sand Wasp	Native	Not Listed	VU
Crabronidae	Bembecinae	<i>Argogorytes</i> sp. 1		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Hoplisoides</i> sp. 1		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Bembecinus borneanus</i>		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Bembecinus insularis</i>		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Bembecinus littoralis</i>		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Bembecinus reversus</i>		Native	Not Listed	NE
Crabronidae	Bembecinae	<i>Nysson</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Dicranorhina ruficollis</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris aurulentus</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris subtesselatus</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris</i> sp. 2		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris</i> sp. 3		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris</i> sp. 4		Native	Not Listed	NE

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Crabronidae	Crabroninae	<i>Liris</i> sp. 5		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Liris</i> sp. 6		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Larra alecto</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Larra carbonaria</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Tachytes modestus</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Tachytes</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Tachysphex morosus</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Tachysphex</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon atricorne</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon bicolor</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon errans</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon menkei</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon nigricorne</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon petiolatum</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon ridleyi</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon simile</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon singaporense</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon</i> cf. <i>schmiedeknechti</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon singator</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Trypoxylon varipilosum</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Pison argentatum</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Pison oblitteratum</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Pison punctifrons</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Oxybelus malaysianus</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Encopognathus</i> sp. [braueri group]		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Ectemnius bogorensis</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Ectemnius</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Crossocerus fabreorum</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Dasyproctus agilis</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Dasyproctus buddha</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Dasyproctus pentheri</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Dasyproctus</i> sp. [metasoma mostly black]		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Piyuma accepta</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Piyuma singapurae</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Rhopalum</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Vechtia rugosa</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Polemistus</i> sp. 1		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Arpactophilus</i> sp. 1		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Spilomena</i> sp. 1		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Carinostigmus</i> cf. <i>congruus</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Carinostigmus</i> cf. <i>maior</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psen elisabethae</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus carinifrons</i> [ssp. <i>malayanus</i> van Lith, 1969]		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus continentis</i>		Native	Not Listed	NE

Family	Subfamily	Species	Common Name	Origin	RDB2	RDB3
Crabronidae	Pemphredoninae	<i>Psenulus crabroniformis</i> [ssp. <i>sumatranaus</i> (Ritsema, 1880)]		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus diversus</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus erraticus</i> [ssp. <i>basilanensis</i> (Rohwer, 1921)]		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus maculatus</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus nigrolineatus</i> [ssp. <i>ajax</i> (Rohwer, 1921)]		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus pulcherrimus</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus puncticeps</i> [typical form incl. holotype of <i>Diodontus antennatus</i>]		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus trimaculatus</i>		Native	Not Listed	NE
Crabronidae	Pemphredoninae	<i>Psenulus yoshimotoi</i>		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Nitela</i> sp. 1		Native	Not Listed	NE
Crabronidae	Crabroninae	<i>Nitela</i> sp. 2		Native	Not Listed	NE
Crabronidae	Philanthinae	<i>Cerceris</i> sp. 1		Native	Not Listed	NE
Crabronidae	Philanthinae	<i>Cerceris</i> sp. 2		Native	Not Listed	NE
Crabronidae	Philanthinae	<i>Cerceris</i> sp. 3		Native	Not Listed	NE
Crabronidae	Philanthinae	<i>Cerceris</i> sp. 4		Native	Not Listed	NE
Scoliidae	Campsomerinae	<i>Campsomeriella collaris</i>	Collared Scoliid Wasp	Native	Not Listed	LC
Scoliidae	Campsomerinae	<i>Megacampsomeris</i> sp. 1		Native	Not Listed	NE
Scoliidae	Campsomerinae	<i>Phalerimeris phalerata</i>	Ornamented Scoliid Wasp	Native	Not Listed	LC
Scoliidae	Campsomerinae	<i>Sericocampsomeris rubromaculata</i>		Native	Not Listed	NE
Scoliidae	Campsomerinae	<i>Sericocampsomeris stygia</i>		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Megascolia azurea</i>		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Megascolia capitata</i>		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Megaoscolia procer</i>	Atlas Mammoth Wasp	Native	Not Listed	VU
Scoliidae	Scoliinae	<i>Austroscolia ruficeps</i>		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Scolia binotata</i>		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Scolia</i> sp. 1		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Scolia</i> sp. 2		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Scolia</i> sp. 3		Native	Not Listed	NE
Scoliidae	Scoliinae	<i>Scolia</i> sp. 4		Native	Not Listed	NE

Checklist of Ant Species with their Category of Threat Status for Singapore

Prepared by Wendy Y. Wang

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Acanthomyrmex</i>	<i>ferox</i>	Emery, 1893		Not Listed	EN
Formicidae	<i>Acropyga</i>	<i>acutiventris</i>	Roger, 1862		Not Listed	VU
Formicidae	<i>Acropyga</i>	<i>inezae</i>	Forel, 1912		Not Listed	CR
Formicidae	<i>Acropyga</i>	<i>oceanica</i>	Emery, 1900		Not Listed	DD
Formicidae	<i>Acropyga</i>	<i>rubescens</i>	Forel, 1894		Not Listed	DD
Formicidae	<i>Aenictus</i>	<i>camposi</i>	Wheeler & Chapman, 1925		Not Listed	EN
Formicidae	<i>Aenictus</i>	<i>cylindripetiolus</i>	Jaitrong & Yamane, 2013		Not Listed	EN
Formicidae	<i>Aenictus</i>	<i>gracilis</i>	Emery, 1893		Not Listed	CR
Formicidae	<i>Aenictus</i>	<i>seletarius</i>	Wong & Guenard, 2016		Not Listed	CR
Formicidae	<i>Aenictus</i>	<i>yamanei</i>	Wiwatwitaya & Jaitrong, 2011		Not Listed	CR
Formicidae	<i>Anochetus</i>	<i>agilis</i>	Emery, 1901		Not Listed	CR
Formicidae	<i>Anochetus</i>	<i>graeffei</i>	Mayr, 1870		Not Listed	DD
Formicidae	<i>Anochetus</i>	<i>incultus</i>	Brown, 1978		Not Listed	CR
Formicidae	<i>Anochetus</i>	<i>tua</i>	Brown, 1978		Not Listed	CR
Formicidae	<i>Anoplolepis</i>	<i>gracilipes</i>	(Smith, 1857)	Yellow Crazy Ant	Not Listed	LC
Formicidae	<i>Aphaenogaster</i>	<i>feae simulans</i>	Forel, 1915		Not Listed	VU
Formicidae	<i>Brachyponera</i>	<i>obscurans</i>	(Walker, 1859)		Not Listed	DD
Formicidae	<i>Buniapone</i>	<i>amblyops</i>	(Emery, 1887)		Not Listed	VU
Formicidae	<i>Calyptomyrmex</i>	<i>beccarii</i>	Emery, 1887		Not Listed	NT
Formicidae	<i>Camponotus</i>	<i>albosparsus</i>	Bingham, 1903		Not Listed	NT
Formicidae	<i>Camponotus</i>	<i>arrogans</i>	(Smith, 1858)		Not Listed	CR
Formicidae	<i>Camponotus</i>	<i>bedoti</i>	Emery, 1893		Not Listed	NT
Formicidae	<i>Camponotus</i>	<i>irritans</i>	(Smith, 1857)		Not Listed	LC
Formicidae	<i>Camponotus</i>	<i>reticulatus</i>	Roger, 1863		Not Listed	NT
Formicidae	<i>Camponotus</i>	<i>reticulatus</i>	Viehmeyer, H. (1916)		Not Listed	DD
		<i>sericeus</i>	("1915"[sic]). Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A), 81(8), 08-168.			
Formicidae	<i>Camponotus</i>	<i>parius</i>	Emery, 1889		Not Listed	LC
Formicidae	<i>Cardiocondyla</i>	<i>obscurior</i>	Wheeler, 1929		Not Listed	LC
Formicidae	<i>Cardiocondyla</i>	<i>tjibodana</i>	Karavaiev, 1935		Not Listed	DD
Formicidae	<i>Cardiocondyla</i>	<i>wroughtonii</i>	(Forel, 1890)		Not Listed	DD
Formicidae	<i>Carebara</i>	<i>affinis</i>	(Jerdon, 1851)		Not Listed	NT
Formicidae	<i>Carebara</i>	<i>diversa</i>	(Jerdon, 1851)	Marauder Ant	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Carebara</i>	<i>overbecki</i>	(Viehmeyer, H. (1916) ("1915"[sic]). Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A), 81(8), 08-168.)		Not Listed	VU
Formicidae	<i>Carebara</i>	<i>silenus</i>	(Smith, 1858)		Not Listed	DD
Formicidae	<i>Cataulacus</i>	<i>granulatus</i>	(Latreille, 1802)		Not Listed	NT
Formicidae	<i>Cataulacus</i>	<i>horridus</i>	Smith, 1857		Not Listed	CR
Formicidae	<i>Cataulacus</i>	<i>nenassus</i>	Bolton, 1974		Not Listed	DD
Formicidae	<i>Centromyrmex</i>	<i>feae greeni</i>	(Emery, 1889)		Not Listed	DD
Formicidae	<i>Centromyrmex</i>	<i>hamulatus</i>	(Karavaiev, 1925)		Not Listed	EN
Formicidae	<i>Chronoxenus</i>	<i>wroughtonii</i>	(Forel, 1895)		Not Listed	DD
Formicidae	<i>Colobopsis</i>	<i>vitrea</i>	(Smith, 1860)		Not Listed	NT
Formicidae	<i>Crematogaster</i>	<i>anthracina</i>	Smith, 1857		Not Listed	EN
Formicidae	<i>Crematogaster</i>	<i>bandarensis</i>	Forel, 1913		Not Listed	NT
Formicidae	<i>Crematogaster</i>	<i>borneensis</i>	André, 1896		Not Listed	DD
Formicidae	<i>Crematogaster</i>	<i>coriaria</i>	Mayr, 1872		Not Listed	CR
Formicidae	<i>Crematogaster</i>	<i>diformis</i>	Smith, 1857		Not Listed	CR
Formicidae	<i>Crematogaster</i>	<i>ferrarii</i>	Emery, 1888		Not Listed	DD
Formicidae	<i>Crematogaster</i>	<i>inflata</i>	Smith, 1857		Not Listed	CR
Formicidae	<i>Crematogaster</i>	<i>linsenmairi</i>	Feldhaar, Maschwitz & Fiala,		Not Listed	DD
Formicidae	<i>Crematogaster</i>	<i>longipilosa</i>	Forel, 1907		Not Listed	VU
Formicidae	<i>Crematogaster</i>	<i>modiglianii</i>	Emery, 1900		Not Listed	DD
Formicidae	<i>Crematogaster</i>	<i>myops</i>	Forel, 1911		Not Listed	CR
Formicidae	<i>Crematogaster</i>	<i>quadriruga</i>	Forel, 1911		Not Listed	NT
Formicidae	<i>Crematogaster</i>	<i>sewardi</i>	Forel, 1901		Not Listed	LC
Formicidae	<i>Crematogaster</i>	<i>subnuda</i> <i>discinodis</i>	Emery, 1893		Not Listed	NT
Formicidae	<i>Crematogaster</i>	<i>treubi</i>	Emery, 1896		Not Listed	NT
Formicidae	<i>Crematogaster</i>	<i>yappi</i>	Forel, 1901		Not Listed	VU
Formicidae	<i>Cryptopone</i>	<i>butteli</i>	Forel, 1913		Not Listed	EN
Formicidae	<i>Diacamma</i>	<i>geometricum</i>	(Smith, 1857)		Not Listed	VU
Formicidae	<i>Diacamma</i>	<i>pallidum</i>	(Smith, 1858)		Not Listed	LC
Formicidae	<i>Diacamma</i>	<i>rugosum</i>	(Le Guillou, 1842)		Not Listed	VU
Formicidae	<i>Diacamma</i>	<i>vagans</i>	(Smith, 1860)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Dilobocondyla</i>	<i>fulva</i>	Viehmeyer, H. (1916) ("1915"[sic]). Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A), 81(8), 08-168.		Not Listed	DD
Formicidae	<i>Dinomyrmex</i>	<i>gigas</i>	(Latreille, 1802)		Not Listed	VU
Formicidae	<i>Discothyrea</i>	<i>bryanti</i>	(Wheeler, 1917)		Not Listed	EN
Formicidae	<i>Discothyrea</i>	<i>sauteri</i>	Forel, 1912		Not Listed	CR
Formicidae	<i>Dolichoderus</i>	<i>affinis</i>	Emery, 1889		Not Listed	CR
Formicidae	<i>Dolichoderus</i>	<i>indrapurensis</i>	Forel, 1912		Not Listed	CR
Formicidae	<i>Dolichoderus</i>	<i>sulcaticeps</i>	(Mayr, 1870)		Not Listed	CR
Formicidae	<i>Dorylus</i>	<i>laevigatus</i>	(Smith, 1857)	Driver Ant	Not Listed	EN
Formicidae	<i>Echinopla</i>	<i>lineata</i>	Mayr, 1862		Not Listed	NT
Formicidae	<i>Ectomomyrmex</i>	<i>leeuwenhoeki</i>	(Forel, 1896)		Not Listed	VU
Formicidae	<i>Ectomomyrmex</i>	<i>overbecki</i>	(Viehmeyer, 1916)		Not Listed	VU
Formicidae	<i>Emeryopone</i>	<i>buttelreepeni</i>	Forel, 1912		Not Listed	EN
Formicidae	<i>Euponera</i>	<i>sharpii</i>	Forel, 1901		Not Listed	NT
Formicidae	<i>Euprenolepis</i>	<i>procera</i>	(Emery, 1900)		Not Listed	VU
Formicidae	<i>Eurhopalothrix</i>	<i>heliscata</i>	Wilson & Brown, 1985		Not Listed	EN
Formicidae	<i>Eurhopalothrix</i>	<i>omnivaga</i>	Taylor, 1990		Not Listed	EN
Formicidae	<i>Eurhopalothrix</i>	<i>procera</i>	(Emery, 1897)		Not Listed	VU
Formicidae	<i>Stictoponera</i>	<i>binghamii</i>	(Forel, 1900)		Not Listed	VU
Formicidae	<i>Stictoponera</i>	<i>coxalis</i>	(Roger, 1860)		Not Listed	EN
Formicidae	<i>Holcoponera</i>	<i>cibrata</i>	(Emery, 1900)		Not Listed	EN
Formicidae	<i>Stictoponera</i>	<i>hyalina</i>	Lattke, 2004		Not Listed	CR
Formicidae	<i>Stictoponera</i>	<i>ortostoma</i>	Lattke, 2004		Not Listed	CR
Formicidae	<i>Stictoponera</i>	<i>posteropsis</i>	(Gregg, 1951)		Not Listed	CR
Formicidae	<i>Harpegnathos</i>	<i>venator</i>	(Smith, 1858)	Giant Jumping Ant	CR	CR
Formicidae	<i>Hypoponera</i>	<i>singaporenensis</i>	(Viehmeyer, 1916)		Not Listed	DD
Formicidae	<i>Iridomyrmex</i>	<i>anceps</i>	(Roger, 1863)		Not Listed	LC
Formicidae	<i>Leptanilla</i>	<i>hypodracos</i>	Wong & Guénard, 2016		Not Listed	CR
Formicidae	<i>Leptogenys</i>	<i>diminuta</i>	(Smith, 1857)		Not Listed	CR
Formicidae	<i>Leptogenys</i>	<i>hemipterica</i>	Forel, 1901		Not Listed	CR
Formicidae	<i>Leptogenys</i>	<i>kraepelini</i>	Forel, 1905		Not Listed	NT
Formicidae	<i>Leptogenys</i>	<i>mutabilis</i>	(Smith, 1861)		Not Listed	VU
Formicidae	<i>Leptogenys</i>	<i>peuqueti</i>	(André, 1887)		Not Listed	VU
Formicidae	<i>Leptogenys</i>	<i>processionalis</i>	(Jerdon, 1851)		Not Listed	DD
Formicidae	<i>Liomyrmex</i>	<i>gestroi</i>	(Emery, 1887)		Not Listed	VU
Formicidae	<i>Lioponera</i>	<i>singaporenensis</i>	(Viehmeyer, 1916)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Mayriella</i>	<i>transfuga</i>	Baroni Urbani, 1977		Not Listed	VU
Formicidae	<i>Meranoplus</i>	<i>bicolor</i>	(Guérin-Méneville, 1844)		Not Listed	LC
Formicidae	<i>Meranoplus</i>	<i>mucronatus</i>	Smith, 1857		Not Listed	DD
Formicidae	<i>Mesoponera</i>	<i>rubra</i>	(Smith, 1857)		Not Listed	CR
Formicidae	<i>Metapone</i>	<i>murphyi</i>	Wang, Yamada & Eguchi, 2019		Not Listed	DD
Formicidae	<i>Myopapone</i>	<i>castanea</i>	(Smith, 1860)		Not Listed	VU
Formicidae	<i>Myrmecina</i>	<i>bandarensis</i>	Forel, 1913		Not Listed	DD
Formicidae	<i>Myrmecina</i>	<i>magnificens</i>	Wong & Guénard, 2016		Not Listed	EN
Formicidae	<i>Myrmicaria</i>	<i>adpressipilosa</i>	Santschi, 1928		Not Listed	CR
Formicidae	<i>Myrmicaria</i>	<i>arachnoides</i>	Emery, 1900		Not Listed	EN
		<i>lutea</i>				
Formicidae	<i>Myrmicaria</i>	<i>luteiventris</i>	Emery, 1900		Not Listed	EN
Formicidae	<i>Myrmicaria</i>	<i>melanogaster</i>	Emery, 1900		Not Listed	CR
Formicidae	<i>Myrmoteras</i>	<i>bakeri</i>	Wheeler, 1919		Not Listed	CR
Formicidae	<i>Myrmoteras</i>	<i>barbouri</i>	Creighton, 1930		Not Listed	CR
Formicidae	<i>Mystrium</i>	<i>camillae</i>	Emery, 1889		Not Listed	VU
Formicidae	<i>Nylanderia</i>	<i>bourbonica</i>	(Forel, 1886)		Not Listed	DD
Formicidae	<i>Ochetellus</i>	<i>glaber</i>	(Mayr, 1862)		Not Listed	NT
Formicidae	<i>Odontomachus</i>	<i>litoralis</i>	Wang, Yamada & Yamane, 2020		Not Listed	VU
Formicidae	<i>Odontomachus</i>	<i>malignus</i>	Smith, 1859		Not Listed	DD
Formicidae	<i>Odontomachus</i>	<i>rixosus</i>	Smith, 1857		Not Listed	NT
Formicidae	<i>Odontomachus</i>	<i>simillimus</i>	Smith, 1858		Not Listed	LC
Formicidae	<i>Odontoponera</i>	<i>denticulata</i>	(Smith, 1858)		Not Listed	LC
Formicidae	<i>Odontoponera</i>	<i>transversa</i>	(Smith, 1857)		Not Listed	VU
Formicidae	<i>Oecophylla</i>	<i>smaragdina</i>	(Fabricius, 1775)	Red Weaver Ant	Not Listed	LC
Formicidae	<i>Ooceraea</i>	<i>biroi</i>	(Forel, 1907)		Not Listed	DD
Formicidae	<i>Paraparatrechina</i>	<i>opaca</i>	(Emery, 1887)		Not Listed	VU
Formicidae	<i>Paratopula</i>	<i>demeta</i>	Bolton, 1988		Not Listed	CR
Formicidae	<i>Paratopula</i>	<i>oculata</i>	(Smith, 1857)		Not Listed	DD
Formicidae	<i>Parvaponera</i>	<i>darwinii</i>	(Forel, 1893)		Not Listed	DD
Formicidae	<i>Pheidole</i>	<i>aglae</i>	Forel, 1913		Not Listed	VU
Formicidae	<i>Pheidole</i>	<i>aristotelis</i>	Forel, 1911		Not Listed	EN
Formicidae	<i>Pheidole</i>	<i>binghamii</i>	Forel, 1902		Not Listed	DD
Formicidae	<i>Pheidole</i>	<i>cariniceps</i>	Eguchi, 2001		Not Listed	EN
Formicidae	<i>Pheidole</i>	<i>clypeocornis</i>	Eguchi, 2001		Not Listed	VU
Formicidae	<i>Pheidole</i>	<i>fervens</i>	Smith, 1858		Not Listed	LC
Formicidae	<i>Pheidole</i>	<i>nodgii</i>	Wheeler, 1937		Not Listed	DD
		<i>verlatenensis</i>				
Formicidae	<i>Pheidole</i>	<i>parva</i>	Mayr, 1865		Not Listed	LC
Formicidae	<i>Pheidole</i>	<i>plagiaria</i>	Smith, 1860		Not Listed	LC
Formicidae	<i>Pheidole</i>	<i>plinii</i>	Forel, 1911		Not Listed	DD
Formicidae	<i>Pheidole</i>	<i>rugifera</i>	Eguchi, 2001		Not Listed	DD
Formicidae	<i>Pheidole</i>	<i>sexspinosa</i>	Mayr, 1870		Not Listed	VU
Formicidae	<i>Pheidole</i>	<i>singaporensis</i>	Özdikmen, 2010		Not Listed	VU
Formicidae	<i>Pheidole</i>	<i>tandjongensis</i>	Forel, 1913		Not Listed	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Pheidole</i>	<i>tjibodana</i>	Forel, 1905		Not Listed	EN
Formicidae	<i>Pheidole</i>	<i>umbonata</i>	Mayr, 1870		Not Listed	DD
Formicidae	<i>Philidris</i>	<i>cordata</i>	(Smith, 1859)		Not Listed	NT
Formicidae	<i>Philidris</i>	<i>laevigata</i>	(Emery, 1895)		Not Listed	EN
Formicidae	<i>Platythyrea</i>	<i>parallela</i>	(Smith, 1859)		Not Listed	VU
Formicidae	<i>Polyrhachis</i>	<i>abdominalis</i>	Smith, 1858		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>armata</i>	(Le Guillou, 1842)		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>beccarii</i>	Mayr, 1872		Not Listed	DD
Formicidae	<i>Polyrhachis</i>	<i>bicolor</i>	Smith, 1858		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>carbonaria</i>	Smith, 1857		Not Listed	CR
Formicidae	<i>Polyrhachis</i>	<i>chalybea</i>	Smith, 1857		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>dives</i>	Smith, 1857		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>hosei</i>	Donisthorpe, 1942		Not Listed	DD
Formicidae	<i>Polyrhachis</i>	<i>illaudata</i>	Walker, 1859		Not Listed	VU
Formicidae	<i>Polyrhachis</i>	<i>inermis</i>	Smith, 1858		Not Listed	VU
Formicidae	<i>Polyrhachis</i>	<i>lepidia</i>	Kohout, 2006		Not Listed	EN
Formicidae	<i>Polyrhachis</i>	<i>nigropilosa</i>	Mayr, 1872		Not Listed	VU
Formicidae	<i>Polyrhachis</i>	<i>olybria</i>	Forel, 1912		Not Listed	EN
Formicidae	<i>Polyrhachis</i>	<i>orsylla ritsemai</i>	Mayr, 1883		Not Listed	DD
Formicidae	<i>Polyrhachis</i>	<i>proxima</i>	Roger, 1863		Not Listed	NT
Formicidae	<i>Polyrhachis</i>	<i>pruinosa</i>	Mayr, 1872		Not Listed	DD
Formicidae	<i>Polyrhachis</i>	<i>saevissima</i>	Smith, 1860		Not Listed	EN
Formicidae	<i>Polyrhachis</i>	<i>thrinax</i>	Viehmeyer, H. (1916) ("1915"[sic]).		Not Listed	DD
		<i>inconstans</i>	Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A). 81(8). 08-168.			
Formicidae	<i>Polyrhachis</i>	<i>thrinax</i> <i>overbecki</i>	Dorow, 1995		Not Listed	DD
Formicidae	<i>Polyrhachis</i>	<i>vindex</i>	Smith, 1857		Not Listed	VU
Formicidae	<i>Ponera</i>	<i>swezeyi</i>	(Wheeler, 1933)		Not Listed	VU
Formicidae	<i>Prenolepis</i>	<i>jerdoni</i>	Emery, 1893		Not Listed	VU
Formicidae	<i>Prenolepis</i>	<i>subopaca</i>	Emery, 1900		Not Listed	VU
Formicidae	<i>Prionopelta</i>	<i>kraepelini</i>	Forel, 1905		Not Listed	DD
Formicidae	<i>Pristomyrmex</i>	<i>costatus</i>	Wang, 2003		Not Listed	VU
Formicidae	<i>Pristomyrmex</i>	<i>punctatus</i>	(Smith, 1860)		Not Listed	NT
Formicidae	<i>Proatta</i>	<i>butteli</i>	Forel, 1912		Not Listed	NT
Formicidae	<i>Probolomyrmex</i>	<i>vieti</i>	Eguchi et al. 2006		Not Listed	DD
Formicidae	<i>Probolomyrmex</i>	<i>watanabei</i>	Tanaka, 1974		Not Listed	EN
Formicidae	<i>Proceratium</i>	<i>deelemani</i>	Perrault, 1981		Not Listed	EN
Formicidae	<i>Proceratium</i>	<i>malesianum</i>	De Andrade, 2003		Not Listed	CR
Formicidae	<i>Protanilla</i>	<i>rafflesi</i>	Taylor, 1990		Not Listed	VU
Formicidae	<i>Pseudoneoponera</i>	<i>rufipes</i>	(Jerdon, 1851)		Not Listed	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Pseudoneoponera</i>	<i>tridentata</i>	(Smith, 1858)		Not Listed	VU
Formicidae	<i>Rhopalomastix</i>	<i>glabricephala</i>	Wang et al., 2018		Not Listed	CR
Formicidae	<i>Rhopalomastix</i>	<i>javana</i>	Wheeler, 1929		Not Listed	VU
Formicidae	<i>Rhopalomastix</i>	<i>johorensis</i>	Wheeler, 1929		Not Listed	LC
Formicidae	<i>Rhopalomastix</i>	<i>murphyi</i>	Wang et al., 2018		Not Listed	VU
Formicidae	<i>Rhopalomastix</i>	<i>striata</i>	Wang et al., 2018		Not Listed	VU
Formicidae	<i>Rhopalomastix</i>	<i>tenebra</i>	Wang, Yong & Jaitrong, 2018		Not Listed	VU
Formicidae	<i>Rostromyrmex</i>	<i>pasohensis</i>	Rosciszewski, 1994		Not Listed	CR
Formicidae	<i>Rotastruma</i>	<i>recava</i>	Bolton, 1991		Not Listed	EN
Formicidae	<i>Simopone</i>	<i>bakeri</i>	Menozzi, 1926		Not Listed	CR
Formicidae	<i>Stigmatomma</i>	<i>besucheti</i>	(Baroni Urbani, 1978)		Not Listed	VU
Formicidae	<i>Stigmatomma</i>	<i>reclinatum</i>	(Mayr, 1879)		Not Listed	VU
Formicidae	<i>Strumigenys</i>	<i>chapmani</i>	Brown, 1954		Not Listed	CR
Formicidae	<i>Strumigenys</i>	<i>extemena</i>	(Taylor, 1968)		Not Listed	CR
Formicidae	<i>Strumigenys</i>	<i>sublaminata</i>	Brown, 1959		Not Listed	CR
Formicidae	<i>Strumigenys</i>	<i>godeffroyi</i>	Mayr, 1866		Not Listed	DD
Formicidae	<i>Strumigenys</i>	<i>juliae</i>	Forel, 1905		Not Listed	VU
Formicidae	<i>Strumigenys</i>	<i>koningsbergeri</i>	Forel, 1905		Not Listed	EN
Formicidae	<i>Strumigenys</i>	<i>kraepelini</i>	Forel, 1905		Not Listed	CR
Formicidae	<i>Strumigenys</i>	<i>mitis</i>	(Brown, 2000)		Not Listed	DD
Formicidae	<i>Strumigenys</i>	<i>nanzanensis</i>	Lin & Wu, 1996		Not Listed	VU
Formicidae	<i>Strumigenys</i>	<i>nepalensis</i>	Baroni Urbani & de Andrade, 1994		Not Listed	DD
Formicidae	<i>Strumigenys</i>	<i>rofocala</i>	Bolton, 2000		Not Listed	VU
Formicidae	<i>Strumigenys</i>	<i>szalayi</i>	Emery, 1897		Not Listed	DD
Formicidae	<i>Strumigenys</i>	<i>sydorata</i>	Bolton, 2000		Not Listed	DD
Formicidae	<i>Technomyrmex</i>	<i>albipes</i>	(Smith, 1861)		Not Listed	LC
Formicidae	<i>Technomyrmex</i>	<i>horni</i>	Forel, 1912		Not Listed	DD
Formicidae	<i>Technomyrmex</i>	<i>kraepelini</i>	Forel, 1905		Not Listed	NT
Formicidae	<i>Technomyrmex</i>	<i>pratensis</i>	(Smith, 1860)		Not Listed	EN
Formicidae	<i>Technomyrmex</i>	<i>schimmeri</i>	Viehmeyer, H. (1916) ("1915"[sic]). Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A), 81(8), 08-168.		Not Listed	VU
Formicidae	<i>Technomyrmex</i>	<i>textor</i>	Forel, 1909		Not Listed	VU
Formicidae	<i>Technomyrmex</i>	<i>vitiensis</i>	Mann, 1921		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Formicidae	<i>Tetramorium</i>	<i>bicarinatum</i>	(Nylander, 1846)		Not Listed	LC
Formicidae	<i>Tetramorium</i>	<i>insolens</i>	(Smith, 1861)		Not Listed	LC
Formicidae	<i>Tetramorium</i>	<i>kheperra</i>	(Bolton, 1976)		Not Listed	DD
Formicidae	<i>Tetramorium</i>	<i>lanuginosum</i>	Mayr, 1870	Wooly Ant	Not Listed	DD
Formicidae	<i>Tetramorium</i>	<i>meshena</i>	(Bolton, 1976)		Not Listed	VU
Formicidae	<i>Tetramorium</i>	<i>obtusidens</i>	Viehmeyer, H. (1916) ("1915"[sic]). Ameisen von Singapore. Beobachtet und gesammelt von H. Overbeck. Archiv für Naturgeschichte (A), 81(8), 08-168.		Not Listed	EN
Formicidae	<i>Tetramorium</i>	<i>pacificum</i>	Mayr, 1870		Not Listed	NT
Formicidae	<i>Tetramorium</i>	<i>smithi</i>	Mayr, 1879		Not Listed	DD
Formicidae	<i>Tetramorium</i>	<i>tonganum</i>	Mayr, 1870		Not Listed	NT
Formicidae	<i>Tetraponera</i>	<i>allaborans</i>	(Walker, 1859)		Not Listed	NT
Formicidae	<i>Tetraponera</i>	<i>attenuata</i>	Smith, 1877		Not Listed	VU
Formicidae	<i>Tetraponera</i>	<i>difficilis</i>	(Emery, 1900)		Not Listed	VU
Formicidae	<i>Tetraponera</i>	<i>extenuata</i>	Ward, 2001		Not Listed	VU
Formicidae	<i>Tetraponera</i>	<i>modesta</i>	(Smith, 1860)		Not Listed	EN
Formicidae	<i>Tetraponera</i>	<i>nitida</i>	(Smith, 1860)		Not Listed	NT
Formicidae	<i>Tetraponera</i>	<i>pilosa</i>	(Smith, 1858)		Not Listed	NT
Formicidae	<i>Tetraponera</i>	<i>rufonigra</i>	(Jerdon, 1851)		Not Listed	LC
Formicidae	<i>Tetraponera</i>	<i>vivax</i>	Ward, 2001		Not Listed	DD
Formicidae	<i>Tetraponera</i>	<i>volucris</i>	Ward, 2001		Not Listed	DD
Formicidae	<i>Tyrannomyrmex</i>	<i>rex</i>	Fernández, 2003		Not Listed	EN
Formicidae	<i>Vollenhovia</i>	<i>rufiventris</i>	Forel, 1901		Not Listed	CR

Checklist of Butterfly Species with their Category of Threat Status for Singapore

Prepared by Khew Sin Khoon, Horace Tan, Tea Yi-Kai, Aaron Soh, Jonathan Soong

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Papilionidae	<i>Troides helena cerberus</i>	Common Birdwing	Native	VU	VU
Papilionidae	<i>Troides amphrysus ruficollis</i>	Malayan Birdwing	Native	NEx	DD
Papilionidae	<i>Pachliopta aristolochiae asteris</i>	Common Rose	Native	VU	NT
Papilionidae	<i>Papilio clytia clytia</i>	Common Mime	Native	Not Listed	LC
Papilionidae	<i>Papilio paradoxa aenigma</i>	Great Blue Mime	Native	NEx	NEx
Papilionidae	<i>Papilio demoleus malayanus</i>	Lime Butterfly	Native	Not Listed	LC
Papilionidae	<i>Papilio demolion demolion</i>	Banded Swallowtail	Native	Not Listed	EN
Papilionidae	<i>Papilio iwara iwara</i>	Great Helen	Native	Not Listed	NT
Papilionidae	<i>Papilio polytes romulus</i>	Common Mormon	Native	Not Listed	LC
Papilionidae	<i>Papilio memnon agenor</i>	Great Mormon	Native	Not Listed	VU
Papilionidae	<i>Papilio prexaspes prexaspes</i>	Blue Helen	Uncertain	VU	VU
Papilionidae	<i>Papilio helenus helenus</i>	Red Helen	Uncertain	Not Listed	DD
Papilionidae	<i>Graphium sarpedon luctatius</i>	Common Bluebottle	Native	Not Listed	LC
Papilionidae	<i>Graphium empedovana</i>	Yellow Bluebottle	Uncertain	Not Listed	DD
Papilionidae	<i>Graphium euryplus mecisteus</i>	Great Jay	Uncertain	Not Listed	DD
Papilionidae	<i>Graphium evemon eventus</i>	Lesser or Blue Jay	Native	Not Listed	LC
Papilionidae	<i>Graphium doson evenmonides</i>	Common Jay	Uncertain	CR	VU
Papilionidae	<i>Graphium bathycles bathyloides</i>	Striped Jay	Uncertain	Not Listed	DD
Papilionidae	<i>Graphium agamemnon agamemnon</i>	Tailed Jay	Native	Not Listed	LC
Papilionidae	<i>Graphium antiphates itamputi</i>	Five Bar Swordtail	Native	Not Listed	LC
Papilionidae	<i>Lamproptera meges virescens</i>	Green Dragontail	Native	Not Listed	NEx
Pieridae	<i>Prioneris philonome themana</i>	Red Spot Sawtooth	Uncertain	Not Listed	DD
Pieridae	<i>Delias singhapura singhapura</i>	Lion Jezebel	Native	NEx	NEx
Pieridae	<i>Delias hyparete metarete</i>	Painted Jezebel	Native	Not Listed	LC
Pieridae	<i>Delias pasithoe parthenope</i>	Red Base Jezebel	Native	NEx	DD
Pieridae	<i>Leptosia nina malayana</i>	Psyche	Native	Not Listed	LC
Pieridae	<i>Pieris canidia canidia</i>	Cabbage White	Native	Not Listed	NT
Pieridae	<i>Cepora iudith malaya</i>	Orange Gull	Native	NEx	DD
Pieridae	<i>Appias lyncida vasava</i>	Chocolate Albatross	Native	Not Listed	DD
Pieridae	<i>Appias olfnera olfnera</i>	Striped Albatross	Native	Not Listed	LC
Pieridae	<i>Appias nero figulina</i>	Orange Albatross	Native	NEx	DD
Pieridae	<i>Appias paulina distanti</i>	Lesser Albatross	Uncertain	Not Listed	DD
Pieridae	<i>Appias indra plana</i>	Plain Puffin	Uncertain	Not Listed	DD
Pieridae	<i>Hebomoia glaucippe aturia</i>	Great Orange Tip	Uncertain	DD	DD
Pieridae	<i>Pareronia valeria lutescens</i>	Wanderer	Native	NEx	DD
Pieridae	<i>Saleptara liberia distanti</i>	Malaysian Albatross	Native	DD	DD
Pieridae	<i>Dercas verhuelli herodorus</i>	Tailed Sulphur	Native	NEx	NEx
Pieridae	<i>Catopsilia pyranthe pyranthe</i>	Mottled Emigrant	Native	Not Listed	LC
Pieridae	<i>Catopsilia pomona pomona</i>	Lemon Emigrant	Native	Not Listed	LC
Pieridae	<i>Catopsilia scylla cornelia</i>	Orange Emigrant	Native	Not Listed	LC
Pieridae	<i>Eurema brigitta senna</i>	No Brand Grass Yellow	Native	NEx	CR
Pieridae	<i>Eurema hecate contubernalis</i>	Common Grass Yellow	Native	Not Listed	LC
Pieridae	<i>Eurema simulatrix tecmessa</i>	Forest Grass Yellow	Native	Not Listed	NT
Pieridae	<i>Eurema blanda snelleni</i>	Three Spot Grass Yellow	Native	Not Listed	LC
Pieridae	<i>Eurema andersonii andersonii</i>	Anderson's Grass Yellow	Native	Not Listed	NT

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Pieridae	<i>Eurema lacteola lacteola</i>	Scarce Grass Yellow	Native	NEx	NEx
Pieridae	<i>Eurema ada iona</i>	Talbot's Grass Yellow	Native	NEx	NEx
Pieridae	<i>Eurema sari sodalis</i>	Chocolate Grass Yellow	Native	Not Listed	LC
Pieridae	<i>Gandaca harina distantii</i>	Tree Yellow	Native	Not Listed	LC
Nymphalidae	<i>Danaus chrysippus chrysippus</i>	Plain Tiger	Native	Not Listed	LC
Nymphalidae	<i>Danaus genutia genutia</i>	Common Tiger	Native	Not Listed	LC
Nymphalidae	<i>Danaus melanippus hegesippus</i>	Black Veined Tiger	Native	Not Listed	NT
Nymphalidae	<i>Danaus affinis malayanus</i>	Swamp Tiger	Uncertain	Not Listed	DD
Nymphalidae	<i>Tirumala septentrionis septentrionis</i>	Dark Blue Tiger	Uncertain	Not Listed	DD
Nymphalidae	<i>Tirumala limniace</i>	Blue Tiger	Uncertain	Not Listed	DD
Nymphalidae	<i>Parantica agleoides agleoides</i>	Dark Glassy Tiger	Native	Not Listed	LC
Nymphalidae	<i>Parantica aspasia aspasia</i>	Yellow Glassy Tiger	Native	NEx	DD
Nymphalidae	<i>Parantica melaneus sinopion</i>	Chocolate Tiger	Native	NEx	NEx
Nymphalidae	<i>Ideopsis vulgaris macrina</i>	Blue Glassy Tiger	Native	Not Listed	LC
Nymphalidae	<i>Ideopsis juventa sitah</i>	Grey Glassy Tiger	Uncertain	Not Listed	DD
Nymphalidae	<i>Ideopsis gaura perakana</i>	Smaller Wood Nymph	Native	NEx	NEx
Nymphalidae	<i>Ideopsis similis persimilis</i>	Glassy Tiger	Uncertain	Not Listed	DD
Nymphalidae	<i>Idea stollii logani</i>	Common Tree Nymph	Native	Not Listed	CR
Nymphalidae	<i>Idea leuconoe chersonesia</i>	Mangrove Tree Nymph	Native	CR	CR
Nymphalidae	<i>Euploea crameri bremeri</i>	Spotted Black Crow	Native	Not Listed	NT
Nymphalidae	<i>Euploea camalzeman malayica</i>	Malayan Crow	Native	CR	CR
Nymphalidae	<i>Euploea eyndhovii gardineri</i>	Striped Black Crow	Native	Not Listed	EN
Nymphalidae	<i>Euploea sylvester harrisii</i>	Double Branded Crow	Native	Not Listed	NEx
Nymphalidae	<i>Euploea mulciber mulciber</i>	Striped BlueCrow	Native	Not Listed	LC
Nymphalidae	<i>Euploea phaenareta castelnau</i>	King Crow	Native	Not Listed	NT
Nymphalidae	<i>Euploea midamus singapura</i>	Blue Spotted Crow	Native	Not Listed	NT
Nymphalidae	<i>Euploea tulliolus ledereri</i>	Dwarf Crow	Native	EN	NT
Nymphalidae	<i>Euploea eunice leucogonitis</i>	Blue-branded King Crow	Native	NEx	NEx
Nymphalidae	<i>Euploea radamanthus radamanthus</i>	Magpie Crow	Native	Not Listed	CR
Nymphalidae	<i>Melanitis leda leda</i>	Common Evening Brown	Native	Not Listed	LC
Nymphalidae	<i>Melanitis phedima abdulla</i>	Dark Evening Brown	Native	Not Listed	NEx
Nymphalidae	<i>Elymnias panthera panthera</i>	Tawny Palmfly	Native	Not Listed	NT
Nymphalidae	<i>Elymnias hypermnestra agina</i>	Common Palmfly	Native	Not Listed	LC
Nymphalidae	<i>Elymnias nesaea lioneli</i>	Tiger Palmfly	Native	Not Listed	NEx
Nymphalidae	<i>Elymnias esaca esaca</i>	Green Palmfly	Native	NEx	NEx
Nymphalidae	<i>Elymnias penanga penanga</i>	Pointed Palmfly	Native	DD	DD
Nymphalidae	<i>Lethe europa malaya</i>	Bamboo Tree Brown	Native	Not Listed	NT
Nymphalidae	<i>Xanthotaenia busiris busiris</i>	Yellow Barred	Native	Not Listed	NEx
Nymphalidae	<i>Mycalesis fusca fusca</i>	Malayan Bush Brown	Native	Not Listed	NT
Nymphalidae	<i>Mycalesis perseus cepheus</i>	Dingy Bush Brown	Native	Not Listed	LC
Nymphalidae	<i>Mycalesis perseoides perseoides</i>	Burmese Bush Brown	Uncertain	DD	LC
Nymphalidae	<i>Mycalesis mineus macromalayana</i>	Dark Brand Bush Brown	Native	Not Listed	LC
Nymphalidae	<i>Mycalesis visala phamis</i>	Long Brand Bush Brown	Native	Not Listed	NT
Nymphalidae	<i>Mycalesis orseis nautilus</i>	Purple Bush Brown	Native	Not Listed	VU
Nymphalidae	<i>Orsotriaena medus cinerea</i>	Dark Grass Brown	Native	Not Listed	LC
Nymphalidae	<i>Coelites epiminthia epiminthia</i>	Straight-Banded Catseye	Native	Not Listed	NEx
Nymphalidae	<i>Ypthima huebneri</i>	Common Four Ring	Native	Not Listed	LC

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Nymphalidae	<i>Ypthima fasciata torone</i>	Scarce Six Ring	Native	CR	DD
Nymphalidae	<i>Ypthima baldus newboldi</i>	Common Five Ring	Native	Not Listed	LC
Nymphalidae	<i>Ypthima horsfieldii humei</i>	Malayan Five Ring	Native	Not Listed	LC
Nymphalidae	<i>Ypthima pandocus corticaria</i>	Common Three Ring	Native	Not Listed	VU
Nymphalidae	<i>Faunis canens arcesilas</i>	Common Faun	Native	Not Listed	LC
Nymphalidae	<i>Melanocyma faunula faunula</i>	Pallid Faun	Native	Not Listed	NEx
Nymphalidae	<i>Taenaris horsfieldii birchi</i>	Silky Owl	Native	NEx	NEx
Nymphalidae	<i>Amathusia phidippus phidippus</i>	Palm King	Native	Not Listed	NT
Nymphalidae	<i>Amathusia friderici holmanhunti</i>	Bicolour Haired Palm King	Uncertain	Not Listed	DD
Nymphalidae	<i>Zeuxidia amethystus amethystus</i>	Saturn	Native	Not Listed	LC
Nymphalidae	<i>Zeuxidia doubledayi doubledayi</i>	Scarce Saturn	Native	NEx	NEx
Nymphalidae	<i>Thaumantis klugius lucipor</i>	Dark Blue Jungle Glory	Native	Not Listed	NT
Nymphalidae	<i>Thaumantis noureddin noureddin</i>	Dark Jungle Glory	Native	NEx	EN
Nymphalidae	<i>Discophora sondaica despoliata</i>	Common Duffer	Native	CR	EN
Nymphalidae	<i>Acraea terpsicore</i>	Tawny Coster	Native	Not Listed	LC
Nymphalidae	<i>Cethosia hypsea hypsina</i>	Malay Lacewing	Native	Not Listed	CR
Nymphalidae	<i>Cethosia methypsea</i>	Plain Lacewing	Uncertain	CR	CR
Nymphalidae	<i>Cethosia cyane</i>	Leopard Lacewing	Uncertain	Not Listed	LC
Nymphalidae	<i>Phalanta phalantha phalantha</i>	Leopard	Native	Not Listed	LC
Nymphalidae	<i>Vagrans sinha sinha</i>	Vagrant	Native	NEx	DD
Nymphalidae	<i>Cupha erymanthis lotis</i>	Rustic	Native	Not Listed	LC
Nymphalidae	<i>Cirrochroa orissa orissa</i>	Banded Yeoman	Native	Not Listed	EN
Nymphalidae	<i>Cirrochroa emalea emalea</i>	Malay Yeoman	Native	Not Listed	EN
Nymphalidae	<i>Cirrochroa tyche rotundata</i>	Common Yeoman	Uncertain	Not Listed	DD
Nymphalidae	<i>Vindula dejone erotella</i>	Cruiser	Native	Not Listed	LC
Nymphalidae	<i>Terinos terpander robertsia</i>	Royal Assyrian	Native	Not Listed	NT
Nymphalidae	<i>Terinos atlita teuthras</i>	Great Assyrian	Native	Not Listed	NEx
Nymphalidae	<i>Dryas iulia</i>	Julia Heliconian	Uncertain	Not Listed	LC
Nymphalidae	<i>Ariadne ariadne ariadne</i>	Angled Castor	Native	NEx	DD
Nymphalidae	<i>Ariadne isaeus isaeus</i>	Malayan Castor	Native	Not Listed	NEx
Nymphalidae	<i>Laringa castelnau castelnau</i>	Blue Dandy	Native	Not Listed	NEx
Nymphalidae	<i>Vanessa cardui</i>	Painted Lady	Uncertain	Not Listed	DD
Nymphalidae	<i>Vanessa indica indica</i>	Indian Red Admiral	Uncertain	Not Listed	DD
Nymphalidae	<i>Symbrenthia hippoclus selangorana</i>	Malayan Jester	Uncertain	Not Listed	DD
Nymphalidae	<i>Hypolimnas anomala anomala</i>	Malayan Eggfly	Native	Not Listed	LC
Nymphalidae	<i>Hypolimnas misippus misippus</i>	Danaid Eggfly	Native	NEx	DD
Nymphalidae	<i>Hypolimnas bolina bolina</i>	Great Eggfly	Native	Not Listed	LC
Nymphalidae	<i>Hypolimnas bolina jacintha</i>	Jacintha Eggfly	Uncertain	Not Listed	LC
Nymphalidae	<i>Doleschallia bisaltide ?bisaltide var.</i>	Autumn Leaf	Native	Not Listed	LC
Nymphalidae	<i>Doleschallia bisaltide pratipa</i>	Autumn Leaf	Native	Not Listed	DD
Nymphalidae	<i>Rhinopalpa polynice eudoxia</i>	The Wizard	Native	Not Listed	NEx
Nymphalidae	<i>Junonia hedonia ida</i>	Chocolate Pansy	Native	Not Listed	LC
Nymphalidae	<i>Junonia atlites atlites</i>	Grey Pansy	Native	Not Listed	LC
Nymphalidae	<i>Junonia almana javana</i>	Peacock Pansy	Native	Not Listed	LC
Nymphalidae	<i>Junonia orithya wallacei</i>	Blue Pansy	Native	Not Listed	LC
Nymphalidae	<i>Kallima limborgii amplirufa</i>	Leaf butterfly	Native	Not Listed	NEx
Nymphalidae	<i>Chersonesia rahria rahria</i>	Wavy Maplet	Native	NEx	NEx

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Nymphalidae	<i>Chersonesia peraka peraka</i>	Little Maplet	Native	VU	VU
Nymphalidae	<i>Moduza procris milonia</i>	Commander	Native	Not Listed	LC
Nymphalidae	<i>Lebadea martha parkeri</i>	Knight	Native	Not Listed	LC
Nymphalidae	<i>Lebadea martha malayana</i>	Knight	Uncertain	Not Listed	DD
Nymphalidae	<i>Athyma pravara helma</i>	Lance Sergeant	Uncertain	Not Listed	LC
Nymphalidae	<i>Athyma asura idita</i>	Studded Sergeant	Native	Not Listed	NT
Nymphalidae	<i>Athyma kanwa kanwa</i>	Dot-Dash Sergeant	Native	Not Listed	LC
Nymphalidae	<i>Athyma reta moorei</i>	Malay Staff Sergeant	Native	Not Listed	NT
Nymphalidae	<i>Athyma nefte substrata</i>	Colour Sergeant	Native	Not Listed	LC
Nymphalidae	<i>Athyma perius perius</i>	Common Sergeant	Native	NEx	DD
Nymphalidae	<i>Pandita sinope sinope</i>	Colonel	Native	Not Listed	NT
Nymphalidae	<i>Neptis hylas papaja</i>	Common Sailor	Native	Not Listed	LC
Nymphalidae	<i>Neptis leucoporos cresina</i>	Burmese (Grey) Sailor	Native	Not Listed	LC
Nymphalidae	<i>Neptis omeroda omeroda</i>	Dingy Sailor	Native	Not Listed	NEx
Nymphalidae	<i>Neptis harita harita</i>	Chocolate Sailor	Uncertain	VU	NT
Nymphalidae	<i>Neptis miah batara</i>	Small Yellow Sailor	Native	NEx	NEx
Nymphalidae	<i>Phaedyma columella singa</i>	Short Banded Sailor	Native	Not Listed	LC
Nymphalidae	<i>Lasippa heliodore dorelia</i>	Burmese Lascar	Native	DD	NT
Nymphalidae	<i>Lasippa tiga siaka</i>	Malayan Lascar	Native	Not Listed	LC
Nymphalidae	<i>Pantoporia hordonia hordonia</i>	Common Lascar	Native	Not Listed	DD
Nymphalidae	<i>Pantoporia paraka paraka</i>	Perak Lascar	Native	Not Listed	LC
Nymphalidae	<i>Pantoporia sandaka sandaka</i>	Extra Lascar	Native	NEx	NT
Nymphalidae	<i>Pantoporia dindinga</i>	Grey-Lined Lascar	Native	NEx	NEx
Nymphalidae	<i>Pantoporia aurelia aurelia</i>	Baby Lascar	Native	NEx	NEx
Nymphalidae	<i>Parthenos sylvia lilacinus</i>	Clipper	Native	NEx	DD
Nymphalidae	<i>Tanaecia pelea pelea</i>	Malay Viscount	Native	Not Listed	LC
Nymphalidae	<i>Tanaecia iapis puseda</i>	Horsfield's Baron	Native	Not Listed	LC
Nymphalidae	<i>Tanaecia godartii puloa</i>	Malay Count	Native	NEx	NEx
Nymphalidae	<i>Tanaecia clathrata violaria</i>	Violet-Bordered Viscount	Native	Not Listed	NEx
Nymphalidae	<i>Euthalia monina monina</i>	Malay Baron	Native	Not Listed	LC
Nymphalidae	<i>Euthalia merta merta</i>	White Tipped Baron	Native	CR	EN
Nymphalidae	<i>Euthalia aconthea gurda</i>	Baron	Native	Not Listed	LC
Nymphalidae	<i>Euthalia adonia pinwilli</i>	Green Baron	Native	Not Listed	LC
Nymphalidae	<i>Euthalia djata rubidifascia</i>	Red-Spot Baron	Native	NEx	NEx
Nymphalidae	<i>Dophla evelina compta</i>	Red-Spot Duke	Native	NEx	NEx
Nymphalidae	<i>Bassarona teuta goodrichi</i>	Banded Marquis	Native	Not Listed	NEx
Nymphalidae	<i>Lexias dirtea mergua</i>	Dark Archduke	Native	Not Listed	LC
Nymphalidae	<i>Lexias pardalis dirteana</i>	Archduke	Native	Not Listed	LC
Nymphalidae	<i>Lexias canescens pardalina</i>	Yellow Archduke	Native	Not Listed	NT
Nymphalidae	<i>Eulaceura osteria kumana</i>	Purple Duke	Native	Not Listed	LC
Nymphalidae	<i>Euripus nyctelius euploeooides</i>	Courtesan	Native	CR	CR
Nymphalidae	<i>Prothoe franck uniformis</i>	Blue Begum	Native	NEx	NEx
Nymphalidae	<i>Charaxes bernardus crepax</i>	Tawny Rajah	Native	NEx	NEx
Nymphalidae	<i>Charaxes solon echo</i>	Black Rajah	Native	CR	CR
Nymphalidae	<i>Polyura hebe plautus</i>	Plain Nawab	Native	Not Listed	LC
Nymphalidae	<i>Polyura schreiber tisamenus</i>	Blue Nawab	Native	Not Listed	LC
Nymphalidae	<i>Polyura moori moori</i>	Malayan Nawab	Native	NEx	DD
Nymphalidae	<i>Polyura athamas athamas</i>	Common Nawab	Native	Not Listed	NEx

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Riodinidae	<i>Zemeros fleygas albipunctatus</i>	Punchinello	Native	NEx	NEx
Riodinidae	<i>Zemeros emesoides emesoides</i>	Malay Punchinello	Native	Not Listed	NEx
Riodinidae	<i>Abisara geza niya</i>	Spotted Judy	Native	Not Listed	LC
Riodinidae	<i>Abisara savitri savitri</i>	Malay Tailed Judy	Native	Not Listed	LC
Riodinidae	<i>Abisara saturata kausambiooides</i>	Malayan Plum Judy	Native	Not Listed	LC
Riodinidae	<i>Laxita thuisto thuisto</i>	Lesser Harlequin	Native	Not Listed	LC
Riodinidae	<i>Taxila haquinus haquinus</i>	The Harlequin	Native	EN	CR
Lycaenidae	<i>Poritia philota philota</i>	Malay Gem	Native	Not Listed	EN
Lycaenidae	<i>Poritia sumatrae sumatrae</i>	Sumatran Gem	Native	Not Listed	LC
Lycaenidae	<i>Poritia erycinoides phraatica</i>	Blue Gem	Native	NEx	NEx
Lycaenidae	<i>Poritia pleurata</i>	Indian Green Gem	Native	Not Listed	NEx
Lycaenidae	<i>Simiskina phalena phalena</i>	Broad-Banded Brilliant	Native	Not Listed	NEx
Lycaenidae	<i>Simiskina pheretia pheretia</i>	Streaked Blue Brilliant	Native	Not Listed	NEx
Lycaenidae	<i>Simiskina pediada</i>	Mixture Blue Brilliant	Native	NEx	NEx
Lycaenidae	<i>Simiskina phalia potina</i>	Blue Brilliant	Native	NEx	NEx
Lycaenidae	<i>Deramas livens livens</i>	Common Bluejohn	Native	Not Listed	NEx
Lycaenidae	<i>Miletus gaesa gaesa</i>	Brown Brownwing	Native	NEx	NEx
Lycaenidae	<i>Miletus gopara gopara</i>	Round-band Brownwing	Native	DD	DD
Lycaenidae	<i>Miletus biggsii biggsii</i>	Bigg's Brownwing	Native	Not Listed	LC
Lycaenidae	<i>Miletus symethus petronius</i>	Blue Brownwing	Native	Not Listed	NT
Lycaenidae	<i>Allotinus unicolor unicolor</i>	Lesser Darkwing	Native	Not Listed	LC
Lycaenidae	<i>Allotinus davidis</i>	Short-Branded Darkwing	Native	NEx	NEx
Lycaenidae	<i>Allotinus strigatus malayanus</i>	Small Malayan Darkwing	Native	NEx	NEx
Lycaenidae	<i>Allotinus subviolaceus subviolaceus</i>	Blue Darkwing	Native	NEx	NEx
Lycaenidae	<i>Allotinus substrigosus substrigosus</i>		Native	NEx	NEx
Lycaenidae	<i>Allotinus horsfieldi permagnus</i>	Common Darkwing	Native	NEx	NEx
Lycaenidae	<i>Allotinus corbeti</i>		Native	Not Listed	NEx
Lycaenidae	<i>Logania marmorata damis</i>	Common Mottle	Native	Not Listed	LC
Lycaenidae	<i>Spalgis epius epius</i>	The Apefly	Native	Not Listed	LC
Lycaenidae	<i>Taraka mahanetra</i>		Native	NEx	NEx
Lycaenidae	<i>Liphyra brassolis abbreviata</i>	Moth Butterfly	Native	NEx	DD
Lycaenidae	<i>Spindasis syama terana</i>	Club/Black Banded Silverline	Native	Not Listed	LC
Lycaenidae	<i>Spindasis lohita senama</i>	Long Banded Silverline	Native	Not Listed	LC
Lycaenidae	<i>Curetis bulis stigmata</i>	Bright Sunbeam	Native	NEx	NEx
Lycaenidae	<i>Curetis sperthis sperthis</i>	Rounded Sunbeam	Native	NEx	NEx
Lycaenidae	<i>Curetis tagalica jopa</i>	Southern Sunbeam	Native	Not Listed	NEx
Lycaenidae	<i>Curetis regula</i>	Regular Sunbeam	Native	NEx	NEx
Lycaenidae	<i>Curetis santana malayica</i>	Malayan Sunbeam	Native	Not Listed	LC
Lycaenidae	<i>Curetis saronis sumatrana</i>	Sumatran Sunbeam	Native	Not Listed	LC
Lycaenidae	<i>Castalius rosimon rosimon</i>	Common Pierrot	Native	NEx	DD
Lycaenidae	<i>Caleta elna elvira</i>	Elbowed Pierrot	Native	Not Listed	LC
Lycaenidae	<i>Everes lacturnus rileyi</i>	Indian Cupid	Native	Not Listed	EN
Lycaenidae	<i>Lycaenopsis haraldus haraldus</i>	Felder's Hedge Blue	Native	Not Listed	NEx
Lycaenidae	<i>Neopithecops zalmora zalmora</i>	The Quaker	Native	Not Listed	LC
Lycaenidae	<i>Megisba malaya sikkima</i>	The Malayan	Uncertain	Not Listed	LC
Lycaenidae	<i>Acytolepis puspa lambi</i>	Common Hedge Blue	Native	Not Listed	LC
Lycaenidae	<i>Zizina otis lampa</i>	Lesser Grass Blue	Native	Not Listed	LC

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Lycaenidae	<i>Zizula hylax pygmaea</i>	Pygmy Grass Blue	Native	Not Listed	LC
Lycaenidae	<i>Zizeeria maha serica</i>	Pale Grass Blue	Native	Not Listed	LC
Lycaenidae	<i>Zizeeria karsandra</i>	Dark Grass Blue	Native	NEx	NEx
Lycaenidae	<i>Freyeria putli</i>	Jewelled Grass Blue	Uncertain	Not Listed	DD
Lycaenidae	<i>Chilades pandava pandava</i>	Cycad Blue	Native	Not Listed	LC
Lycaenidae	<i>Euchrysops cneus cneus</i>	Gram Blue	Native	Not Listed	LC
Lycaenidae	<i>Catochrysops strabo strabo</i>	Forget-Me-Not	Native	Not Listed	VU
Lycaenidae	<i>Catochrysops panormus exiguus</i>	Silver Forget-Me-Not	Native	Not Listed	LC
Lycaenidae	<i>Lampides boeticus</i>	Pea Blue	Native	Not Listed	LC
Lycaenidae	<i>Jamides bochus nabonassar</i>	Dark Caerulean	Native	Not Listed	LC
Lycaenidae	<i>Jamides alecto ageladas</i>	Metallic Caerulean	Native	NEx	LC
Lycaenidae	<i>Jamides celeno aelianus</i>	Common Caerulean	Native	Not Listed	LC
Lycaenidae	<i>Jamides malaccanus malaccanus</i>	Malaccan Caerulean	Uncertain	DD	DD
Lycaenidae	<i>Jamides caeruleus caeruleus</i>	Sky Blue	Native	DD	CR
Lycaenidae	<i>Jamides elpis pseudelpis</i>	Glistening Caerulean	Native	NEx	CR
Lycaenidae	<i>Jamides pura pura</i>	White Caerulean	Native	NEx	NEx
Lycaenidae	<i>Jamides philatus subditus</i>	Burmese Caerulean	Native	NEx	NEx
Lycaenidae	<i>Jamides abdul abdul</i>	Abdul Caerulean	Native	NEx	NEx
Lycaenidae	<i>Nacaduba pendleburyi pendleburyi</i>	Pendlebury's Caerulean	Native	NEx	DD
Lycaenidae	<i>Nacaduba hermus swatipa</i>	Pale Fourline Blue	Native	NEx	DD
Lycaenidae	<i>Nacaduba subperusia lysa</i>	Violet Fourline Blue	Native	NEx	DD
Lycaenidae	<i>Nacaduba russelli</i>	Dark Marginal Sixline Blue	Native	NEx	DD
Lycaenidae	<i>Nacaduba angusta kerriana</i>	White Fourline Blue	Native	NEx	DD
Lycaenidae	<i>Nacaduba sanaya elioti</i>	Jewel Fourline Blue	Native	NEx	LC
Lycaenidae	<i>Nacaduba pactolus odon</i>	Large Fourline Blue	Native	NEx	LC
Lycaenidae	<i>Nacaduba kurava nemana</i>	Transparent Sixline Blue	Native	NEx	LC
Lycaenidae	<i>Nacaduba pavana singapura</i>	Singapore Fourline Blue	Native	Not Listed	EN
Lycaenidae	<i>Nacaduba beroe neon</i>	Opaque Sixline Blue	Native	Not Listed	LC
Lycaenidae	<i>Nacaduba berenice icena</i>	Rounded Sixline Blue	Native	Not Listed	LC
Lycaenidae	<i>Nacaduba calauria malayica</i>	Dark Malayan Sixline Blue	Native	Not Listed	LC
Lycaenidae	<i>Nacaduba biocellata</i>	Two Spotted Line Blue	Uncertain	Not Listed	LC
Lycaenidae	<i>Ionolyce helicon merguiana</i>	Pointed Line Blue	Native	Not Listed	LC
Lycaenidae	<i>Prosotas lutea sivoka</i>	Banded Line Blue	Uncertain	Not Listed	DD
Lycaenidae	<i>Prosotas nora superdates</i>	Common Line-Blue	Native	Not Listed	LC
Lycaenidae	<i>Prosotas dubiosa lumpura</i>	Tailless Line Blue	Native	Not Listed	LC
Lycaenidae	<i>Prosotas aluta nanda</i>	Barred Line Blue	Uncertain	Not Listed	NT
Lycaenidae	<i>Una usta usta</i>	Singleton	Native	NEx	NEx
Lycaenidae	<i>Catopyrops ancyra aberrans</i>	Ancyra Blue	Uncertain	VU	LC
Lycaenidae	<i>Petrelaea dana dana</i>	Dingy Line Blue	Uncertain	Not Listed	LC
Lycaenidae	<i>Anthene emolus goberus</i>	Ciliate Blue	Native	Not Listed	LC
Lycaenidae	<i>Anthene lycaenina miya</i>	Pointed Ciliate Blue	Native	Not Listed	LC
Lycaenidae	<i>Arhopala lurida</i>	Lesser Disc Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala allata pandora</i>	Rosy Oakblue	Native	NEx	EN
Lycaenidae	<i>Arhopala delta</i>	Delta Dull Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala avathina avathina</i>	Lunulate Yellow Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala muta maranda</i>	Mutal Oakblue	Native	NEx	VU

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Lycaenidae	<i>Arhopala kurzi</i>		Native	NEx	NEx
Lycaenidae	<i>Arhopala aroa aroa</i>		Native	NEx	NEx
Lycaenidae	<i>Arhopala zamba zamba</i>	Zamba Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala vihara vihara</i>	Large Spotted Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala moorei busa</i>		Native	NEx	NEx
Lycaenidae	<i>Arhopala metamuta metamuta</i>	Bicolour Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala inornata inornata</i>		Native	NEx	NEx
Lycaenidae	<i>Arhopala democritus lycaenaria</i>	White Dot Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala alitaeus pardena</i> s	Purple Broken-Band Oakblue	Native	NEx	EN
Lycaenidae	<i>Arhopala agrata agrata</i>	de Niceville's Dull Oakblue	Native	NEx	DD
Lycaenidae	<i>Arhopala milleri</i>	Indigo Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala phanda phanda</i>	Golden Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala normani</i>	Norman's Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala barami penanga</i>	Wood's Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala agelastus agelastus</i>	Green-Edged Tailless Oakblue	Native	Not Listed	NEx
Lycaenidae	<i>Arhopala wildeyana wildeyana</i>	White Wavy Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala hypomuta hypomuta</i>	Violet Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala corinda acestes</i>	Ultramarine Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala ariel</i>	Chocolate Bushblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala achelous achelous</i>		Native	NEx	NEx
Lycaenidae	<i>Arhopala fulla intaca</i>	Spotless Oakblue	Native	NEx	NEx
Lycaenidae	<i>Arhopala centaurus nakula</i>	Centaur Oakblue	Native	Not Listed	LC
Lycaenidae	<i>Arhopala myrzala lammas</i>	Malayan Oakblue	Native	Not Listed	VU
Lycaenidae	<i>Arhopala aedias agnis</i>	Large Metallic Oakblue	Native	DD	EN
Lycaenidae	<i>Arhopala atosia malayana</i>	Tailed Disc Oakblue	Native	Not Listed	EN
Lycaenidae	<i>Arhopala epimuta epiala</i>	Common Disc Oakblue	Native	Not Listed	LC
Lycaenidae	<i>Arhopala amphimuta amphimuta</i>	Broad Yellow Oakblue	Native	NEx	NT
Lycaenidae	<i>Arhopala major major</i>	Major Yellow Oakblue	Native	DD	LC
Lycaenidae	<i>Arhopala antimuta antimuta</i>	Small Tailless Oakblue	Native	NEx	EN
Lycaenidae	<i>Arhopala pseudomuta pseudomuta</i>	Raffles' Oakblue	Native	NEx	NT
Lycaenidae	<i>Arhopala athada athada</i>	Vinous Oakblue	Native	Not Listed	LC
Lycaenidae	<i>Arhopala sublustris ridleyi</i>	Bright Oakblue	Native	NEx	NT
Lycaenidae	<i>Arhopala silhetensis adorea</i>	Sylhet Oakblue	Native	NEx	VU
Lycaenidae	<i>Arhopala eumolphus maxwelli</i>	Green Oakblue	Native	NEx	NT
Lycaenidae	<i>Arhopala aurea</i>	Golden Green Oakblue	Native	Not Listed	EN
Lycaenidae	<i>Arhopala trogon</i>	Green Suffused Oakblue	Native	Not Listed	EN
Lycaenidae	<i>Arhopala ammon ammon</i>	Lesser Malayan Oakblue	Native	Not Listed	EN
Lycaenidae	<i>Arhopala abseus abseus</i>	Aberrant Oakblue	Native	Not Listed	LC
Lycaenidae	<i>Flos diardi capeta</i>	Bifid Plushblue	Native	Not Listed	NT
Lycaenidae	<i>Flos fulgida singhapura</i>	Shining Plushblue	Native	Not Listed	NT
Lycaenidae	<i>Flos anniella anniella</i>	Darky Plushblue	Native	Not Listed	NT
Lycaenidae	<i>Flos apidanus saturatus</i>	Plain Plushblue	Native	Not Listed	LC
Lycaenidae	<i>Semanga superba deliciosa</i>	Red Edge	Native	Not Listed	LC
Lycaenidae	<i>Surendra vivarna amisena</i>	Acacia Blue	Native	Not Listed	LC
Lycaenidae	<i>Surendra florimel</i>	Steely Acacia Blue	Native	Not Listed	NEx
Lycaenidae	<i>Iraota timoleon wickii</i>	Silverstreak	Native	NEx	NEx

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Lycaenidae	<i>Iraota rochana boswelliana</i>	Scarce Silverstreak	Native	Not Listed	LC
Lycaenidae	<i>Iraota distanti distanti</i>	Spotted Silverstreak	Uncertain	CR	DD
Lycaenidae	<i>Catapaecilma major emas</i>	Gray Tinsel	Native	DD	DD
Lycaenidae	<i>Catapaecilma evansi evansi</i>	Golden Tinsel	Uncertain	Not Listed	DD
Lycaenidae	<i>Loxura atymnus fuconius</i>	Yamfly	Native	Not Listed	LC
Lycaenidae	<i>Eooxylides tharis distanti</i>	Branded Imperial	Native	Not Listed	LC
Lycaenidae	<i>Thamala marciana marciana</i>	Cardinal	Native	Not Listed	NEx
Lycaenidae	<i>Cheritra freja frigga</i>	Common Imperial	Native	Not Listed	LC
Lycaenidae	<i>Drupadia ravindra moorei</i>	Common Posy	Native	Not Listed	LC
Lycaenidae	<i>Drupadia rufotaenia rufotaenia</i>	Pygmy Posy	Native	CR	EN
Lycaenidae	<i>Drupadia theda thesmia</i>	Dark Posy	Native	Not Listed	VU
Lycaenidae	<i>Drupadia scaeva scaeva</i>	Blue Posy	Native	NEx	NEx
Lycaenidae	<i>Horaga albimacula albistigmata</i>	Brown Onyx	Native	NEx	DD
Lycaenidae	<i>Horaga chalcedonyx malaya</i>	Malayan Onyx	Native	NEx	DD
Lycaenidae	<i>Horaga onyx sardonyx</i>	Common Onyx	Native	NEx	VU
Lycaenidae	<i>Horaga syrinx maenala</i>	Ambon Onyx	Native	Not Listed	VU
Lycaenidae	<i>Dacalana vidura azyada</i>	Medium Branded Royal	Native	Not Listed	NEx
Lycaenidae	<i>Pratapa deva relata</i>	White Royal	Native	CR	EN
Lycaenidae	<i>Pratapa icetoides calculis</i>	Smoky Blue Royal	Native	NEx	NEx
Lycaenidae	<i>Tajuria cippus maxentius</i>	Peacock Royal	Native	Not Listed	LC
Lycaenidae	<i>Tajuria mantra mantra</i>	Felder's Royal	Native	Not Listed	NT
Lycaenidae	<i>Tajuria deudorix ingenii</i>	Flash Royal	Native	NEx	EN
Lycaenidae	<i>Tajuria dominus dominus</i>	Sovereign Royal	Native	Not Listed	NT
Lycaenidae	<i>Rachana jalindra burbona</i>	Banded Royal	Native	CR	VU
Lycaenidae	<i>Purlisa gigantea gigantea</i>	Giant Imperial	Native	NEx	NEx
Lycaenidae	<i>Jacoona anasuja anasuja</i>	Great Imperial	Native	DD	NT
Lycaenidae	<i>Neucheritra amrita amrita</i>	Grand Imperial	Native	Not Listed	CR
Lycaenidae	<i>Manto hypoleuca terana</i>	Green Imperial	Native	NEx	NT
Lycaenidae	<i>Mantoides gama gama</i>	Distant's Imperial	Native	NEx	NEx
Lycaenidae	<i>Remelana jangala travana</i>	Chocolate Royal	Native	Not Listed	LC
Lycaenidae	<i>Pseudotajuria donatana</i>	Golden Royal	Native	CR	VU
Lycaenidae	<i>donatana</i>				
Lycaenidae	<i>Ancema blanka blanka</i>	Silver Royal	Native	CR	VU
Lycaenidae	<i>Hypolycaena thecloides thecloides</i>	Dark Tit	Native	Not Listed	LC
Lycaenidae	<i>Hypolycaena erylus teatus</i>	Common Tit	Native	Not Listed	LC
Lycaenidae	<i>Zeltus amasa maximinianus</i>	Fluffy Tit	Native	Not Listed	LC
Lycaenidae	<i>Deudorix epijarbas cinnabarus</i>	Cornelian	Native	Not Listed	LC
Lycaenidae	<i>Deudorix elioti</i>	Eliot's Cornelian	Native	Not Listed	NT
Lycaenidae	<i>Deudorix staudingeri</i>	Large Cornelian	Native	NEx	DD
Lycaenidae	<i>Drina cowani</i>		Native	NEx	NEx
Lycaenidae	<i>Drina maneia</i>	Blue Yam	Native	Not Listed	NEx
Lycaenidae	<i>Virachola subguttata malaya</i>	Spotted Guava Blue	Native	NEx	DD
Lycaenidae	<i>Virachola kessuma deliochus</i>	Pitcher Blue	Native	Not Listed	EN
Lycaenidae	<i>Sinthusa nasaka amba</i>	Narrow Spark	Uncertain	Not Listed	NT
Lycaenidae	<i>Bindahara phocides phocides</i>	The Plane	Native	Not Listed	NT
Lycaenidae	<i>Bullis buto cowani</i>	Baby Royal	Native	NEx	NEx
Lycaenidae	<i>Rapala abnormis abnormis</i>		Native	NEx	NEx
Lycaenidae	<i>Rapala damona</i>	Malayan Red Flash	Native	NEx	DD

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Lycaenidae	<i>Rapala cowani</i>		Native	NEx	DD
Lycaenidae	<i>Rapala domitia domitia</i>	Yellow Flash	Native	Not Listed	NT
Lycaenidae	<i>Rapala suffusa barthema</i>	Suffused Flash	Native	Not Listed	NT
Lycaenidae	<i>Rapala pheretima sequeira</i>	Copper Flash	Native	Not Listed	LC
Lycaenidae	<i>Rapala dieneces dieneces</i>	Scarlet Flash	Native	Not Listed	LC
Lycaenidae	<i>Rapala iarbus iarbus</i>	Common Red Flash	Native	Not Listed	LC
Lycaenidae	<i>Rapala manea chozeba</i>	Slate Flash	Native	Not Listed	LC
Lycaenidae	<i>Rapala varuna orseis</i>	Indigo Flash	Native	Not Listed	LC
Lycaenidae	<i>Araotes lapithis uruwela</i>	The Witch	Native	NEx	NEx
Lycaenidae	<i>Sithon nedymond nedymond</i>	The Plush	Native	Not Listed	NEx
Hesperiidae	<i>Bibasis etelka</i>	Great Orange Awlet	Native	Not Listed	NT
Hesperiidae	<i>Bibasis harisa consobrina</i>	Orange Awlet	Native	Not Listed	LC
Hesperiidae	<i>Bibasis sena uniformis</i>	Orange-Tail Awl	Uncertain	Not Listed	NT
Hesperiidae	<i>Bibasis oedipodea oedipodea</i>	Branded Orange Awlet	Native	Not Listed	NEx
Hesperiidae	<i>Hasora chromus chromus</i>	Common Banded Awl	Native	Not Listed	LC
Hesperiidae	<i>Hasora taminatus malayana</i>	White Banded Awl	Native	Not Listed	LC
Hesperiidae	<i>Hasora schoenherr chuza</i>	Yellow Banded Awl	Native	Not Listed	LC
Hesperiidae	<i>Hasora badra badra</i>	Common Awl	Native	Not Listed	LC
Hesperiidae	<i>Hasora vitta vitta</i>	Plain Banded Awl	Native	Not Listed	LC
Hesperiidae	<i>Hasora lizetta</i>		Native	NEx	NEx
Hesperiidae	<i>Badamia exclamationis</i>	Brown Awl	Native	Not Listed	NT
Hesperiidae	<i>Choaspes plateni caudatus</i>	Yellow Tailed Awking	Native	NEx	NEx
Hesperiidae	<i>Choaspes subcaudatus crawfurdii</i>	Lobed Awking	Native	NEx	NEx
Hesperiidae	<i>Capila phanaeus ferrea</i>	Fulvous Dawnfly	Native	NEx	NEx
Hesperiidae	<i>Tapena thwaitesi bornea</i>	Dark Flat	Uncertain	EN	VU
Hesperiidae	<i>Odina hieroglyphica ortina</i>	Hieroglyphic Flat	Native	Not Listed	NT
Hesperiidae	<i>Celaenorhinus asmara asmara</i>	White Banded Flat	Native	NEx	CR
Hesperiidae	<i>Pseudocoladenia dan dhyana</i>	Fulvous Pied Flat	Uncertain	Not Listed	NT
Hesperiidae	<i>Gerosis limax dirae</i>	Black and White Flat	Native	Not Listed	DD
Hesperiidae	<i>Gerosis tristis</i>		Native	NEx	DD
Hesperiidae	<i>Gerosis phisara phisara</i>	Variable White Flat	Uncertain	Not Listed	DD
Hesperiidae	<i>Tagiades japetus atticus</i>	Common Snow Flat	Native	Not Listed	LC
Hesperiidae	<i>Tagiades gana gana</i>	Large Snow Flat	Native	Not Listed	LC
Hesperiidae	<i>Tagiades ultra</i>	Ultra Snow Flat	Native	Not Listed	LC
Hesperiidae	<i>Tagiades calligana</i>	Malayan Snow Flat	Native	Not Listed	NT
Hesperiidae	<i>Mooreana trichoneura trichoneura</i>	Yellow Flat	Uncertain	Not Listed	EN
Hesperiidae	<i>Odontoptilum angulatum angulatum</i>	Chestnut Angle	Native	Not Listed	NT
Hesperiidae	<i>Ampittia dioscorides camertes</i>	Bush Hopper	Native	Not Listed	LC
Hesperiidae	<i>Halpe insignis</i>	White Fringed Ace	Native	Not Listed	NEx
Hesperiidae	<i>Halpe elana</i>	Narrow Banded Ace	Native	NEx	NEx
Hesperiidae	<i>Halpe ormenes vilasina</i>	Dark Banded Ace	Native	Not Listed	VU
Hesperiidae	<i>Halpe porus</i>	Moore's Ace	Uncertain	Not Listed	DD
Hesperiidae	<i>Iambrix salsala salsala</i>	Chestnut Bob	Native	Not Listed	LC
Hesperiidae	<i>Iambrix stellifer</i>	Starry Bob	Native	Not Listed	LC
Hesperiidae	<i>Idmon distanti</i>	Spotless Bob	Native	NEx	NEx
Hesperiidae	<i>Idmon obliquans obliquans</i>	Small Red Bob	Native	NEx	NEx
Hesperiidae	<i>Psolos fuligo fuligo</i>	Coon	Native	Not Listed	NEx

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Hesperiidae	<i>Astictopterus jama jama</i>	Forest Hopper	Native	Not Listed	EN
Hesperiidae	<i>Ancistroides nigrita maura</i>	Chocolate Demon	Native	Not Listed	LC
Hesperiidae	<i>Ancistroides gemmifer gemmifer</i>	Gem Red Demon	Native	Not Listed	NEx
Hesperiidae	<i>Notocrypta paralyos varians</i>	Banded Demon	Native	Not Listed	LC
Hesperiidae	<i>Notocrypta clavata clavata</i>	Clavated Banded Demon	Native	NEx	NEx
Hesperiidae	<i>Udaspes folus</i>	Grass Demon	Native	Not Listed	LC
Hesperiidae	<i>Suastus gremius gremius</i>	Palm Bob	Uncertain	Not Listed	LC
Hesperiidae	<i>Suastus everyx everyx</i>	White Palm Bob	Uncertain	EN	NT
Hesperiidae	<i>Zographetus doxus</i>	Spotted Flitter	Native	Not Listed	NT
Hesperiidae	<i>Zographetus ogygia ogygia</i>	Purple Spotted Flitter	Native	NEx	VU
Hesperiidae	<i>Zographetus rama</i>		Native	NEx	NEx
Hesperiidae	<i>Hyarotis adrastus praba</i>	Tree Flitter	Native	Not Listed	LC
Hesperiidae	<i>Hyarotis microsticta</i>	White Club Flitter	Uncertain	Not Listed	DD
Hesperiidae	<i>Quedara monteithi monteithi</i>	Dubious Bar Flitter	Native	Not Listed	NT
Hesperiidae	<i>Isma protoclea obscura</i>	Ciliate Long-Horned Flitter	Native	Not Listed	DD
Hesperiidae	<i>Isma bononia bononia</i>	Lesser Long-Spot Filtter	Native	Not Listed	NEx
Hesperiidae	<i>Plastingia naga</i>	Chequered Lancer	Native	Not Listed	LC
Hesperiidae	<i>Plastingia pellonia</i>	Yellow Chequered Lancer	Native	Not Listed	VU
Hesperiidae	<i>Salanoemia tavoyana</i>	Yellow Streak Darter	Uncertain	Not Listed	DD
Hesperiidae	<i>Salanoemia sala</i>	Multi-Spotted Darter	Native	Not Listed	NEx
Hesperiidae	<i>Pemara pugnans</i>	Pugnacious Lancer	Native	Not Listed	VU
Hesperiidae	<i>Pyroneura latoia latoia</i>	Yellow Vein Lancer	Native	Not Listed	LC
Hesperiidae	<i>Pyroneura derna</i>	Spot-Pointed Lancer	Native	Not Listed	NEx
Hesperiidae	<i>Zela storeyi (or Zela zenon)</i>	Storey's Palmer	Uncertain	CR	EN
Hesperiidae	<i>Zela cowani</i>	Cowan's Palmer	Native	NEx	NEx
Hesperiidae	<i>Gangara thyrsis thyrsis</i>	Giant Redeye	Native	Not Listed	VU
Hesperiidae	<i>Gangara lebadea lebadea</i>	Banded Redeye	Native	NEx	EN
Hesperiidae	<i>Matapa aria</i>	Common Redeye	Native	Not Listed	LC
Hesperiidae	<i>Erionota torus</i>	Giant Banana Skipper	Native	Not Listed	LC
Hesperiidae	<i>Erionota thrax thrax</i>	Banana Skipper	Native	Not Listed	LC
Hesperiidae	<i>Erionota acroleuca apicalis</i>	White Tipped Banana Skipper	Native	Not Listed	LC
Hesperiidae	<i>Erionota sybirita</i>	Sybarite Skipper	Native	Not Listed	NEx
Hesperiidae	<i>Unkana ambasa batara</i>	Hoary Palmer	Native	Not Listed	LC
Hesperiidae	<i>Hidari irava</i>	Coconut Skipper	Native	Not Listed	NT
Hesperiidae	<i>Eetion elia</i>	White Spot Palmer	Native	Not Listed	VU
Hesperiidae	<i>Acerbas anthea anthea</i>	White Palmer	Native	Not Listed	NEx
Hesperiidae	<i>Pirdana hyela rudolphii</i>	Green Striped Palmer	Native	Not Listed	NEx
Hesperiidae	<i>Taractrocera ardonia lamia</i>	Spotted Grass Dart	Native	Not Listed	VU
Hesperiidae	<i>Taractrocera archias quinta</i>	Yellow Grass Dart	Uncertain	Not Listed	LC
Hesperiidae	<i>Oriens gola pseudolus</i>	Common Dartlet	Native	Not Listed	LC
Hesperiidae	<i>Oriens paragola</i>	Malay Dartlet	Uncertain	Not Listed	LC
Hesperiidae	<i>Potanthus omaha omaha</i>	Lesser Dart	Native	Not Listed	LC
Hesperiidae	<i>Potanthus trachala tytleri</i>	Detached Dart	Native	NEx	LC
Hesperiidae	<i>Potanthus serina</i>	Large Dart	Native	NEx	LC
Hesperiidae	<i>Potanthus juno juno</i>	Overlapped Dart	Native	NEx	DD
Hesperiidae	<i>Potanthus confucius dushta</i>	Confucian Dart	Native	NEx	NEx

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Hesperiidae	<i>Potanthus ganda ganda</i>	Ganda Dart	Uncertain	Not Listed	LC
Hesperiidae	<i>Cephrenes acalle niasicus</i>	Plain Palm Dart	Native	NEx	VU
Hesperiidae	<i>Cephrenes trichopepla</i>	Yellow Palm Dart	Uncertain	Not Listed	LC
Hesperiidae	<i>Telicota colon stinga</i>	Common Palm Dart	Native	NEx	LC
Hesperiidae	<i>Telicota besta bina</i>	Besta Palm Dart	Native	Not Listed	LC
Hesperiidae	<i>Telicota augias augias</i>	Palm Dart	Native	Not Listed	VU
Hesperiidae	<i>Telicota linna</i>	Linna Palm Dart	Uncertain	Not Listed	NT
Hesperiidae	<i>Borbo cinnara</i>	Formosan Swift	Native	NEx	LC
Hesperiidae	<i>Parnara bada bada</i>	Ceylon Swift	Native	NEx	DD
Hesperiidae	<i>Parnara ganga</i>	Continental Swift	Native	NEx	DD
Hesperiidae	<i>Pelopidas mathias mathias</i>	Small Branded Swift	Native	Not Listed	LC
Hesperiidae	<i>Pelopidas agna agna</i>	Bengal Swift	Native	NEx	LC
Hesperiidae	<i>Pelopidas assamensis</i>	Great Swift	Uncertain	Not Listed	VU
Hesperiidae	<i>Pelopidas conjunctus conjunctus</i>	Conjoined Swift	Uncertain	Not Listed	NT
Hesperiidae	<i>Polytremis lubricans lubricans</i>	Contiguous Swift	Native	Not Listed	LC
Hesperiidae	<i>Baoris farri farri</i>	Bamboo Paintbrush Swift	Native	Not Listed	LC
Hesperiidae	<i>Baoris oceia</i>	Paintbrush Swift	Native	Not Listed	LC
Hesperiidae	<i>Caltoris cormasa</i>	Full Stop Swift	Native	Not Listed	LC
Hesperiidae	<i>Caltoris bromus bromus</i>	Extra Spot Swift	Uncertain	Not Listed	DD
Hesperiidae	<i>Caltoris philippina philippina</i>	Philippine Swift	Native	Not Listed	VU
Hesperiidae	<i>Caltoris malaya</i>	Malayan Swift	Native	NEx	NT

Checklist of Moth Species with their Category of Threat Status for Singapore

Prepared by Anuj Jain, Jerome Chua, Gan Cheong Wee

Family	TAXON NAME	Authority	Common Name	RDB2	RDB3
Erebidae	<i>Achaea janata</i>	Linnaeus,1758	Castor Semi-Looper	Not Listed	LC
Erebidae	<i>Achaea serva</i>	Fabricius,1775		Not Listed	LC
Erebidae	<i>Amata huebneri</i>	Boisduval,1828	Hubner's Wasp Moth	Not Listed	LC
Erebidae	<i>Anomis albipunctula</i>	Hampson		Not Listed	VU
Erebidae	<i>Anomis cupienda</i>	Swinhoe,1903		Not Listed	VU
Erebidae	<i>Arctornis dorsolineatus</i>	Holloway,1999		Not Listed	NT
Erebidae	<i>Arctornis egerina</i>	Swinhoe,1893		Not Listed	NT
Lasiocampidae	<i>Arguda rosemariae</i>	Holloway,1987		Not Listed	NT
Erebidae	<i>Asota caricae</i>	Fabricius,1775	Tropical Tiger Moth	Not Listed	LC
Erebidae	<i>Asota plana</i>	Walker,1854		Not Listed	LC
Erebidae	<i>Asota subsimilis</i>	Walker,1864		Not Listed	LC
Saturniidae	<i>Attacus atlas</i>	Linnaeus,1758	Atlas Moth	Not Listed	LC
Erebidae	<i>Avitta bracteola</i>	Holloway,1976		Not Listed	VU
Erebidae	<i>Avitta guttulosa</i>	Swinhoe,1900		Not Listed	VU
Erebidae	<i>Avittonia albidentata</i>	Hampson,1926		Not Listed	NT
Noctuidae	<i>Bagada labi</i>	Holloway,1989		Not Listed	NT
Erebidae	<i>Bamra albicola</i>	Walker,1858		Not Listed	NT
Erebidae	<i>Bematha extensa</i>	Walker,1865		Not Listed	LC
Cossidae	<i>Bergaris lutescens</i>	Roepke,1957		Not Listed	NT
Noctuidae	<i>Borbotana nivifascia</i>	Walker,1858		Not Listed	VU
Erebidae	<i>Brontypena ochrocuprea</i>	Pagenstecher,1894		Not Listed	VU
Erebidae	<i>Brunia antica</i>	Walker,1854		Not Listed	LC
Geometridae	<i>Bulonga schistacearia</i>	Walker,1859		Not Listed	NT
Erebidae	<i>Calliteara horsfieldii</i>	Saunders,1851	Horsfield's Tussock Moth	Not Listed	LC
Noctuidae	<i>Callopistria wallacei</i>	Felder,1874		Not Listed	VU
Limacodidae	<i>Cania striola</i>	Hering,1931		Not Listed	LC
Notodontidae	<i>Cerasana pagenstecheri</i>	Schintlmeister & Lourens,2010		Not Listed	LC
Erebidae	<i>Chalciope mygdon</i>	Cramer,1777	Triangular Striped Moth	Not Listed	LC
Zygaenidae	<i>Chalcosia coliadoides</i>	Walker,1862		Not Listed	NEx
Nolidae	<i>Chloriola gratissima</i>	Walker,1863		Not Listed	NT
Geometridae	<i>Chrysocraspeda argentimacula</i>	Holloway,1997		Not Listed	NT
Geometridae	<i>Chrysocraspeda phlogea</i>	Prout,1938		Not Listed	VU
Erebidae	<i>Claterna cydonia</i>	Cramer,1775		Not Listed	LC
Erebidae	<i>Corcobara angulipennis</i>	Moore,1894		Not Listed	VU
Geometridae	<i>Coremecis maculata</i>	Warren,1899		Not Listed	NT
Erebidae	<i>Creatonotos gangis</i>	Linnaeus,1763	Baphomet Moth	Not Listed	LC
Erebidae	<i>Creatonotos transiens</i>	Walker,1855	Clouded Tiger Moth	Not Listed	LC
Erebidae	<i>Crithote horridipes</i>	Walker,1864		Not Listed	LC
Crambidae	<i>Culladia hastiferalis</i>	Walker,1865		Not Listed	LC
Erebidae	<i>Cultripalpa lunulifera</i>	Hampson,1926		Not Listed	VU
Erebidae	<i>Cultripalpa partita</i>	Guenée,1852		Not Listed	EN
Zygaenidae	<i>Cyclosia inclusus</i>	Walker,1864		Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Zygaenidae	<i>Cyclosia pieridoides</i>	Herrich-Schäffer, 1854	False Idea Moth	Not Listed	LC
Erebidae	<i>Cyme reticulata</i>	C. Felder, 1861		Not Listed	LC
Sphingidae	<i>Daphnis nerii</i>	Linnaeus, 1758	Oleander Hawkmoth	Not Listed	LC
Erebidae	<i>Dasychira chekiangensis</i>	Collenette, 1938	Zhejiang Tussock Moth	Not Listed	LC
Erebidae	<i>Diascia hayesi</i>	Holloway, 1976		Not Listed	VU
Geometridae	<i>Dysphania subrepleta</i>	Walker, 1854		Not Listed	LC
Erebidae	<i>Egnasides rudmuna</i>	Swinhoe, 1905		Not Listed	LC
Sphingidae	<i>Elibia dolichus</i>	Westwood, 1847	Large Banded Hawkmoth	Not Listed	EN
Sphingidae	<i>Enpinanga borneensis</i>	Butler, 1879		Not Listed	LC
Erebidae	<i>Ercheia pulchrivenula</i>	Gaede, 1938		Not Listed	NT
Erebidae	<i>Erebus ephesperis</i>	Hübner, 1827		Not Listed	LC
Erebidae	<i>Eressa confinis</i>	Walker, 1854		Not Listed	LC
Erebidae	<i>Eublemma ignefusa</i>	Hampson, 1910		Not Listed	EN
Erebidae	<i>Eudocima phalonia</i>	Linnaeus, 1763	Common Fruit-piercing Moth	Not Listed	LC
Erebidae	<i>Eugnathia diagonalis</i>	Hampson, 1910		Not Listed	NT
Crambidae	<i>Eurrhyparodes tricoloralis</i>	Zeller, 1852		Not Listed	LC
Sphingidae	<i>Eurypteryx bhaga</i>	Moore, 1865		Not Listed	VU
Geometridae	<i>Fascellina viridicosta</i>	Holloway, 1993		Not Listed	NT
Eupterotidae	<i>Ganisa plana</i>	Walker, 1855		Not Listed	VU
Erebidae	<i>Gesonia obeditalis</i>	Walker, 1859		Not Listed	LC
Bombycidae	<i>Gunda subnotata</i>	Walker, 1859		Not Listed	NEx
Erebidae	<i>Hadennia kimae</i>	Holloway, 2008		Not Listed	NT
Erebidae	<i>Hamodes lutea</i>	Walker, 1863		Not Listed	NT
Crambidae	<i>Herpetogramma licarsialis</i>	Walker, 1859	Grass Webworm Moth	Not Listed	LC
Geometridae	<i>Heteralex rectilineata</i>	Guenée, 1857		Not Listed	LC
Crambidae	<i>Hoplisa xipharesalis</i>	Walker, 1859		Not Listed	NT
Erebidae	<i>Hulodes caranea</i>	Cramer, 1780		Not Listed	LC
Crambidae	<i>Hydriris ornatalis</i>	Duponchel, 1832	Ornate Hydriris Moth	Not Listed	LC
Erebidae	<i>Indiana citrona</i>	Hampson, 1907		Not Listed	NT
Erebidae	<i>Ischyja anna</i>	Swinhoe, 1902		Not Listed	NEx
Erebidae	<i>Ischyja ferrifracta</i>	Walker, 1864		Not Listed	VU
Geometridae	<i>Krananda semihyalina</i>	Moore, 1868		Not Listed	LC
Cosmopterigidae	<i>Labdia stibogramma</i>	Meyrick, 1924		Not Listed	VU
Crambidae	<i>Lamprosema tampiusalis</i>	Walker, 1859		Not Listed	LC
Erebidae	<i>Lopharthrum comprimens</i>	Walker, 1858		Not Listed	EN
Erebidae	<i>Lutzugia trigonalis</i>	Kobes, 1983		Not Listed	LC
Erebidae	<i>Lymantria faircloughi</i>	Holloway, 1999		Not Listed	NT
Uraniidae	<i>Lyssa zampa</i>	Butler, 1869	Tropical Swallowtail Moth	Not Listed	LC
Sphingidae	<i>Macroglossum multifascia</i>	Rothschild & Jordan, 1903		Not Listed	NT
Geometridae	<i>Maxates magnipuncta</i>	Prout, 1916		Not Listed	VU
Erebidae	<i>Mecodina leucosticta</i>	Hampson, 1926		Not Listed	NT
Erebidae	<i>Metaemene atrigutta</i>	Walker, 1862		Not Listed	LC
Crambidae	<i>Metoeca foederalis</i>	Guenée, 1854		Not Listed	LC
Geometridae	<i>Microcalicha punctimarginaria</i>	Leech, 1897		Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Erebidae	<i>Mocis undata</i>	Fabricius,1775	Brown-striped Semilooper	Not Listed	LC
Tortricidae	<i>Neocalyptis affinisana</i>	Walker,1863		Not Listed	LC
Erebidae	<i>Neochera inops</i>	Walker,1854		Not Listed	VU
Erebidae	<i>Neochera marmorea</i>	Walker,1856		Not Listed	NEx
Geometridae	<i>Nothomiza xanthocolona</i>	Meyrick,1897		Not Listed	VU
Erebidae	<i>Nyctemera lacticinia</i>	Cramer,1775		Not Listed	LC
Erebidae	<i>Oeonistis altica</i>	Linnaeus,1768		Not Listed	NT
Erebidae	<i>Olene mendosa</i>	Hübner,1823	Brown Tussock Moth	Not Listed	LC
Geometridae	<i>Organopoda perorbata</i>	Prout,1937		Not Listed	NT
Erebidae	<i>Orvasca subnotata</i>	Walker,1865		Not Listed	LC
Notodontidae	<i>Oxoia smaragdiplena</i>	Walker,1862		Not Listed	VU
Erebidae	<i>Pandesma quenavadi</i>	Guenée,1852		Not Listed	LC
Crambidae	<i>Parapoynx diminutalis</i>	Snellen,1880	Hydrilla Leafcutter Moth	Not Listed	LC
Geometridae	<i>Peratophyga xanthyala</i>	Hampson,1896		Not Listed	NT
Crambidae	<i>Peribona venosa</i>	Butler,1889		Not Listed	VU
Tineidae	<i>Phereoeca uterella</i>	Walsingham, 1897	Household Casebearer	Not Listed	LC
Gracillariidae	<i>Phylloconistis nepenthiae</i>	Hering,1931	Pitcher-plant Leaf-miner Moth	EN	DD
Zygaenidae	<i>Pidorus corculum</i>	Butler,1879		Not Listed	NEx
Erebidae	<i>Pilipectus cyclopis</i>	Hampson,1912		Not Listed	LC
Erebidae	<i>Pindara illibata</i>	Fabricius,1775		Not Listed	VU
Erebidae	<i>Platyja sumatrana</i>	Felder,1894		Not Listed	NT
Erebidae	<i>Plecoptera recta</i>	Pagenstecher,1886		Not Listed	NT
Tortricidae	<i>Polemograptis miltocosma</i>	Meyrick,1910		Not Listed	NT
Erebidae	<i>Poliofoca gebenna</i>	Swinhoe,1903		Not Listed	VU
Zygaenidae	<i>Pompelon marginata</i>	Guerin,1843		Not Listed	LC
Geometridae	<i>Protuliocnemis helpsi</i>	Holloway,1996		Not Listed	NT
Zygaenidae	<i>Psaphis camadeva</i>	Doubleday,1847		Not Listed	CR
Erebidae	<i>Pseudosphetta fissisigna</i>	Hampson,1926		Not Listed	VU
Erebidae	<i>Pterocyclophora ridleyi</i>	Hampson,1913		Not Listed	VU
Pterophoridae	<i>Pterophorus lacteipennis</i>	Walker,1864		Not Listed	LC
Nolidae	<i>Ptisciana seminivea</i>	Walker,1865		Not Listed	VU
Erebidae	<i>Rhesala imparata</i>	Walker,1858		Not Listed	LC
Geometridae	<i>Rhombocentra semipurpurea</i>	Warren,1897		Not Listed	LC
Erebidae	<i>Rhynchodina molybdota</i>	Hampson,1926		Not Listed	NT
Crambidae	<i>Sameodes cancellalis</i>	Zeller,1852	Banded Pearl	Not Listed	LC
Choreutidae	<i>Saptha beryllitis</i>	Meyrick,1910		Not Listed	LC
Choreutidae	<i>Saptha exanthista</i>	Meyrick,1910		Not Listed	LC
Erebidae	<i>Saroba pansa</i>	Swinhoe,1902		Not Listed	VU
Erebidae	<i>Schistorhynx lobata</i>	Prout,1925		Not Listed	NT
Geometridae	<i>Scopula divisaria</i>	Christoph,1893		Not Listed	NT
Drepanidae	<i>Scytalopteryx elongata</i>	Snellen,1889		Not Listed	NT
Erebidae	<i>Somena aurantiacoides</i>	Holloway,1999		Not Listed	EN
Erebidae	<i>Speiredonia mutabilis</i>	Fabricius,1794		Not Listed	VU
Noctuidae	<i>Spodoptera litura</i>	Fabricius,1775	Oriental Leafworm Moth	Not Listed	LC
Noctuidae	<i>Spodoptera pecten</i>	Guenée,1852		Not Listed	LC
Crambidae	<i>Spoladea recurvalis</i>	Fabricius,1775	Hawaiian Beet Webworm Moth	Not Listed	LC
Metarbelidae	<i>Squamura disciplaga</i>	Swinhoe,1901		Not Listed	EN
Erebidae	<i>Stenocarsia sthenoptera</i>	Swinhoe,1895		Not Listed	NT
Lasiocampidae	<i>Suana riemsdyki</i>	Heylaerts,1889		Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Erebidae	<i>Sundagrapha tenebrosa</i>	Swinhoe,1902		Not Listed	NT
Erebidae	<i>Syntomoides imao</i>	Cramer,1780	Handmaiden Moth	Not Listed	LC
Erebidae	<i>Talariga capacior</i>	Walker,1858		Not Listed	VU
Erebidae	<i>Tamba basiscipta</i>	Walker,1864		Not Listed	VU
Erebidae	<i>Tamsia hieroglyphica</i>	Swinhoe,1902		Not Listed	VU
Crambidae	<i>Tatobotys varanesalis</i>	Walker,1858	Striped Mangrove Moth	VU	DD
Callidulidae	<i>Tetragonus catamitus</i>	Geyer,1832	Common Butterfly Moth	Not Listed	LC
Erebidae	<i>Thyas coronata</i>	Fabricius,1775	Yellow Underwing	Not Listed	LC
Erebidae	<i>Tiruvaca hollowayi</i>	Kobes,1988		Not Listed	VU
Geometridae	<i>Traminda aventiaria</i>	Guenée,1857	Cross-line Wave Moth	Not Listed	LC
Geometridae	<i>Traminda mundissima</i>	Walker,1861		Not Listed	LC
Erebidae	<i>Trigonodes hyppasia</i>	Cramer,1779	Triangles Moth	Not Listed	LC
Erebidae	<i>Tropidtamba lepraota</i>	Hampson,1898		Not Listed	NT
Erebidae	<i>Veslema flavifrons</i>	Bucsek,2012		Not Listed	VU
Erebidae	<i>Xanthanomis xanthina</i>	Holloway & Zilli,2005		Not Listed	NT
Nolidae	<i>Xenochroa xanthia</i>	Hampson,1902		Not Listed	NT
Noctuidae	<i>Yepcalphis dilectissima</i>	Walker,1858		Not Listed	NT

Checklist of Odonata Species with their Category of Threat Status for Singapore

Prepared by Robin Ngiam Wen Jiang, Marcus F.C. Ng

Family	Species	Common Name	RDB2	RDB3
Argiolestidae	<i>Podolestes orientalis</i>	Blue-spotted Flatwing	CR	VU
Calopterygidae	<i>Echo modesta</i>	White-faced Clearwing	Not Listed	NEx
Calopterygidae	<i>Neurobasis chinensis</i>	Green Metalwing	NEx	NEx
Calopterygidae	<i>Vestalis amethystina</i>	Common Flashwing	Not Listed	VU
Calopterygidae	<i>Vestalis amoena</i>	Charming Flashwing	Not Listed	EN
Calopterygidae	<i>Vestalis gracilis</i>	Plain Flashwing	Not Listed	CR
Chlorocyphidae	<i>Libellago aurantiaca</i>	Fiery Gem	Not Listed	CR
Chlorocyphidae	<i>Libellago hyalina</i>	Clearwing Gem	CR	CR
Chlorocyphidae	<i>Libellago lineata</i>	Golden Gem	Not Listed	LC
Chlorocyphidae	<i>Libellago stigmatizans</i>	Orange-faced Gem	NEx	NEx
Coenagrionidae	<i>Aciagrion hisopa</i>	Blue Slim	CR	VU
Coenagrionidae	<i>Agriocnemis femina</i>	Variable Wisp	Not Listed	LC
Coenagrionidae	<i>Agriocnemis minima</i>	Marsh Wisp	Not Listed	CR
Coenagrionidae	<i>Agriocnemis nana</i>	Dwarf Wisp	CR	EN
Coenagrionidae	<i>Agriocnemis pygmaea</i>	Wandering Wisp	CR	LC
Coenagrionidae	<i>Amphicnemis bebar</i>	Bebar Wisp	Not Listed	CR
Coenagrionidae	<i>Amphicnemis gracilis</i>	Will-o-wisp	Not Listed	VU
Coenagrionidae	<i>Archibasis melanocysta</i>	Blue-nosed Sprite	CR	EN
Coenagrionidae	<i>Archibasis rebeccae</i>	Rebecca's Sprite	Not Listed	CR
Coenagrionidae	<i>Archibasis viola</i>	Violet Sprite	CR	LC
Coenagrionidae	<i>Argiocnemis rubescens rubeola</i>	Variable Sprite	CR	LC
Coenagrionidae	<i>Ceriagrion cerinorubellum</i>	Ornate Coraltail	Not Listed	LC
Coenagrionidae	<i>Ceriagrion chaoi</i>	Fiery Coraltail	Not Listed	VU
Coenagrionidae	<i>Ischnura senegalensis</i>	Common Bluetail	Not Listed	LC
Coenagrionidae	<i>Mortonagrion aborense</i>	Blue Midget	Not Listed	CR
Coenagrionidae	<i>Mortonagrion arthuri</i>	Arthur's Midget	Not Listed	VU
Coenagrionidae	<i>Mortonagrion falcatum</i>	Hooked Midget	CR	CR
Coenagrionidae	<i>Pericnemis stictica</i>	Dryad	CR	VU
Coenagrionidae	<i>Pseudagrion australasiae</i>	Look-alike Sprite	Not Listed	VU
Coenagrionidae	<i>Pseudagrion microcephalum</i>	Blue Sprite	Not Listed	LC
Coenagrionidae	<i>Pseudagrion pruinatum</i>	Grey Sprite	CR	VU
Coenagrionidae	<i>Pseudagrion rubriceps</i>	Orange-faced Sprite	CR	NT
Coenagrionidae	<i>Teinobasis cryptica</i>	Cryptic Shadesprite	Not Listed	CR
Coenagrionidae	<i>Teinobasis ruficollis</i>	Red-tailed Sprite	CR	NT
Devadattidae	<i>Devadatta argyroides</i>	Malayan Grisette	Not Listed	EN
Euphaeidae	<i>Dysphaea dimidiata</i>	Black Velvetwing	NEx	NEx
Euphaeidae	<i>Euphaea impar</i>	Blue-sided Satinwing	Not Listed	LC
Lestidae	<i>Lestes praemorsus</i>	Crenulated Spreadwing	Not Listed	LC
Lestidae	<i>Orolestes wallacei</i>	Great Spreadwing	NEx	NEx
Lestidae	<i>Platylestes heterostylus</i>	Slender Spreadwing	CR	CR
Platycnemididae	<i>Coeliccia albicauda</i>	White-tailed Sylvan	CR	CR
Platycnemididae	<i>Coeliccia didyma</i>	Twin-spotted Sylvan	Not Listed	CR
Platycnemididae	<i>Coeliccia octagesima</i>	Telephone Sylvan	Not Listed	VU
Platycnemididae	<i>Copera marginipes</i>	Yellow Featherlegs	Not Listed	LC
Platycnemididae	<i>Copera vittata</i>	Variable Featherlegs	CR	VU
Platycnemididae	<i>Onychargia atrocyana</i>	Shorttail	Not Listed	LC

Family	Species	Common Name	RDB2	RDB3
Platycnemididae	<i>Prodasineura collaris</i>	Collared Threadtail	Not Listed	VU
Platycnemididae	<i>Prodasineura humeralis</i>	Orange-striped Threadtail	CR	LC
Platycnemididae	<i>Prodasineura interrupta</i>	Interrupted Threadtail	Not Listed	CR
Platycnemididae	<i>Prodasineura notostigma</i>	Crescent Threadtail	Not Listed	LC
Platystictidae	<i>Drepanosticta quadrata</i>	Singapore Shadowdamsel	Not Listed	VU
Aeshnidae	<i>Anax guttatus</i>	Emperor	Not Listed	LC
Aeshnidae	<i>Anax panybeus</i>	Arrow Emperor	Not Listed	LC
Aeshnidae	<i>Gynacantha basiguttata</i>	Spoon-tailed Duskhawker	Not Listed	VU
Aeshnidae	<i>Gynacantha bayadera</i>	Small Duskhawker	Not Listed	LC
Aeshnidae	<i>Gynacantha dohrni</i>	Spear-tailed Duskhawker	Not Listed	LC
Aeshnidae	<i>Gynacantha subinterrupta</i>	Dingy Duskhawker	Not Listed	LC
Aeshnidae	<i>Heliaeschna crassa</i>	Nighthawker	Not Listed	CR
Aeshnidae	<i>Heliaeschna simplicia</i>	Plain Nighthawker	Not Listed	CR
Aeshnidae	<i>Heliaeschna uninervulata</i>	Lesser Nighthawker	Not Listed	NT
Aeshnidae	<i>Oligoaeschna amata</i>	Paddletail	NEx	CR
Aeshnidae	<i>Oligoaeschna foliacea</i>	Leaftail	Not Listed	CR
Aeshnidae	<i>Tetraclanthagyna plagiata</i>	Giant Hawker	CR	VU
Corduliidae	<i>Hemicordulia tenera</i>	Emerald	CR	VU
Gomphidae	<i>Acrogomphus malayanus</i>	Malayan Hooktail	Not Listed	VU
Gomphidae	<i>Burmagomphus arthuri</i>	Arthur's Clubtail	Not Listed	CR
Gomphidae	<i>Burmagomphus divaricatus</i>	Splayed Clubtail	CR	NEx
Gomphidae	<i>Burmagomphus plagiatus</i>	Lesser Splayed Clubtail	CR	NEx
Gomphidae	<i>Heliogomphus kelantanensis</i>	Malayan Grapptail	CR	CR
Gomphidae	<i>Ictinogomphus decoratus</i>	Common Flangetail	Not Listed	LC
Gomphidae	<i>Leptogomphus risi</i>	Ris' Clubtail	CR	VU
Gomphidae	<i>Macrogomphus quadratus</i>	Forktail	Not Listed	VU
Gomphidae	<i>Merogomphus femoralis</i>	Malayan Spineleg	Not Listed	CR
Gomphidae	<i>Microgomphus chelifer</i>	Tiny Sheartail	CR	VU
Gomphidae	<i>Paragomphus capricornis</i>	Banded Hooktail	CR	EN
Libellulidae	<i>Acisoma panorpoides</i>	Trumpet Tail	Not Listed	LC
Libellulidae	<i>Aethriamanta aethra</i>	Blue Adjutant	CR	LC
Libellulidae	<i>Aethriamanta brevipennis</i>	Scarlet Adjutant	Not Listed	LC
Libellulidae	<i>Aethriamanta gracilis</i>	Pond Adjutant	Not Listed	LC
Libellulidae	<i>Agrionoptera insignis</i>	Grenadier	Not Listed	LC
Libellulidae	<i>Agrionoptera sexlineata</i>	Handsome Grenadier	CR	LC
Libellulidae	<i>Brachydiplax chalybea</i>	Blue Dasher	Not Listed	LC
Libellulidae	<i>Brachydiplax farinosa</i>	Black-tailed Dasher	CR	EN
Libellulidae	<i>Brachygonia oculata</i>	Pixie	NEx	EN
Libellulidae	<i>Brachythemis contaminata</i>	Common Amberwing	Not Listed	LC
Libellulidae	<i>Camacinia gigantea</i>	Sultan	CR	LC
Libellulidae	<i>Chalybiothemis fluviatilis</i>	Green-eyed Percher	CR	VU
Libellulidae	<i>Cratilla lineata</i>	Lined Forest Skimmer	CR	LC
Libellulidae	<i>Cratilla metallica</i>	Dark-tipped Forest Skimmer	Not Listed	LC
Libellulidae	<i>Crocothemis servilia</i>	Common Scarlet	Not Listed	LC
Libellulidae	<i>Diplacodes nebulosa</i>	Black-tipped Percher	Not Listed	LC
Libellulidae	<i>Diplacodes trivialis</i>	Blue Percher	Not Listed	LC
Libellulidae	<i>Hydrobasileus croceus</i>	Water Monarch	Not Listed	LC
Libellulidae	<i>Indothemis carnatica</i>	White-tipped Demon	Not Listed	CR
Libellulidae	<i>Indothemis limbata</i>	Restless Demon	CR	VU

Family	Species	Common Name	RDB2	RDB3
Libellulidae	<i>Lathrecista asiatica</i>	Scarlet Grenadier	Not Listed	LC
Libellulidae	<i>Lyriothemis cleis</i>	Bombardier	Not Listed	EN
Libellulidae	<i>Macrodiplax cora</i>	Coastal Glider	Not Listed	LC
Libellulidae	<i>Nannophya pygmaea</i>	Scarlet Pygmy	Not Listed	LC
Libellulidae	<i>Nesoxenia lineata</i>	Striped Grenadier	CR	LC
Libellulidae	<i>Neurothemis disparilis</i>	Rare Parasol	NEx	NEx
Libellulidae	<i>Neurothemis fluctuans</i>	Common Parasol	Not Listed	LC
Libellulidae	<i>Onychothemis testacea</i>	Riverhawk	Not Listed	EN
Libellulidae	<i>Orchithemis pruinans</i>	Blue Sentinel	Not Listed	CR
Libellulidae	<i>Orchithemis pulcherrima</i>	Variable Sentinel	Not Listed	LC
Libellulidae	<i>Orthetrum chrysostigma</i>	Spine-tufted Skimmer	Not Listed	LC
Libellulidae	<i>Orthetrum glaucum</i>	Common Blue Skimmer	Not Listed	LC
Libellulidae	<i>Orthetrum luzonicum</i>	Slender Blue Skimmer	Not Listed	LC
Libellulidae	<i>Orthetrum sabina</i>	Variegated Green Skimmer	Not Listed	LC
Libellulidae	<i>Orthetrum testaceum</i>	Scarlet Skimmer	Not Listed	LC
Libellulidae	<i>Pantala flavescens</i>	Wandering Glider	Not Listed	LC
Libellulidae	<i>Pornothemis starrei</i>	Mangrove Marshal	Not Listed	NT
Libellulidae	<i>Potamarcha congener</i>	Common Chaser	Not Listed	LC
Libellulidae	<i>Pseudothemis jorina</i>	Banded Skimmer	CR	LC
Libellulidae	<i>Raphismia bispina</i>	Mangrove Dwarf	Not Listed	NT
Libellulidae	<i>Rhodothemis rufa</i>	Common Redbolt	Not Listed	LC
Libellulidae	<i>Rhyothemis fulgens</i>	Small Bronze Flutterer	Not Listed	NEx
Libellulidae	<i>Rhyothemis obsolescens</i>	Bronze Flutterer	CR	LC
Libellulidae	<i>Rhyothemis phyllis</i>	Yellow-barred Flutterer	Not Listed	LC
Libellulidae	<i>Rhyothemis triangularis</i>	Sapphire Flutterer	Not Listed	LC
Libellulidae	<i>Risiophlebia dohrni</i>	Potbellied Elf	CR	EN
Libellulidae	<i>Tetrathemis hyalina</i>	Elf	Not Listed	EN
Libellulidae	<i>Tholymis tillarga</i>	White-barred Duskhawk	Not Listed	LC
Libellulidae	<i>Tramea transmarina euryale</i>	Saddlebag Glider	CR	LC
Libellulidae	<i>Trithemis aurora</i>	Crimson Dropwing	Not Listed	LC
Libellulidae	<i>Trithemis festiva</i>	Indigo Dropwing	Not Listed	LC
Libellulidae	<i>Trithemis pallidinervis</i>	Dancing Dropwing	Not Listed	LC
Libellulidae	<i>Tyriobapta torrida</i>	Treehugger	Not Listed	LC
Libellulidae	<i>Urothemis abbotti</i>	Rare Basker	CR	NEx
Libellulidae	<i>Urothemis signata insignata</i>	Scarlet Basker	Not Listed	LC
Libellulidae	<i>Zyxomma obtusum</i>	White Duskdarter	Not Listed	CR
Libellulidae	<i>Zyxomma petiolatum</i>	Slender Duskdarter	Not Listed	LC
Macromiidae	<i>Epophthalmia vittigera</i>	Pond Cruiser	Not Listed	LC
Macromiidae	<i>Macromia cincta</i>	Stream Cruiser	Not Listed	EN
Macromiidae	<i>Macromia cydippe</i>	Lesser Stream Cruiser	Not Listed	EN
Synthemistidae	<i>Idionyx yolanda</i>	Shadowdancer	CR	LC

Checklist of Orthoptera Species with their Category of Threat Status for Singapore

Prepared by Tan Ming Kai

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Tettigoniidae	<i>Asiophlugis</i>	<i>temasek</i>	Gorochov & Tan, 2011	Temasek Crystal Predatory Katydid	Not Listed	EN
Trigonidiidae	<i>Svistella</i>	<i>chekjawa</i>	Tan & Robillard, 2013	Chek Jawa's Mangrove Sword- tailed Cricket	Not Listed	CR
Gryllotalpidae	<i>Gryllotalpa</i>	<i>fulvipes</i>	Saussure, 1877	Yellow-legged Mole Cricket	EN	VU
Gryllidae	<i>Singapuriola</i>	<i>separata</i>	Gorochov & Tan, 2012	Singapore's Feather- winged Cricket	Not Listed	VU
Tettigoniidae	<i>Glenophisis</i>	<i>singapura</i>	Tan, 2012	Spectacular Spider- legged Katydid	Not Listed	CR

Checklist of Phasmida Species with their Category of Threat Status for Singapore

Prepared by Francis Seow-Choen

Family	Genus	Species	Authority	Common Name	Origin	RDB2	RDB3
Diapheromeridae	<i>Pseudobactricia</i>	<i>ridleyi</i>	Brock, 1999	Ridley's Stick	Uncertain	NEx	NA
Lonchodidae	<i>Baculofractum</i>	<i>insigne</i>	(Brunner, 1907)	Broken Twig	Native	VU	CR
Lonchodidae	<i>Carausius</i>	<i>transiliens</i>	Brunner, 1907	Knob-back Stick	Native	Not Listed	NT
Lonchodidae	<i>Lonchodes</i>	<i>brevipes</i>	Gray, 1835	Gray's Malayan Stick	Native	Not Listed	LC
Lonchodidae	<i>Staelonchodes</i>	<i>geniculatus</i>	(Gray, 1835)	Orange-kneed Stick	Native	Not Listed	NT
Lonchodidae	<i>Stheneboea</i>	<i>malaya</i>	Stål, 1875	Warty-legged Stick	Native	Not Listed	NT
Lonchodidae	<i>Acacus</i>	<i>sarawacus</i> <i>sinkiebensis</i>	(Wood-Mason, 1877)	White-kneed Stick	Native	VU	NT
Lonchodidae	<i>Anarchodes</i>	<i>annulipes</i>	(Gray, 1835)	Yellow-and-Brown Stick	Native	Not Listed	NEx
Lonchodidae	<i>Asceles</i>	<i>malaccae</i>	(Saussure, 1868)	Hairy Asceles	Native	Not Listed	LC
Lonchodidae	<i>Asceles</i>	<i>rabihaiae</i>	Seow-Choen, 2021	Mottled Asceles	Native	Not Listed	LC
Lonchodidae	<i>Asceles</i>	<i>tanarata</i> <i>singapura</i>	Seow-Choen & Brock, 1999	Singapore Asceles	Native	Not Listed	LC
Lonchodidae	<i>Calvisia</i> (<i>Calvisia</i>)	<i>sangarius</i>	(Westwood, 1859)	Brown Knob-Neck	Native	NEx	NEx
Lonchodidae	<i>Calvisia</i> (<i>Conoicalvisia</i>)	<i>virbius virbius</i>	(Westwood, 1859)	Green Knob-Neck	Native	Not Listed	CR
Lonchodidae	<i>Diacanthoidea</i>	<i>diacanthos</i>	(Haan, 1842)	Spike Head Stick	Native	Not Listed	NEx
Lonchodidae	<i>Diacanthoidea</i>	<i>malaccensis</i>	(Kirby, 1904)	Cone Head Stick	Native	Not Listed	NEx
Lonchodidae	<i>Diardia</i>	<i>battak</i>	Redtenbacher, 1908	Thin-Spine Neck Stick	Native	Not Listed	CR
Lonchodidae	<i>Diesbachia</i>	<i>tamyris</i> <i>tamyris triumphalis</i>	(Westwood, 1859)	Spiny Flying Stick	Native	VU	EN
Lonchodidae	<i>Gargantuoidae</i>	<i>triumphalis</i>	Redtenbacher, 1908	Triumphant Giant	Native	VU	NT
Lonchodidae	<i>Lobonecroscia</i>	<i>subflava</i>	Brock & Seow-Choen, 2000	Lobe-Legged Stick	Native	VU	CR
Lonchodidae	<i>Lopaphus</i>	<i>brachypterus</i>	(Haan, 1842)	Short Winged Lopaphus	Native	VU	VU
Lonchodidae	<i>Lopaphus</i>	<i>iolas iolas</i>	(Westwood, 1859)	Round Winged Lopaphus	Native	Not Listed	NT
Lonchodidae	<i>Marmessoidea</i>	<i>rosea</i>	(Fabricius, 1793)	Yellow-Spotted Stick	Native	NEx	NEx
Lonchodidae	<i>Necroscia</i>	<i>connexa</i>	(Redtenbacher, 1908)	Rose-Wing Stick	Native	Not Listed	LC
Lonchodidae	<i>Necroscia</i>	<i>ingenua</i>	(Redtenbacher, 1908)	Green Flying Stick	Native	Not Listed	LC
Lonchodidae	<i>Necroscia</i>	<i>punctata</i>	(Gray, 1835)	Spotted Flying Stick	Native	Not Listed	LC

Family	Genus	Species	Authority	Common Name	Origin	RDB2	RDB3
Lonchodidae	<i>Necroscia</i>	<i>westwoodi</i>	Kirby, 1904	Westwood's Flying Stick	Native	Not Listed	VU
Lonchodidae	<i>Phaenopharos</i>	<i>struthioneus</i>	(Westwood, 1859)	Small-Red-Wings	Native	NEx	CR
Lonchodidae	<i>Planososibia</i>	<i>esacus</i>	(Westwood, 1859)	Banded Sosibia	Native	Not Listed	LC
Lonchodidae	<i>Planososibia</i>	<i>lysippus</i>	(Westwood, 1859)	Greater Sosibia	Native	Not Listed	LC
Lonchodidae	<i>Planososibia</i>	<i>tommykohi</i>	Seow-Choen, 2017	Tommy's Sosibia	Native	Not Listed	CR
Lonchodidae	<i>Singaporioidea</i>	<i>menepotolemus</i>	(Westwood, 1859)	Green-Legged Stick	Native	Not Listed	NT
Lonchodidae	<i>Sipyloidea</i>	<i>chlorotica</i>	Serville, 1838	Pink Winged Stick	Native	VU	LC
Lonchodidae	<i>Trachythorax</i>	sp.			Native	Not Listed	NE
Phasmatidae	<i>Ramulus</i>	<i>nematodea</i>	(Haan, 1842)	Great Thin Stick	Native	VU	LC
Phasmatidae	<i>Phobaeticus</i>	<i>serratus</i>	(Gray, 1835)	Giant Malayan Stick	Native	VU	NEx
Phasmatidae	<i>Eurycnema</i>	<i>versicolor</i>	Serville, 1838	Pink-Winged Green Giant	Non-Native	NEx	NA
Aschiphasmatidae	<i>Chlorobistus</i>	<i>xiuyuae</i>	Brock & Seow-Choen, 1999	Xiuyu's Abrosoma	Native	Not Listed	NT
Aschiphasmatidae	<i>Kerabistus</i> (<i>Kerabistus</i>)	<i>murphyi</i>	Seow-Choen, 2017	Murphy's Kerabistus	Native	Not Listed	CR
Aschiphasmatidae	<i>Presbistus</i>	<i>peleus</i>	(Gray, 1835)	Green-Striped Flying Stick	Native	Not Listed	LC
Heteropterygidae	<i>Orestes</i>	<i>draegeri</i>	Bresseel & Constant, 2018	Small Cigar Stick	Native	VU	LC
Heteropterygidae	<i>Planispectrum</i>	<i>bengalense</i>	(Redtenbacher, 1906)	Pygmy Stick	Native	VU	VU
Heteropterygidae	<i>Pylaemenes</i>	<i>mitratus</i>	(Redtenbacher, 1906)	Money Plant Stick	Native	Not Listed	LC
Heteropterygidae	<i>Haaniella</i>	<i>mecheli</i> <i>macroptera</i>	Hennemann, Conle, Brock & Seow-Choen, 2016	Spiny Brown Stick	Native	Not Listed	CR
Heteropterygidae	<i>Heteropteryx</i>	<i>dilatata</i>	(Parkinson, 1798)	Malayan Jungle Nymph	Native	CR	NEx
Phylliidae	<i>Cryptophyllum</i>	<i>chrisangi</i>	Seow-Choen, 2017	Chris Ang's Leaf Insect	Native	Not Listed	LC
Phylliidae	<i>Phyllium</i>	<i>hausleithneri</i>	Brock, 1999	Hausleithner's Leaf Insect	Uncertain	Not Listed	NA
Phylliidae	<i>Pulchriphyllum</i>	<i>bioculatum</i>	(Gray, 1832)	Gray's Leaf Insect	Native	VU	NT

Checklist of Spider Species with their Category of Threat Status for Singapore

Prepared by David J. Court, Joseph K.H. Koh

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Anapidae	<i>Pseudanapis</i>	<i>parocula</i>	(Simon, 1899)	Palp-less Dimpled Orb Weaver	Not Listed	DD
Anapidae	<i>Pseudanapis</i>	sp.		Palped Dimpled Orb Weaver	Not Listed	NE
Araneidae	<i>Acusilas</i>	<i>coccineus</i>	Simon, 1895	Brown Leaf-rolling Orb Weaver	Not Listed	DD
Anapidae	<i>Acusilas</i>	sp.			Not Listed	NE
Araneidae	<i>Anepision</i>	<i>depressum</i>	(Thorell, 1877)	Common Pizza Round-headed Spider	Not Listed	LC
Araneidae	<i>Anepision</i>	<i>maculatum</i>	(Thorell, 1897)	Spotted Round-headed Spider	Not Listed	DD
Araneidae	<i>Anepision</i>	<i>maritatum</i>	(O.Pickard-Cambridge, 1877)	Marble Anepision	Not Listed	LC
Araneidae	<i>Aoaraneus</i>	sp.		Green Orb Weaver	Not Listed	NE
Araneidae	<i>Arachnura</i>	<i>melanura</i>	Simon, 1867	Black Scorpion-tailed Spider	Not Listed	LC
Araneidae	<i>Arachnura</i>	sp.		Yellow-lined Scorpion-tailed Spider	Not Listed	NE
Araneidae	<i>Araneus</i>	<i>nox</i>	(Simon, 1877)	Leathery Garden Orb Weaver	Not Listed	LC
Araneidae	<i>Araneus</i>	sp. A		Yellow-striped Orb Weaver	Not Listed	NE
Araneidae	<i>Araneus</i>	sp. B		Marshmallow Orb Weaver	Not Listed	NE
Araneidae	<i>Araneus</i>	sp. C		White-spotted Orb Weaver	Not Listed	NE
Araneidae	<i>Araneus</i>	sp. D		Porphyron Orb Weaver	Not Listed	NE
Araneidae	<i>Argiope</i>	<i>aemula</i>	(Walckenaer, 1841)	Oval Silver-faced Spider	Not Listed	LC
Araneidae	<i>Argiope</i>	<i>catenulata</i>	(Doleschall, 1859)	Chained Silver-faced Spider	Not Listed	LC
Araneidae	<i>Argiope</i>	<i>dang</i>	Jäger & Praxaysombath, 2009	Red-capped Silver-faced Spider	Not Listed	DD
Araneidae	<i>Argiope</i>	<i>jinghongensis</i>	Yin, Peng & Wang, 1994	Jinghong Silver-faced Spider	Not Listed	DD
Araneidae	<i>Argiope</i>	<i>mangal</i>	Koh, 1991	Mangrove Silver-faced Spider	Not Listed	VU
Araneidae	<i>Argiope</i>	<i>pulchella</i>	Thorell, 1881	Beautiful Silver-faced Spider	Not Listed	DD
Araneidae	<i>Argiope</i>	<i>versicolor</i>	(Doleschall, 1859)	Multicoloured Silver-faced Spider	Not Listed	LC
Araneidae	<i>Bijoaraneus</i>	<i>legonensis</i>	(Grasshoff & Edmunds, 1979)	Giant Kidney Orb Weaver	Not Listed	DD
Araneidae	<i>Bijoaraneus</i>	<i>mitificus</i>	(Simon, 1886)	Kidney Garden Spider	Not Listed	LC
Araneidae	<i>Caerostris</i>	<i>sumatrana</i>	Strand, 1915	Sumatran Bark Spider	Not Listed	DD
Araneidae	<i>Caerostris</i>	sp.		White-faced Bark Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Araneidae	<i>Chorizopesoides</i>	<i>wulingensis</i>	(Yin, Wang & Xie, 1994)	Swollen-headed Orb Weaver	Not Listed	DD
Araneidae	<i>Cyclosa</i>	<i>bifida</i>	(Doleschall, 1859)	Long-bellied Cyclosa	Not Listed	LC
Araneidae	<i>Cyclosa</i>	<i>bulla</i>	Tanikawa & Petcharad, 2018	Door-knob Cyclosa	Not Listed	DD
Araneidae	<i>Cyclosa</i>	<i>confrega</i>	(Thorell, 1893)	Double-humped Cyclosa	Not Listed	DD
Araneidae	<i>Cyclosa</i>	<i>insulana</i>	(Costa, 1834)	Humpback Debris Spider	Not Listed	LC
Araneidae	<i>Cyclosa</i>	<i>mulmeinensis</i>	(Thorell, 1887)	Two-horned Debris spider	Not Listed	LC
Araneidae	<i>Cyclosa</i>	sp. A		Long-tailed Debris Spider	Not Listed	NE
Araneidae	<i>Cyphalonotus</i>	<i>sumatranus</i>	Simon, 1899	Sumatran Twig-legged Spider	Not Listed	DD
Araneidae	<i>Cyphalonotus</i>	sp. A		Twin Peaks Twig-legged Spider	Not Listed	NE
Araneidae	<i>Cyphalonotus</i>	sp. B		Round-humped Twig-legged Spider	Not Listed	NE
Araneidae	<i>Cyrtarachne</i>	<i>conica</i>	O. Pickard-Cambridge, 1901	Conical Spider	EN	VU
Araneidae	<i>Cyrtarachne</i>	<i>inaequalis</i>	Thorell, 1895	Double-humped Bird Dung Spider	Not Listed	LC
Araneidae	<i>Cyrtarachne</i>	<i>nagasakiensis</i>	Strand, 1918	Nagasaki Bird Dung Spider	Not Listed	DD
Araneidae	<i>Cyrtarachne</i>	sp.		Homer Simpson Bird Dung Spider	Not Listed	NE
Araneidae	<i>Cyrtophora</i>	<i>beccarii</i>	(Thorell, 1878)	Cotton Tent Spider	Not Listed	LC
Araneidae	<i>Cyrtophora</i>	<i>cicatrosa</i>	(Stoliczka, 1869)	Four-humped Tent Spider	Not Listed	DD
Araneidae	<i>Cyrtophora</i>	<i>cylindroides</i>	(Walckenaer, 1841)	Double-humped Yellow Tent Spider	Not Listed	DD
Araneidae	<i>Cyrtophora</i>	<i>exanthematica</i>	(Doleschall, 1859)	Double-tailed Tent Spider	Not Listed	LC
Araneidae	<i>Cyrtophora</i>	<i>moluccensis</i>	(Doleschall, 1857)	Maluku Tent Spider	Not Listed	DD
Araneidae	<i>Cyrtophora</i>	<i>sextuberculata</i>	Tanikawa & Petcharad, 2015	Six-nippled Tent Spider	Not Listed	DD
Araneidae	<i>Cyrtophora</i>	<i>unicolor</i>	(Doleschall, 1857)	Red Tent Spider	Not Listed	LC
Araneidae	<i>Eriovixia</i>	<i>excelsa</i>	(Simon, 1889)	Knob-tailed Woolly Orb Weaver	Not Listed	DD
Araneidae	<i>Eriovixia</i>	<i>laglaisei</i>	(Simon, 1877)	Laglaise's Woolly Orb Weaver	Not Listed	LC
Araneidae	<i>Eriovixia</i>	<i>porcula</i>	(Simon, 1877)	Pig-tailed Woolly Orb Weaver	Not Listed	DD
Araneidae	<i>Eriovixia</i>	<i>pseudocentrodes</i>	(Bösenberg & Strand, 1906)	Cone-tailed Woolly Orb Weaver	Not Listed	DD
Araneidae	<i>Eriovixia</i>	sp. A		False-eyed Woolly Spider	Not Listed	NE
Araneidae	<i>Eriovixia</i>	sp. B		Periscope Woolly Orb Weaver	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Araneidae	<i>Eriovixia</i>	sp. C		Truncated Tail Wooly Orb Weaver	Not Listed	NE
Araneidae	<i>Eriovixia</i>	sp. D		Squirrel-headed Woolly Orb Weaver	Not Listed	NE
Araneidae	<i>Gasteracantha</i>	<i>diardi</i>	(Lucas, 1835)	Diard's Spiny Spider	Not Listed	DD
Araneidae	<i>Gasteracantha</i>	<i>kuhl</i>	C.L.Koch, 1837	Black-and-white Spiny Spider	Not Listed	LC
Araneidae	<i>Gasteracantha</i>	<i>mengel</i>	Keyserling, 1864	Parallel Spiny Spider	Not Listed	DD
Araneidae	<i>Gasteracantha</i>	sp. A		Double-barred Yellow Spiny Spider	Not Listed	NE
Araneidae	<i>Gasteracantha</i>	sp. B		Double-banded White Spiny Spider	Not Listed	NE
Araneidae	<i>Gea</i>	<i>spinipes</i>	C.L.Koch, 1843	Spiny Shoulder-horn Spider	Not Listed	LC
Araneidae	<i>Guizygiella</i>	<i>nadleri</i>	(Heimer 1984)	Marbled Orb Weaver	Not Listed	LC
Araneidae	<i>Hypsosinga</i>	<i>pygmaea</i>	(Sundevall, 1831)	Pygmy Orb Weaver	Not Listed	LC
Araneidae	<i>Leviaraneus</i>	<i>noegeatus</i>	(Thorell, 1895)	Banner Orb Weaver	Not Listed	VU
Araneidae	<i>Lipocrea</i>	<i>fusiformis</i>	(Thorell, 1877)	Grass Orb Weaver Spider	Not Listed	LC
Araneidae	<i>Lipocrea</i>	sp.		Black-banded Grass Orb Weaver	Not Listed	NE
Araneidae	<i>Macracantha</i>	<i>arcuata</i>	(Fabricius, 1793)	Longhorn Spiny Spider	VU	EN
Araneidae	<i>Macracantha</i>	<i>hasselti</i>	(C. L. Koch, 1837)	Hasselt's Spiny Spider	Not Listed	LC
Araneidae	<i>Milonia</i>	<i>obtusa</i>	Thorell, 1893	Obtuse Leaf-rolling Orb Weaver	Not Listed	EN
Araneidae	<i>Neogea</i>	<i>nocticolor</i>	(Thorell, 1887)	Silver-spotted Sun Spider	Not Listed	DD
Araneidae	<i>Neoscona</i>	<i>inusta</i>	(L.Koch, 1871)	Variable Grass Neoscona	Not Listed	DD
Araneidae	<i>Neoscona</i>	<i>nautica</i>	(L.Koch, 1875)	Brown Sailor Spider	Not Listed	LC
Araneidae	<i>Neoscona</i>	<i>punctigera</i>	(Doleschall, 1857)	Jute Mat Neoscona	Not Listed	LC
Araneidae	<i>Neoscona</i>	<i>theisi</i>	(Walckenaer, 1841)	Serrated Spearhead Neoscona	Not Listed	LC
Araneidae	<i>Neoscona</i>	<i>vigilans</i>	(Blackwall, 1865)	Variable Orb Weaver	Not Listed	LC
Araneidae	<i>Ordgarius</i>	<i>hobsoni</i>	(O. Pickard-Cambridge, 1877)	Hobson's Bolas Spider	Not Listed	DD
Araneidae	<i>Ordgarius</i>	<i>sexspinosis</i>) (Thorell, 1894)	Six-spined Bolas Spider	Not Listed	DD
Araneidae	<i>Ordgarius</i>	sp.		Periscope Bolas Spider	Not Listed	NE
Araneidae	<i>Paraplectana</i>	sp. A		Black Socks Ladybird Spider	Not Listed	NE
Araneidae	<i>Paraplectana</i>	sp. B		Spotted Ladybird Spider	Not Listed	NE
Araneidae	<i>Paraplectana</i>	sp. C		White-eyed Ladybird Spider	Not Listed	VU
Araneidae	<i>Parawixia</i>	<i>dehaani</i>	(Doleschall, 1859)	Common Two-horned Orb Weaver	Not Listed	LC
Araneidae	<i>Pasilobus</i>	<i>bufoninus</i>	(Simon, 1867)	X-wing Fighter Spider	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Araneidae	<i>Poltys</i>	<i>elevatus</i>	Thorell, 1890	Tall-bellied Orb Weaver	Not Listed	DD
Araneidae	<i>Poltys</i>	<i>illepidus</i>	C. L. Koch, 1843	Abominable Tree-stump Spider	Not Listed	LC
Araneidae	<i>Poltys</i>	<i>stygius</i>	Thorell, 1898	Round Tree-stump Spider	Not Listed	DD
Araneidae	" <i>Singa</i> "	<i>perpolita</i>	(Thorell, 1893)	Spotted Green-bottom Spider	Not Listed	DD
Araneidae	<i>Talthybia</i>	<i>depressa</i>	Thorell, 1898	Wrap-around Orb Weaver	Not Listed	DD
Araneidae	<i>Thelacantha</i>	<i>brevispina</i>	(Doleschall, 1857)	Peaked Carapace Spiny Spider	Not Listed	LC
Araneidae	" <i>Zygiella</i> "	<i>calyprata</i>	(Workman & Workman, 1894)	Cotton Ball Orb Weaver	Not Listed	LC
Atypidae	<i>Calommata</i>	<i>sundaica</i>	(Doleschall, 1857)	Sunda Calommata	Not Listed	NEx?
Barychelidae	<i>Idioctis</i>	<i>littoralis</i>	Abraham, 1924	Intertidal Brush-footed Trapdoor Spider	Not Listed	VU
Barychelidae	<i>Monodontium</i>	<i>bukittimah</i>	Raven, 2008	Bukit Timah Brush-footed Trapdoor Spider	Not Listed	VU
Barychelidae	<i>Rhianodes</i>	<i>atratus</i>	(Thorell, 1890)	Spotted Brush-footed Trapdoor Spider	Not Listed	LC
Bemmeridae	<i>Damarchus</i>	<i>workmani</i>	Thorell, 1891	Workman's Werewolf Spider	Not Listed	DD
Cheiracanthiidae	<i>Calamoneta</i>	sp.		Flexi-legs Spider	Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	<i>approximatum</i>	O. Pickard-Cambridge, 1885	Black-faced Sac Spider	Not Listed	LC
Cheiracanthiidae	" <i>Cheiracanthium</i> "	<i>insigne</i>	O. Pickard-Cambridge, 1874	Insignia Sac Spider	Not Listed	LC
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. A			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. B			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. C			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. D			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. E			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. F			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. G			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. H			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. I			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. J			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. K			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. L			Not Listed	NE
Cheiracanthiidae	<i>Cheiracanthium</i>	sp. M		White-blotched Long-jawed Sac Spider	Not Listed	DD
Cithaeronidae	<i>Cithaeron</i>	<i>praedonius</i>	O. Pickard-Cambridge, 1872	Swift Ground Spider	Not Listed	LC
Clubionidae	<i>Clubiona</i>	<i>melanosticta</i>	Thorell, 1890	Smooth Spotted Spider	Not Listed	DD
Clubionidae	<i>Clubiona</i>	sp. A		Three-toned Sac Spider	Not Listed	NE
Clubionidae	<i>Clubiona</i>	sp. B		Pygmy Sac Spider	Not Listed	NE
Clubionidae	<i>Clubiona</i>	sp. C		Bronze Sac Spider	Not Listed	NE
Clubionidae	<i>Clubiona</i>	sp. D		Narrow-headed Sac Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Clubionidae	<i>Clubiona</i>	sp. E		Broad-carapaced Sac Spider	Not Listed	NE
Clubionidae	<i>Clubiona</i>	sp. F		Purple-jawed Sac Spider	Not Listed	NE
Clubionidae	<i>Clubiona</i>	sp. G		White-headed Sac Spider	Not Listed	NE
Clubionidae	<i>Nusatidia</i>	<i>borneensis</i>	Deeleman-Reinhold, 2001	Borneo Green Sac Spider	Not Listed	DD
Clubionidae	<i>Nusatidia</i>	<i>camouflata</i>	Deeleman-Reinhold, 2001	Camouflage Green Sac Spider	Not Listed	LC
Clubionidae	<i>Nusatidia</i>	<i>javana</i>	(Simon, 1897)	Javanese Green Sac Spider	Not Listed	DD
Clubionidae	<i>Pteroneta</i>	<i>tertia</i>	Deeleman-Reinhold, 2001	Blue-spotted Sac Spider	Not Listed	DD
Corinnidae	<i>Aetius</i>	<i>bicuspidatus</i>	Yamasaki, 2020	Swallowtail Ant-mimicking Spider	Not Listed	DD
Corinnidae	<i>Aetius</i>	sp. A		Yen Ant-mimicking Spider	Not Listed	NE
Corinnidae	<i>Aetius</i>	sp. B		Lined Ant-mimicking Spider	Not Listed	NE
Corinnidae	<i>Apochinomma</i>	<i>nitidum</i>	(Thorell, 1895)	Golden Hair Armoured Spider	Not Listed	DD
Corinnidae	<i>Corinomma</i>	<i>javanum</i>	Simon, 1905	Javanese Leathery Sac Spider	Not Listed	DD
Corinnidae	<i>Corinomma</i>	<i>severum</i>	(Thorell, 1877)	Common Black Leathery Sac Spider	Not Listed	LC
Corinnidae	<i>Echinax</i>	<i>oxyopoides</i>	(Deeleman-Reinhold, 1995)	Pale Urchin Spider	Not Listed	LC
Corinnidae	<i>Medmassa</i>	<i>insignis</i>	(Thorell, 1890)	Caramel-Stripe Medmassa	Not Listed	DD
Corinnidae	<i>Medmassa</i>	sp.		"Blackish Brown Medmassa"	Not Listed	NE
Corinnidae	<i>Peng</i>	sp.		Box-headed Black Ant Mimic	Not Listed	VU
Corinnidae	<i>Serendib</i>	<i>muadai</i>	Jäger, Nophageud & Praxaysombath, 2012	Striped Serendib	Not Listed	DD
Corinnidae	<i>Serendib</i>	<i>suthepica</i>	Deeleman-Reinhold, 2001	Four-spined Serendib	Not Listed	DD
Ctenidae	<i>Acantheis</i>	sp. A		Orange-spotted Long-legged Wandering Spider	Not Listed	NE
Ctenidae	" <i>Acantheis</i> "	sp. B		Red-spotted Tufted Wandering Spider	Not Listed	NE
Ctenidae	" <i>Acantheis</i> "	sp. C		Yellow-lined Tufted Wandering Spider	Not Listed	NE
Ctenidae	<i>Anahita</i>	<i>periculosa</i>	(Bristowe, 1931)	Common Banded Wandering Spider	Not Listed	DD
Ctenidae	<i>Anahita</i>	sp.		Grassland Banded Wandering Spider	Not Listed	DD
Ctenidae	<i>Bowie</i>	<i>abdulmajid</i>	Jäger, 2022	Shaggy Wandering Spider	Not Listed	DD
Ctenidae	<i>Bowie</i>	<i>argentipes</i>	(van Hasselt, 1893)	Sumatran Wandering Spider	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Deinopidae	<i>Asianopis</i>	sp.		Common Singapore Net-casting Spider	Not Listed	NE
Desidae	<i>Desis</i>	<i>martensi</i>	L. Koch, 1872	Von Martens' Reef Spider	VU	VU
Dictynidae	<i>Paratheuma</i>	sp. aff. <i>armata</i>	(Marples, 1964)	Can-opener Marine Spider	Not Listed	VU
Dictynidae	<i>Sudesna</i>	sp.		White-lined Sudesna	Not Listed	NE
Euagridae	" <i>Masteria</i> "	sp.		Minute Curtain Web Spider	Not Listed	NE
Filistatidae	<i>Labahitha</i>	<i>garciai</i>	(Simon, 1892)	Garcia Crevice Weaver	Not Listed	DD
Gnaphosidae	" <i>Drassodes</i> "	sp. A		Mangrove Tawny Ground Spider	Not Listed	NE
Gnaphosidae	" <i>Drassodes</i> "	sp. B		Parkland Black Ground Spider	Not Listed	NE
Gnaphosidae	<i>Hitobia</i>	sp. A		Common Tapir Ground Spider	Not Listed	NE
Gnaphosidae	<i>Hitobia</i>	sp. B		White-crested Tapir Ground Spider	Not Listed	NE
Gnaphosidae	<i>Hitobia</i>	sp. C		Wavy Tapir Ground Spider	Not Listed	NE
Gnaphosidae	<i>Hitobia</i>	sp. D		Strong-armed Tapir Ground Spider	Not Listed	VU
Gnaphosidae	?	?			Not Listed	NE
Gnaphosidae	?	?			Not Listed	NE
Gnaphosidae	?	?			Not Listed	NE
Hahniidae	<i>Alistra</i>	sp. A		Pale Comb-tailed Spider	Not Listed	NE
Hahniidae	<i>Alistra</i>	sp. B		Black-capped Comb-tailed Spider	Not Listed	NE
Hahniidae	<i>Alistra</i>	sp. C		Spotted Comb-tailed Spider	Not Listed	NE
Hersiliidae	<i>Hersilia</i>	<i>deelemanae</i>	M. Baehr & B. Baehr, 1993	Deelemann's Two-tailed Spider	Not Listed	DD
Hersiliidae	<i>Hersilia</i>	<i>lelabah</i>	Rheims & Brescovit, 2004	Long-abdomen Two-tailed Spider	Not Listed	DD
Hersiliidae	<i>Hersilia</i>	<i>nentwigi</i>	M. Baehr & B. Baehr, 1993	Nentwig's Two-tailed Spider	Not Listed	DD
Hersiliidae	<i>Hersilia</i>	<i>savignyi</i>	Lucas, 1836	Dusky Two-tailed Spider	Not Listed	LC
Hersiliidae	<i>Hersilia</i>	<i>sumatrana</i>	(Thorell, 1890)	Sumatran Two-tailed Spider	Not Listed	DD
Hersiliidae	<i>Hersilia</i>	<i>sundaica</i>	M. Baehr & B. Baehr, 1993	Sunda Two-tailed Spider	Not Listed	DD
Hersiliidae	<i>Murricia</i>	<i>cornuta</i>	M. Baehr & B. Baehr, 1993	Green Murricia	Not Listed	DD
Linyphiidae	<i>Atypena</i>	sp.		Bump-headed Money Spider	Not Listed	NE
Linyphiidae	<i>Batueta</i>	<i>voluta</i>	Locket, 1982	Seletar Money Spider	Not Listed	DD
Linyphiidae	<i>Cirrosus</i>	sp.		Lemon Money Spider	Not Listed	NE
Linyphiidae	<i>Ceratinopsis</i>	<i>blesti</i>	Locket, 1982		Not Listed	DD
Linyphiidae	<i>Erigone</i>	<i>bifurca</i>	Locket, 1982	Locket's Forked-tibia Money Spider	Not Listed	DD
Linyphiidae	<i>Johorea</i>	<i>decorata</i>	Locket, 1982		Not Listed	DD
Linyphiidae	<i>Knischatiria</i>	sp.		Spiny Hammock Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Linyphiidae	<i>Microbathyphantes</i>	<i>palmarius</i>	(Marples, 1955)	Palm Money Spider	Not Listed	DD
Linyphiidae	<i>Nasoona</i>	<i>chrysanthusi</i>	Locket, 1982	Father Chrysanthus Hammock Spider	Not Listed	LC
Linyphiidae	<i>Nasoona</i>	<i>crucifera</i>	(Thorell, 1895)	Crucifix Nasoona	Not Listed	DD
Linyphiidae	<i>Nematogmus</i>	<i>dentimanus</i>	Simon, 1886		Not Listed	DD
Linyphiidae	<i>Neonesiotes</i>	sp.		Oven Mitten Money Spider	Not Listed	NE
Linyphiidae	<i>Neriene</i>	<i>macella</i>	(Thorell, 1898)	Common Southeast Asian Neriene	Not Listed	LC
Linyphiidae	" <i>Nesianeta</i> "	sp.		Durian-palped Sheet Web Spider	Not Listed	NE
Linyphiidae	<i>Parameioneta</i>	<i>spicata</i>	Locket, 1982		Not Listed	DD
Linyphiidae	<i>Parameioneta</i>	sp.		Bicolored Sheet Web Spider	Not Listed	NE
Linyphiidae	<i>Prosoponoides</i>	<i>sinense</i>	(Chen, 1991)		Not Listed	DD
Linyphiidae	<i>Pseudomicrocentria</i>	<i>simplex</i>	Locket, 1982		Not Listed	DD
Linyphiidae	<i>Singatrichona</i>	<i>longipes</i>	Tanasevitch, 2019		Not Listed	DD
Liocranidae	<i>Oedignatha</i>	<i>scrobiculata</i>	Thorell, 1881	Common Swollen Jaw Spider	Not Listed	LC
Liocranidae	<i>Oedignatha</i>	sp.		"Larger Swollen Jaw Spider"	Not Listed	NE
Liocranidae	<i>Sesieutes</i>	<i>lucens</i>	Simon, 1897	Shiny Spiny-legged Spider	Not Listed	DD
Liocranidae	<i>Sphingius</i>	<i>punctatus</i>	Deeleman-Reinhold, 2001	Punctate Sphingius	Not Listed	DD
Liocranidae	<i>Sphingius</i>	<i>vivax</i>	(Thorell, 1897)	Granulate Sphingius	Not Listed	DD
Liocranidae	<i>Teutamus</i>	<i>leptotheclus</i>	Dankittipakul, Tavano & Singtripop, 2012	Wavy Spiny-legged Spider	Not Listed	DD
Lycosidae	<i>Arctosa</i>	<i>tanakai</i>	Barrión & Litsinger, 1995	White-flecked Wolf Spider	Not Listed	DD
Lycosidae	<i>Draposa</i>	sp.		Greater Pond Wolf Spider	Not Listed	NE
Lycosidae	<i>Hippasa</i>	<i>holmerae</i>	Thorell, 1895	Lawn Wolf Spider	Not Listed	LC
Lycosidae	<i>Lycosa</i>	<i>vittata</i>	Yin, Bao & Zhang, 1995	Colourful Striped Wolf Spider	Not Listed	LC
Lycosidae	<i>Lysania</i>	<i>pygmaea</i>	Thorell, 1890	Dwarf Wolf Spider	Not Listed	DD
Lycosidae	<i>Ovia</i>	<i>macritchie</i>	Lu, Koh, Zhang & Li, 2018	MacRitchie Blue Wolf Spider	Not Listed	LC
Lycosidae	" <i>Pardosa</i> "	<i>pseudoannulata</i>	(Bösenberg & Strand, 1906)	Pond Wolf Spider	Not Listed	LC
Lycosidae	<i>Pardosa</i>	<i>pusiola</i>	(Thorell, 1891)	Common Little Wolf Spider	Not Listed	LC
Lycosidae	<i>Pardosa</i>	<i>sumatrana</i>	(Thorell, 1890)	Sumatran Wolf Spider	Not Listed	DD
Lycosidae	" <i>Pirata</i> "	sp.		Singapore Mangrove Wolf Spider	Not Listed	NE
Lycosidae	<i>Trochosa</i>	<i>ruricoloides</i>	Schenkel, 1963	White-spotted Wolf Spider	Not Listed	LC
Lycosidae	<i>Venonia</i>	<i>coruscans</i>	Thorell, 1895	White-dot Wolf Spider	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Lycosidae	<i>Wadicosa</i>	<i>fidelis</i>	(O. Pickard-Cambridge, 1872)	White-palped Wolf Spider	Not Listed	DD
Lycosidae	<i>Zoica</i>	<i>parvula</i>	(Thorell, 1895)	Miniature Wolf Spider	Not Listed	DD
Mimetidae	<i>Mimetus</i>	sp. A		White-lined Pirate Spider	Not Listed	NE
Mimetidae	<i>Mimetus</i>	sp. B		Blue-and-White Pirate Spider	Not Listed	NE
Mimetidae	<i>Mimetus</i>	sp. C		Red-shouldered Pirate Spider	Not Listed	NE
Miturgidae	<i>Systaria</i>	sp.		Singapore Systaria	Not Listed	NE
Miturgidae	<i>Tamin</i>	sp.		Singapore Tamin	Not Listed	NE
Miturgidae	<i>Xantharia</i>	<i>murphyi</i>	Deeleman-Reinhold, 2001	Murphy's Large-eyed Spider	Not Listed	DD
Mysmenidae	<i>Microdipoena</i>	sp.		Spotted Minute Clasping Weaver	Not Listed	NE
Mysmenidae	<i>Mosu</i>	sp.		Garlic Minute Clasping Weaver	Not Listed	NE
Mysmenidae	<i>Mysmena</i>	sp.		Dark Minute Clasping Weaver	Not Listed	NE
Nephilidae	<i>Herennia</i>	<i>multipuncta</i>	(Doleschall, 1859)	Ornamental Coin Spider	Not Listed	LC
Nephilidae	<i>Nephila</i>	<i>pilipes</i>	(Fabricius, 1793)	Giant Golden Orb Weaver	Not Listed	LC
Nephilidae	<i>Nephilengys</i>	<i>malabarensis</i>	(Walckenaer, 1841)	Malabar Hermit Spider	Not Listed	LC
Nephilidae	<i>Trichonephila</i>	<i>antipodiana</i>	(Walckenaer, 1841)	Batik Golden Orb Weaver	Not Listed	LC
Nesticidae	<i>Nesticella</i>	sp.		Grassland Midget Cobweb Spider	Not Listed	NE
Ochyroceratidae	<i>Theotima</i>	<i>minutissima</i>	(Petrunkevitch, 1929)	Virgin Midget Ground Weaver	Not Listed	LC
Oecobiidae	<i>Oecobius</i>	<i>concinus</i>	Simon, 1893	Elegant Tiny House Dweller	Not Listed	LC
Oonopidae	<i>Aposphragisma</i>	<i>salewski</i>	Thoma, 2014	Salewski's Goblin Spider	Not Listed	DD
Oonopidae	<i>Aposphragisma</i>	<i>stannum</i>	Thoma, 2014		Not Listed	DD
Oonopidae	<i>Gamasomorpha</i>	<i>camelina</i>	Simon, 1893	Camel Goblin Spider	Not Listed	DD
Oonopidae	<i>Gamasomorpha</i>	<i>coniacris</i>	Eichenberger, 2012		Not Listed	DD
Oonopidae	<i>Gamasomorpha</i>	<i>insomnia</i>	Eichenberger, 2012	Perplexing Goblin Spider	Not Listed	DD
Oonopidae	<i>Gamasomorpha</i>	<i>squalens</i>	Eichenberger, 2012		Not Listed	DD
Oonopidae	<i>Ischnothyreus</i>	<i>an</i>	Tong & Li, 2016	Black-palped Goblin Spider	Not Listed	DD
Oonopidae	<i>Ischnothyreus</i>	<i>brunneus</i>	Tong & Li, 2016	Chocolate Goblin Spider	Not Listed	DD
Oonopidae	<i>Ischnothyreus</i>	<i>dactylinus</i>	Tong & Li, 2016	Dark-rumped Goblin Spider	Not Listed	DD
Oonopidae	<i>Ischnothyreus</i>	<i>poculum</i>	Tong & Li, 2016	Humpback Goblin Spider	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Oonopidae	<i>Ischnothyreus</i>	<i>tectorius</i>	Tong & Li, 2016	Folded Carapace Goblin Spider	Not Listed	DD
Oonopidae	<i>Ischnothyreus</i>	sp.		Large Black-palped Goblin Spider	Not Listed	NE
Oonopidae	<i>Ischnothyreus</i>	sp.			Not Listed	NE
Oonopidae	<i>Opopaea</i>	<i>apicalis</i>	(Simon, 1893)	Black-rumped Boxing-gloved Goblin Spider	Not Listed	DD
Oonopidae	<i>Opopaea</i>	<i>deserticola</i>	Simon, 1892	Desert Dweller Goblin Spider	Not Listed	LC
Oonopidae	<i>Opopaea</i>	sp. A		Four-spined Goblin Spider	Not Listed	NE
Oonopidae	<i>Opopaea</i>	sp. B		Notched Goblin Spider	Not Listed	NE
Oonopidae	<i>Opopaea</i>	sp.			Not Listed	NE
Oonopidae	<i>Orchestina</i>	sp.		Singapore Leaping Goblin Spider	Not Listed	NE
Oonopidae	<i>Prethopalpus</i>	<i>pahang</i>	Baehr, 2012	Pahang Swollen-palped Goblin Spider	Not Listed	DD
Oonopidae	<i>Prethopalpus</i>	<i>schwendingeri</i>	Baehr, 2012		Not Listed	DD
Oonopidae	<i>Xyphinus</i>	<i>hystrix</i>	Simon, 1893	Porcupine Goblin Spider	Not Listed	VU
Oonopidae	<i>Xyphinus</i>	<i>karschi</i>	(Bösenberg & Strand, 1906)	Karsch's Porcupine Goblin Spider	Not Listed	DD
Oxyopidae	<i>Hamadruas</i>	sp. A		Jogjakarta Batik Lynx Spider	Not Listed	NE
Oxyopidae	<i>Hamadruas</i>	sp. B		Green Fairy Lynx Spider	Not Listed	NE
Oxyopidae	<i>Hamadruas</i>	sp. C		Mohawk Lynx Spider	Not Listed	NE
Oxyopidae	<i>Hamadruas</i>	sp. D		Crocodile Lynx Spider	Not Listed	NE
Oxyopidae	<i>Hamadruas</i>	sp.			Not Listed	NE
Oxyopidae	<i>Hamataliwa</i>	<i>floreni</i>	Deeleman-Reinhold, 2009	Floren's Boxy Lynx Spider	Not Listed	DD
Oxyopidae	<i>Hamataliwa</i>	<i>incompta</i>	(Thorell, 1895)	Common Boxy Lynx Spider	Not Listed	LC
Oxyopidae	<i>Hamataliwa</i>	sp. A		Black-spotted Boxy Lynx Spider	Not Listed	NE
Oxyopidae	<i>Hamataliwa</i>	sp. B		Lance-backed Lynx Spider	Not Listed	NE
Oxyopidae	<i>Oxyopes</i>	<i>auratus</i>	Thorell, 1890	Golden Lynx Spider	Not Listed	DD
Oxyopidae	<i>Oxyopes</i>	<i>birmanicus</i>	Thorell, 1887	Burmese Lynx Spider	Not Listed	LC
Oxyopidae	<i>Oxyopes</i>	<i>complicatus</i>	Tang & Li, 2012	Slender Striped Lynx Spider	Not Listed	DD
Oxyopidae	<i>Oxyopes</i>	<i>javanus</i>	Thorell, 1887	Javan Lynx Spider	Not Listed	LC
Oxyopidae	<i>Oxyopes</i>	<i>lineatipes</i>	(C.L.Koch, 1847)	Common Garden Lynx Spider	Not Listed	LC
Oxyopidae	<i>Oxyopes</i>	<i>macilentus</i>	L. Koch, 1878	Long-legged Lynx Spider	Not Listed	DD
Oxyopidae	<i>Oxyopes</i>	sp. A		Swampy Grassland Lynx Spider	Not Listed	NE
Oxyopidae	<i>Oxyopes</i>	sp. B		Boxy Epigyne Lynx Spider	Not Listed	NE
Oxyopidae	<i>Oxyopes</i>	sp. C		Mangrove Lynx Spider	Not Listed	NE
Oxyopidae	<i>Tapponia</i>	<i>micans</i>	Simon, 1885	Metallic Green Lynx Spider	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Oxyopidae	<i>Tapponia</i>	sp.			Not Listed	NE
Pacullidae	<i>Paculla</i>	<i>bukittimahensis</i>	Lin & Li, 2017	Bukit Timah Armoured Spider	Not Listed	DD
Pacullidae	<i>Paculla</i>	<i>globosa</i>	Lin & Li, 2017	Globular-palped Armoured Spider	Not Listed	DD
Palpimanidae	<i>Boagrius</i>	<i>pumilus</i>	Simon, 1893	Dwarf Palp-footed Spider	Not Listed	VU
Palpimanidae	<i>Boagrius</i>	sp.		Goldfish Palp-footed Spider	Not Listed	VU
Palpimanidae	<i>Sarascelis</i>	<i>raffrayi</i>	Simon, 1893	Raffray's Palp-footed Spider	Not Listed	NEx?
Philodromidae	<i>Philodromus</i>	sp. A		Rotund White Running Spider	Not Listed	NE
Philodromidae	<i>Philodromus</i>	sp. B		Slender White Running Spider	Not Listed	NE
Philodromidae	<i>Philodromus</i>	sp. C		Kaleidoscope Running Crab Spider	Not Listed	NE
Philodromidae	<i>Philodromus</i>	sp. D		Curly White Running Crab Spider	Not Listed	NE
Pholcidae	<i>Artema</i>	<i>atlanta</i>	Walckenaer, 1837	Giant Daddy-long-legs	Not Listed	LC
Pholcidae	<i>Belisana</i>	<i>nomis</i>	Huber, 2005	Common Singapore Short Rump Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Belisana</i>	sp. A		Red-eyed Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. B		Truncated Yellow Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. C		Red-patched Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. D		Blunt-tusked Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. E		Dracula Litter Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. F		Household Tiny Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. G		Purple Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. H		Curved-tusked Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Belisana</i>	sp. I		Dark-spotted Short Rump Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Cantikus</i>	<i>halabala</i>	(Huber, 2011)	Halabala Variegated Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Cantikus</i>	<i>ubin</i>	(Huber, 2016)	Ubin Variegated Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Crossopriza</i>	<i>lyoni</i>	(Blackwall, 1867)	Common House Daddy-long-legs	Not Listed	LC
Pholcidae	<i>Holocneminus</i>	<i>multiguttatus</i>	(Simon, 1905)	Multi-spotted Leaf Litter Pholcid	Not Listed	LC
Pholcidae	<i>Leptopholcus</i>	<i>borneensis</i>	Deeleman-Reinhold, 1986	Borneo Slender Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Leptopholcus</i>	<i>podophthalmus</i>	(Simon, 1893)	Short Leptopholcus	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Pholcidae	<i>Micropholcus</i>	<i>fauroti</i>	(Simon, 1887)	Tiny House Daddy-long-legs	Not Listed	LC
Pholcidae	<i>Modisimus</i>	<i>culicinus</i>	(Simon, 1893)	Six-eyed Turret House Spider	Not Listed	LC
Pholcidae	<i>Ninetis</i>	sp.		Short-legged House Spider	Not Listed	NE
Pholcidae	<i>Nipisa</i>	<i>anai</i>	(Huber, 2017)	Beaded Egg Sac Matchstick Spider	Not Listed	DD
Pholcidae	<i>Nipisa</i>	<i>phyllicola</i>	(Deeleman-Reinhold, 1986)	Common Matchstick Spider	Not Listed	DD
Pholcidae	<i>Pholcus</i>	<i>gracillimus</i>	Thorell, 1890	Double-streaked Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Physocyclus</i>	<i>globosus</i>	(Taczanowski, 1874)	Rounded Cellar Spider	Not Listed	LC
Pholcidae	<i>Pribumia</i>	<i>atrigularis</i>	(Simon, 1901)	Antelope Stalk-eyed Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Smeringopus</i>	<i>pallidus</i>	(Blackwall, 1858)	Large House Daddy-long-legs	Not Listed	LC
Pholcidae	<i>Spermophora</i>	sp.		Rear-pocketed Daddy-long-legs	Not Listed	NE
Pholcidae	<i>Tissahamia</i>	<i>bukittimah</i>	(Huber, 2016)	Bukit Timah Forest Daddy-long-legs	Not Listed	DD
Pholcidae	<i>Uthina</i>	<i>luzonica</i>	Simon, 1893	Luzon Daddy-long-legs	Not Listed	LC
Phrurolithidae	<i>Plynnon</i>	sp.		Cream-legged Rimmed Spider	Not Listed	NE
Pisauridae	<i>Dendrolycosa</i>	sp.		Mangrove Tree Lycan	Not Listed	NE
Pisauridae	<i>Dolomedes</i>	sp. A		Common Singapore Fishing Spider	Not Listed	NE
Pisauridae	<i>Dolomedes</i>	sp. B		Larger Fishing Spider	Not Listed	NE
Pisauridae	<i>Dolomedes</i>	sp. C		Wide-belted Fishing Spider	Not Listed	EN
Pisauridae	<i>Hygropoda</i>	<i>prognatha</i>	Thorell, 1895	Common Pond Flexi-legs	Not Listed	DD
Pisauridae	<i>Hygropoda</i>	sp. A		Brown Cigar Flexi-legs	Not Listed	NE
Pisauridae	<i>Hygropoda</i>	sp. B		Singapore Mangrove Flexi-legs	Not Listed	NE
Pisauridae	<i>Hygropoda</i>	sp. C		Southeast Asian Mangrove Flexi-legs	Not Listed	NE
Pisauridae	<i>Nilus</i>	<i>albocinctus</i>	(Doleschall, 1859)	Common White-Flanked Water Spider	Not Listed	DD
Pisauridae	<i>Nilus</i>	sp.		Variegated Water Spider	Not Listed	NE
Pisauridae	<i>Perenethis</i>	<i>venusta</i>	L. Koch, 1878	Broad-banded Grass Spider	Not Listed	DD
Pisauridae	<i>Polyboea</i>	<i>vulpina</i>	Thorell, 1895	Brown Grass Spider	Not Listed	LC
Pisauridae	<i>Sphedanus</i>	<i>quadrimaculatus</i>	(Thorell, 1897)	Four-spotted Nursery Web Spider	Not Listed	DD
Psechridae	<i>Fecenia</i>	<i>ochracea</i>	(Doleschall, 1859)	Raccoon Pseudo-orb Weaver	Not Listed	DD
Psechridae	<i>Fecenia</i>	<i>protensa</i>	Thorell, 1891	Common Pseudo-orb Weaver	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Psechridae	<i>Psechrus</i>	<i>singaporenensis</i>	Thorell, 1895	Singapore Lace-web Weaver	Not Listed	LC
Psilodercidae	<i>Leclercera</i>	sp.		Patched Violet Ground Weaver	Not Listed	NE
Psilodercidae	<i>Merizocera</i>	<i>mandai</i>	Li, 2020	Striped Violet Ground Weaver	Not Listed	DD
Salticidae	(Euophryini)	sp. A			Not Listed	NE
Salticidae	(Euophryini)	sp. B			Not Listed	NE
Salticidae	(Euophryini)	sp. C			Not Listed	NE
Salticidae	(Chysillini)	sp. A			Not Listed	NE
Salticidae	(Simaethina)	sp. A			Not Listed	NE
Salticidae	(Simaethina)	sp. B			Not Listed	NE
Salticidae	(Nannenini)	sp. A			Not Listed	DD
Salticidae	<i>Agorius</i>	<i>constrictus</i>	Simon, 1901	Orange-waisted Long-patella Ant Jumper	Not Listed	DD
Salticidae	<i>Agorius</i>	sp. A		Peanut Long-patella Ant Jumper	Not Listed	VU
Salticidae	<i>Agorius</i>	sp. B		Hyena Long-patella Ant Jumper	Not Listed	NE
Salticidae	<i>Anarrhotus</i>	<i>fossulatus</i>	Simon, 1902	Hairy Bronze Jumper	Not Listed	DD
Salticidae	"Anarrhotus"	sp. A			Not Listed	NE
Salticidae	<i>Artabrus</i>	<i>erythrocephalus</i>	(C.L.Koch, 1846)	Red-headed Jumper	Not Listed	DD
Salticidae	<i>Asemonea</i>	<i>tenuipes</i>	(O. Pickard-Cambridge, 1869)	Iridescent Jumper	Not Listed	DD
Salticidae	<i>Augustaea</i>	<i>formicaria</i>	Szombathy, 1915		Not Listed	DD
Salticidae	<i>Bavia</i>	<i>aericeps</i>	Simon, 1877		Not Listed	LC
Salticidae	<i>Bavia</i>	<i>capistrata</i>	(C. L. Koch, 1846)	Wavy-striped Long-bellied Jumper	Not Listed	DD
Salticidae	<i>Bavia</i>	<i>sexpunctata</i>	(Doleschall, 1859)	Six-spotted Long-bellied Jumper	Not Listed	DD
Salticidae	<i>Bianor</i>	<i>angulosus</i>	(Karsch, 1879)	Angular Bianor	Not Listed	DD
Salticidae	<i>Bucus</i>	<i>angusticollis</i>	Deeleman-Reinhold & Floren, 2003	Broad-jawed Ant-Mimic Jumper	Not Listed	DD
Salticidae	<i>Bristowia</i>	<i>heterospinosa</i>	Reimoser, 1934	Bristowe's Spiny-legged Jumper	Not Listed	DD
Salticidae	<i>Burmattus</i>	<i>pococki</i>	(Thorell, 1895)	Four-dotted Grass Jumper	Not Listed	DD
Salticidae	<i>Carrhotus</i>	<i>sannio</i>	(Thorell, 1877)	Clown-faced Jumper	Not Listed	DD
Salticidae	<i>Carrhotus</i>	<i>viduus</i>	(C.L. Koch, 1846)	Double-striped Black-and-white Jumper	Not Listed	DD
Salticidae	<i>Carrhotus</i>	sp. A		Striped Cat-whiskered Jumper	Not Listed	NE
Salticidae	<i>Carrhotus</i>	sp. B		Painted Cat-whiskered Jumper	Not Listed	NE
Salticidae	<i>Carrhotus</i>	sp. C		Tiny Cat-whiskered Jumper	Not Listed	NE
Salticidae	<i>Carrhotus</i>	sp. D		Heavyweight Cat-whiskered Jumper	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Carrhotus</i>	sp. E		Bearded Cat-whiskered Jumper	Not Listed	NE
Salticidae	<i>Chalcotropis</i>	sp. A		Wide-jawed House Spider	Not Listed	NE
Salticidae	<i>Chalcotropis</i>	sp. B		White-patched Heavy Jumper	Not Listed	NE
Salticidae	<i>Chalcovietnamicus</i>	<i>daiqini</i>	(Prószyński & Deeleman-Reinhold, 2012)	Black-faced Jumper	Not Listed	DD
Salticidae	<i>Chalcovietnamicus</i>	<i>terbakar</i>	Yu, Maddison & Yang, 2023	Dark Squat Jumper	Not Listed	DD
Salticidae	<i>Chalcovietnamicus</i>	<i>vietnamensis</i>	Zabka, 1985	Gold-lined Jumper	Not Listed	DD
Salticidae	" <i>Chrysilla</i> "	<i>delicata</i>	Thorell, 1892	Double-banded Iridescent Jumper	Not Listed	DD
Salticidae	<i>Chrysilla</i>	<i>lauta</i>	Thorell, 1887	Spectacular Iridescent Jumper	Not Listed	LC
Salticidae	<i>Cocalus</i>	<i>murinus</i>	Simon, 1899	Bump-headed Arboreal Jumper	Not Listed	DD
Salticidae	<i>Colytthus</i>	<i>bilineatus</i>	Thorell, 1891	Two-lined Jumper	Not Listed	DD
Salticidae	<i>Colytthus</i>	<i>nigriceps</i>	(Simon, 1899)		Not Listed	DD
Salticidae	<i>Colytthus</i>	<i>striatus</i>	(Simon, 1902)	Striated Jungle Jumper	Not Listed	DD
Salticidae	<i>Copocrossa</i>	sp.		Cigar Jumper	Not Listed	VU
Salticidae	<i>Cosmophasis</i>	<i>lami</i>	Berry, Beatty & Prószyński, 1997	Tangerine Garden Jumper	Not Listed	LC
Salticidae	<i>Cosmophasis</i>	<i>quadricincta</i>	(Simon, 1886)		Not Listed	DD
Salticidae	<i>Cosmophasis</i>	<i>thalassina</i>	(C.L.Koch, 1846)	Iridescent Green Garden Jumper	Not Listed	DD
Salticidae	<i>Cytaea</i>	<i>dispalans</i>	(Thorell, 1892)	Iridescent Emerald Jumper	Not Listed	DD
Salticidae	<i>Cytaea</i>	<i>oreophila</i>	Simon, 1902	Banded Jaw Jumper	Not Listed	DD
Salticidae	<i>Dendrocius</i>	sp. A		U-Pin Jumper	Not Listed	NE
Salticidae	<i>Dendrocius</i>	sp. B		Banded Wavy Jumper	Not Listed	NE
Salticidae	<i>Diplocanthopoda</i>	<i>marina</i>	Abraham, 1926	Marine Jumper	Not Listed	VU
Salticidae	<i>Echeclus</i>	sp.		Halloween Bark Jumper	Not Listed	NE
Salticidae	<i>Emertonius</i>	<i>exasperans</i>	(G.W. Peckham & E.G. Peckham, 1892)	Emerton's Ant Jumper	Not Listed	DD
Salticidae	<i>Epeus</i>	<i>furcatus</i>	Zhang, Song & Li, 2003	Forked Jade Jumper	Not Listed	LC
Salticidae	<i>Epeus</i>	<i>sumatranaus</i>	Prószyński & Deeleman-Reinhold, 2012	Sumatra Jade Jumper	Not Listed	DD
Salticidae	<i>Epeus</i>	sp. A (ex <i>flavobilineatus</i>)		Jade Legs Mohawk Jumper	Not Listed	DD
Salticidae	<i>Epeus</i>	sp. B		Serrated Spur Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. C		Bukit Timah Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. D		Green & Yellow Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. E		Stout-legged Jade Jumper	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Epeus</i>	sp. F		Green & Yellow Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. G		Stout-legged Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. H		Bronze Jade Jumper	Not Listed	NE
Salticidae	<i>Epeus</i>	sp. I		Tuning Fork Jumper	Not Listed	NE
Salticidae	<i>Epocilla</i>	<i>calcarata</i>	(Karsch, 1880)	Orange Painted Face Jumper	Not Listed	LC
Salticidae	<i>Epocilla</i>	<i>praetextata</i>	Thorell, 1887		Not Listed	DD
Salticidae	" <i>Evarcha</i> "	<i>besar</i>	(Prószyński, 2018)	Pop-eye Big-head Jumper	Not Listed	DD
Salticidae	" <i>Evarcha</i> "	<i>bulbosa</i>	Zabka, 1985	Horned Grass Jumper	Not Listed	DD
Salticidae	<i>Evarcha</i>	sp. A		Copper Pop-eye Jumper	Not Listed	NE
Salticidae	<i>Evarcha</i>	sp. B		Golden Pop-eye Jumper	Not Listed	NE
Salticidae	<i>Gedeia</i>	<i>tibialis</i>	Zabka, 1985	Guan Kong Bark Jumper	Not Listed	LC
Salticidae	<i>Gelotia</i>	<i>argenteolimbata</i>	(Simon, 1900)		Not Listed	DD
Salticidae	<i>Gelotia</i>	<i>bimaculata</i>	Thorell, 1890	Starry Night Gelotia	Not Listed	DD
Salticidae	<i>Gelotia</i>	<i>syringopalpis</i>	Wanless, 1984	Syringe Palp Gelotia	Not Listed	DD
Salticidae	<i>Harmochirus</i>	<i>brachiatus</i>	(Thorell, 1877)	Hairy-armed Jumper	Not Listed	LC
Salticidae	<i>Hasarius</i>	<i>adansonii</i>	(Audouin, 1826)	Adanson's House Jumper	Not Listed	LC
Salticidae	<i>Heratemita</i>	sp. A		Kaleidoscope Jumper	Not Listed	NE
Salticidae	<i>Heratemita</i>	sp. B		White Socks Squat Jumper	Not Listed	NE
Salticidae	<i>Hyllus</i>	<i>diardi</i>	(Walckenaer, 1837)	Heavy Jumper	Not Listed	DD
Salticidae	<i>Hyllus</i>	<i>keratodes</i>	(Hasselt, 1882)	Bronze Heavy Jumper	Not Listed	DD
Salticidae	<i>Hyllus</i>	<i>semicupreus</i>	(Simon, 1885)	Copper Heavy Jumper	Not Listed	LC
Salticidae	<i>Idastrandia</i>	<i>orientalis</i>	(Szombathy, 1915)	Oriental Ground Jumper	Not Listed	DD
Salticidae	<i>Indopadilla</i>	<i>nesinor</i>	Maddison, 2020	Custard Tart Scorpion Jumper	Not Listed	DD
Salticidae	<i>Indopadilla</i>	<i>vimedaba</i>	Maddison, 2020	Cappuccino Scorpion Spider	Not Listed	DD
Salticidae	<i>Indopadilla</i>	sp. A		Black Glossy Scorpion Spider	Not Listed	NE
Salticidae	<i>Indopadilla</i>	sp. B		Peanut Butter Scorpion Spider	Not Listed	NE
Salticidae	<i>Kelawakaju</i>	<i>leucomelas</i>	Maddison & Ng, 2022		Not Listed	DD
Salticidae	<i>Kelawakaju</i>	<i>singapura</i>	Maddison & Ng, 2022		Not Listed	DD
Salticidae	<i>Kelawakaju</i>	sp.			Not Listed	NE
Salticidae	<i>Langerra</i>	sp. A		Triangular Langerra	Not Listed	NE
Salticidae	<i>Langerra</i>	sp. B		White-brushed Langerra	Not Listed	NE
Salticidae	<i>Langona</i>	sp.		Hairy Ground Jumper	Not Listed	NE
Salticidae	<i>Lepidemathis</i>	sp.		Crimson Jumper	Not Listed	NE
Salticidae	<i>Ligurra</i>	<i>latidens</i>	(Doleschall, 1859)	Bronze Angular Jumper	Not Listed	LC
Salticidae	<i>Maripanthus</i>	<i>draconis</i>	Maddison, 2020	Black-collared Jumper	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Menemerus</i>	<i>bivittatus</i>	(Dufour, 1831)	Common House Jumper	Not Listed	LC
Salticidae	<i>Menemerus</i>	sp. (aff. <i>nigli</i>)	Wesołowska & Freudenschuss, 2012	South Asian House Jumper	Not Listed	LC
Salticidae	<i>Mintonia</i>	<i>protruberans</i>	Wanless, 1984	Cappuccino Mintonia	Not Listed	DD
Salticidae	<i>Mintonia</i>	<i>silvicola</i>	Wanless, 1987	White-moustached Mintonia	Not Listed	DD
Salticidae	<i>Myrmaplata</i>	<i>plataleoides</i>	(O. Pickard-Cambridge, 1869)	Kerengga Ant Jumper	Not Listed	LC
Salticidae	<i>Myrmaplata</i>	<i>wanlessi</i>	(Edmunds & Prószyński, 2003)	Wanless' Ant Jumper	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>acromegalis</i>	Yamasaki & Ahmad, 2013	Swollen-jawed Black Ant-mimicking Spider	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>biseratensis</i>	Badcock, 1918	Biserat Ant-mimicking Spider	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>cornuta</i>	Badcock, 1918	Long-waisted Ant-mimic Jumper	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>macrognatha</i>	(Thorell, 1894)	Mangrove Long-jawed Ant Jumper	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>markaha</i>	Barrión & Litsinger, 1995	Long-jawed Ant Jumper	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>melanocephala</i>	MacLeay, 1839	Black-headed Ant Jumper	Not Listed	LC
Salticidae	<i>Myrmarachne</i>	<i>pumilio</i>	(Karsch, 1880)	Long Drumstick Ant Spider	Not Listed	DD
Salticidae	<i>Myrmarachne</i>	<i>pygmaea</i>	(Thorell, 1894)		Not Listed	DD
Salticidae	<i>Nannenus</i>	<i>lyriger</i>	Simon, 1902	Singapore Litter Jumper	Not Listed	DD
Salticidae	<i>Nannenus</i>	<i>syrphus</i>	Simon, 1902	Common Litter Jumper	Not Listed	LC
Salticidae	<i>Nannenus</i>	sp.			Not Listed	NE
Salticidae	<i>Neon</i>	<i>sumatranaus</i>	Logunov, 1998	Miniature Jumper	Not Listed	DD
Salticidae	<i>Nungia</i>	sp.		Glossy False Scorpion Spider	Not Listed	NE
Salticidae	<i>Ogdenia</i>	<i>mutilla</i>	(G.W. Peckham & E.G. Peckham, 1907)	Ogden's Ant-mimic Spider	Not Listed	DD
Salticidae	<i>Orcevia</i>	sp. A		Chevroned Tree-trunk Jumper	Not Listed	NE
Salticidae	<i>Orcevia</i>	sp. B		Golden Tree-trunk Jumper	Not Listed	NE
Salticidae	<i>Orientattus</i>	<i>minutus</i>	(Zabka, 1985)	Miniature Big-headed Jumper	Not Listed	DD
Salticidae	<i>Orsima</i>	<i>ichneumon</i>	(Simon, 1901)	Kaleidoscope Ant Mimic Jumper	Not Listed	DD
Salticidae	<i>Padillothorax</i>	<i>semiostranus</i>	Simon, 1901	Slingshot Jumper	Not Listed	DD
Salticidae	<i>Pancorius</i>	<i>dentichelus</i>	(Simon, 1899)	Silver-back Big-headed Jumper	Not Listed	DD
Salticidae	<i>Pancorius</i>	<i>kohi</i>	Zhang, Song & Li, 2003		Not Listed	DD
Salticidae	<i>Pancorius</i>	<i>magnus</i>	Zabka, 1985	Mighty Big-headed Jumper	Not Listed	DD
Salticidae	<i>Pancorius</i>	<i>protervus</i>	(Simon, 1902)		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Pancorius</i>	<i>thorelli</i>	(Simon, 1899)	White-capped Big-headed Jumper	Not Listed	DD
Salticidae	<i>Pancorius</i>	sp. A		Striped Big-headed Jumper	Not Listed	NE
Salticidae	<i>Pancorius</i>	sp. B		Short Big-headed Jumper	Not Listed	NE
Salticidae	<i>Parabathippus</i>	<i>digitalis</i>	(Zhang, Song & Li, 2003)	Fingered Divergent Jaw Jumper	Not Listed	DD
Salticidae	<i>Parabathippus</i>	<i>macilentus</i>	(Thorell, 1890)		Not Listed	DD
Salticidae	<i>Parabathippus</i>	<i>rectus</i>	(Zhang, Song & Li, 2003)		Not Listed	DD
Salticidae	<i>Parabathippus</i>	<i>shelfordi</i>	(G. W. Peckham & E. G. Peckham, 1907)	Common Divergent Jaw Jumper	Not Listed	DD
Salticidae	<i>Parabathippus</i>	sp.			Not Listed	NE
Salticidae	<i>Pengmarino</i>	<i>chelifer</i>	(Simon, 1900)	White-spotted Strong-arm Spider	Not Listed	DD
Salticidae	<i>Phaeacius</i>	<i>malayensis</i>	Wanless, 1981	Malayan Tree Trunk Jumper	Not Listed	LC
Salticidae	<i>Phintella</i>	<i>bifurcilinea</i>	(Bösenberg & Strand, 1906)	Golden Abdomen Spider	Not Listed	DD
Salticidae	<i>Phintella</i>	<i>debilis</i>	(Thorell, 1891)	Striped Metallic Jumper	Not Listed	DD
Salticidae	" <i>Phintella</i> "	<i>lepidus</i>	Cao & Li, 2016	Lobster Claw Tiny Metallic Jumper	Not Listed	DD
Salticidae	" <i>Phintella</i> "	<i>vittata</i>	(C.L. Koch, 1846)	Electric Blue Jumper	Not Listed	LC
Salticidae	<i>Phintella</i>	sp. A		Mangrove Golden Jumper	Not Listed	NE
Salticidae	" <i>Phintella</i> "	sp. B		Excavated Jaw Golden Jumper	Not Listed	NE
Salticidae	" <i>Phintella</i> "	sp. C		Swollen Jaws Golden Jumper	Not Listed	NE
Salticidae	" <i>Phintella</i> "	sp. D		Black-and-white Banded Golden Jumper	Not Listed	NE
Salticidae	" <i>Phintella</i> "	sp. E		Wavy-banded Golden jumper	Not Listed	NE
Salticidae	<i>Phintella</i>	sp. F		Salt-and-pepper Jumper	Not Listed	NE
Salticidae	" <i>Phintelloides</i> "	<i>versicolor</i>	(C.L. Koch, 1846)	Black-banded Yellow Jumper	Not Listed	LC
Salticidae	<i>Phlegra</i>	sp.		Glossy Ground Jumper	Not Listed	NE
Salticidae	<i>Piranthus</i>	<i>api</i>	Maddison, 2020	Orange Strong-armed Jumper	Not Listed	VU
Salticidae	<i>Piranthus</i>	<i>kohi</i>	Maddison, 2020	Black Strong-armed Jumper	Not Listed	DD
Salticidae	<i>Piranthus</i>	<i>mandai</i>	Maddison, 2020	Mandai Strong-armed Jumper	Not Listed	VU
Salticidae	<i>Plexippus</i>	<i>paykulli</i>	(Audouin, 1826)	Greater Housefly Catcher	Not Listed	LC
Salticidae	<i>Plexippus</i>	<i>petersi</i>	(Karsch, 1878)	Common Housefly Catcher	Not Listed	LC
Salticidae	<i>Plexippus</i>	<i>setipes</i>	Karsch, 1879	Lesser Housefly Catcher	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Portia</i>	<i>albimana</i>	(Simon, 1900)	White-haired Portia	Not Listed	DD
Salticidae	<i>Portia</i>	<i>crassipalpis</i>	(G.W. Peckham & E.G. Peckham, 1907)	Pale-palped Portia	Not Listed	DD
Salticidae	<i>Portia</i>	<i>fimbriata</i>	(Doleschall, 1859)	Stripe-faced Portia	Not Listed	DD
Salticidae	<i>Portia</i>	<i>labiata</i>	(Thorell, 1887)	Hairy Moustached Portia	Not Listed	DD
Salticidae	<i>Psenuc</i>	<i>nuclearis</i>	(Prószyński, 1992)	Saw-lined Braille Jumper	Not Listed	DD
Salticidae	<i>Psenuc</i>	sp.		Mangrove Painted Braille Jumper	Not Listed	NE
Salticidae	<i>Pseudamycus</i>	<i>albomaculatus</i>	(van Hasselt, 1882)	White-spotted Big-eyed Jumper	Not Listed	DD
Salticidae	<i>Pseudicius</i>	<i>decemnotatus</i>	Simon, 1886	Ten-spotted Strong-armed Jumper	Not Listed	DD
Salticidae	<i>Ptocasius</i>	<i>gratiosus</i>	G.W. Peckham & E.G. Peckham, 1907		Not Listed	DD
Salticidae	<i>Ptocasius</i>	<i>montiformis</i>	Song, 1991		Not Listed	DD
Salticidae	<i>Ptocasius</i>	<i>weyersi</i>	Simon, 1885	Rounded Cone Zebra Jumper	Not Listed	LC
Salticidae	<i>Pystira</i>	<i>ephippigera</i>	(Simon, 1885)	Bumblebee Jumper	Not Listed	DD
Salticidae	<i>Rhene</i>	<i>flavigera</i>	(C.L. Koch, 1846)	Bold Cross Flat-headed Jumper	Not Listed	DD
Salticidae	<i>Rhene</i>	<i>rubrigera</i>	(Thorell, 1887)		Not Listed	DD
Salticidae	<i>Rhene</i>	<i>setipes</i>	Zabka, 1985		Not Listed	DD
Salticidae	<i>Rhene</i>	sp. A		White Flat-headed Jumper	Not Listed	NE
Salticidae	<i>Rhene</i>	sp. B		Round-headed Jumper	Not Listed	NE
Salticidae	<i>Rhene</i>	sp. C		Wavy Flat-head Jumper	Not Listed	NE
Salticidae	<i>Rhene</i>	sp. D		Domino Flat-headed Jumper	Not Listed	NE
Salticidae	<i>Rogmocrypta</i>	<i>puta</i>	Simon, 1900		Not Listed	DD
Salticidae	<i>Siler</i>	<i>flavocinctus</i>	(Simon, 1901)		Not Listed	DD
Salticidae	<i>Siler</i>	<i>semiglaucus</i>	(Simon, 1901)	Bottle-brush Iridescent Jumper	Not Listed	DD
Salticidae	<i>Simaetha</i>	<i>deelemanae</i>	Zhang, Song & Li, 2003		Not Listed	DD
Salticidae	<i>Spartaeus</i>	<i>spinimanus</i>	(Thorell, 1878)	Spiny-legged Jumper	Not Listed	LC
Salticidae	<i>Stergusa</i>	sp.		Kaleidoscope Bug Spider	Not Listed	NE
Salticidae	<i>Telamonia</i>	<i>dimidiata</i>	(Simon, 1899)	Two-striped Spiny-palped Jumper	Not Listed	LC
Salticidae	<i>Telamonia</i>	<i>festiva</i>	Thorell, 1887	Magpie Robin Jumper	Not Listed	LC
Salticidae	<i>Telamonia</i>	sp.		Bleeding Mango Spider	Not Listed	NE
Salticidae	<i>Thiania</i>	<i>bhamoensis</i>	Thorell, 1887	Common Fighting Spider	Not Listed	LC
Salticidae	<i>Thiania</i>	<i>demissa</i>	(Thorell, 1892)	Spectacular Fighting Spider	Not Listed	DD
Salticidae	<i>Thiania</i>	<i>latefasciata</i>	(Simon, 1877)	Yellow-banded Jumper	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Salticidae	<i>Thiania</i>	sp. A		Blue-and-black Fighting Spider	Not Listed	NE
Salticidae	<i>Thiania</i>	sp. B		U-Pin Fighting Spider	Not Listed	NE
Salticidae	<i>Thorelliola</i>	<i>ensifera</i>	(Thorell, 1877)	Rhino Garden Jumper	Not Listed	LC
Salticidae	<i>Tisaniba</i>	sp.		Tiny Shiny Litter Spider	Not Listed	NE
Salticidae	<i>Toxeus</i>	<i>hirsutipalpi</i>	(Edmunds & Prószyński, 2003)		Not Listed	DD
Salticidae	<i>Toxeus</i>	<i>maxillosus</i>	C.L.Koch, 1846	Giant Ant-mimicking Jumper	Not Listed	LC
Salticidae	<i>Vaillimia</i>	sp. A		Sleeping Beauty Jumper	Not Listed	NE
Salticidae	<i>Vaillimia</i>	sp. B		Mottled Coppery Jumper	Not Listed	NE
Salticidae	<i>Viciria</i>	<i>pavesii</i>	Thorell, 1877	Wide-jawed Scorpion Spider	Not Listed	LC
Scytodidae	<i>Dictis</i>	<i>striatipes</i>	L. Koch, 1872		Not Listed	LC
Scytodidae	<i>Dictis</i>	sp. A		Black-eyed Spitting Spider	Not Listed	NE
Scytodidae	<i>Dictis</i>	sp. B		Common Scrub Spitting Spider	Not Listed	NE
Scytodidae	<i>Scytodes</i>	<i>fusca</i>	Walckenaer, 1837	Brown Spitting Spider	Not Listed	LC
Scytodidae	<i>Scytodes</i>	<i>longipes</i>	Lucas, 1844		Not Listed	LC
Scytodidae	<i>Scytodes</i>	<i>pallida</i>	Doleschall, 1859	Pale Spitting Spider	Not Listed	DD
Scytodidae	<i>Scytodes</i>	<i>venusta</i>	(Thorell, 1890)	Broad-banded Spitting Spider	Not Listed	DD
Scytodidae	<i>Scytodes</i>	sp. A		Black Pepper Spitting Spider	Not Listed	NE
Scytodidae	<i>Scytodes</i>	sp. B		Minute Spitting Spider	Not Listed	NE
Segestriidae	<i>Ariadna</i>	sp.		Singapore Tube Web Spider	Not Listed	NE
Selenopidae	<i>Siamspinops</i>	sp.		Singapore Flattie	Not Listed	NE
Sparassidae	<i>Gnathopalystes</i>	<i>kochi</i>	(Simon, 1880)	Koch's Huntsman	Not Listed	DD
Sparassidae	<i>Gnathopalystes</i>	sp. A		Moldy Green Huntsman	Not Listed	NE
Sparassidae	<i>Gnathopalystes</i>	sp. B		Chequered Flag Huntsman	Not Listed	NE
Sparassidae	<i>Gnathopalystes</i>	sp. C		Slender Green Huntsman	Not Listed	NE
Sparassidae	<i>Gnathopalystes</i>	sp. D		Jade Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	<i>boiei</i>	(Doleschall, 1859)	Giant Tree Trunk Huntsman	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>christae</i>	Jäger, 2008	Christa's Huntsman	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>davidbowie</i>	Jäger, 2008	David Bowie's Huntsman	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>jaegerorum</i>	Jäger, 2008	Filial Piety Huntsman	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>laai</i>	Jäger, 2008	Flecked Orange Huntsman	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>lunula</i>	(Doleschall, 1857)	Leopard-spotted Huntsman Spider	Not Listed	DD
Sparassidae	<i>Heteropoda</i>	<i>tetrica</i>	Thorell, 1897	Black-jawed Huntsman	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Sparassidae	<i>Heteropoda</i>	<i>venatoria</i>	(Linnaeus, 1767)	Domestic Huntsman Spider	Not Listed	LC
Sparassidae	<i>Heteropoda</i>	sp. A		Giant Orange Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. B		Slender Unicorn Huntsman Spider	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. C		Tiger-striped Dwarf Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. D		Pale Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. E		Clouded Monitor Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. F		Small Banded Legs Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. G		False Black Jaw Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. H		Spiny Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. I			Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. J		Pale Horse-shoe Huntsman	Not Listed	NE
Sparassidae	<i>Heteropoda</i>	sp. K		Broad-banded Pale Huntsman	Not Listed	NE
Sparassidae	" <i>Heteropoda</i> "	sp. L		Lined Carapace Huntsman	Not Listed	NE
Sparassidae	<i>Olios</i>	sp. aff. <i>nentwigi</i>	Jäger, 2020	Common Yoga Huntsman	Not Listed	LC
Sparassidae	<i>Pandercetes</i>	sp. A		Common Lichen Huntsman	Not Listed	NE
Sparassidae	<i>Pandercetes</i>	sp. B		Fringe-legged Arboreal Huntsman	Not Listed	NE
Sparassidae	<i>Pandercetes</i>	sp. C		Woolly Small-eyed Arboreal Huntsman	Not Listed	NE
Salticidae	<i>Rhytimna</i>	<i>cursor</i>	(Thorell, 1895)		Not Listed	DD
Sparassidae	<i>Rhitymna</i>	sp. A			Not Listed	NE
Sparassidae	<i>Stasina</i>	<i>planithorax</i>	Simon, 1897	Flat-carapaced Spotted Huntsman	Not Listed	DD
Sparassidae	<i>Thelcticopis</i>	<i>orichalcea</i>	(Simon, 1880)	Golden Heavy Huntsman	Not Listed	DD
Sparassidae	<i>Thelcticopis</i>	sp. A		Black-jawed Heavy Huntsman	Not Listed	NE
Sparassidae	<i>Thelcticopis</i>	sp. B		Stout-legged Heavy Huntsman	Not Listed	NE
Sparassidae	<i>Thelcticopis</i>	sp. C		Tawny Heavy Huntsman	Not Listed	NE
Sparassidae	<i>Thelcticopis</i>	sp. D		Orangish Heavy Huntsman	Not Listed	NE
Sparassidae	<i>Thelcticopis</i>	sp. E		Whip Embolus Heavy Huntsman	Not Listed	NE
Sparassidae	<i>Tiomaniella</i>	<i>ladam</i>	Grall & Jäger, 2022	Mottled Horse-shoe Huntsman	Not Listed	DD
Stenochilidae	<i>Colopea</i>	<i>malayana</i>	Lehtinen, 1982	Peninsular Diamond Carapace Spider	Not Listed	EN
Sympytognathidae	<i>Crassignatha</i>	sp.		Yellow Dwarf Orb Weaver	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Sympytognathidae	<i>Patu</i>	sp.		Black Dwarf Orb Weaver	Not Listed	NE
Synotaxidae	<i>Nescina</i>	<i>kohi</i>	Lin, Ballarin & Li, 2016	Singapore Midget Cobweb Spider	Not Listed	DD
Synotaxidae	<i>Tekellina</i>	sp. A		Blue-ringed Comb-footed Spider	Not Listed	NE
Synotaxidae	" <i>Tekellina</i> "	sp. B		White Hairy Comb-footed Spider	Not Listed	NE
Telemidae	<i>Telemofila</i>	<i>fabata</i>	(Wang & Li, 2010)	Singapore Long-legged Leaf Litter Spider	Not Listed	LC
Tetrablemmidae	<i>Ablemma</i>	<i>malacca</i>	Lin & Li, 2017	Malacca Strait Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Brignoliella</i>	<i>besutensis</i>	Lin, Li & Jäger, 2012	Besut Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Brignoliella</i>	<i>michaeli</i>	Lehtinen, 1981	Michael's Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Singaporemma</i>	<i>lenachanae</i>	Lin & Li, 2017	Lena's Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Singaporemma</i>	<i>singulare</i>	Shear, 1978	Remarkable Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Sulaimania</i>	<i>brevis</i>	Lin & Li, 2017	Shorty Armoured Spider	Not Listed	DD
Tetrablemmidae	<i>Tetrablemma</i>	sp. A		Double-tusked Tree Bark Armoured Spider	Not Listed	NE
Tetrablemmidae	<i>Tetrablemma</i>	sp. B		Double-fingered Tree Bark Armoured Spider	Not Listed	NE
Tetragnathidae	<i>Dolichognatha</i>	<i>deelemanae</i>	Smith, 2008	Yellow Long-jawed Orb Weaver	Not Listed	DD
Tetragnathidae	<i>Dolichognatha</i>	sp. A		Singapore Giraffe Spider	Not Listed	NE
Tetragnathidae	<i>Dolichognatha</i>	sp. B		Four-hump Long-jawed Orb Weaver	Not Listed	NE
Tetragnathidae	<i>Dolichognatha</i>	sp. C		Bi-coloured Humped Spider	Not Listed	NE
Tetragnathidae	" <i>Dolichognatha</i> "	sp. D		Spiny-legged Humped Spider	Not Listed	NE
Tetragnathidae	<i>Glenognatha</i>	<i>dentata</i>	(Zhu & Wen, 1978)	Four-spot Horizontal Oeb Weaver	Not Listed	LC
Tetragnathidae	<i>Leucauge</i>	<i>argentina</i>	(van Hasselt, 1882)	Black-and-silver Orb Weaver	Not Listed	LC
Tetragnathidae	<i>Leucauge</i>	<i>celebesiana</i>	(Walckenaer, 1841)	Celebes Silver Orb Weaver	Not Listed	VU
Tetragnathidae	<i>Leucauge</i>	<i>decorata</i>	(Blackwall, 1864)	Decorative Silver Orb Weaver	Not Listed	LC
Tetragnathidae	<i>Leucauge</i>	<i>fastigata</i>	(Simon, 1877)	Orange-and-black Humpback Spider	Not Listed	DD
Tetragnathidae	<i>Leucauge</i>	<i>sarawakensis</i>	(Dzulhelmi & Suryanti, 2015)	Red-and-blue Pear Spider	Not Listed	DD
Tetragnathidae	<i>Mesida</i>	<i>gemmea</i>	(van Hasselt, 1882)	Gemstone Spider	NEx?	DD
Tetragnathidae	<i>Tetragnatha</i>	<i>ceylonica</i>	O. Pickard-Cambridge, 1869	Pop-eyed Big-jawed Spider	Not Listed	LC
Tetragnathidae	<i>Tetragnatha</i>	<i>chauliodus</i>	(Thorell, 1890)	Skinny Big-jawed Spider	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Tetragnathidae	<i>Tetragnatha</i>	<i>hasselti</i>	Thorell, 1890	Green-and-red Long-jawed Spider	Not Listed	DD
Tetragnathidae	<i>Tetragnatha</i>	<i>josephi</i>	Okuma, 1988	Mangrove Long-jawed Spider	VU	VU
Tetragnathidae	<i>Tetragnatha</i>	<i>keyserlingi</i>	Simon, 1890	Keyserling's Big-jawed Spider	Not Listed	LC
Tetragnathidae	<i>Tetragnatha</i>	<i>mandibulata</i>	Walckenaer, 1841	Common Big-jawed Spider	Not Listed	LC
Tetragnathidae	<i>Tetragnatha</i>	<i>nitens</i>	(Audouin, 1826)	Reticulated Big-jawed Spider	Not Listed	LC
Tetragnathidae	<i>Tetragnatha</i>	<i>serra</i>	Doleschall, 1857	Saw-jawed Spider	Not Listed	DD
Tetragnathidae	<i>Tetragnatha</i>	sp. A		Little Green Long-jawed Spider	Not Listed	NE
Tetragnathidae	<i>Tetragnatha</i>	sp. B		Yellow-and-red Long-jawed Spider	Not Listed	NE
Tetragnathidae	<i>Tetragnatha</i>	sp. C		Embroidered Carapace Big-jawed Spider	Not Listed	NE
Tetragnathidae	<i>Tylorida</i>	<i>striata</i>	(Thorell, 1877)	Streaked Golden Humpback Spider	Not Listed	LC
Tetragnathidae	<i>Tylorida</i>	<i>ventralis</i>	(Thorell, 1877)	Big-bellied Humpback Spider	Not Listed	LC
Tetragnathidae	<i>Tylorida</i>	sp. A		Brown-bellied Golden Spider	Not Listed	NE
Tetragnathidae	<i>Tylorida</i>	sp. B		Daisy Field Spider	Not Listed	NE
Tetragnathidae	<i>Tylorida</i>	sp. C		Common Golden Spider	Not Listed	NE
Theraphosidae	"Coremiocnemis"	sp. A		Singapore Feather-duster Tarantula	Not Listed	EN
Theraphosidae	"Coremiocnemis"	sp. B		Brown Feather-duster Tarantula	Not Listed	EN
Theraphosidae	<i>Omothymus</i>	<i>violaceopes</i>	(Abraham, 1924)	Singapore Blue Tarantula	NEx	EN
Theraphosidae	<i>Phlogiellus</i>	sp. A		Common Singapore Brown Tarantula	Not Listed	LC
Theraphosidae	<i>Phlogiellus</i>	sp. B		Larger Singapore Brown Tarantula	Not Listed	DD
Theraphosidae	<i>Selenocosmia</i>	sp.		Singapore Black Tarantula	Not Listed	EN
Theridiidae	(Hadrotarsinae)	sp. A			Not Listed	NE
Theridiidae	(Hadrotarsinae)	sp. B			Not Listed	NE
Theridiidae	<i>Allothymoites</i>	sp. A		Banded Legs Scaly Cobweb Spider	Not Listed	NE
Theridiidae	<i>Allothymoites</i>	sp. B		Socketed Spines Scaly Cobweb Spider	Not Listed	NE
Theridiidae	<i>Anelosimus</i>	<i>kohi</i>	Yoshida, 1993	Common-jagged-band Cobweb Spider	Not Listed	DD
Theridiidae	<i>Anelosimus</i>	sp.			Not Listed	NE
Theridiidae	<i>Argyrodes</i>	<i>argentatus</i>	O. Pickard-Cambridge, 1880	Silver Teardrop Food Stealer	Not Listed	LC
Theridiidae	<i>Argyrodes</i>	<i>fasciatus</i>	Thorell, 1893	Singapore Banded Food Stealer	Not Listed	LC
Theridiidae	<i>Argyrodes</i>	<i>fissifrons</i>	O. Pickard-Cambridge, 1869	Split-faced Silver Food Stealer	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Theridiidae	<i>Argyrodes</i>	<i>flavescens</i>	O. Pickard-Cambridge, 1880	Orange Silver Food Stealer	Not Listed	LC
Theridiidae	<i>Argyrodes</i>	sp. A		Square-notch Food Stealer	Not Listed	NE
Theridiidae	<i>Aryrodes</i>	sp. B		Furry Food Stealer	Not Listed	NE
Theridiidae	<i>Aryrodes</i>	sp. C		Ski-mask Food Stealer	Not Listed	NE
Theridiidae	<i>Ariamnes</i>	<i>flagellum</i>	(Doleschall, 1857)	Green Whip Spider	Not Listed	DD
Theridiidae	<i>Ariamnes</i>	<i>petilus</i>	Gao & Li, 2014	Reticulated Python Whip Spider	Not Listed	DD
Theridiidae	<i>Brunepisinus</i>	<i>selirong</i>	Yoshida & Koh, 2011	Twin-humpback Spider	Not Listed	DD
Theridiidae	<i>Brunepisinus</i>	sp.		Striped Twin-humpback Spider	Not Listed	NE
Theridiidae	<i>Campanicola</i>	sp.		Bell Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Cephalobares</i>	sp. A		Smooth Heavy-headed Spider	Not Listed	NE
Theridiidae	<i>Cephalobares</i>	sp. B		Scaly Heavy-headed Spider	Not Listed	NE
Theridiidae	<i>Chikunia</i>	sp.		Spinning-top Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. A		Tiger-striped Teardrop Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. B		Red-&-black Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. C		False Tiger-striped Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. D		Yellow-spotted Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. E		Polymorphic Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. F		Jade Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. G		Long-legged Jade Translucent Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. H		Tiny Spiny Mandarin Orange Spider	Not Listed	NE
Theridiidae	<i>Chrysso</i>	sp. I		Yellow Polka Dot Spider	Not Listed	NE
Theridiidae	<i>Coleosoma</i>	<i>blandum</i>	O. Pickard-Cambridge, 1882	Common Collared Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Coleosoma</i>	<i>floridanum</i>	Banks, 1900	Florida Collared Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Coleosoma</i>	<i>pseudoblandum</i>	Barrion & Litsinger, 1995	Orange Collared Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Coscinida</i>	<i>asiatica</i>	Zhu & Zhang, 1992	Asian Shovel-nose Big-eye Cobweb Spider	Not Listed	DD
Theridiidae	<i>Coscinida</i>	sp.		Spotted Big-eye Cobweb Spider	Not Listed	NE
Theridiidae	<i>Crustulina</i>	sp.		Warty False Widow	Not Listed	NE
Theridiidae	" <i>Dipoena</i> "	<i>turriceps</i>	(Schenkel, 1936)	Rorschach Block-headed Spider	Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Theridiidae	<i>Emertonella</i>	sp. A		Silver Ant-hunter	Not Listed	NE
Theridiidae	<i>Emertonella</i>	sp. B		Golden Ant-hunter	Not Listed	NE
Theridiidae	<i>Episinus</i>	<i>rhomboidalis</i>	(Simon, 1895)	Rhomboidal Twin-humpback Spider	Not Listed	DD
Theridiidae	<i>Episinus</i>	<i>yoshidai</i>	Okuma, 1994		Not Listed	DD
Theridiidae	" <i>Episinus</i> "	sp. A		Unicorn Spider	Not Listed	NE
Theridiidae	" <i>Episinus</i> "	sp. B		Bactrian Camel Spider	Not Listed	NE
Theridiidae	<i>Euryopis</i>	<i>episinoides</i>	(Walckenaer, 1847)	Variable-coloured Ant-hunter	Not Listed	LC
Theridiidae	<i>Janula</i>	<i>batman</i>	Yoshida & Koh, 2011	Batman Red-eyed Spider	Not Listed	DD
Theridiidae	<i>Janula</i>	<i>picta</i>	(Simon, 1895)	Speckled Red-eyed Spider	Not Listed	DD
Theridiidae	<i>Janula</i>	<i>triangularis</i>	Yoshida & Koh, 2011	Samosa Red-eyed Spider	Not Listed	DD
Theridiidae	<i>Janula</i>	<i>triocellata</i>	Yoshida & Koh, 2011	Red-eyed Spider	Not Listed	DD
Theridiidae	<i>Janula</i>	sp. A		Monkey-faced Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Janula</i>	sp. B		Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Janula</i>	sp. C		Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Janula</i>	sp. D		Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Janula</i>	sp. E		Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Janula</i>	sp. F		Red-eyed Spider	Not Listed	NE
Theridiidae	<i>Latrodectus</i>	<i>geometricus</i>	C.L.Koch, 1841	Brown Widow	Not Listed	LC
Theridiidae	" <i>Meotipa</i> "	<i>picturata</i>	Simon, 1895	Painted Blade-haired Triangular Spider	Not Listed	DD
Theridiidae	<i>Meotipa</i>	<i>pulcherrima</i>	(Mello-Leitão, 1917)	Beautiful Blade-haired Triangular Spider	Not Listed	LC
Theridiidae	<i>Meotipa</i>	<i>thalerorum</i>	Deeleman-Reinhold, 2009	Red Blade-haired Triangular Spider	Not Listed	DD
Theridiidae	<i>Meotipa</i>	<i>vesiculosa</i>	Simon, 1895	Blister Meotipa	Not Listed	DD
Theridiidae	<i>Meotipa</i>	sp.		Durian Meotipa	Not Listed	NE
Theridiidae	<i>Molione</i>	<i>triacantha</i>	Thorell, 1893	Three-spined Girdled Comb-footed Spider	Not Listed	DD
Theridiidae	<i>Moneta</i>	sp.		Short-tarsus Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Nesticodes</i>	<i>rufipes</i>	(Lucas, 1846)	Red-footed House Spider	Not Listed	LC
Theridiidae	<i>Nihonhimea</i>	<i>mundula</i>	(L. Koch, 1872)	Rolled-leaf Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Parasteatoda</i>	<i>celsabdomina</i>	(Zhu, 1998)	Brown-streaked Dorsal Hump Spider	Not Listed	DD
Theridiidae	<i>Parasteatoda</i>	<i>tepidiorum</i>	(C.L.Koch, 1841)	Glasshouse Spider	Not Listed	LC
Theridiidae	<i>Parasteatoda</i>	<i>triangula</i>	(Yoshida, 1993)	Pink-rumped Comb-footed Spider	Not Listed	DD
Theridiidae	<i>Parasteatoda</i>	sp. A		Black-sided Balloon Spider	Not Listed	NE
Theridiidae	<i>Parasteatoda</i>	sp. B		Arrow Folium Comb-footed Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Theridiidae	<i>Parasteatoda</i>	sp. C		White-streaked Dorsal Hump Spider	Not Listed	NE
Theridiidae	<i>Parasteatoda</i>	sp. D		Halloween Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Parasteatoda</i>	sp. E		Yellow Tall-faced Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Parasteatoda</i>	sp. F		Three-spotted Orange Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Phoroncidia</i>	<i>lygeana</i>	(Walckenaer, 1841)	Spiny Phoroncidia	EN	EN
Theridiidae	<i>Phoroncidia</i>	sp. A		Red Tortoise-shell Spider	Not Listed	NE
Theridiidae	<i>Phoroncidia</i>	sp. B		Pearly Tortoise-shell Spider	Not Listed	NE
Theridiidae	<i>Phoroncidia</i>	sp. C		Lumpy Tube-headed Spider	Not Listed	NE
Theridiidae	<i>Phoroncidia</i>	sp. D		Conical Lumpy Tube-headed Spider	Not Listed	NE
Theridiidae	<i>Phycosoma</i>	<i>digitula</i>	F. Zhang & B.S. Zhang, 2012	Zebra-crossing Box-headed Spider	Not Listed	DD
Theridiidae	<i>Phycosoma</i>	<i>hana</i>	(Zhu, 1998)	Blotchy Box-headed Spider	Not Listed	DD
Theridiidae	<i>Phycosoma</i>	<i>martinae</i>	(Roberts, 1983)	Spotted Box-headed Spider	Not Listed	LC
Theridiidae	<i>Phycosoma</i>	sp. A			Not Listed	NE
Theridiidae	<i>Phycosoma</i>	sp. B			Not Listed	NE
Theridiidae	<i>Phycosoma</i>	sp. C			Not Listed	NE
Theridiidae	<i>Phycosoma</i>	sp. D			Not Listed	NE
Theridiidae	<i>Platnickina</i>	<i>mneon</i>	(Bösenberg & Strand, 1906)	Speckled House Cob-web Spider	Not Listed	LC
Theridiidae	<i>Platnickina</i>	sp.		Ninja Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Propostira</i>	sp.		Four-tits Quadrangular Spider	Not Listed	NE
Theridiidae	<i>Rhinocosmetus</i>	<i>xiphias</i>	(Thorell, 1887)	Swordfish Food-stealing Spider	Not Listed	DD
Theridiidae	<i>Rhinocosmetus</i>	sp.		Metallic Red Pinnochio Food-stealer	Not Listed	DD
Theridiidae	<i>Rhomphaea</i>	<i>labiata</i>	(Zhu & Song, 1991)	Tiger Cowrie Boomerang Spider	Not Listed	LC
Theridiidae	<i>Rhomphaea</i>	<i>sinica</i>	(Zhu & Song, 1991)	Black Diamond Boomerang Spider	Not Listed	LC
Theridiidae	<i>Rhomphaea</i>	sp. A		Chocolate Chips Boomerang Spider	Not Listed	NE
Theridiidae	<i>Rhomphaea</i>	sp. B		Translucent Lined Boomerang Spider	Not Listed	NE
Theridiidae	<i>Rhomphaea</i>	sp. C		Mangrove Boomerang Spider	Not Listed	NE
Theridiidae	<i>Spheropistha</i>	sp. A		Black Balloon Spider	Not Listed	NE
Theridiidae	<i>Spheropistha</i>	sp. B		Strawberry-bellied Food-stealing Spider	Not Listed	NE
Theridiidae	<i>Spheropistha</i>	sp. C		Mangrove Silver Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Theridiidae	<i>Steatoda</i>	<i>gui</i>	Zhu, 1998	Gu's False Widow	Not Listed	DD
Theridiidae	<i>Steatoda</i>	sp.		Golden False Widow	Not Listed	DD
Theridiidae	<i>Stemmops</i>	<i>nigrabdomenus</i>	Zhu, 1998	Tangerine Bigeye Cobweb Spider	Not Listed	DD
Theridiidae	<i>Tamanidion</i>	sp.		Tiny Black-dotted Green Comb-footed	Not Listed	NE
Theridiidae	<i>Theridion</i>	<i>hainanense</i>	Zhu, 1998	Boxing Gloves Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Theridion</i>	<i>incanescens</i>	Simon, 1890	Black Spots Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Theridion</i>	<i>t-notatum</i>	Thorell, 1895	T-motif Comb-footed Spider	Not Listed	LC
Theridiidae	<i>Theridion</i>	<i>zonulatum</i>	Thorell, 1890	Smiley Zebra Comb-footed Spider	Not Listed	DD
Theridiidae	<i>Theridion</i>	sp. A		White Zebra Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Theridion</i>	sp. B		Black-rumped Globose Spider	Not Listed	NE
Theridiidae	<i>Theridion</i>	sp. C		Black Venter Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Theridion</i>	sp. D		Spotted Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Theridion</i>	sp. E		Four-spotted Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Theridula</i>	sp.		Yellow-spotted Theridula	Not Listed	NE
Theridiidae	<i>Thwaitesia</i>	sp. (<i>margaritifera</i> ?)	O. Pickard-Cambridge, 1881	Asian Mirror Spider	Not Listed	DD
Theridiidae	" <i>Thymoites</i> "	sp.		Tiny Hyena Comb-footed Spider	Not Listed	NE
Theridiidae	<i>Yaginumena</i>	<i>maculosa</i>	(Yoshida & Ono, 2000)	Spotted Ant-eater	Not Listed	DD
Theridiidae	<i>Yunohamella</i>	sp.		Soccer Comb-footed spider	Not Listed	NE
Theridiosomatidae	<i>Theridiosoma</i>	<i>fasciatum</i>	Workman, 1896	Workman's Ray Spider	Not Listed	DD
Theridiosomatidae	<i>Zoma</i>	sp.		Yin-yang Ray Spider	Not Listed	NE
Thomisidae	<i>Alcimochthes</i>	<i>limbatus</i>	Simon, 1886	Common Tall-faced Crab Spider	Not Listed	LC
Thomisidae	<i>Alcimochthes</i>	sp. A		Green Tall-faced Crab Spider	Not Listed	NE
Thomisidae	<i>Alcimochthes</i>	sp. B		Pinkish Tall-faced Crab Spider	Not Listed	NE
Thomisidae	<i>Amyciaea</i>	<i>forticeps</i>	(O. Pickard-Cambridge, 1873)	Ant-Mimic Crab Spider	Not Listed	LC
Thomisidae	<i>Angaeus</i>	<i>lenticulosus</i>	Simon, 1903	Woolly Flat-faced Crab Spider	Not Listed	DD
Thomisidae	<i>Angaeus</i>	<i>rhombifer</i>	Thorell, 1890	Common Diamond-bellied Crab Spider	Not Listed	DD
Thomisidae	<i>Angaeus</i>	<i>verrucosus</i>	Benjamin, 2017	Red-haired Flat-faced Crab Spider	Not Listed	DD
Thomisidae	<i>Boliscus</i>	<i>tuberculatus</i>	(Simon, 1886)	Beaded Crab Spider	Not Listed	LC

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Thomisidae	<i>Borboropactus</i>	<i>cinerascens</i>	(Doleschall, 1859)	Litter Crab Spider	Not Listed	DD
Thomisidae	<i>Camaricus</i>	<i>maugei</i>	(Walckenaer, 1837)	Flat-abdomen Crab Spider	Not Listed	LC
Thomisidae	<i>Cebrenninus</i>	<i>magnus</i>	Benjamin, 2016	Greater Cebrenninus	Not Listed	DD
Thomisidae	<i>Ebrechtella</i>	<i>concinna</i>	(Thorell, 1877)	Red-blotted Ebrechtella	Not Listed	LC
Thomisidae	<i>Epidius</i>	sp. A		Singapore Long-palped Crab Spider	Not Listed	VU
Thomisidae	<i>Epidius</i>	sp. B		Masked Long-palped Crab Spider	Not Listed	VU
Thomisidae	<i>Henriksenia</i>	<i>hilaris</i>	(Thorell, 1877)	Merry Crab Spider	Not Listed	LC
Thomisidae	<i>Henriksenia</i>	<i>nepenthicola</i>	(Fage, 1928)	Singapore Pitcher-plant Crab Spider	Not Listed	VU
Thomisidae	<i>Loxobates</i>	sp.		Crimson-striped Crab Spider	Not Listed	NE
Thomisidae	<i>Lycopus</i>	<i>rubropictus</i>	Workman, 1896	Red-painted Lycopus	Not Listed	DD
Thomisidae	<i>Mastira</i>	<i>bipunctata</i>	Thorell, 1891	Two-dotted White Angel	Not Listed	LC
Thomisidae	<i>Monaeses</i>	sp. A		Black-banded Flat-faced Spider	Not Listed	NE
Thomisidae	<i>Monaeses</i>	sp. B		Common Flat-faced Crab Spider	Not Listed	NE
Thomisidae	<i>Oxytate</i>	<i>virens</i>	(Thorell, 1891)	Long Green Crab Spider	Not Listed	LC
Thomisidae	<i>Pharta</i>	<i>bimaculata</i>	Thorell, 1891	Two-spotted Crab Spider	Not Listed	LC
Thomisidae	<i>Pharta</i>	sp.		Decorated Carapace Crab Spider	Not Listed	NE
Thomisidae	<i>Philodamia</i>	<i>hilaris</i>	Thorell, 1895	White-flecked Philodamia	Not Listed	LC
Thomisidae	<i>Philodamia</i>	<i>variata</i>	Thorell, 1895	Variegated Philodamia	Not Listed	DD
Thomisidae	" <i>Philodamia</i> "	<i>semicincta</i>	(Workman, 1896)	Half Girdle Crab Spider	Not Listed	LC
Thomisidae	<i>Phrynarachne</i>	<i>ceylonica</i>	(O. P-Cambridge, 1884)	Ceylon Bird-dropping Spider	Not Listed	DD
Thomisidae	<i>Phrynarachne</i>	<i>tuberosa</i>	(Blackwall, 1864)	Horned Bird-dropping Spider	Not Listed	DD
Thomisidae	<i>Platythomisus</i>	<i>octomaculatus</i>	(C.L.Koch, 1845)	Eight-spotted Crab Spider	EN	VU
Thomisidae	<i>Platythomisus</i>	sp.		Three-spotted Crab Spider	Not Listed	EN
Thomisidae	<i>Pycnaxis</i>	<i>krakatauensis</i>	(Bristowe, 1931)	Krakatau Bark Crab Spider	Not Listed	LC
Thomisidae	<i>Runcinia</i>	<i>acuminata</i>	(Thorell, 1881)	Long-pointed Runcinia	Not Listed	LC
Thomisidae	<i>Runcinia</i>	<i>insecta</i>	(L. Koch, 1875)	Round-tailed Runcinia	Not Listed	DD
Thomisidae	<i>Runcinia</i>	sp. A		Sharp-tailed Runcinia	Not Listed	NE
Thomisidae	<i>Runcinia</i>	sp. B		Pentagonal Runcinia	Not Listed	NE
Thomisidae	" <i>Spilosynema</i> "	sp.		Double-dashed Crab Spider	Not Listed	NE
Thomisidae	<i>Stephanopis</i>	sp.		Thorny Crab Spider	Not Listed	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Thomisidae	<i>Strigoplus</i>	<i>albostriatus</i>	Simon, 1886	Rake-faced Crab Spider	Not Listed	DD
Thomisidae	<i>Talaus</i>	sp. A		Four-blotched Pea Crab Spider	Not Listed	NE
Thomisidae	<i>Talaus</i>	sp. B		Black-and-yellow Pea Crab Spider	Not Listed	NE
Thomisidae	" <i>Tarrocanus</i> "	sp.		Cone-eyed Crab Spider	Not Listed	CR
Thomisidae	<i>Thomisus</i>	<i>callidus</i>	(Thorell, 1890)	Callidus Crab Spider	Not Listed	DD
Thomisidae	<i>Thomisus</i>	<i>guangxicus</i>	Song & Zhu, 1995	Chocolate-faced Crab Spider	Not Listed	LC
Thomisidae	<i>Thomisus</i>	<i>nepenthiphilus</i>	Fage, 1930	Pitcher-plant Horned Crab Spider	Not Listed	VU
Thomisidae	<i>Thomisus</i>	<i>perspicillatus</i>	(Thorell, 1890)	Buffalo Horn Crab Spider	Not Listed	EN
Thomisidae	<i>Thomisus</i>	<i>zhui</i>	Tang & Song, 1998	Small Dot Crab Spider	Not Listed	LC
Thomisidae	<i>Thomisus</i>	sp. A		Large horned Crab Spider	Not Listed	NE
Thomisidae	<i>Thomisus</i>	sp. B		Triangular Face Crab Spider	Not Listed	NE
Thomisidae	<i>Tmarus</i>	sp. A		Striped Humpback Crab Spider	Not Listed	NE
Thomisidae	<i>Tmarus</i>	sp. B		Triple-streaked Humpback Crab Spider	Not Listed	NE
Thomisidae	<i>Tmarus</i>	sp. C		Plump Humpback Crab Spider	Not Listed	NE
Titanocidae	<i>Pandava</i>	<i>laminata</i>	(Thorell, 1878)	Ambon Rock Weaver	Not Listed	LC
Trachelidae	<i>Orthobula</i>	sp.		Creamy Orthobula	Not Listed	NE
Trachelidae	<i>Trachelas</i>	<i>shilinensis</i>	Jin, Yin & Zhang, 2017	Tawny Bull-headed Hunter	Not Listed	DD
Trachelidae	<i>Utivarachna</i>	<i>phyllicola</i>	Deeleman-Reinhold, 2001	Banded Bull-headed Hunter	Not Listed	DD
Trachelidae	<i>Utivarachna</i>	sp.		Singapore Bull-headed Hunter	Not Listed	NE
Uloboridae	<i>Miagrammopes</i>	<i>oblongus</i>	Yoshida, 1982	Green Twig Spider	Not Listed	DD
Uloboridae	<i>Miagrammopes</i>	<i>singaporenensis</i>	Kulczyński, 1908	Singapore Twig Spider	Not Listed	DD
Uloboridae	<i>Miagrammopes</i>	sp. A		Brown Spotted Twig Spider	Not Listed	NE
Uloboridae	<i>Miagrammopes</i>	sp. B		Brown-green Twig Spider	Not Listed	NE
Uloboridae	<i>Miagrammopes</i>	sp. C		Thick Brush Twig Spider	Not Listed	NE
Uloboridae	<i>Miagrammopes</i>	sp. D		Arched-back Twig Spider	Not Listed	NE
Uloboridae	" <i>Philoponella</i> "	<i>quadrituberculata</i> (Thorell, 1893)		Mexican Hat Philoponella	Not Listed	EN
Uloboridae	<i>Philoponella</i>	<i>raffrayi</i>	(Simon, 1891)	Communal Red Philoponella	Not Listed	DD
Uloboridae	<i>Uloborus</i>	<i>plumipes</i>	Lucas, 1846	House Feather-legged Spider	Not Listed	LC
Uloboridae	<i>Uloborus</i>	sp. A		Hooked Feather-legged Spider	Not Listed	NE
Uloboridae	<i>Uloborus</i>	sp. B		Chocolate Feather-legged Spider	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Uloboridae	<i>Uloborus</i>	sp. C		Yellow Feather-legged Spider	Not Listed	NE
Uloboridae	<i>Zosis</i>	<i>geniculata</i>	(Olivier, 1789)	Grey Humped Domestic Spider	Not Listed	LC
Zodariidae	<i>Asceua</i>	sp. A		Five-barred Ant Hunter	Not Listed	NE
Zodariidae	<i>Asceua</i>	sp. B		Smiley Ant Hunter	Not Listed	NE
Zodariidae	<i>Asceua</i>	sp. C		Variegated Brown Ant Hunter	Not Listed	NE
Zodariidae	<i>Asceua</i>	sp. D		Pleated Leathery Ant Hunter	Not Listed	NE
Zodariidae	<i>Asceua</i>	sp. E		Yellow-banded Ant Hunter	Not Listed	NE
Zodariidae	<i>Cryptothelae</i>	<i>sundaica</i>	Thorell, 1890	Walking Mud Spider	Not Listed	LC
Zodariidae	<i>Mallinella</i>	<i>allorostrata</i>	Dankittipakul, Jocqué & Singtripop, 2012	Long-haired Glossy Ant Hunter	Not Listed	DD
Zodariidae	<i>Mallinella</i>	<i>annulipes</i>	(Thorell, 1893)	Ring-legged Glossy Ant Hunter	Not Listed	LC
Zodariidae	<i>Mallinella</i>	sp. A		Short-haired Glossy Ant Hunter	Not Listed	NE
Zodariidae	<i>Mallinella</i>	sp. B		Moustached Glossy Ant Hunter	Not Listed	NE
Zodariidae	<i>Tropozodium</i>	sp.		Unshaven Ground Spider	Not Listed	NE
Zodariidae	<i>Workmania</i>	<i>botuliformis</i>	Dankittipakul, Jocqué & Singtripop, 2012	Phang Nga Workman's Spider	Not Listed	DD
Zodariidae	<i>Workmania</i>	<i>juvenca</i>	(Workman, 1896)	Singapore Workman's Spider	Not Listed	DD

Checklist of Miscellaneous Arthropoda and Onychophora Species with their Category of Threat Status for Singapore

Prepared by Hwang Wei Song

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Peripatidae	<i>Eoperipatus</i>	<i>sumatrana</i>	(Sedgwick 1888)	Velvet worm	EN	EN
Sminthuridae	<i>Sphaeridia</i>	<i>massoudi</i>	Murphy 1966	Springtail	NEx?	NEx
Sminthuridae	<i>Sphaeridia</i>	<i>pippetti</i>	Murphy 1966	Springtail	NEx?	NEx
Machilidae	<i>Dromadimachilis</i>	<i>gibba</i>	(Carpenter, 1916)	Camel rockspringer	NEx	NEx
Mantidae	<i>Hymenopus</i>	<i>coronatus</i>	(Oliver, 1792)	Walking flower mantis	NEx	NEx
Nogodinidae	<i>Elica</i>	<i>latipennis</i>	(Walker, 1857)	Nogodinid plant-bug	DD	VU
Pyrrhocoridae	<i>Dysdercus</i>	<i>decussatus</i>	Boisduval, 1835	Cotton stainer bug	EN	LC
Miridae	<i>Stethoconus</i>	<i>praefectus</i>	(Distant, 1909)		DD	DD
Tingidae	<i>Ypsotiringis</i>	<i>sideris</i>	(Drake, 1947)		DD	DD
Pentatomidae	<i>Rhynchoscoris</i>	<i>humeralis</i>	(Thunberg, 1783)	Lime shieldbug	EN/CR	DD
Psyllidae	<i>Diclidophlebia</i>	<i>oceania</i>	(Crawford, 1919)	Beetle-like plant louse	DD	DD
Pteromalidae	<i>Solenura</i>	<i>ania</i>	(Walker, 1846)	Long-tailed parasitic wasp	VU	VU
Berothidae	<i>Berotha</i>	sp.		Beaded lacewing	VU	VU
Nicoletiidae	<i>Assmuthia</i>	<i>spinossissima</i>	Escherich, 1906		DD	DD

Checklist of Arthropoda - Tanaidacean Crustacean Species with their Category of Threat Status for Singapore

Prepared by Chim Chee Kong

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Kalliapseudidae	<i>Phoxokalliapseudes</i>	<i>singaporense</i>	Drumm & Heard, 2011		Not Listed	LC
Tanaididae	<i>Xenosinelobus</i>	<i>balanocolus</i>	Chim & Tong, 2019		Not Listed	DD

Checklist of Arthropoda - Freshwater Decapod Crustacean Species with their Category of Threat Status for Singapore

Prepared by Yixiong Cai, Daniel J.J. Ng, Lydia X. Gan, Elysia X.P. Toh, Darren C.J. Yeo

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Gecarcinidae	<i>Irmengardia</i>	<i>johsoni</i>	Ng & Yang, 1985	Johnson's Freshwater Crab	EN	VU
Gecarcinidae	<i>Parathelphusa</i>	<i>maculata</i>	De Man 1879	Lowland Freshwater Crab	Not Listed	LC
Gecarcinidae	<i>Parathelphusa</i>	<i>reticulata</i>	Ng, 1990	Swamp Forest Crab	EN	EN
Potamidae	<i>Johora</i>	<i>singaporensis</i>	Ng, 1986	Singapore Freshwater Crab	EN	EN
Sesarmidae	<i>Geosesarma</i>	<i>peraccae</i>	(Nobili, 1903)	Peracca's Land Crab	VU	VU
Sesarmidae	<i>Geosesarma</i>	<i>nemesis</i>	Ng, 1986	Little Land Crab	EN	EN
Palaemonidae	<i>Macrobrachium</i>	<i>equidens</i>	(Dana, 1852)	Rough River Prawn	Not Listed	EN
Palaemonidae	<i>Macrobrachium</i>	<i>malayanum</i>	(Roux, 1934)	Malayan River Prawn	Not Listed	LC
Palaemonidae	<i>Macrobrachium</i>	<i>platycheles</i>	Ou & Yeo, 1995	Torrent Prawn	CR	CR
Palaemonidae	<i>Macrobrachium</i>	<i>sundaicum</i>	(Heller, 1862)	Sunda River Prawn	Not Listed	VU
Palaemonidae	<i>Macrobrachium</i>	<i>pilimanus</i>	(De Man, 1879)	Muff River Prawn	Not Listed	EN
Palaemonidae	<i>Macrobrachium</i>	<i>rosenbergii</i>	(De Man, 1879)	Giant River Prawn	NEx	NEx
Palaemonidae	<i>Macrobrachium</i>	<i>scabriculum</i>	(Heller, 1862)	Goda River Prawn	Not Listed	NEx
Palaemonidae	<i>Macrobrachium</i>	<i>neglectum</i>	(De Man, 1905)	Java River Prawn	Not Listed	NEx
Palaemonidae	<i>Macrobrachium</i>	<i>idae</i>	(Heller, 1862)	Orana River Prawn	NEx	NEx
Atyidae	<i>Caridina</i>	<i>peninsularis</i>	Kemp, 1918	Peninsular Caridina	Not Listed	EN
Atyidae	<i>Caridina</i>	<i>gracilirostris</i>	De Man, 1892	Needlenose Caridina	Not Listed	EN
Atyidae	<i>Caridina</i>	<i>propinqua</i>	De Man, 1908	Bengal Caridina	Not Listed	VU
Atyidae	<i>Caridina</i>	<i>sumatrensis</i>	De Man, 1892	Sumatra Caridina	Not Listed	NEx
Atyidae	<i>Caridina</i>	<i>gracilipes</i>	De Man, 1892	Slender-legged Caridina	Not Listed	CR
Atyidae	<i>Caridina</i>	<i>bruneiana</i>	Choy, 1992	Brunei Caridina	Not Listed	NEx
Atyidae	<i>Caridina</i>	<i>temasek</i>	Choy & Ng, 1991	Temasek Caridina	EN	EN
Atyidae	<i>Caridina</i>	<i>johsoni</i>	Cai, Ng & Choy, 2007	Johnson's Caridina	Not Listed	LC
Atyidae	<i>Caridina</i>	<i>malayensis</i>	Cai, Ng & Choy, 2007	Malayan Caridina	Not Listed	EN
Alpheidae	<i>Potamalpheops</i>	<i>amnicus</i>	Yeo & Ng, 1997	Riverine Alpheid Shrimp	EN	EN

Checklist of Arthropoda - Horseshoe Crab (Order: Xiphosurida) and Marine Decapod Crustacean (Order: Decapoda) Species with their Category of Threat Status for Singapore
Prepared by Jose Christopher E. Mendoza, Bee Yan Lee, Peter K.L. Ng, Darren C.J. Yeo

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Limulidae	<i>Carcinoscorpius</i>	<i>rotundicauda</i>	(Latreille, 1802)	Mangrove horseshoe crab	VU	VU
Limulidae	<i>Tachypleus</i>	<i>gigas</i>	(Müller, 1785)	Coastal horseshoe crab	EN	VU
Palaemonidae	<i>Cristimenes</i>	<i>cristimanus</i>	(Bruce, 1965)	Black urchin shrimp	VU	VU
Palaemonidae	<i>Cuapetes</i>	<i>johsoni</i>	(Bruce, 1987)	Seagrass shrimp	VU	CR
Alpheidae	<i>Alpheus</i>	<i>microrhynchus</i>	De Man, 1898	Giant mangrove snapping shrimp	EN	EN
Alpheidae	<i>Athanas</i>	<i>japonicus</i>	Kubo, 1936		VU	VU
Alpheidae	<i>Athanas</i>	<i>polymorphus</i>	Kemp, 1915		VU	VU
Alpheidae	<i>Potamalpheops</i>	<i>johsoni</i>	Anker, 2003	Brackish alpheid shrimp	VU	EN
Alpheidae	<i>Potamalpheops</i>	<i>tigger</i>	Yeo & Ng, 1997	Brackish alpheid shrimp	VU	VU
Alpheidae	<i>Salmoneus</i>	<i>singaporenensis</i>	Anker, 2003		CR	CR
Alpheidae	<i>Synalpheus</i>	<i>stimpsoni</i>	(De Man, 1888)	Crinoid snapping shrimp	CR	EN
Thalassinidae	<i>Thalassina</i>	<i>anomala</i>	(Herbst, 1804)	Mud lobster	EN	EN
Thalassinidae	<i>Thalassina</i>	<i>gracilis</i>	Dana, 1852	Mud lobster	EN	EN
Upogebiidae	<i>Wolfoggebia</i>	<i>phuketensis</i>	Sakai, 1982	Mud shrimp	EN	EN
Porcellanidae	<i>Eulenaios</i>	<i>cometes</i>	(Walker, 1887)	Parchment worm porcelain crab	EN	EN
Porcellanidae	<i>Porcellanella</i>	<i>triloba</i>	White, 1851	Painted porcelain crab	VU	VU
Porcellanidae	<i>Pseudoporcellanella</i>	<i>manoliensis</i>	Sankarankutty, 1961	False porcelain crab	VU	VU
Porcellanidae	<i>Raphidopus</i>	<i>ciliatus</i>	Stimpson, 1858	Hairy-leg porcelain crab	VU	VU
Coenobitidae	<i>Coenobita</i>	<i>violascens</i>	Heller, 1862	Land hermit crab	VU	DD
Coenobitidae	<i>Coenobita</i>	<i>lila</i>	Rahayu, Shih & Ng, 2016	Land hermit crab	VU	NT
Calappidae	<i>Calappa</i>	<i>lophos</i>	(Herbst, 1782)	Common box crab	VU	VU
Calappidae	<i>Calappa</i>	<i>philargius</i>	(Linnaeus, 1758)	Spectacled box crab; Spotted box crab	VU	NT
Calappidae	<i>Calappa</i>	<i>hepatica</i>	(Linnaeus, 1758)	Reef box crab	VU	VU
Leucosiidae	<i>Favus</i>	<i>granulatus</i>	Lanchester, 1900	Rubble crab; Singapore rubble crab	EN	EN
Leucosiidae	<i>Praosia</i>	<i>punctata</i>	Tan & Ng, 1993	Cheryl crab; Mangrove pebble crab	EN	EN
Leucosiidae	<i>Alox</i>	<i>somphos</i>	Tan & Ng, 1995	Spongy rubble crab	EN	EN
Epiaptidae	<i>Doclea</i>	<i>canaliformis</i>	Ow-Yang, in Lovett, 1981	Channeled spider crab	EN	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Epialtidae	<i>Hyastenus</i>	<i>elatus</i>	Griffin & Tranter, 1986		EN	DD
Epialtidae	<i>Hyastenus</i>	<i>subinermis</i>	Zehntner, 1894		EN	VU
Epialtidae	<i>Menaethius</i>	<i>monoceros</i>	(Latreille, 1825)	Arrow-head spider crab; One-horned spider crab	VU	NT
Inachidae	<i>Camposcia</i>	<i>retusa</i>	Latreille, 1829	Velcro crab; Decorator crab	VU	NT
Inachidae	<i>Paratymolus</i>	<i>cygnus</i>	Loh & Ng, 1999		CR	EN
Majidae	<i>Planotergum</i>	<i>mirabile</i>	Balss, 1935		EN	DD
Hymenosomatidae	<i>Crustaenia</i>	<i>palawanensis</i>	(Serène, 1971)	False spider crab	EN	EN
Hymenosomatidae	<i>Elamena</i>	<i>globosa</i>	Chuang & Ng, 1991	False spider crab	EN	CR
Hymenosomatidae	<i>Elamena</i>	<i>mendosa</i>	Chuang & Ng, 1991	False spider crab	EN	EN
Hymenosomatidae	<i>Elamenopsis</i>	<i>rotunda</i>	Naruse & Ng, 2007	Circular false spider crab	CR	CR
Hymenosomatidae	<i>Lucascinus</i>	<i>coralicola</i>	(Rathbun, 1909)	False spider crab	VU	VU
Hymenosomatidae	<i>Neorhynchoplax</i>	<i>mangalis</i>	(Ng, 1988)	Mangrove false spider crab; Mangrove crown crab	VU	NT
Parthenopidae	<i>Aulacolambrus</i>	<i>granulosus</i>	(Miers, 1879)	Elbow crab	CR	DD
Parthenopidae	<i>Daldorfia</i>	<i>horrida</i>	(Linnaeus, 1758)	Horrid elbow crab	NEx	CR
Parthenopidae	<i>Enoplolampbrus</i>	<i>echinatus</i>	(Herbst, 1790)	Elbow crab	EN	VU
Parthenopidae	<i>Pseudolambrus</i>	<i>bicornis</i>	(Flipse, 1930)	Two-horned elbow crab	CR	CR
Parthenopidae	<i>Rhinolambrus</i>	<i>pelagicus</i>	(Rüppell, 1830)	Common elbow crab	VU	VU
Parthenopidae	<i>Cryptopodia</i>	<i>fornicata</i>	(Fabricius, 1787)	Domed elbow crab	EN	VU
Corystidae	<i>Gomeza</i>	<i>bicornis</i>	Gray, 1831	Masked burrowing crab	VU	VU
Corystidae	<i>Jonas</i>	<i>formosae</i>	(Balss, 1922)	Masked burrowing crab	VU	EN
Portunidae	<i>Lupocyclus</i>	<i>rotundatus</i>	Adams & White, 1849	Swimming crab	NEx	EN
Carpiliidae	<i>Carpilius</i>	<i>maculatus</i>	(Linnaeus, 1758)	Spotted reef crab	EN	EN
Eriphiidae	<i>Eriphia</i>	<i>ferox</i>	Koh & Ng, 2008	Red-eyed reef crab; Ferocious reef crab	VU	VU
Pilumnidae	<i>Glabropilumnus</i>	<i>edamensis</i>	(De Man, 1888)		VU	VU
Pilumnidae	<i>Gonatonotus</i>	<i>pentagonus</i>	White, 1847	Sea urchin crab	EN	EN
Pilumnidae	<i>Harrovia</i>	<i>albolineata</i>	Adams & White, 1849	Feather star crab	CR	VU
Pilumnidae	<i>Harrovia</i>	<i>longipes</i>	Lanchester, 1900	Feather star crab	CR	VU
Xanthidae	<i>Hypocolpus</i>	<i>rugosus</i>	(Henderson, 1893)	Reef crab	CR	EN
Pilumnidae	<i>Mertonia</i>	<i>lanka</i>	Laurie, 1906		VU	EN
Galenidae	<i>Parapanope</i>	<i>euagora</i>	De Man, 1895		EN	EN
Pilumnidae	<i>Pilumnus</i>	<i>murphyi</i>	Ng, 1988		VU	EN

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Pilumnidae	<i>Pilumnus</i>	<i>ohshima</i>	Takeda & Miyake, 1970		EN	EN
Pilumnidae	<i>Vellumnus</i>	<i>labyrinthicus</i>	(Miers, 1884)		VU	EN
Pilumnidae	<i>Rhabdonotus</i>	<i>pictus</i>	A. Milne- Edwards, 1879		EN	EN
Pilumnidae	<i>Rhizopoides</i>	<i>yangae</i>	(Ng, 1985)		CR	CR
Pilumnidae	<i>Zebrida</i>	<i>adamsii</i>	White, 1847	Zebra crab; Zebra urchin crab	EN	EN
Trapeziidae	<i>Trapezia</i>	<i>cymodoce</i>	(Herbst, 1801)	Lilac coral crab; Red coral crab	VU	VU
Tetraliidæ	<i>Tetralia</i>	<i>nigrolineata</i>	Serène & Pham, 1957	Bandit coral crab	CR	EN
Xanthidae	<i>Atergatis</i>	<i>floridus</i>	(Linnaeus, 1767)	Green egg crab; Floral egg crab	VU	VU
Xanthidae	<i>Atergatis</i>	<i>integerimus</i>	(Lamarck, 1818)	Red egg crab	VU	NT
Xanthidae	<i>Banareia</i>	<i>subglobosa</i>	(Stimpson, 1858)		EN	EN
Xanthidae	<i>Cymo</i>	<i>andreossyi</i>	(Audouin, 1826)	Hairy coral crab	VU	VU
Xanthidae	<i>Lophozozymus</i>	<i>pictor</i>	(Fabricius, 1798)	Mosaic reef crab	EN	NT
Xanthidae	<i>Neoxanthops</i>	<i>lineatus</i>	(A. Milne- Edwards, 1867)	Lined reef crab	EN	EN
Xanthidae	<i>Novactaea</i>	<i>bella</i>	Guinot, 1976		EN	EN
Xanthidae	<i>Palapedia</i>	<i>valentini</i>	Ng, 1993		VU	EN
Xanthidae	<i>Platypodia</i>	<i>granulosa</i>	(Rüppell, 1830)	Curry puff crab	EN	VU
Xanthidae	<i>Trichia</i>	<i>horii</i>	Miyake, 1940	Paddington bear crab	CR	CR
Dotillidae	<i>Dotilla</i>	<i>myctiroides</i>	(H. Milne Edwards, 1852)	Soldier crab	VU	LC
Dotillidae	<i>Ilyoplax</i>	<i>delsmani</i>	De Man, 1926	White semaphore crab	VU	VU
Ocypodidae	<i>Ocypode</i>	<i>cordimanus</i>	Latreille, 1818	Smooth-handed ghost crab; Smooth- eyed ghost crab	VU	EN
Ocypodidae	<i>Tubuca</i>	<i>rosea</i>	(Tweedie, 1937)	Rosy fiddler crab	EN	VU
Gecarcinidae	<i>Tuerkayana</i>	<i>hirtipes</i>	(Dana, 1852)	Blue land crab	Not Listed	EN
Sesarmidae	<i>Sarmatium</i>	<i>germaini</i>	(A. Milne- Edwards, 1869)	Mound crab	EN	NT
Sesarmidae	<i>Sesarmoides</i>	<i>boreensis</i>	(Tweedie, 1950)		EN	EN
Sesarmidae	<i>Haberma</i>	<i>nanum</i>	Ng & Schubart, 2002	Grasping land sesarmid	VU	NT
Camptandriidae	<i>Baruna</i>	<i>trigranulum</i>	(Dai & Song, 1986)	Crevice crab	Not Listed	LC
Camptandriidae	<i>Ilyogynnis</i>	<i>microcheirum</i>	(Tweedie, 1937)	Common silt crab	Not Listed	LC
Camptandriidae	<i>Moguai</i>	<i>elongatum</i>	(Rathbun, 1931)		Not Listed	NE
Camptandriidae	<i>Paracleistostoma</i>	<i>depressum</i>	De Man, 1895	Red silt crab	Not Listed	LC
Camptandriidae	<i>Paracleistostoma</i>	<i>longimanum</i>	Tweedie, 1937		Not Listed	NE
Camptandriidae	<i>Paracleistostoma</i>	<i>wardi</i>	(Rathbun, 1926)		Not Listed	NE
Dorippidae	<i>Neodorippe</i>	<i>callida</i>	(Fabricius, 1798)	Leaf porter crab	Not Listed	NE
Dotillidae	<i>Dotilla</i>	<i>wichmani</i>	De Man, 1892	Wichman's soldier crab	Not Listed	NE
Dotillidae	<i>Ilyoplax</i>	<i>lingulata</i>	(Rathbun, 1909)		Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Dotillidae	<i>Ilyoplax</i>	<i>longicarpa</i>	Tweedie, 1918		Not Listed	NE
Dotillidae	<i>Ilyoplax</i>	<i>obliqua</i>	Tweedie, 1935	Tweedies' semaphore crab	Not Listed	NE
Dotillidae	<i>Ilyoplax</i>	<i>punctata</i>	Tweedie, 1935		Not Listed	NE
Dotillidae	<i>Scopimera</i>	<i>intermedia</i>	Balss, 1934		Not Listed	LC
Dotillidae	<i>Shenius</i>	<i>anomalus</i>	(Shen, 1935)	Shen crab	Not Listed	NE
Epialtidae	<i>Doclea</i>	<i>armata</i>	De Haan, 1839		Not Listed	NE
Epialtidae	<i>Doclea</i>	<i>ovis</i>	(Fabricius, 1787)		Not Listed	NE
Epialtidae	<i>Doclea</i>	<i>rissoni</i>	Leach, 1815		Not Listed	NE
Epialtidae	<i>Hyastenus</i>	<i>whitei</i>	Griffin, 1976		Not Listed	NE
Epialtidae	<i>Phalangipus</i>	<i>indicus</i>	(Leach, 1815)		Not Listed	NE
Epialtidae	<i>Phalangipus</i>	<i>longipes</i>	(Linnaeus, 1758)		Not Listed	NE
Epialtidae	<i>Phalangipus</i>	<i>malakkensis</i>	Griffin, 1973		Not Listed	NE
Epialtidae	<i>Tylocarcinus</i>	<i>styx</i>	(Herbst, 1803)	Underworld spider crab	Not Listed	NE
Epialtidae	<i>Xenocarcinus</i>	<i>tuberculatus</i>	White, 1847	Wire coral crab	Not Listed	NE
Grapsidae	<i>Metopograpsus</i>	<i>frontalis</i>	Miers, 1880	Purple climber crab	Not Listed	NE
Grapsidae	<i>Metopograpsus</i>	<i>latifrons</i>	(White, 1847)	Purple climber crab	Not Listed	NE
Inachidae	<i>Achaeus</i>	<i>brevirostris</i>	(Haswell, 1879)		Not Listed	NE
Inachidae	<i>Achaeus</i>	<i>lacertosus</i>	Stimpson, 1858		Not Listed	NE
Inachidae	<i>Achaeus</i>	<i>lorina</i>	(Adams & White, 1848)		Not Listed	NE
Inachidae	<i>Litosus</i>	<i>sexspinosus</i>	(Miers, 1884)		Not Listed	NE
Inachidae	<i>Oncinopus</i>	<i>araneus</i>	(De Haan, 1839)		Not Listed	NE
Inachidae	<i>Oncinopus</i>	<i>neptunus</i>	Adams & White, 1848		Not Listed	NE
Leucosiidae	<i>Paranursia</i>	<i>abbreviata</i>	(Bell, 1855)		Not Listed	NT
Leucosiidae	<i>Philyra</i>	<i>malefactrix</i>	(Kemp, 1915)	Mangrove pebble crab; Millet crab	Not Listed	NE
Macrophthalmidae	<i>Macrophthalmus</i> (<i>Mareotis</i>)	<i>crinitus</i>	Rathbun, 1913		Not Listed	NE
Majidae	<i>Holthuija</i>	<i>miersii</i>	(Walker, 1887)		Not Listed	NE
Majidae	<i>Micippa</i>	<i>curtispina</i>	Haswell, 1880		Not Listed	NE
Majidae	<i>Micippa</i>	<i>excavata</i>	Lanchester, 1900		Not Listed	NE
Majidae	<i>Micippa</i>	<i>philyra</i>	(Herbst, 1803)		Not Listed	NE
Majidae	<i>Prismatopus</i>	<i>aculeatus</i>	(H. Milne Edwards, 1834)		Not Listed	NE
Majidae	<i>Prismatopus</i>	<i>halimoides</i>	(Miers, 1879)		Not Listed	NE
Majidae	<i>Schizophrys</i>	<i>aspera</i>	(H. Milne Edwards, 1831)	Sea toad spider crab	Not Listed	NE
Majidae	<i>Schizophrys</i>	<i>dama</i>	(Herbst, 1804)	Sea toad spider crab	Not Listed	NE
Menippidae	<i>Myomenippe</i>	<i>hardwickii</i>	(Gray, 1831)	Stone crab; Thunder crab	Not Listed	LC
Ocypodidae	<i>Ocypode</i>	<i>ceratophthalmus</i>	(Pallas, 1772)	Horn-eyed ghost crab	Not Listed	LC
Ocypodidae	<i>Gelasimus</i>	<i>vocans</i>	(Linnaeus, 1758)	Orange fiddler crab	Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Ocypodidae	<i>Paraleptuca</i>	<i>annulipes</i>	(H. Milne Edwards, 1837)	Porcelain fiddler crab	Not Listed	NE
Ocypodidae	<i>Paraleptuca</i>	<i>perplexa</i>	(H. Milne Edwards, 1837)	Lemon clawed fiddler crab	Not Listed	NE
Ocypodidae	<i>Tubuca</i>	<i>dussumieri</i>	(H. Milne Edwards, 1852)	Purple fiddler crab	Not Listed	NE
Ocypodidae	<i>Tubuca</i>	<i>forcipata</i>	(Adams & White, 1849)		Not Listed	NE
Ocypodidae	<i>Tubuca</i>	<i>paradussumieri</i>	Bott, 1973	Purple fiddler crab	Not Listed	NE
Ocypodidae	<i>Tubuca</i>	<i>rhizophoriae</i>	Tweedie, 1950		Not Listed	NE
Oziidae	<i>Epixanthus</i>	<i>dentatus</i>	(White, 1848)	Forceps crab; Mangrove forceps crab; Long fingered peeler crab	Not Listed	NE
Oziidae	<i>Ozius</i>	<i>guttatus</i>	H. Milne Edwards, 1834	Spotted-belly forceps crab	Not Listed	NE
Pilumnidae	<i>Aniptumnus</i>	<i>quadridentatus</i>	(De Man, 1895)		Not Listed	NE
Pilumnidae	<i>Heteropanope</i>	<i>glabra</i>	Stimpson, 1858	Pebble crab	Not Listed	NE
Pilumnidae	<i>Heteropilumnus</i>	<i>sasekumari</i>	Serène, 1971		Not Listed	NE
Portunidae	<i>Portunus</i>	<i>pelagicus</i>	(Linnaeus, 1758)	Flower crab	Not Listed	NE
Portunidae	<i>Scylla</i>	<i>olivacea</i>	(Herbst, 1796)	Orange mud crab	Not Listed	NE
Portunidae	<i>Scylla</i>	<i>paramamosain</i>	Estampador, 1949	Green mud crab	Not Listed	NE
Portunidae	<i>Scylla</i>	<i>serrata</i>	(Forskål, 1775)	Giant mud crab; Indo-Pacific swamp crab; Sri Lanka crab; Giant green crab	Not Listed	NE
Portunidae	<i>Scylla</i>	<i>tranquebarica</i>	(Fabricius, 1798)	Purple mud crab	Not Listed	NE
Sesarmidae	<i>Clistocoeloma</i>	<i>merguiense</i>	De Man, 1888		Not Listed	NE
Sesarmidae	<i>Episesarma</i>	<i>chentongense</i>	(Serène & Soh, 1967)	Pink-fingered tree-climbing crab; Pink-fingered vinegar crab	Not Listed	NE
Sesarmidae	<i>Episesarma</i>	<i>mederi</i>	(H. Milne Edwards, 1853)	Thai vinegar crab; Red claw crab	Not Listed	NE
Sesarmidae	<i>Episesarma</i>	<i>palawanense</i>	(Rathbun, 1914)	Rathbun's vinegar crab	Not Listed	NE
Sesarmidae	<i>Episesarma</i>	<i>singaporense</i>	(Tweedie, 1936)	Singapore tree-climbing crab; Singapore vinegar crab	Not Listed	NE
Sesarmidae	<i>Episesarma</i>	<i>versicolor</i>	(Tweedie, 1940)	Violet tree-climbing crab; Violet vinegar crab; Purple white claw	Not Listed	NE
Sesarmidae	<i>Fasciama</i>	<i>fasciatum</i>	(Lanchester, 1900)		Not Listed	NE
Sesarmidae	<i>Lithoselatium</i>	<i>kusu</i>	Schubart, Liu & Ng, 2009	Kusu rock crab	Not Listed	NE
Sesarmidae	<i>Nanosesarma</i>	<i>batavicum</i>	(Moreira, 1903)		Not Listed	NE
Sesarmidae	<i>Nanosesarma</i>	<i>minutum</i>	(De Man, 1887)		Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Sesarmidae	<i>Nanosesarma</i>	<i>pontianacense</i>	(De Man, 1895)		Not Listed	NE
Sesarmidae	<i>Neosarmatium</i>	<i>smithi</i>	(H. Milne Edwards, 1853)		Not Listed	NE
Sesarmidae	<i>Neosarmatium</i>	<i>indicum</i>	(A. Milne-Edwards, 1898)		Not Listed	NE
Sesarmidae	<i>Neosesarma</i>	<i>gemmaferum</i>	(Tweedie, 1936)		Not Listed	NE
Sesarmidae	<i>Neosesarma</i>	<i>rectipectinatum</i>	(Tweedie, 1950)		Not Listed	NE
Sesarmidae	<i>Parasesarma</i>	<i>eumolpe</i>	(De Man, 1895)	Face-banded sesarmine crab	Not Listed	NE
Sesarmidae	<i>Parasesarma</i>	<i>indiarum</i>	(Tweedie, 1940)	Face-banded sesarmine crab	Not Listed	NE
Sesarmidae	<i>Sarmatium</i>	<i>striaticarpus</i>	Davie, 1992		Not Listed	NE
Sesarmidae	<i>Selatium</i>	<i>brockii</i>	(De Man, 1887)	Mangrove tree-dwelling crab	Not Listed	NE
Sesarmidae	<i>Tiomanium</i>	<i>indicum</i>	(H. Milne Edwards, 1837)		Not Listed	NE
Varunidae	<i>Metaplax</i>	<i>elegans</i>	De Man, 1888	Orange signaller crab	Not Listed	NE
Varunidae	<i>Utica</i>	<i>borneensis</i>	De Man, 1895		Not Listed	NE
Varunidae	<i>Varuna</i>	<i>yui</i>	Hwang & Takeda, 1986	Sundaic paddler crab; Paddler crab	Not Listed	NE
Hymenosomatidae	<i>Neorhynchoplax</i>	<i>venusta</i>	Ng, 2015		Not Listed	EN

Checklist of Marine Insect Species with their Category of Threat Status for Singapore

Prepared by Marc Chang Jia Jin, Lanna Cheng, Tran Anh Duc, Hwang Wei Song

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Chironomidae	<i>Pontomyia</i>	<i>pacifica</i>	Tokunaga, 1932	Marine midge	Not Listed	NT
Gerridae	<i>Asclepios</i>	<i>annandalei</i>	Distant, 1915	Sea skater	Not Listed	LC
Gerridae	<i>Halobates</i>	<i>esakii</i>	Miyamoto, 1967	Sea skater	Not Listed	DD
Gerridae	<i>Halobates</i>	<i>germanus</i>	White, 1883	Sea skater	Not Listed	LC
Gerridae	<i>Halobates</i>	<i>hayanus</i>	White, 1883	Sea skater	Not Listed	LC
Gerridae	<i>Halobates</i>	<i>princeps</i>	White, 1883	Sea skater	Not Listed	DD
Gerridae	<i>Halobates</i>	<i>proavus</i>	White, 1883	Sea skater	Not Listed	DD
Gerridae	<i>Halobates</i>	<i>trynae</i>	Herring, 1964	Sea skater	Not Listed	DD
Gerridae	<i>Rheumatometroides</i>	<i>insularis</i>	(J. Polhemus and Cheng, 1982)	Sea skater	Not Listed	LC
Gerridae	<i>Stenobates</i>	<i>biroi</i>	Esaki, 1926	Sea skater	Not Listed	LC
Hermatobatidae	<i>Hermatobates</i>	<i>singaporensis</i>	Cheng, 1976	Coral treader	Not Listed	EN
Veliidae	<i>Halovelia</i>	<i>lannae</i>	Andersen, 1989	Coral bug	Not Listed	LC
Veliidae	<i>Haloveloides</i>	<i>sundaensis</i>	Andersen, 1991	Coral bug	Not Listed	LC
Veliidae	<i>Xenobates</i>	<i>mandai</i>	Andersen, 2000	Mangrove bug	Not Listed	LC
Veliidae	<i>Xenobates</i>	<i>murphyi</i>	Andersen, 2000	Mangrove bug	Not Listed	LC
Veliidae	<i>Xenobates</i>	<i>singaporensis</i>	Andersen, 2000	Mangrove bug	Not Listed	LC
Omaniidae	<i>Corallocoris</i>	<i>marksae</i>	(Woodward, 1958)	Intertidal dwarf bug	Not Listed	NT
Saldidae	<i>Pentacora</i>	<i>malayensis</i>	(Dover, 1929)	Shore bug	Not Listed	EN
Saldidae	<i>Salduncula</i>	<i>murphyi</i>	J. Polhemus, 1991	Shore bug	Not Listed	VU
Saldidae	<i>Saldoida</i>	<i>armata</i>	Horvath, 1911	Shore bug	Not Listed	VU

Checklist of Echinodermata Species with their Category of Threat Status for Singapore

Prepared by Iffah Iesa, David J.W. Lane, Helen P.-S. Wong, Teresa Stephanie Tay

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Caudinidae	<i>Acaudina</i>	<i>leucoprocta</i>	(H. L. Clark, 1938)		Not Listed	VU
Caudinidae	<i>Acaudina</i>	<i>molpadiooides</i>	(Semper, 1867)		Not Listed	VU
Caudinidae	<i>Acaudina</i>	<i>rosettis</i>	O'Loughlin & Ong, 2015		Not Listed	VU
Caudinidae	<i>Acaudina</i>	sp. A			Not Listed	NE
Caudinidae	<i>Acaudina</i>	sp. B			Not Listed	NE
Caudinidae	<i>Paracaudina</i>	<i>australis</i>	(Semper, 1868)	See-through sea cucumber	Not Listed	VU
Caudinidae	<i>Paracaudina</i>	<i>chilensis</i>	(Muller, 1850)		Not Listed	VU
Cucumariidae	<i>Actinocucumis</i>	<i>cf. typica</i>	Ludwig, 1875		Not Listed	VU
Cucumariidae	<i>Actinocucumis</i>	sp.			Not Listed	NE
Cucumariidae	<i>Cerodemas</i>	<i>anceps</i>	Selenka, 1867	Pink warty sea cucumber	Not Listed	VU
Cucumariidae	<i>Colochirus</i>	<i>quadrangularis</i>	Troschel, 1846	Thorny sea cucumber	Not Listed	NT
Cucumariidae	<i>Colochirus</i>	sp.			Not Listed	VU
Cucumariidae	<i>Cucumarid</i>	sp. A			Not Listed	NE
Cucumariidae	<i>Cucumarid</i>	sp. B			Not Listed	NE
Cucumariidae	<i>Cucumarid</i>	sp. C			Not Listed	NE
Cucumariidae	<i>Leptopentacta</i>	<i>imbricata</i>	(Semper, 1867)		Not Listed	VU
Cucumariidae	<i>Mensamaria</i>	<i>intercedens</i>	(Lampert, 1885)	Orange sea cucumber	Not Listed	VU
Cucumariidae	<i>Pentacta</i>	sp.			Not Listed	NE
Cucumariidae	<i>Plesiocolochirus</i>	<i>cf. australis</i>	(Ludwig, 1875)		Not Listed	VU
Cucumariidae	<i>Plesiocolochirus</i>	sp.			Not Listed	NE
Cucumariidae	<i>Pseudocolochirus</i>	<i>violaceus</i>	(Théel, 1886)	Sea-apple sea cucumber	VU	VU
Holothuriidae	<i>Actinopyga</i>	<i>lecanora</i>	(Jaeger, 1833)	Stonefish sea cucumber	Not Listed	VU
Holothuriidae	<i>Actinopyga</i>	sp.			Not Listed	NE
Holothuriidae	<i>Bohadschia</i>	<i>ocellata</i>	Jaeger, 1833	Polka-dotted sea cucumber	Not Listed	VU
Holothuriidae	<i>Bohadschia</i>	<i>vitiensis</i>	(Semper, 1868)	Brown sandfish sea cucumber	Not Listed	EN
Holothuriidae	<i>Holothuria</i> <i>(Halodeima)</i>	<i>edulis</i>	Lesson, 1830	Pinkfish sea cucumber	Not Listed	VU
Holothuriidae	<i>Holothuria</i> <i>(Lessonothuria)</i>	<i>pardalis</i>	Selenka, 1867	Bantunan [Bahasa Indonesia]	Not Listed	VU
Holothuriidae	<i>Holothuria</i> <i>(Lessonothuria)</i>	sp.			Not Listed	NE
Holothuriidae	<i>Holothuria</i> <i>(Mertensiothuria)</i>	<i>leucospilota</i>	(Brandt, 1835)	White threadsfish sea cucumber	VU	EN
Holothuriidae	<i>Holothuria</i> <i>(Mertensiothuria)</i>	sp.			Not Listed	NE
Holothuriidae	<i>Holothuria</i> <i>(Metriatyla)</i>	<i>albiventer</i>	Semper, 1867	Beige sea cucumber	Not Listed	VU
Holothuriidae	<i>Holothuria</i> <i>(Metriatyla)</i>	<i>martensi</i>	Semper, 1868		Not Listed	VU
Holothuriidae	<i>Holothuria</i> <i>(Metriatyla)</i>	<i>scabra</i>	Jaeger, 1833	Sandfish sea cucumber	VU	EN

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Holothuriidae	<i>Holothuria</i> (<i>Metriatyla</i>)	sp.			Not Listed	NE
Holothuriidae	<i>Holothuria</i> (<i>Platyperona</i>)	<i>crosnieri</i>	Cherbonnier, 1988		Not Listed	VU
Holothuriidae	<i>Holothuria</i> (<i>Platyperona</i>)	<i>difficilis</i>	Semper, 1868	Difficult sea cucumber	Not Listed	VU
Holothuriidae	<i>Holothuria</i> (<i>Stauropora</i>)	<i>fuscocinerea</i>	Jaeger, 1833	Ashy pink sea cucumber	Not Listed	VU
Holothuriidae	<i>Holothuria</i> (<i>Theelothuria</i>)	<i>notabilis</i>	Ludwig, 1875	Remarkable sea cucumber	Not Listed	EN
Holothuriidae	<i>Holothuria</i> (<i>Thymioscyia</i>)	<i>impatiens</i>	(Forsskål, 1775)	Bottleneck sea cucumber	Not Listed	VU
Pelagothuriidae	<i>Pelagothuria</i>	sp.			Not Listed	NE
Phyllophoridae	<i>Hemithyone</i>	<i>semperi</i>	(Bell, 1884)		Not Listed	VU
Phyllophoridae	<i>Hemithyone</i>	sp.			Not Listed	NE
Phyllophoridae	<i>Phyllophorella</i>	<i>kohkutiensis</i>	(Heding & Panning, 1954)		Not Listed	VU
Phyllophoridae	<i>Phyllophorella</i>	<i>spiculata</i>	(Chang, 1935)	Ball sea cucumber	Not Listed	VU
Phyllophoridae	<i>Stolus</i>	<i>buccalis</i>	(Stimpson, 1856)		Not Listed	VU
Phyllophoridae	<i>Stolus</i>	sp.			Not Listed	NE
Phyllophoridae	<i>Thorsonia</i>	<i>adversaria</i>	(Semper, 1867)		Not Listed	VU
Phyllophoridae	<i>Thorsonia</i>	sp.			Not Listed	NE
Phyllophoridae	<i>Thyone</i>	sp. A			Not Listed	NE
Phyllophoridae	<i>Thyone</i>	sp. B			Not Listed	NE
Phyllophoridae	<i>Thyone</i>	sp. C			Not Listed	NE
Psolididae	<i>Psolidium</i>	<i>helenaee</i>	Ong & O'Loughlin, 2019		Not Listed	VU
Psolididae	<i>Psolidium</i>	<i>wongae</i>	Ong & O'Loughlin, 2019		Not Listed	VU
Sclerodactylidae	<i>Afrocucumis</i>	<i>africana</i>	(Semper, 1867)	Little African sea cucumber	Not Listed	VU
Sclerodactylidae	<i>Cladolabes</i>	<i>hamatus</i>	(Sluiter, 1914)	Plasticky sea cucumber	Not Listed	VU
Sclerodactylidae	<i>Globosita</i>	sp.		Ball sea cucumber	Not Listed	NE
Sclerodactylidae	<i>Havelockia</i>	sp.			Not Listed	NE
Stichopodidae	<i>Stichopus</i>	aff. <i>monotuberculatus</i>	(Quoy & Gaimard, 1833)		Not Listed	NE
Stichopodidae	<i>Stichopus</i>	<i>chloronotus</i>	Brandt, 1835	Greenfish sea cucumber	Not Listed	VU
Stichopodidae	<i>Stichopus</i>	<i>herrmanni</i>	Semper, 1868	Curryfish sea cucumber	Not Listed	EN
Stichopodidae	<i>Stichopus</i>	<i>horrens</i>	Selenka, 1867	Durian sea cucumber	Not Listed	VU
Stichopodidae	<i>Stichopus</i>	<i>ocellatus</i>	Massin, Zulfigar, Hwai & Boss, 2002	Ocellated sea cucumber	VU	EN
Stichopodidae	<i>Stichopus</i>	<i>vastus</i>	Sluiter, 1887	Zebrafish sea cucumber	Not Listed	EN
Synaptidae	<i>Anapta</i>	<i>gracilis</i>	Semper, 1867		Not Listed	VU
Synaptidae	<i>Opheodesoma</i>	<i>grisea</i>	(Semper, 1867)		Not Listed	VU
Synaptidae	<i>Polyplectana</i>	<i>kefersteinii</i>	(Selenka, 1867)		Not Listed	VU
Synaptidae	<i>Protankyra</i>	<i>bidentata</i>	(Woodward & Barett, 1858)		Not Listed	VU
Synaptidae	<i>Protankyra</i>	<i>pseudodigitata</i>	(Semper, 1867)		Not Listed	VU

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Synaptidae	<i>Protankyra</i>	<i>scaphia</i>	O'Loughling & Ong, 2015		Not Listed	VU
Synaptidae	<i>Protankyra</i>	sp.			Not Listed	NE
Synaptidae	<i>Synaptula</i>	<i>cf. recta</i>	(Semper, 1952)		Not Listed	VU
Synaptidae	<i>Synaptula</i>	<i>minima</i>	Heding, 1928		Not Listed	VU
Synaptidae	<i>Synaptula</i>	<i>recta</i>	(Semper, 1867)		Not Listed	VU
Synaptidae	<i>Synaptula</i>	<i>reticulata</i>	(Semper, 1867)		Not Listed	VU
Synaptidae	<i>Synaptula</i>	sp. A			Not Listed	NE
Synaptidae	<i>Synaptula</i>	sp. B			Not Listed	NE
Synaptidae	<i>Synaptula</i>	sp. C			Not Listed	NE
Himerometridae	<i>Amphimetra</i>	<i>cf. discoidea</i>			Not Listed	DD
Himerometridae	<i>Amphimetra</i>	<i>ensifer</i>	AH Clark, 1908		Not Listed	NT
Himerometridae	<i>Amphimetra</i>	<i>molleri</i>	AH Clark, 1908		Not Listed	DD
Comatulidae	<i>Anneissia</i>	<i>bennetti</i>	Müller, 1841		Not Listed	DD
Comatulidae	<i>Capillaster</i>	<i>cf. tenuicirrus</i>			Not Listed	DD
Comatulidae	<i>Capillaster</i>	<i>multiradiatus</i>	Linnaeus, 1758		Not Listed	NT
Comatulidae	<i>Capillaster</i>	<i>sentosus</i>	Carpenter, 1888		Not Listed	DD
Colobometridae	<i>Cenometra</i>	<i>bella</i>	Hartlaub, 1890		Not Listed	DD
Colobometridae	<i>Colobometra</i>	<i>perspinosa</i>	Carpenter, 1881		Not Listed	VU
Comatulidae	<i>Comanthus</i>	<i>parvicirrus</i>	Müller, 1841		Not Listed	DD
Comatulidae	<i>Comaster</i>	<i>multifidus</i>	Müller, 1841		Not Listed	DD
Comatulidae	<i>Comaster</i>	<i>schlegelii</i>	Carpenter, 1881		Not Listed	DD
Comatulidae	<i>Comatula</i>	<i>purpurea</i>	Müller, 1843		Not Listed	DD
Comatulidae	<i>Comatula</i>	(<i>Comatula</i>)				
Comatulidae	<i>Comatula</i>	<i>cf. pectinata</i>			Not Listed	LC
Comatulidae	<i>Comatula</i>	<i>cf. solaris</i>			Not Listed	LC
Comatulidae	<i>Comatula</i>	sp.			Not Listed	LC
Himerometridae	<i>Craspedometra</i>	<i>acuticirra</i>	Carpenter, 1882		Not Listed	DD
Colobometridae	<i>Decametra</i>	<i>informis</i>	Carpenter, 1888		Not Listed	DD
Colobometridae	<i>Decametra</i>	<i>mylitta</i>	AH Clark, 1912		Not Listed	DD
Colobometridae	<i>Decametra</i>	sp.			Not Listed	DD
Mariametridae	<i>Dichrometra</i>	<i>flagellata</i>	Müller, 1841		Not Listed	DD
Antedonidae	<i>Dorometra</i>	<i>cf. nana</i>			Not Listed	DD
Antedonidae	<i>Dorometra</i>	<i>parvicirra</i>	Carpenter, 1888		Not Listed	VU
Himerometridae	<i>Heterometra</i>	<i>affinis</i>	Hartlaub, 1890		Not Listed	DD
Himerometridae	<i>Heterometra</i>	<i>amboinae</i>	AH Clark, 1912		Not Listed	DD
Himerometridae	<i>Heterometra</i>	<i>bengalensis</i>	Hartlaub, 1890		Not Listed	DD
Himerometridae	<i>Heterometra</i>	<i>producta</i>	AH Clark, 1908		Not Listed	DD
Himerometridae	<i>Heterometra</i>	<i>quinduplicava</i>	Carpenter, 1888		Not Listed	DD
Himerometridae	<i>Heterometra</i>	<i>schlegelii</i>	AH Clark, 1908		Not Listed	LC
Himerometridae	<i>Heterometra</i>	<i>singularis</i>	AH Clark, 1909		Not Listed	DD
Himerometridae	<i>Himerometra</i>	<i>bartschi</i>	AH Clark, 1908		Not Listed	DD
Himerometridae	<i>Himerometra</i>	<i>martensi</i>	Hartlaub, 1890		Not Listed	DD
Himerometridae	<i>Himerometra</i>	<i>robustipinna</i>	Carpenter, 1881	Red feather star	DD	LC
Himerometridae	<i>Homalometra</i>	<i>crenulata</i>	(Carpenter, 1882)		Not Listed	DD
Mariametridae	<i>Lamprometra</i>	<i>palmata</i>	Müller, 1841		Not Listed	DD
Colobometridae	<i>Oligometra</i>	<i>serripinna</i>	Carpenter, 1881		Not Listed	NT
Comatulidae	<i>Phanogenia</i>	<i>gracilis</i>	Hartlaub, 1893		Not Listed	DD
Comatulidae	<i>Phanogenia</i>	<i>schoenovi</i>	AH Clark, 1918		Not Listed	DD
Comatulidae	<i>Phanogenia</i>	<i>typica</i>	Lovén, 1866		Not Listed	LC
Colobometridae	<i>Pontiometra</i>	<i>andersoni</i>	Carpenter, 1889		Not Listed	VU
Mariametridae	<i>Stephanometra</i>	<i>indica</i>	Smith, 1876		Not Listed	DD
Mariametridae	<i>Stephanometra</i>	<i>oxyacantha</i>	Hartlaub, 1890		VU	VU
Mariametridae	<i>Stephanometra</i>	<i>tenuipinna</i>	Hartlaub, 1890		Not Listed	DD
Zygometridae	<i>Zygometra</i>	<i>cf. comata</i>	AH Clark, 1911		Not Listed	DD

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Euryalidae	<i>Euryale</i>	<i>aspersa</i>	Lamarck, 1816	Basket star	DD (EN?)	DD
Ophiactidae	<i>Ophiactis</i>	<i>savignyi</i>	(Müller & Troschel, 1842)		Not Listed	NE
Ophiotrichidae	<i>Ophiomaza</i>	<i>cacaotica</i>	Lyman, 1871	Feather-hitching brittle star	Not Listed	VU
Ophiotrichidae	<i>Ophiothela</i>	<i>danae</i>	Verrill, 1869		Not Listed	NE
Ophiotrichidae	<i>Ophiothela</i>	<i>venusta</i>	(de Loriol, 1900)		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i>	<i>fumaria</i>	Müller & Troschel, 1840		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i>	<i>longipeda</i>	(Lamarck, 1816)		Not Listed	NE
Amphiuridae	<i>Amphioplus</i> (<i>Amphioplus</i>)	<i>lucidus</i>	Koehler, 1922		Not Listed	VU
Amphiuridae	<i>Amphioplus</i> (<i>Lymanella</i>)	<i>andreae</i>	(Lütken, 1872)		Not Listed	NE
Amphiuridae	<i>Amphioplus</i> (<i>Lymanella</i>)	<i>depressus</i>	(Ljungman, 1867)		Not Listed	NE
Amphiuridae	<i>Amphipholis</i>	<i>misera</i>	(Koehler, 1899)		Not Listed	NE
Amphiuridae	<i>Amphiura</i> (<i>Amphiura</i>)	<i>duncani</i>	Lyman, 1882		Not Listed	NE
Amphiuridae	<i>Amphiura</i> (<i>Amphiura</i>)	<i>instans</i>	Koehler, 1905		Not Listed	NE
Amphiuridae	<i>Amphiura</i> (<i>Ophiopeltis</i>)	<i>phalerata</i>	(Lyman, 1874)		Not Listed	NE
Amphiuridae	<i>Dougaloplus</i>	<i>echinatus</i>	(Ljungman, 1867)		Not Listed	NE
Amphiuridae	<i>Ophiocentrus</i>	<i>dilatata</i>	(Koehler, 1905)		Not Listed	NE
Amphiuridae	<i>Ophiocsphaera</i>	<i>insignis</i>	Brock, 1888		Not Listed	NE
Ophiuridae	<i>Ophiura</i>	<i>kinbergi</i>	(Ljungman, 1867)		Not Listed	NE
Ophiuridae	<i>Ophiura</i>	<i>pteracantha</i>	Liao, 1982		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>demessa</i>	(Lyman, 1862)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>fumaria</i>	(Müller & Troschel, 1842)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>galathea</i>	(Lütken, 1872)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>hybrida</i>	(Clark, 1915)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>nereidina</i>	(Lamarck, 1816)	Violet brittle star	Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>lineocaerulea</i>	(H.L. Clark, 1928)	Blue-lined brittle star	Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>longipeda</i>	(Lamarck, 1816)	Very long-armed brittle star	Not Listed	DD
Ophiotrichidae	<i>Macrophiothrix</i>	<i>lorioli</i>	A.M. Clark, 1968		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>melanosticta</i>	(Grube, 1868)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>propinqua</i>	(Lyman, 1862)		Not Listed	NE
Ophiotrichidae	<i>Macrophiothrix</i>	<i>robilliardi</i>	(de Loriol, 1893)		Not Listed	NE
Ophiotrichidae	<i>Ophiocnemis</i>	<i>marmorata</i>	Lamarck, 1816	Hitchhiker brittle star	Not Listed	DD
Ophiotrichidae	<i>Ophiothela</i>	<i>danae</i>	Verrill, 1869		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i> (<i>Acanthophiothrix</i>)	<i>leucotrigona</i>	H.L. Clark, 1918		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i> (<i>Acanthophiothrix</i>)	<i>spinosissima</i>	Koehler, 1905		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i> (<i>Keystonia</i>)	<i>nereidina</i>	(Lamarck, 1816)		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i> (<i>Ophiothrix</i>)	<i>ciliaris</i>	(Lamarck, 1816)		Not Listed	NE

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Ophiotrichidae	<i>Ophiothrix</i> (<i>Ophiothrix</i>)	<i>exigua</i>	Lyman, 1874		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i> (<i>Ophiothrix</i>)	<i>miles</i>	Koehler, 1905		Not Listed	NE
Ophiotrichidae	<i>Ophiothrix</i>	sp.			Not Listed	NE
Ophiactidae	<i>Ophiactis</i>	<i>delagoa</i>	Balinsky, 1957		Not Listed	NE
Ophiactidae	<i>Ophiactis</i>	<i>macrolepidota</i>	Marktanner- Turneretscher, 1887		Not Listed	NE
Ophiactidae	<i>Ophiactis</i>	<i>modesta</i>	Brock, 1888		Not Listed	VU
Ophiactidae	<i>Ophiactis</i>	<i>picteti</i>	(de Loriol, 1893)		Not Listed	NE
Ophiactidae	<i>Ophiactis</i>	<i>sinensis</i>	Mortensen, 1934		Not Listed	NE
Ophionereididae	<i>Ophonereis</i>	<i>dubia</i>	(Müller & Troschel, 1842)		Not Listed	NE
Ophiocomidae	<i>Ophiarthrum</i>	<i>elegans</i>	Peters, 1851		Not Listed	NE
Ophiocomidae	<i>Ophiopsila</i>	<i>pantherina</i>	Koehler, 1898		Not Listed	NE
Ophiocomidae	<i>Ophiopsila</i>	sp.			Not Listed	NE
Ophiodermatidae	<i>Ophiarachnella</i>	<i>gorgonia</i>	(Müller & Troschel, 1842)		Not Listed	NE
Ophiolepididae	<i>Ophiolepsis</i>	<i>superba</i>	H.L. Clark, 1915		Not Listed	NE
Ophiodermatidae	<i>Ophioconis</i>	<i>permixta</i>	Koehler, 1905		Not Listed	NE
Ophiodermatidae	<i>Ophiodyscrita</i>	<i>instratus</i>	(Murakami, 1944)		Not Listed	NE
Ophiolepididae	<i>Ophiolepsis</i>	<i>cincta</i>	Müller & Troschel, 1842		Not Listed	NE
Ophiolepididae	<i>Ophiolepsis</i>	<i>nodosa</i>	Duncan, 1887		Not Listed	NE
Luidiidae	<i>Luidia</i>	<i>hardwicki</i>	(Gray, 1840)	Luidia sand star	Not Listed	NE
Luidiidae	<i>Luidia</i>	<i>longispina</i>	Sladen, 1889		Not Listed	NE
Luidiidae	<i>Luidia</i>	<i>maculata</i>	Müller & Troschel, 1842	Eight-armed sea star	EN	EN
Luidiidae	<i>Luidia</i>	<i>penangensis</i>	de Loriol, 1891	Six-armed sand star	VU	EN
Astropectinidae	<i>Craspidaster</i>	<i>hesperus</i>	(Müller & Troschel, 1840)	Venus star	Not Listed	VU
Astropectinidae	<i>Astropecten</i>	<i>indicus</i>	Döderlein, 1888	Comb star	Not Listed	VU
Astropectinidae	<i>Astropecten</i>	<i>novaeguineae</i>	Döderlein, 1917	Venus star	Not Listed	NE
Anseropodidae	<i>Anseropoda</i>	<i>rosacea</i>	(Lamarck, 1816)		Not Listed	NE
Asterinidae	<i>Aquilonastraea</i>	<i>anomala</i>	(H.L. Clark, 1921)		Not Listed	NE
Asterinidae	<i>Aquilonastraea</i>	<i>coronata</i>	(von Martens, 1866)		Not Listed	NE
Asterinidae	<i>Nepanthia</i>	<i>belcheri</i>	(Perrier, 1875)	Scaly sea star	Not Listed	VU
Asterinidae	<i>Nepenthia</i>	<i>maculata</i>	Gray, 1840	Maculated sea star	Not Listed	NE
Asterinidae	<i>Cryptasterina</i>	<i>pentagona</i>	(Muller & Troschel, 1840)	Cryptic sea star	VU	VU
Asterinidae	<i>Disasterina</i>	<i>ceylanica</i>	Döderlein, 1888		Not Listed	NE
Archasteridae	<i>Archaster</i>	<i>typicus</i>	Müller & Troschel, 1840	Common sand star	VU	VU
Goniasteridae	<i>Iconaster</i>	<i>longimanus</i>	(Möbius, 1859)	Icon star	VU	VU
Goniasteridae	<i>Stellaster</i>	<i>childreni</i>	Gray, 1840	Galloping sand star	Not Listed	VU
Oreasteridae	<i>Anthenea</i>	<i>aspera</i>	Döderlein, 1915	Cake star	VU	VU
Oreasteridae	<i>Culcita</i>	<i>novaeguineae</i>	Müller & Troschel, 1842		Not Listed	NE
Goniasteridae	<i>Goniodiscaster</i>	<i>scaber</i>	(Moebius, 1859)	Biscuit sea star	Not Listed	VU
Oreasteridae	<i>Gymnanthenea</i>	<i>laevis</i>	H.L. Clark, 1938		Not Listed	NE
Oreasteridae	<i>Protoreaster</i>	<i>nodosus</i>	(Linnaeus, 1758)	Knobbly sea star	EN	EN

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Oreasteridae	<i>Pentaceraster</i>	<i>mammillatus</i>	(Audouin, 1826)	Mammilated pentaceraster	Not Listed	EN
Goniasteridae	<i>Fromia</i>	<i>monilis</i>	(Perrier, 1869)	Peppermint sea star	VU	EN
Ophidiasteridae	<i>Ophidiaster</i>	<i>granifer</i>	Lütken, 1871		Not Listed	NE
Ophidiasteridae	<i>Tamaria</i>	<i>fusca</i>	Gray, 1840		Not Listed	VU
Pterasteridae	<i>Eureaster</i>	<i>insignis</i>	(Sladen, 1882)		EN	EN
Echinasteridae	<i>Echinaster</i>	<i>callosus</i>	Marenzeller, 1895	Warty sea star	EN	EN
Echinasteridae	<i>Echinaster</i>	<i>stereosomus</i>	Fisher, 1913		Not Listed	NE
Echinasteridae	<i>Metrodira</i>	<i>subulata</i>	Gray, 1840		Not Listed	NE
Cidaridae	<i>Prionocidaris</i>	<i>baculosa</i>	(Lamarck, 1816)	Thorny urchin	VU	VU
Cidaridae	<i>Prionocidaris</i>	<i>bispinosa</i>	(Lamarck, 1816)	Thorny urchin	Not Listed	VU
Echinothuriidae	<i>Asthenosoma</i>	<i>varium</i>	Grube, 1868	Fire urchin	VU	EN
Diadematidae	<i>Diadema</i>	<i>setosum</i>	(Leske, 1778)		Not Listed	NE
Diadematidae	<i>Diadema</i>	<i>savignyi</i>	(Audouin, 1809)		Not Listed	NE
Diadematidae	<i>Echinothrix</i>	<i>diadema</i>	(Linnaeus, 1758)		Not Listed	NE
Diadematidae	<i>Chaetodiadema</i>	<i>granulatum</i>	Mortensen, 1903		EN	EN
Temnopleuridae	<i>Temnopleurus</i>	<i>toreumaticus</i>	(Leske, 1778)		Not Listed	NE
Temnopleuridae	<i>Mespilia</i>	<i>globulus</i>	(Linnaeus, 1758)	Globe urchin	Not Listed	VU
Temnopleuridae	<i>Salmacis</i>	<i>bicolor</i>	(L. Agassiz & Desor, 1846)		Not Listed	NE
Temnopleuridae	<i>Salmacis</i>	<i>sphaeroides</i>	(Linnaeus, 1758)		Not Listed	NE
Temnopleuridae	<i>Salmacis</i>	<i>virgulata</i>	(L. Agassiz & Desor, 1846)		Not Listed	NE
Toxopneustidae	<i>Toxopneustes</i>	<i>pileolus</i>	(Lamarck, 1816)	Flower urchin	Not Listed	NT
Clypeasteridae	<i>Arachnoides</i>	<i>placenta</i>	(Linnaeus, 1758)	Sand dollar	Not Listed	NT
Astrichypeidae	<i>Echinodiscus</i>	<i>bisperforatus</i>	Leske, 1778	Key-hole sand dollar	VU	VU
Laganidae	<i>Jacksonaster</i>	<i>depressum</i>	(L. Agassiz, 1841)	Thick-edged sand dollar	VU	VU
Laganidae	<i>Peronella</i>	<i>lesueuri</i>	(L. Agassiz, 1841)		Not Listed	NE
Spatangidae	<i>Maretia</i>	<i>planulata</i>	(Lamarck, 1816)		Not Listed	NE

Checklist of Freshwater Fish Species with their Category of Threat Status for Singapore

Prepared by Low Bi Wei, Tan Heok Hui, Jeffrey T.B. Kwik, Zeng Yiwen, Darren C.J. Yeo

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Cyprinidae	<i>Barbodes</i>	<i>sellifer</i>	Kottelet & Lim, 2021	Saddle barb	Not Listed	VU
Cyprinidae	<i>Barbodes</i>	<i>dunckeri</i>	(Ahl, 1929)	Malayan clown barb	Not Listed	NEx
Cyprinidae	<i>Barbodes</i>	<i>lateristriga</i>	(Valenciennes, in Cuvier & Valenciennes, 1842)	Spanner barb, T-barb	Not Listed	EN
Cyprinidae	<i>Boraras</i>	<i>maculatus</i>	(Duncker, 1904)	Pygmy rasbora	CR	EN
Cyprinidae	<i>Cyclocheilichthys</i>	<i>apogon</i>	(Valenciennes, 1842)	Beardless barb	EN	EN
Cyprinidae	<i>Desmopuntius</i>	<i>hexazona</i>	(Weber & de Beaufort, 1912)	Six-banded tiger barb	CR	EN
Cyprinidae	<i>Osteochilus</i>	<i>spilurus</i>	(Bleeker, 1851)	Swamp bony-lipped barb	Not Listed	NEx
Cyprinidae	<i>Rasbora</i>	<i>cephalotaenia</i>	(Bleeker, 1852)	Head-banded rasbora	Not Listed	NEx
Cyprinidae	<i>Rasbora</i>	<i>einthovenii</i>	(Bleeker, 1851)	Einthoven's rasbora	Not Listed	VU
Cyprinidae	<i>Rasbora</i>	<i>elegans</i>	Volz, 1903	Two-spot rasbora	Not Listed	VU
Cyprinidae	<i>Rasbora</i>	<i>paucisqualis</i>	Ahl, 1935	Large-scaled rasbora	Not Listed	NEx
Cyprinidae	<i>Trigonostigma</i>	<i>heteromorpha</i>	(Duncker, 1904)	Harlequin rasbora	EN	EN
Cobitidae	<i>Pangio</i>	<i>muraeniformis</i>	(de Beaufort, 1933)	Spotted eel-loach	EN	CR
Cobitidae	<i>Pangio</i>	<i>semicincta</i>	(Fraser-Brunner, 1940)	Malayan banded eel- loach	Not Listed	NEx
Nemacheilidae	<i>Nemacheilus</i>	<i>selangoricus</i>	Duncker, 1904	Grey-banded sand loach	CR	CR
Bagridae	<i>Mystus</i>	<i>gulio</i>	(Hamilton, 1822)	Long-whiskered catfish	Not Listed	LC
Bagridae	<i>Pseudomystus</i>	<i>leiacanthus</i>	(Weber & de Beaufort, 1912)	Dwarf bumblebee catfish	CR	CR
Siluridae	<i>Ompok</i>	<i>fumidus</i>	Tan & Ng, 1996	Swamp ompok	Not Listed	NEx
Siluridae	<i>Silurichthys</i>	<i>hasseltii</i>	Bleeker, 1858	Hasselt's leaf catfish	CR	CR
Akysidae	<i>Parakysis</i>	<i>longirostris</i>	Ng & Lim, 1995	Longnose little warty catfish	CR	CR
Clariidae	<i>Clarias</i>	<i>batrachus</i>	(Linnaeus, 1758)	Common walking catfish	Not Listed	NT
Clariidae	<i>Clarias</i>	<i>leiacanthus</i>	Bleeker, 1851	Forest walking catfish	Not Listed	VU
Clariidae	<i>Clarias</i>	<i>nieuhofii</i>	Valenciennes, 1840	Slender walking catfish	CR	EN
Clariidae	<i>Encheloclarias</i>	<i>keliooides</i>	Ng & Lim, 1993	Bladefin catfish	Not Listed	CR
Sisoridae	<i>Glyptothorax</i>	<i>fucus</i>	Fowler, 1934	Wrinkle-bellied catfish	Not Listed	NEx
Synbranchidae	<i>Monopterus</i>	<i>javanensis</i>	Lacepède, 1800	Sunda swamp eel	Not Listed	LC
Mastacembelidae	<i>Macrognathus</i>	<i>maculatus</i>	(Cuvier, 1831)	Buff-backed spiny eel	CR	CR
Zenarchopteridae	<i>Dermogenys</i>	<i>collettei</i>	Meisner, 2001	Sunda pygmy halfbeak	Not Listed	LC
Zenarchopteridae	<i>Hemirhamphodon</i>	<i>pogonognathus</i>	(Bleeker, 1853)	Malayan forest halfbeak	Not Listed	EN
Aplocheilidae	<i>Aplocheilus</i>	<i>armatus</i>	(van Hasselt, 1823)	Whitespot	Not Listed	LC
Gobinellidae	<i>Eugnathogobius</i>	<i>siamensis</i>	(Fowler, 1934)	Roundhead stream goby	Not Listed	CR

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Gobinellidae	<i>Pseudogobiopsis</i>	<i>oligactis</i>	(Bleeker, 1875)	Broadhead stream goby	Not Listed	VU
Nandidae	<i>Nandus</i>	<i>nebulosus</i>	(Gray, 1835)	Sunda leaf fish	CR	EN
Anabantidae	<i>Anabas</i>	<i>testudineus</i>	(Bloch, 1792)	Climbing perch	Not Listed	LC
Osphronemidae	<i>Belontia</i>	<i>hasseltii</i>	(Cuvier, 1831)	Javan combtail	Not Listed	NEx
Osphronemidae	<i>Betta</i>	<i>imbellis</i>	Ladiges, 1975	Crescent betta	Not Listed	EN
Osphronemidae	<i>Betta</i>	<i>pugnax</i>	(Cantor, 1850)	Malayan forest betta	Not Listed	LC
Osphronemidae	<i>Betta</i>	<i>tomi</i>	Ng & Kottelat, (Gray, 1830)	Mawai giant betta	Not Listed	NEx
Osphronemidae	<i>Luciocephalus</i>	<i>pulcher</i>	(Pallas, 1770)	Brown pikehead	CR	EN
Osphronemidae	<i>Trichopodus</i>	<i>trichopterus</i>	(Cuvier, 1831)	Three-spot gourami	Not Listed	VU
Osphronemidae	<i>Trichopsis</i>	<i>vittata</i>	(Cuvier, 1831)	Striped croaking gourami	Not Listed	LC
Channidae	<i>Channa</i>	<i>limbata</i>	(Cuvier, in Cuvier & Valenciennes, 1831)	Dwarf snakehead	CR	EN
Channidae	<i>Channa</i>	<i>lucius</i>	(Cuvier, 1831)	Forest snakehead	Not Listed	VU
Channidae	<i>Channa</i>	<i>melasoma</i>	(Bleeker, 1851)	Black snakehead	CR	EN
Channidae	<i>Channa</i>	<i>striata</i>	(Bloch, 1793)	Common snakehead; Haruan	Not Listed	LC

Checklist of Marine Fish Species with their Category of Threat Status for Singapore

Prepared by Zeehan Jaafar, Jeffrey K.Y. Low, Kelvin K.P. Lim

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Elopidae	<i>Elops hawaiiensis</i>	Regan, 1909	Hawaiian tenpounder	Not Listed	DD
Megalopidae	<i>Megalops cyprinoides</i>	(Broussonet, 1782)	Indo-Pacific tarpon	Not Listed	DD
Albulidae	<i>Albula argentea</i>	(Forster, 1801)	Longjaw bonefish	Not Listed	DD
Muraenidae	<i>Gymnothorax annulatus</i>	Smith & Böhlke, 1997	Ringed moray	Not Listed	DD
Muraenidae	<i>Gymnothorax javanicus</i>	(Bleeker, 1859)	Giant moray	Not Listed	DD
Muraenidae	<i>Gymnothorax reevesii</i>	(Richardson, 1845)	Reeve's moray	Not Listed	DD
Muraenidae	<i>Gymnothorax tile</i>	(Hamilton, 1822)	Indian mud moray	Not Listed	LC
Muraenidae	<i>Strophidon sathete</i>	(Hamilton, 1822)	Slender giant moray	Not Listed	DD
Ophichthidae	<i>Scolecenchelys macroptera</i>	(Bleeker, 1857)	Narrow worm-eel	Not Listed	DD
Ophichthidae	<i>Ophichthus lithinus</i>	(Jordan & Richardson, 1908)	Evermann's snake-eel	Not Listed	DD
Ophichthidae	<i>Pisodonophis boro</i>	(Hamilton, 1822)	Boro snake-eel	Not Listed	DD
Ophichthidae	<i>Pisodonophis cancrivorus</i>	(Richardson, 1848)	Longfin snake-eel	Not Listed	DD
Muraenesocidae	<i>Muraenesox bagio</i>	(Hamilton, 1822)	Common pike-eel	Not Listed	DD
Muraenesocidae	<i>Muraenesox cinereus</i>	(Forsskål, 1775)	Daggetooth pike-eel	Not Listed	DD
Congridae	<i>Conger cinereus</i>	Rüppell, 1830	Ashen conger-eel	Not Listed	DD
Clupeidae	<i>Spratelloides delicatulus</i>	(Bennett, 1832)	Delicate round herring	Not Listed	DD
Clupeidae	<i>Anodontostoma chacunda</i>	(Hamilton, 1822)	Chacunda gizzard shad	Not Listed	LC
Clupeidae	<i>Escualosa thoracata</i>	(Valenciennes, 1847)	White sardine	Not Listed	LC
Clupeidae	<i>Herklotsichthys dispilonotus</i>	(Bleeker, 1852)	Blacksaddle herring	Not Listed	LC
Clupeidae	<i>Hilsa kelee</i>	(Cuvier, 1829)	Kelee shad	Not Listed	LC
Clupeidae	<i>Nematalosa nasus</i>	(Bloch, 1795)	Bloch's gizzard shad	Not Listed	DD
Clupeidae	<i>Nematalosa galatheae</i>	Nelson & Rothman, 1973	Galathea gizzard shad	Not Listed	DD
Clupeidae	<i>Sardinella albella</i>	(Valenciennes, 1847)	White sardinella	Not Listed	LC
Dussumieriidae	<i>Dussumieria acuta</i>	Valenciennes, 1847	Rainbow sardine	Not Listed	DD
Dussumieriidae	<i>Dussumieria elopsoides</i>	Bleeker, 1849	Slender rainbow sardine	Not Listed	DD
Engraulidae	<i>Coilia dussumieri</i>	Valenciennes, 1848	Goldspotted grenadier anchovy	Not Listed	DD
Engraulidae	<i>Encrasicholina heteroloba</i>	(Rüppell, 1837)	Devis' anchovy	Not Listed	DD
Engraulidae	<i>Encrasicholina pseudoheteroloba</i>	(Hardenberg, 1933)	Shorthead anchovy	Not Listed	DD
Engraulidae	<i>Setipinna breviceps</i>	(Cantor, 1849)	Shorthead hairfin anchovy	Not Listed	DD
Engraulidae	<i>Setipinna taty</i>	(Valenciennes, 1848)	Scaly hairfin anchovy	Not Listed	DD
Engraulidae	<i>Stolephorus baganensis</i>	Hardenberg, 1933	Bagan anchovy	Not Listed	DD
Engraulidae	<i>Stolephorus bataviensis</i>	Hardenberg, 1933	Batavia anchovy	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Engraulidae	<i>Stolephorus baweanensis</i>	Hardenberg, 1933	Spotty-face anchovy	Not Listed	DD
Engraulidae	<i>Stolephorus bengalensis</i>	(Dutt & Babu Rao, 1959)	Hardenberg's anchovy	Not Listed	DD
Engraulidae	<i>Stolephorus commersonnii</i>	Lacepède, 1803	Commerson's anchovy	Not Listed	LC
Engraulidae	<i>Stolephorus indicus</i>	(van Hasselt, 1823)	Indian anchovy	Not Listed	LC
Engraulidae	<i>Thrissina dussumieri</i>	(Valenciennes, 1848)	Dussumier's thryssa	Not Listed	LC
Engraulidae	<i>Thrissina hamiltonii</i>	Gray, 1835	Hamilton's thryssa	Not Listed	LC
Engraulidae	<i>Thrissina kammalensis</i>	(Bleeker, 1849)	Kammal thryssa	Not Listed	DD
Engraulidae	<i>Thrissina mystax</i>	(Bloch & Schneider, 1801)	Moustached thryssa	Not Listed	DD
Engraulidae	<i>Thrissina setirostris</i>	(Broussonet, 1782)	Longjaw thryssa	Not Listed	LC
Chirocentridae	<i>Chirocentrus dorab</i>	(Forsskål, 1775)	Dorab wolf herring	Not Listed	VU
Chirocentridae	<i>Chirocentrus nudus</i>	(Forsskål, 1775)	Dorab wolf herring	Not Listed	DD
Pristigasteridae	<i>Ilisha elongata</i>	(Anonymous [Bennett], 1830)	Elongate ilisha	Not Listed	LC
Pristigasteridae	<i>Ilisha megaloptera</i>	(Swainson, 1839)	Bigeye ilisha	Not Listed	LC
Pristigasteridae	<i>Ilisha indica</i>	(Bloch & Schneider, 1801)	Indian ilisha	Not Listed	LC
Pristigasteridae	<i>Opisthoteretus tardoore</i>	(Cuvier, 1829)	Longfin shad	Not Listed	DD
Pristigasteridae	<i>Pellona ditchela</i>	Valenciennes, 1847	Toothed shad	Not Listed	DD
Pristigasteridae	<i>Raconda russeliana</i>	Gray, 1831	Raconda	Not Listed	DD
Plotosidae	<i>Paraplotosus albilabris</i>	(Valenciennes, 1840)	Whitelipped eel-catfish	Not Listed	LC
Plotosidae	<i>Plotosus canius</i>	Hamilton, 1822	Gray eel-catfish	Not Listed	LC
Plotosidae	<i>Plotosus lineatus</i>	(Thunberg, 1787)	Striped eel-catfish	Not Listed	LC
Bagridae	<i>Mystus gulio</i>	(Hamilton, 1822)	Long whiskers catfish	Not Listed	LC
Bagridae	<i>Mystus wolffii</i>	(Bleeker, 1851)	Wolff's catfish	Not Listed	LC
Ariidae	<i>Arius gagora</i>	(Hamilton, 1822)	Gagora catfish	Not Listed	DD
Ariidae	<i>Arius leptotacanthus</i>	Bleeker, 1849	Smooth-spined catfish	Not Listed	DD
Ariidae	<i>Arius oetik</i>	Bleeker, 1846	Lowly sea catfish	Not Listed	LC
Ariidae	<i>Hemiarrius sona</i>	(Hamilton, 1822)	Sona sea catfish	Not Listed	LC
Ariidae	<i>Hexanematichthys sagor</i>	(Hamilton, 1822)	Sagor catfish	Not Listed	LC
Ariidae	<i>Netuma bilineata</i>	(Valenciennes, 1840)	Bronze catfish	Not Listed	DD
Ariidae	<i>Netuma thalassina</i>	(Rüppell 1837)	Giant catfish	Not Listed	DD
Ariidae	<i>Osteogeneiosus militaris</i>	(Linnaeus, 1758)	Soldier catfish	Not Listed	DD
Ariidae	<i>Plicofollis argyropleuron</i>	(Valenciennes, 1840)	Longsnouted catfish	Not Listed	DD
Ariidae	<i>Plicofollis nella</i>	(Valenciennes, 1840)	Shieldhead catfish	Not Listed	LC
Synodontidae	<i>Saurida micropectoralis</i>	Shindo & Yamada, 1972	Shortfin lizardfish	Not Listed	VU
Bregmacerotidae	<i>Bregmaceros mcclellandii</i>	Thompson, 1840	Spotted codlet	Not Listed	LC
Holocentridae	<i>Sargocentron rubrum</i>	(Forsskål, 1775)	Redcoat	Not Listed	VU
Holocentridae	<i>Myripristis hexagona</i>	(Lacepède, 1802)	Doubletooth soldierfish	Not Listed	VU

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Bythitidae	<i>Ungusurculus riauensis</i>	Schwarzans & Möller, 2007	Riau viviparous brotula	Not Listed	LC
Batrachoididae	<i>Allenbatrachus reticulatus</i>	(Steindachner, 1870)	Singapore toadfish	Not Listed	LC
Batrachoididae	<i>Batrachomoeus trispinosus</i>	(Günther, 1861)	Three-spined toadfish	Not Listed	LC
Trichiuridae	<i>Eupleurogrammus glossodon</i>	(Bleeker, 1860)	Longtooth hairtail	Not Listed	DD
Trichiuridae	<i>Lepturacanthus savala</i>	(Cuvier, 1829)	Savalai hairtail	Not Listed	DD
Trichiuridae	<i>Trichiurus lepturus</i>	Linnaeus, 1758	Largehead hairtail	Not Listed	DD
Scombridae	<i>Rastrelliger brachysoma</i>	(Bleeker, 1851)	Short mackerel	Not Listed	DD
Scombridae	<i>Rastrelliger kanagurta</i>	(Cuvier, 1816)	Indian mackerel	Not Listed	DD
Scombridae	<i>Scomberomorus commerson</i>	(Lacepède, 1800)	Narrow-barred Spanish mackerel	Not Listed	VU
Scombridae	<i>Scomberomorus guttatus</i>	(Bloch & Schneider, 1801)	Indo-Pacific king mackerel	Not Listed	DD
Scombridae	<i>Scomberomorus lineolatus</i>	(Cuvier, 1829)	Streaked Spanish mackerel	Not Listed	DD
Stromateidae	<i>Pampus argenteus</i>	(Euphrasen, 1788)	White pomfret	Not Listed	DD
Stromateidae	<i>Pampus chinensis</i>	(Euphrasen, 1788)	Chinese silver pomfret	Not Listed	DD
Fistulariidae	<i>Fistularia petimba</i>	Lacepède, 1803	Red cornetfish	Not Listed	DD
Centriscidae	<i>Aeoliscus strigatus</i>	(Günther, 1861)	Coral shrimpfish	Not Listed	NT
Centriscidae	<i>Centriscus scutatus</i>	Linnaeus, 1758	Grooved razorfish	Not Listed	NT
Syngnathidae	<i>Choeroichthys brachysoma</i>	(Bleeker, 1855)	Pacific short- bodied pipefish	Not Listed	DD
Syngnathidae	<i>Doryrhamphus janssi</i>	(Herald & Randall, 1972)	Janss' pipefish	Not Listed	VU
Syngnathidae	<i>Dunckerocampus dactyliophorus</i>	(Bleeker, 1853)	Ringed pipefish	Not Listed	VU
Syngnathidae	<i>Bhanotia fasciolata</i>	(Duméril, 1870)	Corrugated pipefish	Not Listed	DD
Syngnathidae	<i>Corythoichthys amplexus</i>	Dawson & Randall, 1975	Brown-banded pipefish	Not Listed	DD
Syngnathidae	<i>Corythoichthys ocellatus</i>	Herald, 1953	Ocellated pipefish	Not Listed	DD
Syngnathidae	<i>Corythoichthys schultzi</i>	Herald, 1953	Schultz's pipefish	Not Listed	DD
Syngnathidae	<i>Halicampus brocki</i>	(Herald, 1953)	Brock's pipefish	Not Listed	DD
Syngnathidae	<i>Halicampus nitidus</i>	(Günther, 1873)	Glittering pipefish	Not Listed	DD
Syngnathidae	<i>Hippichthys cyanospilos</i>	(Bleeker, 1854)	Bluespeckled pipefish	Not Listed	DD
Syngnathidae	<i>Hippichthys heptagonus</i>	Bleeker, 1849	Reticulated freshwater pipefish	Not Listed	DD
Syngnathidae	<i>Hippichthys penicillatus</i>	(Cantor, 1849)	Beady pipefish	Not Listed	DD
Syngnathidae	<i>Hippichthys spicifer</i>	(Rüppell, 1838)	Barred-belly pipefish	Not Listed	DD
Syngnathidae	<i>Hippocampus comes</i>	Cantor, 1849	Tiger tail seahorse	VU	CR
Syngnathidae	<i>Hippocampus kuda</i>	Bleeker, 1852	Spotted seahorse	VU	CR
Syngnathidae	<i>Hippocampus mohnikei</i>	Bleeker, 1853	Japanese seahorse	Not Listed	CR
Syngnathidae	<i>Ichthyocampus carce</i>	(Hamilton, 1822)	Indian freshwater pipefish	Not Listed	VU
Syngnathidae	<i>Micrognathus micronopterus</i>	(Fowler, 1938)	Tidepool pipefish	Not Listed	DD
Syngnathidae	<i>Phoxocampus belcheri</i>	(Kaup, 1856)	Rock pipefish	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Syngnathidae	<i>Syngnathoides biaculeatus</i>	(Bloch, 1785)	Alligator pipefish	Not Listed	DD
Syngnathidae	<i>Trachyrhamphus bicoarctatus</i>	(Bleeker, 1857)	Double-ended pipefish	Not Listed	DD
Syngnathidae	<i>Trachyrhamphus serratus</i>	(Temminck & Schlegel, 1850)	Saw pipefish	Not Listed	DD
Pegasidae	<i>Pegasus volitans</i>	Linnaeus, 1758	Longtail seamount	Not Listed	LC
Pegasidae	<i>Spinipegasus laternarius</i>	Cuvier, 1816	Brick seamount	Not Listed	DD
Eleotridae	<i>Butis butis</i>	(Hamilton, 1822)	Crimson-tipped gudgeon	Not Listed	NT
Eleotridae	<i>Butis humeralis</i>	(Valenciennes, 1837)	Olive flathead-gudgeon	Not Listed	NT
Eleotridae	<i>Butis koiromatodon</i>	(Bleeker, 1849)	Mud sleeper	Not Listed	NT
Eleotridae	<i>Ophiocara porocephala</i>	(Valenciennes, 1837)	Spangled gudgeon	Not Listed	NT
Eleotridae	<i>Oxyeleotris marmorata</i>	(Bleeker, 1852)	Marbled goby	Not Listed	NT
Eleotridae	<i>Oxyeleotris urophthalmus</i>	(Bleeker, 1851)	Sinuous gudgeon	Not Listed	NT
Gobiidae	<i>Brachygobius kabiliensis</i>	Inger, 1958	Mangrove bumblebee goby	Not Listed	NT
Gobiidae	<i>Brachygobius sabanus</i>	Inger, 1958	Sabanus bumblebee goby	Not Listed	NT
Gobiidae	<i>Eugnathogobius illotus</i>	(Larson, 1999)	Dirtyface brackish-goby	Not Listed	NT
Gobiidae	<i>Eugnathogobius polylepis</i>	Wu & Ni, 1985	Malayan tailring-goby	Not Listed	NT
Gobiidae	<i>Eugnathogobius siamensis</i>	(Fowler, 1934)	Siam stream-goby	Not Listed	LC
Gobiidae	<i>Eugnathogobius variegatus</i>	(Peters, 1868)	Stripeface goby	Not Listed	NT
Gobiidae	<i>Gobiopterus birtwistlei</i>	(Herre, 1935)	Birtwistle's glass-goby	Not Listed	NT
Gobiidae	<i>Gobiopterus brachypterus</i>	(Bleeker, 1855)	Greater glass-goby	Not Listed	NT
Gobiidae	<i>Gobiopterus panayensis</i>	(Herre, 1944)	Panay glass-goby	Not Listed	NT
Gobiidae	<i>Hemigobius hoevenii</i>	(Bleeker, 1851)	Banded mullet-goby	Not Listed	LC
Gobiidae	<i>Hemigobius melanurus</i>	(Herre, 1936)	Banded goby	Not Listed	NT
Gobiidae	<i>Mugilogobius chulae</i>	(Smith, 1932)	Chulae's goby	Not Listed	LC
Gobiidae	<i>Mugilogobius fasciatus</i>	Larson, 2001	Broad-barred mangrove-goby	Not Listed	NT
Gobiidae	<i>Mugilogobius mertoni</i>	(Weber, 1911)	Chequered mangrove-goby	Not Listed	NT
Gobiidae	<i>Mugilogobius rambiae</i>	(Smith, 1945)	Queen of Siam mangrove-goby	Not Listed	NT
Gobiidae	<i>Mugilogobius tigrinus</i>	Larson, 2001	Narrow-barred mangrove-goby	Not Listed	NT
Gobiidae	<i>Oxyurichthys auchenolepis</i>	Bleeker, 1876	Scaly-nape tentacle-goby	Not Listed	NT
Gobiidae	<i>Oxyurichthys longicauda</i>	(Steindachner, 1893)	Long-tail tentacle-goby	Not Listed	NT
Gobiidae	<i>Oxyurichthys microlepis</i>	(Bleeker, 1849)	Maned goby	Not Listed	NT
Gobiidae	<i>Pandaka rouxi</i>	(Weber, 1911)	Roux's pygmy-goby	Not Listed	NT
Gobiidae	<i>Pseudogobiopsis oligactis</i>	(Bleeker, 1875)	Bigmouth steam-goby	Not Listed	NT
Gobiidae	<i>Pseudogobius avicennia</i>	(Herre, 1940)	Avicennia snubnose-goby	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Gobiidae	<i>Pseudogobius fulvicaudus</i>	Huang, Shao & Chen, 2014	Yellowfin snubnose-goby	Not Listed	NT
Gobiidae	<i>Pseudogobius masago</i>	(Tomiyama, 1936)	Masago snubnose-goby	Not Listed	NT
Gobiidae	<i>Pseudogobius melanosticta</i>	(Day, 1876)	Black-spotted snubnose-goby	Not Listed	NT
Gobiidae	<i>Pseudogobius poecilosoma</i>	(Bleeker, 1849)	Spotted snubnose-goby	Not Listed	LC
Gobiidae	<i>Pseudogobius verticalis</i>	Larson & Hammer 2021	Blackline snubnose-goby	Not Listed	NT
Gobiidae	<i>Pseudogobius yanamensis</i>	(Rao 1971)	Barfin snubnose-goby	Not Listed	LC
Gobiidae	<i>Redigobius bikolanus</i>	(Herre, 1927)	Mangrove bigmouth-goby	Not Listed	LC
Gobiidae	<i>Rhinogobius similis</i>	Gill, 1859	Barcheek river-goby	Not Listed	LC
Gobiidae	<i>Stigmatogobius pleurostigma</i>	(Bleeker, 1849)	Peach knight-goby	Not Listed	NT
Gobiidae	<i>Stigmatogobius sadanundio</i>	(Hamilton, 1822)	Grey knight-goby	Not Listed	LC
Gobiidae	<i>Apocryptodon madurensis</i>	(Bleeker, 1849)	Spotted mudskipper	Not Listed	VU
Gobiidae	<i>Boleophthalmus boddarti</i>	(Pallas, 1770)	Blue-spotted mudskipper	Not Listed	VU
Gobiidae	<i>Parapocryptes serperaster</i>	(Richardson, 1846)	Serpent mudskipper	Not Listed	VU
Gobiidae	<i>Periophthalmodon schlosseri</i>	(Pallas, 1770)	Giant mudskipper	Not Listed	LC
Gobiidae	<i>Periophthalmus argenteolineatus</i>	Valenciennes, 1837	Silver-lined mudskipper	Not Listed	VU
Gobiidae	<i>Periophthalmus chrysospilos</i>	Bleeker, 1853	Gold-spotted mudskipper	Not Listed	VU
Gobiidae	<i>Periophthalmus gracilis</i>	Eggert, 1935	Graceful mudskipper	Not Listed	VU
Gobiidae	<i>Periophthalmus variabilis</i>	Eggert, 1935	Dusky-gilled mudskipper	Not Listed	VU
Gobiidae	<i>Periophthalmus walailakae</i>	Darumas & Tantichodok, 2002	Yellow-spotted mudskipper	Not Listed	VU
Gobiidae	<i>Pseudopocryptes elongatus</i>	(Cuvier, 1816)	Elongate mudskipper	Not Listed	VU
Gobiidae	<i>Scartelaos histophorus</i>	(Valenciennes, 1837)	Bearded mudskipper	Not Listed	VU
Gobiidae	<i>Brachyamblyopus brachysoma</i>	(Bleeker, 1854)	Short eel-goby	Not Listed	VU
Gobiidae	<i>Paratrypauchen microcephalus</i>	(Bleeker, 1860)	Comb goby	Not Listed	VU
Gobiidae	<i>Taeniodoides gracilis</i>	(Valenciennes, 1837)	Slender eel-goby	Not Listed	DD
Gobiidae	<i>Trypauchen pelaeos</i>	Murdy, 2006		Not Listed	VU
Gobiidae	<i>Trypauchen vagina</i>	(Bloch & Schneider, 1801)	Pink eel-goby	Not Listed	VU
Gobiidae	<i>Trypauchenichthys sumatrensis</i>	Hardenberg, 1931	Sumatran eel-goby	Not Listed	VU
Gobiidae	<i>Trypauchenichthys typus</i>	Bleeker, 1860	Typical eel-goby	Not Listed	VU
Gobiidae	<i>Acentrogobius caninus</i>	(Valenciennes, 1837)	Green-shouldered acentrogobius	Not Listed	LC
Gobiidae	<i>Acentrogobius cyanomos</i>	(Bleeker, 1849)	Blue-spotted acentrogobius	Not Listed	LC
Gobiidae	<i>Acentrogobius janthinopterus</i>	(Bleeker, 1853)	Green-spotted acentrogobius	Not Listed	VU

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Gobiidae	<i>Acentrogobius viridipunctatus</i>	(Valenciennes, 1837)	Papillose acentrogobius	Not Listed	LC
Gobiidae	<i>Amblyeleotris fontanesii</i>	(Bleeker, 1853)	Giant shrimp-goby	Not Listed	VU
Gobiidae	<i>Amblyeleotris gymnocephala</i>	(Bleeker, 1853)	Masked shrimp-goby	Not Listed	VU
Gobiidae	<i>Amblyeleotris periophthalma</i>	(Bleeker, 1853)	Blotchy shrimp-goby	Not Listed	VU
Gobiidae	<i>Amblygobius buanensis</i>	Herre, 1927	Buan blunthead-goby	Not Listed	NT
Gobiidae	<i>Amblygobius phalaena</i>	(Valenciennes, 1837)	Banded blunthead-goby	Not Listed	NT
Gobiidae	<i>Amblygobius stethopthalmus</i>	(Bleeker, 1851)	Headstripe blunthead-goby	Not Listed	LC
Gobiidae	<i>Amoya gracilis</i>	(Bleeker, 1875)	Slender amoya	Not Listed	NT
Gobiidae	<i>Amoya moloanus</i>	(Herre, 1927)	Bar-cheeked amoya	Not Listed	NT
Gobiidae	<i>Arcygobius baliurus</i>	(Valenciennes, 1837)	Isthmus goby	Not Listed	VU
Gobiidae	<i>Bathygobius fuscus</i>	(Rüppell, 1830)	Dusky frillfin-goby	Not Listed	LC
Gobiidae	<i>Bathygobius meggitti</i>	(Hora & Mukerji, 1936)	Meggitt's frillfin-goby	Not Listed	VU
Gobiidae	<i>Bryaninops amplus</i>	Larson, 1985	Large gorgonian-goby	Not Listed	VU
Gobiidae	<i>Bryaninops loki</i>	Larson, 1985	Loki gorgonian-goby	Not Listed	VU
Gobiidae	<i>Callogobius hasseltii</i>	(Bleeker, 1851)	Hasselt's goby	Not Listed	VU
Gobiidae	<i>Callogobius maculipinnis</i>	(Fowler, 1918)	Ostrich goby	Not Listed	VU
Gobiidae	<i>Cryptocentroides insignis</i>	(Seale, 1910)	Crested shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus caeruleomaculatus</i>	(Herre, 1933)	Blue-speckled shrimp-goby	Not Listed	NT
Gobiidae	<i>Cryptocentrus cinctus</i>	(Herre, 1936)	Yellow shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus cyanospilotus</i>	Allen & Randall, 2011	Blue-spotted shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus cyanotaenia</i>	(Bleeker, 1853)	Lagoon shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus inexplicatus</i>	(Herre, 1934)	Inexplicable shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus leptcephalus</i>	Bleeker, 1876	Pink-speckled shrimp-goby	Not Listed	DD
Gobiidae	<i>Cryptocentrus maudae</i>	Fowler, 1937	Saddled shrimp-goby	Not Listed	LC
Gobiidae	<i>Cryptocentrus melanopus</i>	(Bleeker, 1860)	Singapore shrimp-goby	Not Listed	LC
Gobiidae	<i>Cryptocentrus pavoninoides</i>	(Bleeker, 1849)	Peacock shrimp-goby	Not Listed	VU
Gobiidae	<i>Cryptocentrus sericus</i>	Herre, 1932	Ventral-barred shrimp-goby	Not Listed	LC
Gobiidae	<i>Cryptocentrus strigilliceps</i>	(Jordan & Seale, 1906)	Target shrimp-goby	Not Listed	VU
Gobiidae	<i>Drombus globiceps</i>	(Hora, 1923)	Kranji drombus	Not Listed	NT
Gobiidae	<i>Drombus ocyurus</i>	(Jordan & Seale, 1907)	Blue-marked drombus	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Gobiidae	<i>Drombus triangularis</i>	(Weber, 1909)	Brown drombus	Not Listed	LC
Gobiidae	<i>Eviota queenslandica</i>	Whitley, 1932	Queensland dwarf-goby	Not Listed	VU
Gobiidae	<i>Eviota storthynx</i>	(Rofen, 1959)	Storthynx dwarf-goby	Not Listed	VU
Gobiidae	<i>Exyrias belissimus</i>	(Smith, 1959)	Barred highfin-goby	Not Listed	LC
Gobiidae	<i>Exyrias puntang</i>	(Bleeker, 1851)	Estuarine highfin-goby	Not Listed	LC
Gobiidae	<i>Favonigobius melanobranchus</i>	(Fowler, 1934)	Blackthroat sand-goby	Not Listed	LC
Gobiidae	<i>Favonigobius opalescens</i>	(Herre, 1936)	Opalescent sand-goby	Not Listed	NT
Gobiidae	<i>Favonigobius reichei</i>	(Bleeker, 1854)	Reiche's sand-goby	Not Listed	LC
Gobiidae	<i>Glossogobius aureus</i>	Akihito & Meguro, 1975	Golden flathead-goby	Not Listed	LC
Gobiidae	<i>Glossogobius circumspectus</i>	(Macleay, 1883)	Circumspect flathead-goby	Not Listed	NT
Gobiidae	<i>Glossogobius giuris</i>	(Hamilton, 1822)	Bareye flathead-goby	Not Listed	LC
Gobiidae	<i>Glossogobius sparsipapillus</i>	Akihito & Meguro, 1976	Linecheek flathead-goby	Not Listed	NT
Gobiidae	<i>Gobiodon heterospilos</i>	Bleeker, 1856	Head-and-tail spotted acropora-goby	Not Listed	VU
Gobiidae	<i>Gobiodon histrio</i>	(Valenciennes, 1837)	Broad-barred acropora-goby	Not Listed	NT
Gobiidae	<i>Gobiodon quinquestrigatus</i>	(Valenciennes, 1837)	Five-lined acropora-goby	Not Listed	VU
Gobiidae	<i>Gobiopsis macrostomus</i>	Steindachner, 1861	Bigmouth barbel-goby	Not Listed	VC
Gobiidae	<i>Istigobius decoratus</i>	(Herre, 1927)	Decorative lagoon-goby	Not Listed	VC
Gobiidae	<i>Istigobius diadema</i>	(Steindachner, 1876)	Black-lined lagoon-goby	Not Listed	VC
Gobiidae	<i>Istigobius goldmanni</i>	(Bleeker, 1852)	Goldmann's lagoon-goby	Not Listed	LC
Gobiidae	<i>Istigobius ornatus</i>	(Rüppell, 1830)	Ornate lagoon-goby	Not Listed	LC
Gobiidae	<i>Lubricogobius ornatus</i>	Fourmanoir, 1966	Yellow ornate-goby	Not Listed	VU
Gobiidae	<i>Macrodontogobius wilburi</i>	Herre, 1936	Wilbur's goby	Not Listed	VU
Gobiidae	<i>Mahidolia mystacina</i>	(Valenciennes, 1837)	Flagfin shrimp-goby	Not Listed	VU
Gobiidae	<i>Myersina adonis</i>	Shibukawa & Satapoomin 2006	Adonis shrimp-goby	Not Listed	VU
Gobiidae	<i>Myersina crocata</i>	(Wongratana, 1975)	Yellow-spotted shrimp-goby	Not Listed	VC
Gobiidae	<i>Myersina macrostoma</i>	Herre, 1934	Bigmouth shrimp-goby	Not Listed	VC
Gobiidae	<i>Oplopomops diacanthus</i>	(Schultz, 1943)	Hole goby	Not Listed	NT
Gobiidae	<i>Oplopomus caninoides</i>	(Bleeker, 1852)	Triplespot goby	Not Listed	NT
Gobiidae	<i>Oplopomus oplopomus</i>	(Valenciennes, 1837)	Spine-cheek goby	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Gobiidae	<i>Parachaeturichthys polynema</i>	(Bleeker, 1853)	Lancet-tail goby	Not Listed	DD
Gobiidae	<i>Priolepis nuchifasciata</i>	(Günther, 1873)	Orange reef-goby	Not Listed	NT
Gobiidae	<i>Priolepis semidoliata</i>	(Valenciennes, 1837)	Half-barred reef-goby	Not Listed	VU
Gobiidae	<i>Psammogobius biocellatus</i>	(Valenciennes, 1837)	Crocodile flathead-goby	Not Listed	NT
Gobiidae	<i>Silhouettea nuchipunctata</i>	(Herre, 1934)	Vanishing sand-goby	Not Listed	NT
Gobiidae	<i>Tomiyamichthys russus</i>	(Cantor, 1849)	Ocellated shrimp-goby	Not Listed	DD
Gobiidae	<i>Valenciennea immaculata</i>	(Ni, 1981)	Red-striped glider-goby	Not Listed	EN
Gobiidae	<i>Valenciennea muralis</i>	(Valenciennes, 1837)	Mural glider-goby	Not Listed	EN
Gobiidae	<i>Yongeichthys madraspatensis</i>	(Day, 1868)	Manyband goby	Not Listed	VU
Gobiidae	<i>Yongeichthys nebulosus</i>	(Forsskål, 1775)	Shadow goby	Not Listed	LC
Microdesmidae	<i>Oxymetopon compressus</i>	Chan, 1966	Robust ribbon-goby	Not Listed	VU
Microdesmidae	<i>Parioglossus palustris</i>	(Herre, 1945)	Estuarine dart-goby	Not Listed	EN
Microdesmidae	<i>Parioglossus philippinus</i>	(Herre, 1945)	Philippine dart-goby	Not Listed	VU
Microdesmidae	<i>Ptereleotris hanae</i>	(Jordan & Snyder, 1901)	Hana dart-goby	Not Listed	VU
Microdesmidae	<i>Ptereleotris microlepis</i>	(Bleeker, 1856)	Small-scaled dart-goby	Not Listed	VU
Istiophoridae	<i>Istiophorus platypterus</i>	(Shaw, 1792)	Indo-Pacific sailfish	Not Listed	CR
Istiophoridae	<i>Istiompax indica</i>	(Cuvier, 1832)	Black marlin	Not Listed	CR
Psettodidae	<i>Psettodes erumei</i>	(Bloch & Schneider, 1801)	Indian halibut	Not Listed	DD
Paralichthyidae	<i>Pseudorhombus arsius</i>	(Hamilton, 1822)	Largetooth flounder	Not Listed	LC
Paralichthyidae	<i>Pseudorhombus elevatus</i>	Ogilby, 1912	Deep flounder	Not Listed	DD
Paralichthyidae	<i>Pseudorhombus javanicus</i>	(Bleeker, 1853)	Javan flounder	Not Listed	DD
Paralichthyidae	<i>Pseudorhombus malayanus</i>	Bleeker, 1865	Malayan flounder	Not Listed	DD
Paralichthyidae	<i>Pseudorhombus neglectus</i>	Bleeker, 1865		Not Listed	DD
Bothidae	<i>Asterorhombus intermedius</i>	(Bleeker, 1865)	Intermediate flounder	Not Listed	DD
Bothidae	<i>Engyprosopon grandisquama</i>	(Temminck & Schlegel, 1846)	Largescale flounder	Not Listed	DD
Bothidae	<i>Grammatobothus polyophthalmus</i>	(Bleeker, 1865)	Threespot flounder	Not Listed	DD
Bothidae	<i>Laeops guentheri</i>	Alcock, 1890	Günther's flounder	Not Listed	DD
Soleidae	<i>Brachirus heterolepis</i>	(Bloch & Schneider, 1801)	Oriental sole	Not Listed	DD
Soleidae	<i>Brachirus orientalis</i>	(Bloch & Schneider, 1801)	Oriental sole	Not Listed	DD
Soleidae	<i>Dagetichthys commersonii</i>	(Lacepède, 1802)	Commerson's sole	Not Listed	DD
Soleidae	<i>Heteromycteris hartzfeldii</i>	(Bleeker, 1853)	Hook-nosed sole	Not Listed	DD
Soleidae	<i>Pardachirus pavoninus</i>	(Lacepède, 1802)	Peacock sole	Not Listed	DD
Soleidae	<i>Solea ovata</i>	Richardson, 1846	Ovate sole	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Soleidae	<i>Zebrias quagga</i>	(Bloch, 1787)	Zebra sole	Not Listed	DD
Soleidae	<i>Zebrias zebra</i>	(Bloch, 1787)	Zebra sole	Not Listed	VU
Cynoglossidae	<i>Cynoglossus arel</i>	(Bloch & Schneider, 1801)	Largescale sole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus bilineatus</i>	(Lacepède, 1802)	Fourlined tonguesole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus cynoglossus</i>	(Lacepède, 1802)	Bengal tonguesole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus itinus</i>	(Snyder, 1909)	Shortheaded tonguesole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus kopsii</i>	(Bleeker, 1851)	Shortheaded tonguesole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus lingua</i>	Hamilton, 1822	Long tonguesole	Not Listed	DD
Cynoglossidae	<i>Cynoglossus puncticeps</i>	(Richardson, 1846)	Speckled tonguesole	Not Listed	DD
Atherinidae	<i>Atherinomorus lacunosus</i>	(Forster, 1801)	Wide-banded silverside	Not Listed	LC
Atherinidae	<i>Doboatherina duodecimalis</i>	(Valenciennes, 1835)	Tropical silverside	Not Listed	LC
Atherinidae	<i>Hypoatherina celebesensis</i>	Sasaki & Kimura, 2012	Sulawesi silverside	Not Listed	DD
Atherinidae	<i>Hypoatherina temminckii</i>	(Bleeker, 1854)	Samoan silverside	Not Listed	DD
Phalostethidae	<i>Neostethus bicornis</i>	Regan, 1916		Not Listed	VU
Phalostethidae	<i>Neostethus lankesteri</i>	Regan, 1916		Not Listed	EN
Belonidae	<i>Strongylura incisa</i>	(Valenciennes, 1846)	Reef needlefish	Not Listed	NT
Belonidae	<i>Strongylura leiura</i>	(Bleeker, 1850)	Banded needlefish	Not Listed	NT
Belonidae	<i>Strongylura strongylura</i>	(van Hasselt, 1823)	Spottail needlefish	Not Listed	NT
Belonidae	<i>Tylosurus crocodilus</i>	(Péron & Lesueur, 1821)	Hound needlefish	Not Listed	NT
Hemiramphidae	<i>Hemiramphus far</i>	(Forsskål, 1775)	Black-barred halfbeak	Not Listed	NT
Hemiramphidae	<i>Hyporhamphus limbatus</i>	(Valenciennes, 1847)	Congaturi halfbeak	Not Listed	NT
Hemiramphidae	<i>Hyporhamphus quoyi</i>	(Valenciennes, 1847)	Quoy's garfish	Not Listed	LC
Hemiramphidae	<i>Rhynchorhamphus georgii</i>	(Valenciennes, 1847)	Long billed halfbeak	Not Listed	DD
Zenarchopteridae	<i>Zenarchopterus buffonis</i>	(Valenciennes, 1847)	Buffon's river-garfish	Not Listed	LC
Zenarchopteridae	<i>Zenarchopterus kneri</i>	Fowler, 1934	Viviparous halfbeak	Not Listed	DD
Exocoetidae	<i>Parexocoetus mento</i>	(Valenciennes, 1847)	African sailfin flyingfish	Not Listed	NT
Adrianichthyidae	<i>Oryzias javanicus</i>	(Bleeker, 1854)	Javan ricefish	Not Listed	LC
Mugilidae	<i>Chelon melinopterus</i>	(Valenciennes, 1836)	Otomebora mullet	Not Listed	LC
Mugilidae	<i>Chelon subviridis</i>	(Valenciennes, 1836)	Greenback mullet	Not Listed	LC
Mugilidae	<i>Crenimugil heterocheilus</i>	(Bleeker, 1855)	Half fringelip mullet	Not Listed	DD
Mugilidae	<i>Ellochelon vaigiensis</i>	(Quoy & Gaimard, 1825)	Squaretail mullet	Not Listed	LC
Mugilidae	<i>Moolgarda perusii</i>	(Valenciennes, 1836)	Longfinned mullet	Not Listed	LC
Mugilidae	<i>Moolgarda sebели</i>	(Forsskål, 1775)	Bluespot mullet	Not Listed	LC
Mugilidae	<i>Mugil cephalus</i>	Linnaeus, 1758	Flathead mullet	Not Listed	DD
Mugilidae	<i>Planiliza macrolepis</i>	(Smith, 1846)	Largescale mullet	Not Listed	DD
Mugilidae	<i>Planiliza tade</i>	(Fabricius, 1775)	Tade gray mullet	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Mugilidae	<i>Paramugil parmatus</i>	(Cantor, 1849)	Broad-mouthed mullet	Not Listed	DD
Gobiesocidae	<i>Diademichthys lineatus</i>	(Sauvage, 1883)	Urchin clingfish	Not Listed	EN
Tripterygiidae	<i>Enneapterygius fasciatus</i>	(Weber, 1909)	Banded triplefin	Not Listed	NT
Blenniidae	<i>Enchelyurus flavipes</i>	Peters, 1868	Yellowfin blenny	Not Listed	EN
Blenniidae	<i>Laiphognathus multimaculatus</i>			Not Listed	DD
Blenniidae	<i>Meiacanthus grammistes</i>	(Valenciennes, 1836)	Striped poison-fang blenny	Not Listed	VU
Blenniidae	<i>Omobranchus elongatus</i>	(Peters, 1855)	Chevroned blenny	Not Listed	VU
Blenniidae	<i>Omobranchus ferox</i>	(Herre, 1927)	Gossamer blenny	Not Listed	VU
Blenniidae	<i>Omobranchus germaini</i>	(Sauvage, 1883)	Germain's blenny	Not Listed	VU
Blenniidae	<i>Omobranchus punctatus</i>	(Valenciennes, 1836)	Muzzled blenny	Not Listed	VU
Blenniidae	<i>Omobranchus smithi</i>	(Rao, 1974)	Smith's blenny	Not Listed	VU
Blenniidae	<i>Omobranchus zebra</i>	(Bleeker, 1868)	Zebra blenny	Not Listed	VU
Blenniidae	<i>Petroscirtes breviceps</i>	(Valenciennes, 1836)	Short-head sabretooth blenny	Not Listed	DD
Blenniidae	<i>Petroscirtes variabilis</i>	Cantor, 1849	Variable sabretooth blenny	Not Listed	NT
Blenniidae	<i>Entomacrodus lighti</i>	(Herre, 1938)	Light's combtooth blenny	Not Listed	DD
Blenniidae	<i>Entomacrodus striatus</i>	(Valenciennes, 1836)	Blackspotted rockskipper	Not Listed	DD
Blenniidae	<i>Istiblennius dussumieri</i>	(Valenciennes, 1836)	Streaky rockskipper	Not Listed	EN
Blenniidae	<i>Parablennius thysanius</i>	(Jordan & Seale, 1907)	Tasseled blenny	Not Listed	DD
Blenniidae	<i>Salarias fasciatus</i>	(Bloch, 1786)	Jewelled blenny	Not Listed	EN
Antennariidae	<i>Antennatus nummifer</i>	(Cuvier, 1817)	Spotfin frogfish	Not Listed	CR
Antennariidae	<i>Lophiocharon trisignatus</i>	(Richardson, 1844)	Three-spot frogfish	Not Listed	EN
Triacanthidae	<i>Triacanthus biaculeatus</i>	(Bloch, 1786)	Short-nosed tripodfish	Not Listed	NT
Triacanthidae	<i>Tripodichthys blochii</i>	(Bleeker, 1852)	Long-tail tripodfish	Not Listed	NT
Triacanthidae	<i>Tripodichthys oxycephalus</i>	(Bleeker, 1851)	Short-tail tripodfish	Not Listed	DD
Diodontidae	<i>Diodon hystriculus</i>	Linnaeus, 1758	Spot-fin porcupinefish	Not Listed	VU
Diodontidae	<i>Diodon holocanthus</i>	Linnaeus, 1758	Longspined porcupinefish,	Not Listed	VU
Diodontidae	<i>Diodon liturosus</i>	Shaw, 1804	Black-blotched porcupinefish	Not Listed	VU
Tetraodontidae	<i>Arothron caeruleopunctatus</i>	Matsuura, 1994	Blue-spotted puffer	Not Listed	VU
Tetraodontidae	<i>Arothron hispidus</i>	(Linnaeus, 1758)	White-spotted puffer	Not Listed	VU
Tetraodontidae	<i>Arothron immaculatus</i>	(Bloch & Schneider, 1801)	Immaculate puffer	Not Listed	VU
Tetraodontidae	<i>Arothron mappa</i>	(Lesson, 1831)	Map puffer	Not Listed	VU
Tetraodontidae	<i>Arothron reticularis</i>	(Bloch & Schneider, 1801)	Reticulated pufferfish	Not Listed	VU
Tetraodontidae	<i>Arothron stellatus</i>	(Anonymous, 1798)	Stellate puffer	Not Listed	VU
Tetraodontidae	<i>Chelonodontops patoca</i>	(Hamilton, 1822)	Milkspotted puffer	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Tetraodontidae	<i>Dichotomyctere nigroviridis</i>	(Marion de Procé, 1822)	Spotted green pufferfish	Not Listed	NT
Tetraodontidae	<i>Gastrophysus oblongus</i>	(Bloch, 1786)	Lattice blaasop	Not Listed	NT
Tetraodontidae	<i>Lagocephalus lunaris</i>	(Bloch & Schneider, 1801)	Lunartail puffer	Not Listed	NT
Ostraciidae	<i>Lactoria cornuta</i>	(Linnaeus, 1758)	Longhorn pufferfish	Not Listed	DD
Ostraciidae	<i>Ostracion nasus</i>	(Bloch, 1785)	Shortnose boxfish	Not Listed	VU
Ostraciidae	<i>Ostracion rhinorhynchos</i>	Bleeker, 1851	Horn-nosed boxfish	Not Listed	DD
Monacanthidae	<i>Acreichthys tomentosus</i>	(Linnaeus, 1758)	Bristletail filefish	Not Listed	NT
Monacanthidae	<i>Aluterus scriptus</i>	(Osbeck, 1765)	Scribbled filefish	Not Listed	CR
Monacanthidae	<i>Anacanthus barbatus</i>	Gray, 1830	Bearded leatherjacket	Not Listed	EN
Monacanthidae	<i>Brachaluteres taylori</i>	Woods, 1966	Taylor's filefish	Not Listed	DD
Monacanthidae	<i>Chaetodermis penicilligerus</i>	(Cuvier, 1816)	Leafy filefish	Not Listed	VU
Monacanthidae	<i>Monacanthus chinensis</i>	(Osbeck, 1765)	Fan-bellied leatherjacket	Not Listed	LC
Monacanthidae	<i>Paramonacanthus choirocephalus</i>	(Bleeker, 1851)	White-blotched filefish	Not Listed	DD
Monacanthidae	<i>Pseudomonacanthus macrurus</i>	(Bleeker, 1856)	Strap-weed filefish	Not Listed	VU
Monacanthidae	<i>Rudarius excelsus</i>	(Bleeker, 1856)	Diamond leatherjacket	Not Listed	DD
Balistidae	<i>Abalistes stellatus</i>	(Bloch & Schneider, 1801)	Starry triggerfish	Not Listed	CR
Balistidae	<i>Balistapus undulatus</i>	(Park, 1797)	Orange-lined triggerfish	Not Listed	CR
Balistidae	<i>Balistoides viridescens</i>	(Bloch & Schneider, 1801)	Titan triggerfish	Not Listed	CR
Apistidae	<i>Apistus carinatus</i>	(Bloch & Schneider, 1801)	Ocellated waspfish	Not Listed	DD
Scorpaenidae	<i>Parascorpaena picta</i>	(Cuvier, 1829)	Painted scorpionfish	Not Listed	NT
Scorpaenidae	<i>Scorpaenopsis diabolus</i>	(Cuvier, 1829)	False stonefish	Not Listed	DD
Scorpaenidae	<i>Scorpaenopsis possi</i>	Randall & Eschmeyer, 2001	Poss' scorpionfish	Not Listed	DD
Scorpaenidae	<i>Scorpaenopsis ramraoai</i>	Randall & Eschmeyer, 2001	Rama Rao's scorpionfish	Not Listed	DD
Scorpaenidae	<i>Pterois russelii</i>	Bennett, 1831	Russel's lionfish	Not Listed	CR
Scorpaenidae	<i>Pterois volitans</i>	(Linnaeus, 1758)	Red lionfish	Not Listed	CR
Tetrapogidae	<i>Cottapistus cotooides</i>	(Linnaeus, 1758)	Marbled stingfish	Not Listed	DD
Tetrapogidae	<i>Paracentropogon longispinis</i>	(Cuvier, 1829)	Wispy waspfish	Not Listed	LC
Tetrapogidae	<i>Richardsonichthys leucogaster</i>	(Richardson, 1848)	Whiteface waspfish	Not Listed	DD
Tetrapogidae	<i>Trichosomus trachinoides</i>	(Cuvier, 1829)	Mangrove goblinfish	Not Listed	DD
Synanceiidae	<i>Minous monodactylus</i>	(Bloch & Schneider, 1801)	Grey stingfish	Not Listed	DD
Synanceiidae	<i>Inimicus brachyrhynchus</i>	(Bleeker, 1874)	Singapore stinger	Not Listed	DD
Synanceiidae	<i>Inimicus cuvieri</i>	(Gray, 1835)	Longsnout stinger	Not Listed	DD
Synanceiidae	<i>Inimicus didactylus</i>	(Pallas, 1769)	Bearded ghoulfish	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Synanceiidae	<i>Leptosynanceia asteroblepa</i>	(Richardson, 1844)	Star-eyed stonefish	Not Listed	DD
Synanceiidae	<i>Synanceia horrida</i>	(Linnaeus, 1766)	Estuarine stonefish	Not Listed	NT
Synanceiidae	<i>Synanceia verrucosa</i>	(Bloch & Schneider, 1801)	Reef stonefish	Not Listed	VU
Synanceiidae	<i>Trachicephalus uranoscopus</i>	(Bloch & Schneider, 1801)	Stargazing stonefish	Not Listed	NT
Aploactinidae	<i>Acanthosphex leurynnis</i>	(Jordan & Seale, 1905)	Wasp-spine velvetfish	Not Listed	DD
Aploactinidae	<i>Sthenopus mollis</i>	Richardson, 1848	Soft velvetfish	Not Listed	DD
Platycephalidae	<i>Cociella punctata</i>	(Cuvier, 1829)	Spotted flathead	Not Listed	DD
Platycephalidae	<i>Cymbacephalus bosschei</i>	(Bleeker, 1860)	Small-eyed flathead	Not Listed	DD
Platycephalidae	<i>Cymbacephalus nematophthalmus</i>	(Günther, 1860)	Fringe-eyed flathead	Not Listed	VU
Platycephalidae	<i>Elates ransonnetii</i>	(Steindachner, 1876)	Dwarf flathead	Not Listed	VU
Platycephalidae	<i>Grammoplites knappi</i>	Imamura & Amaoka, 1994	Small-spined flathead	Not Listed	DD
Platycephalidae	<i>Grammoplites scaber</i>	(Linnaeus, 1758)	Rough flathead	Not Listed	DD
Platycephalidae	<i>Inegocia japonica</i>	(Cuvier, 1829)	Japanese flathead	Not Listed	VU
Platycephalidae	<i>Platycephalus cultellatus</i>	Richardson, 1846	Knife flathead	Not Listed	DD
Platycephalidae	<i>Platycephalus indicus</i>	(Linnaeus, 1758)	Bartail flathead	Not Listed	VU
Platycephalidae	<i>Rogadius tuberculatus</i>	(Cuvier, 1829)	Tuberculated flathead	Not Listed	DD
Platycephalidae	<i>Sunagocia carbunculus</i>	(Valenciennes, 1833)	Papillose flathead	Not Listed	VU
Terapontidae	<i>Eutherapon theraps</i>	Cuvier, 1829	Largescaled terapon	Not Listed	LC
Terapontidae	<i>Pelates quadrilineatus</i>	(Bloch, 1790)	Fourlined terapon	Not Listed	LC
Terapontidae	<i>Pelates sexlineatus</i>	(Quoy & Gaimard, 1825)	Eastern striped grunter	Not Listed	NT
Terapontidae	<i>Terapon jarbua</i>	(Forsskål, 1775)	Tiger perch; Jarbua terapon	Not Listed	LC
Terapontidae	<i>Terapon puta</i>	Cuvier, 1829	Small-scaled terapon	Not Listed	NT
Kyphosidae	<i>Kyphosus vaigiensis</i>	(Quoy & Gaimard, 1825)	Brassy chub	Not Listed	NT
Pempheridae	<i>Pempheris adusta</i>	Bleeker 1877	Dusky sweeper	Not Listed	EN
Pempheridae	<i>Pempheris malabarica</i>	Cuvier, 1831	Malabar sweeper	Not Listed	EN
Pempheridae	<i>Pempheris molucca</i>	Cuvier, 1829	Moluccan sweeper	Not Listed	EN
Ambassidae	<i>Ambassis interrupta</i>	Bleeker, 1853	Long-spined glass-perchlet	Not Listed	LC
Ambassidae	<i>Ambassis kopsii</i>	Bleeker, 1858	Singapore glass-perchlet	Not Listed	LC
Ambassidae	<i>Ambassis nalua</i>	(Hamilton, 1822)	Scalloped glass-perchlet	Not Listed	DD
Ambassidae	<i>Ambassis urotaenia</i>	Bleeker 1852	Banded-tail glass-perchlet	Not Listed	DD
Ambassidae	<i>Ambassis vachellii</i>	Richardson, 1846	Vachelli's glass-perchlet	Not Listed	LC
Latidae	<i>Lates calcarifer</i>	(Bloch, 1790)	Asian seabass	Not Listed	DD
Latidae	<i>Psammoperca waigiensis</i>	(Cuvier, 1828)	Waigieu seaperch	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Serranidae	<i>Cephalopholis argus</i>	Schneider, 1801	Peacock hind	Not Listed	VU
Serranidae	<i>Cephalopholis boenak</i>	(Bloch, 1790)	Chocolate hind	Not Listed	LC
Serranidae	<i>Cephalopholis formosa</i>	(Shaw, 1812)	Bluelined hind	Not Listed	VU
Serranidae	<i>Cephalopholis microprion</i>	(Bleeker, 1852)	Freckled hind	Not Listed	DD
Serranidae	<i>Cromileptes altivelis</i>	(Valenciennes, 1828)	Humpback grouper	Not Listed	CR
Serranidae	<i>Epinephelus areolatus</i>	(Forsskål, 1775)	Areolate grouper	Not Listed	VU
Serranidae	<i>Epinephelus bleekeri</i>	(Vaillant, 1878)	Duskytail grouper	Not Listed	VU
Serranidae	<i>Epinephelus coioides</i>	(Hamilton, 1822)	Orange-spotted grouper	Not Listed	VU
Serranidae	<i>Epinephelus corallicola</i>	(Valenciennes, 1828)	Coral grouper	Not Listed	EN
Serranidae	<i>Epinephelus erythrurus</i>	(Valenciennes, 1828)	Cloudy grouper	Not Listed	VU
Serranidae	<i>Epinephelus fasciatus</i>	(Forsskål, 1775)	Blacktip grouper	Not Listed	DD
Serranidae	<i>Epinephelus fuscoguttatus</i>	(Forsskål, 1775)	Brown-marbled grouper	Not Listed	VU
Serranidae	<i>Epinephelus lanceolatus</i>	(Bloch, 1790)	Giant grouper	Not Listed	DD
Serranidae	<i>Epinephelus malabaricus</i>	(Bloch & Schneider, 1801)	Malabar grouper	Not Listed	VU
Serranidae	<i>Epinephelus ongus</i>	(Bloch, 1790)	Specklefin grouper	Not Listed	EN
Serranidae	<i>Epinephelus quoyanus</i>	(Valenciennes, 1830)	Longfin Grouper	Not Listed	VU
Serranidae	<i>Epinephelus sexfasciatus</i>	(Valenciennes, 1828)	Sixbar grouper	Not Listed	DD
Serranidae	<i>Plectropomus leopardus</i>	(Lacepède, 1802)	Leopard coral-grouper	Not Listed	EN
Serranidae	<i>Plectropomus maculatus</i>	(Bloch, 1790)	Spotted coral-grouper	Not Listed	EN
Serranidae	<i>Diploprion bifasciatum</i>	Cuvier, 1828	Barred soapfish	Not Listed	LC
Centrogenyidae	<i>Centrogenys vaigiensis</i>	(Quoy & Gaimard, 1824)	False scorpionfish	Not Listed	LC
Pseudochromidae	<i>Pseudochromis ransonneti</i>	Steindachner, 1870	Karimunjawa dottyback	Not Listed	LC
Pseudochromidae	<i>Congrogadus subducens</i>	(Richardson, 1843)	Carpet eel-blenny	Not Listed	LC
Plesiopidae	<i>Calloplesiops altivelis</i>	(Steindachner, 1903)	Comet	Not Listed	CR
Opistognathidae	<i>Stalix novikovi</i>	Prokofiev, 2015	Novikov's jawfish	Not Listed	CR
Priacanthidae	<i>Priacanthus tayenus</i>	Richardson, 1846	Purple-spotted bigeye	Not Listed	DD
Apogonidae	<i>Apogon crassiceps</i>	Garman, 1903	Transparent cardinalfish	Not Listed	VU
Apogonidae	<i>Apogonichthyooides melas</i>	(Bleeker, 1848)	Black cardinalfish	Not Listed	NT
Apogonidae	<i>Apogonichthyooides timorensis</i>	(Bleeker, 1854)	Timor cardinalfish	Not Listed	VU
Apogonidae	<i>Archamia bleekeri</i>	(Günther, 1859)	Gon's cardinalfish	Not Listed	NT
Apogonidae	<i>Cheilodipterus artus</i>	Smith, 1961	Wolf cardinalfish	Not Listed	DD
Apogonidae	<i>Cheilodipterus macrodon</i>	(Lacepède, 1802)	Large toothed cardinalfish	Not Listed	NT
Apogonidae	<i>Cheilodipterus quinquelineatus</i>	Cuvier, 1828	Five-lined cardinalfish	Not Listed	NT
Apogonidae	<i>Cheilodipterus singapurensis</i>	Bleeker, 1860	Truncate cardinalfish	Not Listed	NT
Apogonidae	<i>Fibramia amboinensis</i>	(Bleeker, 1853)	Ambonia cardinalfish	Not Listed	DD
Apogonidae	<i>Fibramia lateralis</i>	(Valenciennes, 1832)	Humpback cardinal	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Apogonidae	<i>Fibramia thermalis</i>	(Cuvier, 1829)	Half-barred cardinal	Not Listed	VU
Apogonidae	<i>Fowleria variegata</i>	(Valenciennes, 1832)	Variegated cardinalfish	Not Listed	NT
Apogonidae	<i>Jaydia lineata</i>	(Temminck & Schlegel, 1842)	Indian perch	Not Listed	DD
Apogonidae	<i>Jaydia truncata</i>	(Bleeker, 1855)	Flagfin cardinalfish	Not Listed	DD
Apogonidae	<i>Lepidamia kalosoma</i>	(Bleeker, 1852)	Pinstripe cardinalfish	Not Listed	VU
Apogonidae	<i>Nectamia savayensis</i>	(Günther, 1872)	Samoan cardinalfish	Not Listed	EN
Apogonidae	<i>Nectamia similis</i>	Fraser, 2008	Similar cardinalfish	Not Listed	EN
Apogonidae	<i>Ostorhinchus cavitensis</i>	(Jordan & Seale, 1907)	Whiteline cardinalfish	Not Listed	VU
Apogonidae	<i>Ostorhinchus chrysopomus</i>	(Bleeker, 1854)	Spotted-gill cardinalfish	Not Listed	DD
Apogonidae	<i>Ostorhinchus compressus</i>	(Smith & Radcliffe, 1911)	Ochre-striped cardinalfish	Not Listed	NT
Apogonidae	<i>Ostorhinchus cookii</i>	(Macleay, 1881)	Cook's cardinalfish	Not Listed	VU
Apogonidae	<i>Ostorhinchus cyanosoma</i>	(Bleeker, 1853)	Orange-lined cardinalfish	Not Listed	VU
Apogonidae	<i>Ostorhinchus endekataenia</i>	(Bleeker, 1852)	Candystripe cardinalfish	Not Listed	LC
Apogonidae	<i>Ostorhinchus fasciatus</i>	(Shaw, 1790)	Broadbanded cardinalfish	Not Listed	DD
Apogonidae	<i>Ostorhinchus fleurieu</i>	Lacepède, 1802	Flower cardinalfish	Not Listed	VU
Apogonidae	<i>Ostorhinchus margaritophorus</i>	(Bleeker, 1855)	Red-striped cardinalfish	Not Listed	LC
Apogonidae	<i>Ostorhinchus nanus</i>	(Allen, Kuiter & Randall, 1994)	Tiny cardinalfish	Not Listed	DD
Apogonidae	<i>Ostorhinchus pleuron</i>	(Fraser, 2005)	Rib-bar cardinalfish	Not Listed	NT
Apogonidae	<i>Ostorhinchus urostigma</i>	(Bleeker, 1874)	Spiny-head cardinalfish	Not Listed	DD
Apogonidae	<i>Ostorhinchus wassinki</i>	(Bleeker, 1861)	Kupang cardinalfish	Not Listed	VU
Apogonidae	<i>Pristicon rhodopterus</i>	Bleeker, 1852)	Redfin cardinalfish	Not Listed	VU
Apogonidae	<i>Pristicon trimaculatus</i>	(Cuvier, 1828)	Three-spot cardinalfish	Not Listed	DD
Apogonidae	<i>Siphamia tubifer</i>	Weber, 1909	Tubifer cardinalfish	Not Listed	VU
Apogonidae	<i>Sphaeramia nematoptera</i>	(Bleeker, 1856)	Pajama cardinalfish	Not Listed	DD
Apogonidae	<i>Sphaeramia orbicularis</i>	(Cuvier, 1828)	Orbiculate cardinalfish	Not Listed	NT
Apogonidae	<i>Taeniamia fucata</i>	(Cantor, 1849)	Orangelined cardinalfish	Not Listed	VU
Apogonidae	<i>Taeniamia macroptera</i>	(Cuvier, 1828)	Dusky-tailed cardinalfish	Not Listed	DD
Apogonidae	<i>Yarica hyalosoma</i>	(Bleeker, 1852)	Humpbacked cardinal	Not Listed	LC
Apogonidae	<i>Pseudamia amblyuropterus</i>	(Bleeker, 1856)	White-jawed cardinalfish	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Sillaginidae	<i>Sillago aeolus</i>	Jordan & Evermann, 1902	Oriental sillago	Not Listed	LC
Sillaginidae	<i>Sillago sihama</i>	(Forsskål, 1775)	Silver sillago	Not Listed	LC
Rachycentridae	<i>Rachycentron canadum</i>	(Linnaeus, 1766)	Cobia	Not Listed	NT
Echeneidae	<i>Echeneis naucrates</i>	Linnæus, 1758	Slender sharksucker	Not Listed	NT
Carangidae	<i>Alectis indica</i>	(Rüppell, 1830)	Indian threadfish	Not Listed	NT
Carangidae	<i>Alepes djedaba</i>	(Forsskål, 1775)	Shrimp scad	Not Listed	DD
Carangidae	<i>Alepes kleinii</i>	(Bloch 1793)	Razorbelly scad	Not Listed	NT
Carangidae	<i>Alepes melanoptera</i>	(Swainson, 1839)	Blackfin scad	Not Listed	DD
Carangidae	<i>Alepes vari</i>			Not Listed	DD
Carangidae	<i>Atule mate</i>	(Cuvier, 1833)	Yellowtail scad	Not Listed	VU
Carangidae	<i>Carangooides armatus</i>	(Rüppell, 1830)	Longfin trevally	Not Listed	VU
Carangidae	<i>Carangooides praeustus</i>	(Anonymous [Bennett], 1830)	Brownback trevally	Not Listed	VU
Carangidae	<i>Caranx ignobilis</i>	(Forsskål, 1775)	Giant trevally	Not Listed	EN
Carangidae	<i>Caranx melampygus</i>	Cuvier, 1833	Bluefin trevally	Not Listed	VU
Carangidae	<i>Caranx sexfasciatus</i>	Quoy & Gaimard, 1825	Bieye trevally	Not Listed	EN
Carangidae	<i>Decapterus russelli</i>	(Rüppell, 1830)	Indian scad	Not Listed	DD
Carangidae	<i>Elagatis bipinnulata</i>	(Quoy & Gaimard, 1825)	Rainbow runner	Not Listed	DD
Carangidae	<i>Gnathanodon speciosus</i>	(Forsskål, 1775)	Golden trevally	Not Listed	VU
Carangidae	<i>Selaroides leptolepis</i>	(Cuvier, 1833)	Yellowstripe scad	Not Listed	VU
Carangidae	<i>Megalaspis cordyla</i>	(Linnaeus, 1758)	Torpedo scad	Not Listed	VU
Carangidae	<i>Parastromateus niger</i>	(Bloch, 1795)	Black pomfret	Not Listed	VU
Carangidae	<i>Scomberoides commersonianus</i>	Lacepède, 1801	Talang queenfish	Not Listed	EN
Carangidae	<i>Scomberoides tol</i>	(Cuvier, 1832)	Needle-scaled queenfish	Not Listed	EN
Carangidae	<i>Trachinotus blochii</i>	(Lacepède, 1801)	Snubnose pompano	Not Listed	EN
Carangidae	<i>Trachinotus mookalee</i>	Cuvier, 1832	Indian pompano	Not Listed	DD
Carangidae	<i>Ulua mentalis</i>	(Cuvier, 1833)	Longrakered trevally	Not Listed	VU
Menidae	<i>Mene maculata</i>	(Bloch & Schneider, 1801)	Moonfish	Not Listed	DD
Leiognathidae	<i>Aurigequula fasciata</i>	(Lacepède, 1803)	Threadfin ponyfish	Not Listed	DD
Leiognathidae	<i>Aurigequula longispina</i>	(Valenciennes, 1835)	Longspine ponyfish	Not Listed	LC
Leiognathidae	<i>Leiognathus equula</i>	(Forsskål, 1775)	Common ponyfish	Not Listed	LC
Leiognathidae	<i>Leiognathus robustus</i>	Sparks & Dunlap, 2004	Robust ponyfish	Not Listed	DD
Leiognathidae	<i>Leiognathus ruconius</i>	(Hamilton, 1822)	Deep pugnose ponyfish	Not Listed	NT
Leiognathidae	<i>Deveximentum hanedai</i>	(Mochizuki & Hayashi, 1989)	Haneda's ponyfish	Not Listed	LC
Leiognathidae	<i>Deveximentum insidiator</i>	(Bloch, 1787)	Pugnose ponyfish	Not Listed	LC
Leiognathidae	<i>Deveximentum interruptum</i>	(Valenciennes, 1835)	Pig-nosed ponyfish	Not Listed	DD
Leiognathidae	<i>Deveximentum megalolepis</i>	(Mochizuki & Hayashi, 1989)	Big-scale ponyfish	Not Listed	DD
Leiognathidae	<i>Equulites lineolatus</i>	(Valenciennes, 1835)	Ornate ponyfish	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Leiognathidae	<i>Eubleekeria jonesi</i>	(James, 1971)	Jones' pony fish	Not Listed	DD
Leiognathidae	<i>Eubleekeria splendens</i>	(Cuvier, 1829)	Splendid ponyfish	Not Listed	DD
Leiognathidae	<i>Gazza minuta</i>	(Bloch, 1795)	Toothed ponyfish	Not Listed	LC
Leiognathidae	<i>Karalla daura</i>	(Cuvier, 1829)	Goldstripe ponyfish	Not Listed	LC
Leiognathidae	<i>Karalla dussumieri</i>	(Valenciennes, 1835)	Dussumier's ponyfish	Not Listed	DD
Leiognathidae	<i>Nucchequula blochii</i>	(Valenciennes, 1835)	Twoblotch ponyfish	Not Listed	DD
Leiognathidae	<i>Nucchequula gerreoides</i>	(Bleeker, 1851)	Decorated ponyfish	Not Listed	DD
Leiognathidae	<i>Nucchequula longicornis</i>	Kimura, Kimura & Ikejima, 2008	Long-horn ponyfish	Not Listed	DD
Leiognathidae	<i>Nucchequula manusella</i>	Chakrabarty & Sparks, 2007	Saddle ponyfish	Not Listed	DD
Leiognathidae	<i>Photolateralis stercorarius</i>	(Evermann & Seale, 1907)	Oblong slipmouth	Not Listed	LC
Lutjanidae	<i>Lutjanus argentimaculatus</i>	(Forsskål, 1775)	Mangrove red snapper	Not Listed	NT
Lutjanidae	<i>Lutjanus carponotatus</i>	(Richardson, 1842)	Spanish flag snapper	Not Listed	VU
Lutjanidae	<i>Lutjanus decussatus</i>	(Cuvier, 1828)	Checkered snapper	Not Listed	EN
Lutjanidae	<i>Lutjanus erythropterus</i>	Bloch, 1790	Crimson snapper	Not Listed	DD
Lutjanidae	<i>Lutjanus fulviflamma</i>	(Forsskål, 1775)	Dory snapper	Not Listed	DD
Lutjanidae	<i>Lutjanus johnii</i>	(Bloch, 1792)	John's snapper	Not Listed	NT
Lutjanidae	<i>Lutjanus lutjanus</i>	Bloch, 1790	Bigeye snapper	Not Listed	VU
Lutjanidae	<i>Lutjanus malabaricus</i>	(Bloch & Schneider, 1801)	Malabar blood snapper	Not Listed	VU
Lutjanidae	<i>Lutjanus rivulatus</i>	(Cuvier, 1828)	Blubberlip snapper	Not Listed	DD
Lutjanidae	<i>Lutjanus russelli</i>	(Bleeker, 1849)	Russell's snapper	Not Listed	NT
Lutjanidae	<i>Lutjanus sebae</i>	(Cuvier, 1816)	Emperor red snapper	Not Listed	CR
Lutjanidae	<i>Lutjanus stellatus</i>	Akazaki, 1983	Star snapper	Not Listed	DD
Lutjanidae	<i>Lutjanus vitta</i>	(Quoy & Gaimard, 1824)	Brownstripe red snapper	Not Listed	VU
Lutjanidae	<i>Lutjanus xanthopinnis</i>	Iwatsuki, Tanaka & Allen, 2015	Yellowfin snapper	Not Listed	DD
Caesionidae	<i>Caesio caeruleaurea</i>	Lacepède, 1801	Blue and gold fusilier	Not Listed	CR
Caesionidae	<i>Caesio cuning</i>	(Bloch, 1791)	Redbelly yellowtail fusilier	Not Listed	LC
Lobotidae	<i>Lobotes surinamensis</i>	(Bloch, 1790)	Tripletail	Not Listed	VU
Hapalogenyidae	<i>Hapalogenys analis</i>	Richardson, 1845	Broadbanded velvetchin	Not Listed	CR
Gerreidae	<i>Gerres erythrourus</i>	(Bloch, 1791)	Deep-bodied mojarra	Not Listed	NT
Gerreidae	<i>Gerres filamentosus</i>	Cuvier, 1829	Whipfin mojarra	Not Listed	NT
Gerreidae	<i>Gerres oyena</i>	(Forsskål, 1775)	Common mojarra	Not Listed	LC
Gerreidae	<i>Gerres shima</i>	Iwatsuki, Kimura & Yoshi no, 2007	Banded silver-biddy	Not Listed	DD

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Gerreidae	<i>Pentaprion longimanus</i>	(Cantor, 1849)	Longfin morjarra	Not Listed	DD
Haemulidae	<i>Pomadasys argenteus</i>	(Forsskål, 1775)	Silver grunt	Not Listed	NT
Haemulidae	<i>Pomadasys auritus</i>	(Cuvier, 1830)	Longhead grunt	Not Listed	NT
Haemulidae	<i>Pomadasys kaakan</i>	(Cuvier, 1830)	Javelin grunt	Not Listed	LC
Haemulidae	<i>Pomadasys maculatus</i>	(Bloch, 1793)	Saddle grunt	Not Listed	NT
Haemulidae	<i>Pomadasys trifasciatus</i>	Fowler, 1937	Black-ear grunt	Not Listed	DD
Haemulidae	<i>Pomadasys unimaculatus</i>	Tian, 1982	Red-patched grunt	Not Listed	DD
Haemulidae	<i>Diagramma pictum</i>	(Thunberg, 1792)	Painted sweetlips	Not Listed	VU
Haemulidae	<i>Plectorrhinchus chaetodonoides</i>	Lacepède, 1801	Harlequin sweetlips	Not Listed	EN
Haemulidae	<i>Plectorrhinchus chrysotaenia</i>	(Bleeker, 1855)	Yellow-striped sweetlips	Not Listed	EN
Haemulidae	<i>Plectorrhinchus gibbosus</i>	(Lacepède, 1802)	Brown sweetlips	Not Listed	VU
Sparidae	<i>Acanthopagrus pacificus</i>	Iwatsuki, Kume & Yoshino, 2010	Pikey bream	Not Listed	DD
Lethrinidae	<i>Lethrinus lentjan</i>	(Lacepède, 1802)	Pinkear emperor	Not Listed	LC
Lethrinidae	<i>Lethrinus nebulosus</i>	(Forsskål, 1775)	Spangled emperor	Not Listed	NT
Nemipteridae	<i>Nemipterus nemurus</i>	(Bleeker, 1857)	Redspine threadfin bream	Not Listed	DD
Nemipteridae	<i>Nemipterus peronii</i>	(Valenciennes, 1830)	Notchedfin threadfin bream	Not Listed	DD
Nemipteridae	<i>Pentapodus bifasciatus</i>	(Bleeker, 1848)	White-shoulder whiptail	Not Listed	VU
Nemipteridae	<i>Pentapodus setosus</i>	(Valenciennes, 1830)	Butterfly whiptail	Not Listed	LC
Nemipteridae	<i>Pentapodus trivittatus</i>	(Bloch, 1791)	Three-striped whiptail	Not Listed	VU
Nemipteridae	<i>Scolopsis bilineata</i>	(Bloch, 1793)	Two-lined monocle bream	Not Listed	VU
Nemipteridae	<i>Scolopsis ciliata</i>	(Lacepède, 1802)	Saw-jawed monocle bream	Not Listed	LC
Nemipteridae	<i>Scolopsis margaritifera</i>	(Cuvier, 1830)	Pearly monocle bream	Not Listed	VU
Nemipteridae	<i>Scolopsis monogramma</i>	(Cuvier, 1830)	Monogrammed monocle bream	Not Listed	LC
Nemipteridae	<i>Scolopsis japonica</i>	(Cuvier, 1830)	Lattice monocle bream	Not Listed	VU
Nemipteridae	<i>Scolopsis vosmeri</i>	(Bloch, 1792)	Whitecheek monocle bream	Not Listed	NT
Sciaenidae	<i>Dendrophysa russelli</i>	(Cuvier, 1829)	Goatee croaker	Not Listed	DD
Sciaenidae	<i>Johnius belangerii</i>	(Cuvier, 1830)	Belanger's croaker	Not Listed	NT
Sciaenidae	<i>Johnius carouna</i>	(Cuvier, 1830)	Caroun croaker	Not Listed	DD
Sciaenidae	<i>Nibea soldado</i>	(Lacepède, 1802)	Soldier croaker	Not Listed	DD
Sciaenidae	<i>Otolithes ruber</i>	(Bloch & Schneider, 1801)	Tigetooth croaker	Not Listed	NT
Sciaenidae	<i>Otolithoides biauritus</i>	(Cantor, 1849)	Bronze croaker	Not Listed	NT
Sciaenidae	<i>Pennahia area</i>	(Bloch, 1793)	Donkey croaker	Not Listed	DD
Sciaenidae	<i>Pseudolarimichthys terengganui</i>			Not Listed	DD
Sciaenidae	<i>Sciaenops ocellatus</i>	(Linnaeus, 1766)	Red drum	Not Listed	NT
Polynemidae	<i>Eleutheronema tetradactylum</i>	(Shaw, 1804)	Fourfinger threadfin	Not Listed	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Polynemidae	<i>Leptomelanosoma indicum</i>	(Shaw, 1804)	Indian threadfin	Not Listed	DD
Polynemidae	<i>Polydactylus sextarius</i>	(Bloch & Schneider, 1801)	Blackspot threadfin	Not Listed	DD
Mullidae	<i>Parupeneus cyclostomus</i>	(Lacepède, 1801)	Gold-saddle goatfish	Not Listed	DD
Mullidae	<i>Parupeneus heptacanthus</i>	(Lacepède, 1802)	Cinnabar goatfish	Not Listed	DD
Mullidae	<i>Upeneus heterospinus</i>	Uiblein & Pavlov, 2019	Varied-spine goatfish	Not Listed	DD
Mullidae	<i>Upeneus sulphureus</i>	Cuvier, 1829	Sulphur goatfish	Not Listed	DD
Mullidae	<i>Upeneus sundaicus</i>	(Bleeker, 1855)	Ochrebanded goatfish	Not Listed	DD
Mullidae	<i>Upeneus tragula</i>	Richardson, 1846	Freckled goatfish	Not Listed	NT
Toxotidae	<i>Toxotes chatareus</i>	(Hamilton, 1822)	Spotted archerfish	Not Listed	NT
Toxotidae	<i>Toxotes jaculatrix</i>	(Pallas, 1767)	Banded archerfish	Not Listed	LC
Drepaneidae	<i>Drepane longimana</i>	(Bloch & Schneider, 1801)	Concertina fish	Not Listed	VU
Drepaneidae	<i>Drepane punctata</i>	(Linnaeus, 1758)	Spotted sicklefish	Not Listed	NT
Monodactylidae	<i>Monodactylus argenteus</i>	(Linnaeus, 1758)	Silver moony	Not Listed	NT
Cepolidae	<i>Acanthocepola abbreviata</i>	(Valenciennes, 1835)	Bandfish	Not Listed	DD
Chaetodontidae	<i>Chaetodon adiergastos</i>	Seale, 1910	Philippine butterflyfish	Not Listed	DD
Chaetodontidae	<i>Chaetodon collare</i>	Bloch, 1787	Redtail butterflyfish	Not Listed	DD
Chaetodontidae	<i>Chaetodon kleinii</i>	Bloch, 1790	Sunburst butterflyfish	Not Listed	DD
Chaetodontidae	<i>Chaetodon lunula</i>	(Lacepède, 1802)	Raccoon butterflyfish	Not Listed	DD
Chaetodontidae	<i>Chaetodon oligacanthus</i>	(Cuvier, 1831)	Sixspine butterflyfish	Not Listed	VU
Chaetodontidae	<i>Chaetodon octofasciatus</i>	Bloch, 1787	Eightband butterflyfish	Not Listed	NT
Chaetodontidae	<i>Chelmon rostratus</i>	(Linnaeus, 1758)	Copperband butterflyfish	Not Listed	LC
Chaetodontidae	<i>Coradion chrysozonus</i>	(Cuvier, 1831)	Goldengirdled coralfish	Not Listed	VU
Chaetodontidae	<i>Heniochus acuminatus</i>	(Linnaeus, 1758)	Pennant coral fish	Not Listed	CR
Chaetodontidae	<i>Heniochus monoceros</i>	Cuvier, 1831	Masked bannerfish	Not Listed	CR
Chaetodontidae	<i>Heniochus varius</i>	(Cuvier, 1829)	Horned bannerfish	Not Listed	CR
Pomacanthidae	<i>Chaetodontoplus mesoleucus</i>	(Bloch, 1787)	Vermiculated angelfish	Not Listed	NT
Pomacanthidae	<i>Pomacanthus annularis</i>	(Bloch, 1787)	Bluering angelfish	Not Listed	EN
Pomacanthidae	<i>Pomacanthus imperator</i>	(Bloch, 1787)	Emperor angelfish	Not Listed	DD
Pomacanthidae	<i>Pomacanthus semicirculatus</i>	(Cuvier, 1831)	Semicircle angelfish	Not Listed	DD
Pomacanthidae	<i>Pomacanthus sexstriatus</i>	(Cuvier, 1831)	Sixbar angelfish	Not Listed	NT
Pomacentridae	<i>Amphiprion clarkii</i>	(Bennett, 1830)	Yellowtail clownfish	VU	CR
Pomacentridae	<i>Amphiprion ocellaris</i>	Cuvier, 1830	Clown anemonefish	VU	NT
Pomacentridae	<i>Amphiprion frenatus</i>	Brevoort, 1856	Tomato clownfish	VU	NT

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Pomacentridae	<i>Amphiprion perideraion</i>	Bleeker, 1855	Pink anemonefish	VU	CR
Pomacentridae	<i>Amphiprion polymnus</i>	(Linnaeus, 1758)	Saddleback clownfish	VU	DD
Pomacentridae	<i>Abudefduf bengalensis</i>	(Bloch, 1787)	Bengal sergeant	Not Listed	LC
Pomacentridae	<i>Abudefduf notatus</i>	(Day, 1870)	Dusky damsel; Yellowtail sergeant	Not Listed	DD
Pomacentridae	<i>Abudefduf sexfasciatus</i>	(Lacepède, 1801)	Scissortail sergeant	Not Listed	LC
Pomacentridae	<i>Abudefduf sordidus</i>	(Forsskål, 1775)	Blackspot sergeant	Not Listed	DD
Pomacentridae	<i>Abudefduf vaigiensis</i>	(Quoy & Gaimard, 1825)	Indo-Pacific sergeant	Not Listed	NT
Pomacentridae	<i>Amblyglyphidodon curacao</i>	(Bloch, 1787)	Staghorn damselfish	Not Listed	CR
Pomacentridae	<i>Chromis atripepectorialis</i>	Welander & Schultz, 1951	Black-axil chromis	Not Listed	DD
Pomacentridae	<i>Chromis cinerascens</i>	(Cuvier, 1830)	Green puller	Not Listed	LC
Pomacentridae	<i>Chrysiptera parasema</i>	(Fowler, 1918)	Goldtail demoiselle	Not Listed	DD
Pomacentridae	<i>Chrysiptera unimaculata</i>	(Cuvier, 1830)	Onespot demoiselle	Not Listed	DD
Pomacentridae	<i>Dascyllus aruanus</i>	(Linnaeus, 1758)	Whitetail dascyllus	Not Listed	CR
Pomacentridae	<i>Dascyllus trimaculatus</i>	(Rüppell, 1829)	Threespot dascyllus	Not Listed	EN
Pomacentridae	<i>Dascyllus reticulatus</i>	(Richardson, 1846)	Reticulate dascyllus	Not Listed	CR
Pomacentridae	<i>Dischistodus chrysopoecilus</i>	(Schlegel & Müller, 1839)	White-spot damsel	Not Listed	DD
Pomacentridae	<i>Dischistodus fasciatus</i>	(Cuvier, 1830)	Banded damsel	Not Listed	NT
Pomacentridae	<i>Dischistodus perspicillatus</i>	(Cuvier, 1830)	White damsel	Not Listed	VU
Pomacentridae	<i>Dischistodus prosopotaenia</i>	(Bleeker, 1852)	Honey-head damsel	Not Listed	NT
Pomacentridae	<i>Hemiglyphidodon plagiometopon</i>	(Bleeker, 1852)	Lagoon damselfish	Not Listed	VU
Pomacentridae	<i>Neoglyphidodon melas</i>	(Cuvier, 1830)	Bowtie damselfish	Not Listed	CR
Pomacentridae	<i>Neoglyphidodon nigroris</i>	(Cuvier, 1830)	Black-gold chromis	Not Listed	CR
Pomacentridae	<i>Neopomacentrus anabatoides</i>	(Bleeker, 1847)	Silver demoiselle	Not Listed	DD
Pomacentridae	<i>Neopomacentrus bankieri</i>	(Richardson, 1846)	Chinese demoiselle	Not Listed	LC
Pomacentridae	<i>Neopomacentrus cyanomos</i>	(Bleeker, 1856)	Regal demoiselle	Not Listed	LC
Pomacentridae	<i>Neopomacentrus filamentosus</i>	(Macleay, 1882)	Brown demoiselle	Not Listed	LC
Pomacentridae	<i>Pomacentrus alexanderae</i>	Evermann & Seale, 1907	Alexander's damsel	Not Listed	EN
Pomacentridae	<i>Pomacentrus bankanensis</i>	Bleeker, 1854	Speckled damsel	Not Listed	DD
Pomacentridae	<i>Pomacentrus cheraphilus</i>	Allen, Erdmann & Hiloman, 2011		Not Listed	LC
Pomacentridae	<i>Pomacentrus littoralis</i>	Cuvier, 1830	Smoky damsel	Not Listed	LC
Pomacentridae	<i>Pomacentrus moluccensis</i>	Bleeker, 1853	Lemon damsel	Not Listed	EN
Pomacentridae	<i>Pomacentrus simsiang</i>	Bleeker, 1856	Blueback damsel	Not Listed	VU
Pomacentridae	<i>Pomacentrus tripunctatus</i>	Cuvier, 1830	Threespot damsel	Not Listed	LC
Pomacentridae	<i>Stegastes obreptus</i>	(Whitley, 1948)	Western gregory	Not Listed	EN
Labridae	<i>Cheilinus chlorourus</i>	(Bloch, 1791)	Floral wrasse	Not Listed	LC

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Labridae	<i>Cheilinus fasciatus</i>	(Bloch, 1791)	Redbreasted wrasse	Not Listed	EN
Labridae	<i>Choerodon anchorago</i>	(Bloch, 1791)	Orange-dotted tuskfish	Not Listed	LC
Labridae	<i>Choerodon oligacanthus</i>	(Bleeker, 1851)	White-patch tuskfish	Not Listed	NT
Labridae	<i>Choerodon schoenleinii</i>	(Valenciennes, 1839)	Blackspot tuskfish	Not Listed	NT
Labridae	<i>Epibulus insidiator</i>	(Pallas, 1770)	Sling-jaw wrasse	Not Listed	VU
Labridae	<i>Halichoeres argus</i>	(Bloch & Schneider, 1801)	Argus wrasse	Not Listed	CR
Labridae	<i>Halichoeres bicolor</i>	(Bloch & Schneider, 1801)	Pearly-spotted wrasse	Not Listed	LC
Labridae	<i>Halichoeres binotopsis</i>	(Bleeker, 1849)	Saowisata wrasse	Not Listed	DD
Labridae	<i>Halichoeres chloropterus</i>	(Bloch, 1791)	Pastel-green wrasse	Not Listed	NT
Labridae	<i>Halichoeres erdmanni</i>	Randall & Allen, 2010	Erdmann's wrasse	Not Listed	LC
Labridae	<i>Halichoeres kneri</i>	Bleeker, 1862	Kner's wrasse	Not Listed	NT
Labridae	<i>Halichoeres leucurus</i>	(Walbaum, 1792)	Greyhead wrasse	Not Listed	LC
Labridae	<i>Halichoeres melanochir</i>	Fowler & Bean, 1928	Orangefin wrasse	Not Listed	VU
Labridae	<i>Halichoeres melanurus</i>	(Bleeker, 1851)	Tail-spot wrasse	Not Listed	VU
Labridae	<i>Halichoeres nigrescens</i>	(Bloch & Schneider, 1801)	Bubblefin wrasse	Not Listed	LC
Labridae	<i>Hemigymnus melapterus</i>	(Bloch, 1791)	Blackeye thicklip	Not Listed	VU
Labridae	<i>Iniistius trivittatus</i>	(Randall & Cornish, 2000)	Three banded razorfish	Not Listed	DD
Labridae	<i>Labroides dimidiatus</i>	(Valenciennes, 1839)	Bluestreak cleaner wrasse	Not Listed	CR
Labridae	<i>Leptojulis cyanopleura</i>	(Bleeker, 1853)	Shoulder-spot wrasse	Not Listed	NT
Labridae	<i>Leptojulis urostigma</i>	Randall, 1996	Tailmark wrasse	Not Listed	NT
Labridae	<i>Oxycheilinus digrammus</i>	(Lacepède, 1801)	Cheeklined wrasse	Not Listed	DD
Labridae	<i>Pteragogus flagellifer</i>	(Valenciennes, 1839)	Cocktail wrasse	Not Listed	DD
Labridae	<i>Stethojulis interrupta</i>	(Bleeker, 1851)	Cutribbon wrasse	Not Listed	DD
Labridae	<i>Thalassoma lunare</i>	(Linnaeus, 1758)	Moon wrasse	Not Listed	CR
Scaridae	<i>Scarus ghobban</i>	Forsskål, 1775	Blue-barred parrotfish	Not Listed	VU
Scaridae	<i>Scarus rivulatus</i>	Valenciennes, 1840	Rivulated parrotfish	Not Listed	VU
Scaridae	<i>Scarus schlegeli</i>	(Bleeker, 1861)	Yellowband parrotfish	Not Listed	DD
Scaridae	<i>Scarus quoyi</i>	Valenciennes, 1840	Quoy's parrotfish	Not Listed	VU
Uranoscopidae	<i>Ichthyscopus lebeck</i>	(Bloch & Schneider, 1801)	Longnosed stargazer	Not Listed	NT
Trichonotidae	<i>Trichonotus setiger</i>	Bloch & Schneider, 1801	Spotted sand diver	Not Listed	NT
Pinguipedidae	<i>Parapercis filamentosa</i>	(Steindachner, 1878)	Threadfin sandperch	Not Listed	DD
Pinguipedidae	<i>Parapercis lineopunctata</i>	Randall, 2003	Nosestripe sandperch	Not Listed	VU
Pinguipedidae	<i>Parapercis snyderi</i>	Jordan & Starks, 1905	U-mark sandperch	Not Listed	VU

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Pinguipedidae	<i>Parapercis xanthozona</i>	(Bleeker, 1849)	Yellowbar sandperch	Not Listed	NT
Callionymidae	<i>Callionymus enneactis</i>	Bleeker, 1879	Mangrove dragonet	Not Listed	NT
Callionymidae	<i>Callionymus erythraeus</i>	Ninni, 1934	Smallhead dragonet	Not Listed	DD
Callionymidae	<i>Callionymus hindsii</i>	Richardson, 1844	Hinds' dragonet	Not Listed	DD
Callionymidae	<i>Callionymus melanopterus</i>	Bleeker, 1850	Indonesian flag dragonet	Not Listed	DD
Callionymidae	<i>Callionymus sagitta</i>	Pallas, 1770	Arrow dragonet	Not Listed	DD
Callionymidae	<i>Callionymus schaapii</i>	Bleeker, 1852	Short-snout sand-dragonet	Not Listed	NT
Callionymidae	<i>Dactylopus dactylopus</i>	(Valenciennes, 1837)	Fingered dragonet	Not Listed	CR
Callionymidae	<i>Dactylopus kuiteri</i>	(Fricke, 1992)	Orange-black dragonet	Not Listed	CR
Callionymidae	<i>Synchiropus lineolatus</i>	(Valenciennes, 1837)	Indian ornate dragonet	Not Listed	DD
Ephippidae	<i>Ephippus orbis</i>	(Bloch, 1787)	Orbfish	Not Listed	EN
Ephippidae	<i>Platax batavianus</i>	Cuvier, 1831	Humpback batfish	Not Listed	EN
Ephippidae	<i>Platax orbicularis</i>	(Forsskål, 1775)	Orbicular batfish	Not Listed	EN
Ephippidae	<i>Platax pinnatus</i>	(Linnaeus, 1758)	Dusky batfish	Not Listed	EN
Ephippidae	<i>Platax teira</i>	(Forsskål, 1775)	Longfin batfish	Not Listed	EN
Ephippidae	<i>Proteracanthus sарissophorus</i>	(Cantor, 1849)	Harpoon spadefish	Not Listed	DD
Scatophagidae	<i>Scatophagus argus</i>	(Linnaeus, 1766)	Spotted Scat	Not Listed	LC
Siganidae	<i>Siganus canaliculatus</i>	(Park, 1797)	White-spotted spinefoot	Not Listed	NT
Siganidae	<i>Siganus corallinus</i>	(Valenciennes, 1835)	Blue-spotted spinefoot	Not Listed	VU
Siganidae	<i>Siganus guttatus</i>	(Bloch, 1787)	Orange-spotted spinefoot	Not Listed	NT
Siganidae	<i>Siganus javus</i>	(Linnaeus, 1766)	Streaked spinefoot	Not Listed	NT
Siganidae	<i>Siganus punctatus</i>	(Schneider & Forster, 1801)	Goldspotted spinefoot	Not Listed	VU
Siganidae	<i>Siganus virgatus</i>	(Valenciennes, 1835)	Barhead spinefoot	Not Listed	EN
Siganidae	<i>Siganus vulpinus</i>	(Schlegel & Müller, 1845)	Foxface spinefoot	Not Listed	CR
Acanthuridae	<i>Acanthurus mata</i>	(Cuvier, 1829)	Elongate Surgeonfish	Not Listed	CR
Acanthuridae	<i>Zebrasoma velifer</i>	(Bloch, 1795)	Sailfin tang	Not Listed	DD
Sphyraenidae	<i>Sphyraena barracuda</i>	(Edwards, 1771)	Great barracuda	Not Listed	EN
Sphyraenidae	<i>Sphyraena jello</i>	Cuvier, 1829	Pickhandle barracuda	Not Listed	NT
Sphyraenidae	<i>Sphyraena obtusata</i>	Cuvier, 1829	Obtuse barracuda	Not Listed	VU
Rhincodontidae	<i>Rhincodon typus</i>	Smith, 1829	Whale shark	Not Listed	CR
Hemiscylliidae	<i>Chiloscyllium griseum</i>	Müller & Henle, 1838	Grey bamboo shark	Not Listed	CR
Stegostomatidae	<i>Stegostoma fasciatum</i>	(Hermann, 1783)	Zebra shark	Not Listed	CR
Ginglymostomatidae	<i>Nebrius ferrugineus</i>	(Lesson, 1831)	Tawny nurse shark	Not Listed	CR
Carcharhinidae	<i>Carcharhinus falciformis</i>	Müller & Henle, 1839	Silky shark	Not Listed	CR
Carcharhinidae	<i>Carcharhinus leucas</i>	Müller & Henle, 1839	Bull shark	Not Listed	CR

Family	Taxon Name	Authority	Common Name	RDB2	RDB3
Carcharhinidae	<i>Carcharhinus sealei</i>	(Pietschmann, 1913)	Blackspot shark	Not Listed	CR
Narkidae	<i>Narke dipterygia</i>	(Bloch & Schneider, 1801)	Spottail sleeper-ray	Not Listed	CR
Narcinidae	<i>Narcine maculata</i>	(Shaw, 1804)	Darkfinned numbfish	Not Listed	CR
Glaucostegidae	<i>Glaucostegus typus</i>	(Bennett, 1830)	Giant shovelnosed ray	Not Listed	CR
Rhinidae	<i>Rhina aenocystoma</i>	Bloch & Schneider, 1801	Bowmouth guitarfish	Not Listed	CR
Rhinidae	<i>Rhynchobatus australiae</i>	Whitley, 1939	White-spotted wedgefish	Not Listed	CR
Rhinidae	<i>Rhynchobatus springeri</i>	Compagno & Last, 2010	Broadnose wedgefish	Not Listed	CR
Pristidae	<i>Pristis pristis</i>	(Linnaeus, 1758)	Largetooth sawfish	Not Listed	CR
Dasyatidae	<i>Taeniurops meyeni</i>	(Müller & Henle, 1841)	Round ribbontail- ray	Not Listed	CR
Dasyatidae	<i>Himantura uarnak</i>	(Gmelin, 1789)	Reticulate whipray	Not Listed	CR
Dasyatidae	<i>Himantura undulata</i>	(Bleeker, 1852)	Honeycomb whipray	Not Listed	CR
Dasyatidae	<i>Urogymnus granulatus</i>	(Macleay, 1883)	Whitetail stingray	Not Listed	CR
Dasyatidae	<i>Pastinachus ater</i>	(Macleay, 1883)	Broad cowtail-ray	Not Listed	CR
Gymnuridae	<i>Gymnura poecilura</i>	(Shaw, 1804)	Longtail butterfly- ray	Not Listed	CR
Aetobatidae	<i>Aetobatus ocellatus</i>	(Kuhl, 1823)	Ocellated eagle-ray	Not Listed	CR
Rhinopteridae	<i>Rhinoptera javanica</i>	Müller & Henle, 1841	Javan cownose-ray	Not Listed	CR
Mobulidae	<i>Mobula kuhlii</i>	(Müller & Henle, 1841)	Shortfin devil-ray	Not Listed	CR
Carcharhinidae	<i>Galeocerdo cuvier</i>	(Péron & Lesueur, 1822)	Tiger shark	Not Listed	DD
Narkidae	<i>Temera hardwickii</i>	Gray, 1831	Finless sleeper-ray	Not Listed	DD
Gymnuridae	<i>Gymnura zonura</i>	(Bleeker, 1852)	Zonetail butterfly- ray	Not Listed	DD
Myliobatidae	<i>Aetomylaeus nichofii</i>	(Bloch & Schneider, 1801)	Banded eagle-ray	Not Listed	DD
Hemiscylliidae	<i>Chiloscyllium indicum</i>	(Gmelin, 1789)	Slender bambooshark	Not Listed	EN
Hemiscylliidae	<i>Chiloscyllium plagiosum</i>	(Anonymous [Bennett], 1830)	Whitespotted bambooshark	Not Listed	EN
Hemiscylliidae	<i>Chiloscyllium punctatum</i>	Müller & Henle, 1838	Brownbanded bambooshark	Not Listed	EN
Scyliorhinidae	<i>Atelomycterus marmoratus</i>	(Anonymous [Bennett], 1830)	Coral catshark	Not Listed	EN
Carcharhinidae	<i>Carcharhinus melanopterus</i>	Quoy & Gaimard, 1824	Blacktip reef shark	Not Listed	EN
Dasyatidae	<i>Telatrygon biasa</i>	Last, White & Naylor, 2016	Indonesian sharpnose ray	Not Listed	EN
Dasyatidae	<i>Maculabatis macrura</i>	(Bleeker, 1852)	Sharpnose whipray	Not Listed	EN
Dasyatidae	<i>Neotrygon varidens</i>	Last, White & Serét, 2016	Mahogany maskray	Not Listed	VU
Dasyatidae	<i>Taeniura lymma</i>	(Forsskål, 1775)	Bluespotted fantail- ray	Not Listed	VU
Dasyatidae	<i>Brevitrygon heterura</i>	(Bleeker, 1852)	Dwarf whipray	Not Listed	VU

Checklist of Amphibian Species with their Category of Threat Status for Singapore

Prepared by Noel Thomas, Law Ing Sind, Kelvin K.P. Lim

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Ictyophiidae	<i>Icthyophis paucisulcus</i>	Asian Striped Caecilian	Native	CR	CR
Bufonidae	<i>Duttaphrynus bengalensis</i>	Asian Toad	Introduced	Not Listed	NA
Bufonidae	<i>Ingerophrynus quadriporcatus</i>	Four-ridged Toad	Native	Not Listed	VU
Bufonidae	<i>Pelophryne ingeri</i>	Inger's Cross Toadlet	Native	CR	CR
Megophryidae	<i>Pelobatrachus nasutus</i>	Malayan Horned Frog	Native	EN	CR
Megophryidae	<i>Leptobrachium nigrops</i>	Black-eyed Litter Frog	Native	Not Listed	NT
Dic平glossidae	<i>Fejervarya limnocharis</i>	Field Frog	Native	Not Listed	LC
Dic平glossidae	<i>Fejervarya cancrivora</i>	Crab-eating Frog	Native	Not Listed	LC
Dic平glossidae	<i>Limnonectes blythii</i>	Malayan Giant Frog	Native	Not Listed	LC
Dic平glossidae	<i>Limnonectes paramacrodon</i>	Lesser Swamp Frog	Native	EN	CR
Dic平glossidae	<i>Limnonectes plicatellus</i>	Rhinoceros Frog	Native	EN	CR
Dic平glossidae	<i>Limnonectes malesianus</i>	Malesian Frog	Native	Not Listed	NT
Dic平glossidae	<i>Occidozyga sumatrana</i>	Yellow-bellied Puddle Frog	Native	Not Listed	NT
Ranidae	<i>Hylarana erythraea</i>	Common Greenback	Native	Not Listed	LC
Ranidae	<i>Hylarana labialis</i>	Copper-cheeked Frog	Native	Not Listed	LC
Ranidae	<i>Hylarana laterimaculata</i>	Masked Rough-sided Frog	Native	Not Listed	NT
Ranidae	<i>Hylarana baramica</i>	Golden-eared Rough-sided Frog	Native	VU	VU
Rhacophoridae	<i>Polypedates leucomystax</i>	Common Tree Frog	Native	Not Listed	LC
Rhacophoridae	<i>Nyctixalus pictus</i>	Cinnamon Bush Frog	Native	VU	VU
Rhacophoridae	<i>Leptomantis cyanopunctatus</i>	Blue-legged Bush Frog	Native	CR	CR
Rhacophoridae	<i>Theloderma horridum</i>	Thorny Bush Frog	Native	CR	CR
Microhylidae	<i>Kalophrynus limbooliati</i>	Limbooliat's Sticky Frog	Native	VU	VU
Microhylidae	<i>Micryletta subaraji</i>	Subaraj's Paddy Frog	Native	Not Listed	CR
Microhylidae	<i>Microhyla butleri</i>	Painted Chorus Frog	Native	Not Listed	LC
Microhylidae	<i>Microhyla heymonsi</i>	Dark-sided Chorus Frog	Native	Not Listed	LC
Microhylidae	<i>Microhyla mantheyi</i>	Manthey's Chorus Frog	Native	CR	VU

Checklist of Reptile Species with their Category of Threat Status for Singapore

Prepared by Noel Thomas, Law Ing Sind, Kelvin K.P. Lim

Family	Taxon Name	Common Name	RDB2	RDB3
Geomydidae	<i>Cuora couro</i>	Malayan Box Turtle	Not Listed	NT
Trionychidae	<i>Amyda cartilaginea</i>	Asian Softshell	EN	VU
Geoemydidae	<i>Cyclemys dentata</i>	Asian Leaf Turtle	CR	CR
Trionychidae	<i>Dogania suplana</i>	Malayan Softshell Turtle	CR	CR
Geoemydidae	<i>Heosemys spinosa</i>	Spiny Hill Turtle	VU	EN
Geoemydidae	<i>Notochelys platynota</i>	Malayan Flatshell Turtle	EN	CR
Cheloniidae	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	CR	CR
Cheloniidae	<i>Chelonia mydas</i>	Green Sea Turtle	CR	CR
Crocodylidae	<i>Crocodylus porosus</i>	Estuarine Crocodile	CR	CR
Agamidae	<i>Aphaniotis fusca</i>	Earless Agamid	EN	EN
Agamidae	<i>Bronchocela cristatella</i>	Green Crested Lizard	Not Listed	LC
Agamidae	<i>Draco melanopogon</i>	Black-bearded Gliding Lizard	VU	VU
Agamidae	<i>Draco quinquefasciatus</i>	Five-banded Gliding Lizard	EN	EN
Agamidae	<i>Draco sumatranaus</i>	Common Gliding Lizard	Not Listed	LC
Gekkonidae	<i>Aeluroscalabotes felinus</i>	Fox-faced Gecko	CR	CR
Gekkonidae	<i>Cnemaspis peninsularis</i>	Peninsular Rock Gecko	VU	VU
Gekkonidae	<i>Cyrtodactylus consobrinus</i>	Peter's Bent-toed Gecko	CR	CR
Gekkonidae	<i>Cyrtodactylus majulah</i>	Singapore Bent-toed Gecko	Not Listed	VU
Gekkonidae	<i>Cyrtodactylus pantiensis</i>	Panti Bent-toed Gecko	Not Listed	CR
Gekkonidae	<i>Cyrtodactylus semenanjungensis</i>	Peninsular Bent-toed Gecko	Not Listed	CR
Gekkonidae	<i>Cyrtodactylus quadrivirgatus</i>	Striped Bent-toed Gecko	VU	CR
Gekkonidae	<i>Gekko hulk</i>	Green-eyed Forest Gecko	CR	CR
Gekkonidae	<i>Hemidactylus frenatus</i>	Common House Gecko	Not Listed	LC
Gekkonidae	<i>Cosymbotus craspedotus</i>	Frilly Gecko	CR	CR
Gekkonidae	<i>Hemidactylus platyurus</i>	Flat-tailed Gecko	Not Listed	LC
Gekkonidae	<i>Gehyra multilata</i>	Four-clawed Gecko	Not Listed	LC
Gekkonidae	<i>Lepidodactylus lugubris</i>	Maritime Gecko	Not Listed	LC
Gekkonidae	<i>Gekko monarchus</i>	Spotted House Gecko	Not Listed	LC
Gekkonidae	<i>Hemiphyllodactylus typus</i>	Lowland Dwarf Gecko	VU	NT
Gekkonidae	<i>Gekko browni</i>	Flap-legged Gecko	CR	CR
Gekkonidae	<i>Gekko kuhli</i>	Kuhl's Gliding Gecko	CR	CR
Scincidae	<i>Dasia grisea</i>	Brown Tree Skink	EN	VU
Scincidae	<i>Dasia olivacea</i>	Olive Tree Skink	EN	CR
Scincidae	<i>Emoia atrocostata</i>	Mangrove Skink	EN	CR
Scincidae	<i>Eutropis multifasciatus</i>	Common Sun Skink	Not Listed	LC
Scincidae	<i>Eutrophis longicaudata</i>	Long-tailed Sun Skink	Not Listed	DD
Scincidae	<i>Eutropis rugifera</i>	Rough-scaled Sun Skink	EN	VU
Scincidae	<i>Lygosoma bowringii</i>	Supple Skink	Not Listed	LC
Scincidae	<i>Lygosoma siamense</i>	Thai Supple Skink	Not Listed	DD
Scincidae	<i>Lipinia vittigera</i>	Striped Tree Skink	EN	EN
Scincidae	<i>Typhloscincus temasekensis</i>	Swamp Skink	CR	EN
Varanidae	<i>Varanus dumerili</i>	Dumeril's Monitor	Not Listed	CR
Varanidae	<i>Varanus nebulosus</i>	Clouded Monitor	Not Listed	LC
Varanidae	<i>Varanus salvator</i>	Malayan Water Monitor	Not Listed	LC
Acrochordidae	<i>Acrochordus granulatus</i>	Banded File Snake	Not Listed	NT
Typhlopidae	<i>Indotyphlops braminus</i>	Brahminy Blind Snake	Not Listed	LC
Typhlopidae	<i>Ramphotyphlops lineatus</i>	Lineated Blind Snake	Not Listed	CR
Typhlopidae	<i>Argyrophis muelleri</i>	White-bellied Blind Snake	CR	CR
Cylindrophidae	<i>Cylindrophis cf. ruffus</i>	Red-tailed Pipe Snake	CR	VU

Family	Taxon Name	Common Name	RDB2	RDB3
Xenopeltidae	<i>Xenopeltis unicolor</i>	Sunbeam Snake	Not Listed	LC
Pythonidae	<i>Malayopython reticulatus</i>	Reticulated Python	Not Listed	LC
Colubridae	<i>Ahaetulla fasciolata</i>	Speckle-headed Whip Snake	CR	CR
Colubridae	<i>Ahaetulla mycterizans</i>	Big-eyed Whip Snake	CR	VU
Colubridae	<i>Ahaetulla prasina</i>	Oriental Whip Snake	Not Listed	LC
Colubridae	<i>Boiga cynodon</i>	Dog-toothed Cat Snake	EN	VU
Colubridae	<i>Boiga dendrophila</i>	Gold-ringed Cat Snake	VU	NT
Colubridae	<i>Boiga drapiezii</i>	White-spotted Cat Snake	Not Listed	CR
Colubridae	<i>Boiga jaspidea</i>	Jasper's Cat Snake	CR	CR
Colubridae	<i>Calamara schlegeli</i>	Pink-headed Reed Snake	VU	NT
Colubridae	<i>Calamaria lumbricoidea</i>	Variable Reed Snake	EN	EN
Colubridae	<i>Calamaria lovi gimletti</i>	Gimlet's Reed Snake	Not Listed	EN
Colubridae	<i>Chrysopelea paradisi</i>	Paradise Tree Snake	Not Listed	LC
Colubridae	<i>Chrysopelea pelias</i>	Twin-barred Tree Snake	Not Listed	NT
Colubridae	<i>Coelognathus flavolineatus</i>	Malayan Racer	EN	LC
Colubridae	<i>Dendrelaphis caudolineatus</i>	Striped Bronzeback	Not Listed	LC
Colubridae	<i>Dendrelaphis haasi</i>	Haas' Bronzeback	Not Listed	CR
Colubridae	<i>Dendrelaphis formosus</i>	Elegant Bronzeback	EN	VU
Colubridae	<i>Dendrelaphis cyanochloris</i>	Blue Bronzeback	Not Listed	EN
Colubridae	<i>Dendrelaphis kopsteini</i>	Kopstein's Bronzeback	VU	NT
Colubridae	<i>Dendrelaphis pictus</i>	Painted Bronzeback	LC	LC
Colubridae	<i>Lycodon subannulatus</i>	Malayan Bridle Snake	EN	EN
Colubridae	<i>Dryophiops rubescens</i>	Keel-bellied Whip Snake	CR	EN
Colubridae	<i>Gonglyosoma baliodeirum</i>	Orange-bellied Ringneck	EN	EN
Colubridae	<i>Gonyosoma oxycephalum</i>	Red-tailed Racer	EN	VU
Colubridae	<i>Lycodon subcinctus</i>	Banded Wolf Snake	CR	CR
Colubridae	<i>Lycodon capucinus</i>	Common House Snake	Not Listed	LC
Colubridae	<i>Oligodon octolineatus</i>	Striped Kukri Snake	Not Listed	LC
Colubridae	<i>Oligodon purpurascens</i>	Brown Kukri Snake	CR	CR
Colubridae	<i>Oligodon signatus</i>	Barred Kukri Snake	CR	EN
Colubridae	<i>Pseudorabdion longiceps</i>	Dwarf Reed Snake	EN	NT
Colubridae	<i>Ptyas carinata</i>	Keeled Rat Snake	Not Listed	VU
Colubridae	<i>Ptyas fusca</i>	White-bellied Rat Snake	EN	VU
Colubridae	<i>Ptyas korros</i>	Indochinese Rat Snake	Not Listed	LC
Colubridae	<i>Sibynophis melanocephalus</i>	Black-headed Collared Snake	EN	VU
Colubridae	<i>Xenelaphis hexagonatus</i>	Malayan Brown Snake	EN	CR
Paretidae	<i>Asthenodipsas laevis</i>	Smooth Slug Snake	Not Listed	CR
Homalopsidae	<i>Cantoria violacea</i>	Cantor's Water Snake	CR	EN
Homalopsidae	<i>Cerberus scheneiderii</i>	Dog-faced Water Snake	Not Listed	LC
Homalopsidae	<i>Fordonia leucobalia</i>	Crab-eating Water Snake	EN	EN
Homalopsidae	<i>Gerarda prevostiana</i>	Gerard's Water Snake	EN	EN
Homalopsidae	<i>Homalopsis buccata</i>	Puff-faced Water Snake	VU	VU
Homalopsidae	<i>Phytolopsis punctata</i>	Blackwater Mud Snake	Not Listed	CR
Homalopsidae	<i>Raclitia indica</i>	Selangor Mud Snake	Not Listed	CR
Natricidae	<i>Rhabdophis rhodomelas</i>	Blue-necked Keelback	EN	VU
Natricidae	<i>Psammodynastes pictus</i>	Painted Mock Viper	CR	CR
Natricidae	<i>Xenochrophis maculatus</i>	Spotted Keelback	VU	VU
Natricidae	<i>Xenochrophis trianguligerus</i>	Triangle Keelback	CR	CR
Elapidae	<i>Bungarus fasciatus</i>	Banded Krait	EN	VU
Elapidae	<i>Calliophis bivirgatus</i>	Malayan Blue Coral Snake	VU	VU
Elapidae	<i>Calliophis intestinalis</i>	Malayan Banded Coral Snake	VU	NT
Elapidae	<i>Naja sumatrana</i>	Equatorial Spitting Cobra	LC	LC

Family	Taxon Name	Common Name	RDB2	RDB3
Elapidae	<i>Ophiophagus hannah</i>	King Cobra	EN	VU
Elapidae	<i>Laticauda colubrina</i>	Yellow-lipped Sea Krait	EN	VU
Viperidae	<i>Trimeresurus purpureomaculatus</i>	Shore Pit Viper	EN	VU
Viperidae	<i>Tropidolaemus wagleri</i>	Wagler's Pit Viper	EN	NT
Elapidae	<i>Aipysurus eydouxii</i>	Marbled Sea Snake	Not Listed	EN
Elapidae	<i>Hydrophis hardwickii</i>	Hardwicke's Sea Snake	Not Listed	EN
Elapidae	<i>Hydrophis platurus</i>	Yellow-bellied Sea Snake	Not Listed	EN

Checklist of Bird Species with their Category of Threat Status for Singapore

Prepared by Yong D.L., Chia A., Jain A., Lee B.P.Y.-H., Li D.Z.W., Davison G.W.H., Lim G., Tan G.C., Lee J., Lim K.C., Lim K.S., Nyanasengaran M.

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Phasianidae	<i>Excalfactoria chinensis</i>	King Quail	Native	Not Listed	LC
Phasianidae	<i>Gallus gallus</i>	Red Junglefowl	Native	EN	NT
Anatidae	<i>Dendrocygna arcuata</i>	Wandering Whistling Duck	Introduced	Not Listed	NA
Anatidae	<i>Dendrocygna javanica</i>	Lesser Whistling Duck	Native	EN	EN
Anatidae	<i>Nettapus coromandelianus</i>	Cotton Pygmy Goose	Native	CR	CR
Anatidae	<i>Spatula querquedula</i>	Garganey	Native	Not Listed	VU
Anatidae	<i>Spatula clypeata</i>	Northern Shoveler	Native	Not Listed	NE
Anatidae	<i>Mareca strepera</i>	Gadwall	Native	Not Listed	NE
Anatidae	<i>Mareca penelope</i>	Eurasian Wigeon	Native	Not Listed	NE
Anatidae	<i>Anas acuta</i>	Northern Pintail	Native	Not Listed	NE
Anatidae	<i>Anas crecca</i>	Eurasian Teal	Native	Not Listed	NE
Anatidae	<i>Aythya fuligula</i>	Tufted Duck	Native	Not Listed	NE
Caprimulgidae	<i>Lyncornis temminckii</i>	Malaysian Eared Nightjar	Native	CR	CR
Caprimulgidae	<i>Caprimulgus jotaka</i>	Grey Nightjar	Native	Not Listed	LC
Caprimulgidae	<i>Caprimulgus macrurus</i>	Large-tailed Nightjar	Native	Not Listed	LC
Caprimulgidae	<i>Caprimulgus affinis</i>	Savanna Nightjar	Native	LC	LC
Hemiprocnidae	<i>Hemiprocne longipennis</i>	Grey-rumped Treesswift	Native	Not Listed	NT
Hemiprocnidae	<i>Hemiprocne comata</i>	Whiskered Treesswift	Native	Not Listed	LC
Apodidae	<i>Collocalia affinis</i>	Plume-toed Swiftlet	Native	CR	VU
Apodidae	<i>Aerodramus maximus</i>	Black-nest Swiftlet	Native	Not Listed	NT
Apodidae	<i>Aerodramus germani</i>	Germain's Swiftlet	Native	Not Listed	LC
Apodidae	<i>Hirundapus cochinchinensis</i>	Silver-backed Needletail	Native	Not Listed	LC
Apodidae	<i>Hirundapus giganteus</i>	Brown-backed Needletail	Native	Not Listed	LC
Apodidae	<i>Hirundapus caudacutus</i>	White-throated Needletail	Native	Not Listed	LC
Apodidae	<i>Cypsiurus balasiensis</i>	Asian Palm Swift	Native	Not Listed	NT
Apodidae	<i>Apus pacificus</i>	Pacific Swift	Native	Not Listed	LC
Apodidae	<i>Apus nipalensis</i>	House Swift	Native	Not Listed	VU
Apodidae	<i>Apus apus</i>	Common Swift	Native	Not Listed	NE
Cuculidae	<i>Centropus sinensis</i>	Greater Coucal	Native	Not Listed	NT
Cuculidae	<i>Centropus bengalensis</i>	Lesser Coucal	Native	Not Listed	LC
Cuculidae	<i>Phaenicophaeus sumatranus</i>	Chestnut-bellied Malkoha	Native	NT	NT
Cuculidae	<i>Clamator coromandus</i>	Chestnut-winged Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Clamator jacobinus</i>	Jacobin Cuckoo	Native	Not Listed	NE
Cuculidae	<i>Eudynamys scolopaceus</i>	Asian Koel	Native	Not Listed	LC
Cuculidae	<i>Chrysococcyx maculatus</i>	Asian Emerald Cuckoo	Native	Not Listed	NE
Cuculidae	<i>Chrysococcyx xanthorhynchus</i>	Violet Cuckoo	Native	EN	VU
Cuculidae	<i>Chrysococcyx basalis</i>	Horsfield's Bronze Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Chrysococcyx minutillus</i>	Little Bronze Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Cacomantis sonneratii</i>	Banded Bay Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Cacomantis merulinus</i>	Plaintive Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Cacomantis sepulcralis</i>	Rusty-breasted Cuckoo	Native	VU	NT
Cuculidae	<i>Surniculus lugubris</i>	Square-tailed Drongo-Cuckoo	Native	CR	VU
Cuculidae	<i>Hierococcyx sparverioides</i>	Large Hawk-Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Hierococcyx fugax</i>	Malaysian Hawk-Cuckoo	Native	Not Listed	NT
Cuculidae	<i>Hierococcyx nisicolor</i>	Hodgson's Hawk-Cuckoo	Native	Not Listed	NT
Cuculidae	<i>Cuculus micropterus</i>	Indian Cuckoo	Native	Not Listed	LC
Cuculidae	<i>Cuculus saturatus</i>	Himalayan Cuckoo	Native	Not Listed	LC
Columbidae	<i>Columba livia</i>	Rock Dove	Introduced	Not Listed	NA

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Columbidae	<i>Streptopelia orientalis</i>	Oriental Turtle Dove	Native	Not Listed	NE
Columbidae	<i>Streptopelia tranquebarica</i>	Red Turtle Dove	Introduced	Not Listed	NA
Columbidae	<i>Spilopelia chinensis</i>	Spotted Dove	Native	Not Listed	LC
Columbidae	<i>Chalcophaps indica</i>	Common Emerald Dove	Native	Not Listed	LC
Columbidae	<i>Geopelia striata</i>	Zebra Dove	Native	Not Listed	LC
Columbidae	<i>Treron fulvicollis</i>	Cinnamon-headed Green Pigeon	Native	Not Listed	EN
Columbidae	<i>Treron olax</i>	Little Green Pigeon	Native	CR	CR
Columbidae	<i>Treron vernans</i>	Pink-necked Green Pigeon	Native	Not Listed	LC
Columbidae	<i>Treron bicinctus</i>	Orange-breasted Green Pigeon	Native	Not Listed	LC
Columbidae	<i>Treron curvirostra</i>	Thick-billed Green Pigeon	Native	EN	VU
Columbidae	<i>Ptilinopus jambu</i>	Jambu Fruit Dove	Native	Not Listed	VU
Columbidae	<i>Ducula aenea</i>	Green Imperial Pigeon	Native	Not Listed	EN
Columbidae	<i>Ducula badia</i>	Mountain Imperial Pigeon	Native	Not Listed	LC
Columbidae	<i>Ducula bicolor</i>	Pied Imperial Pigeon	Native + Introduced	Not Listed	DD
Heliornithidae	<i>Heliopais personatus</i>	Masked Finfoot	Native	Not Listed	EN
Rallidae	<i>Rallina fasciata</i>	Red-legged Crake	Native	VU	NT
Rallidae	<i>Rallina eurizonoides</i>	Slaty-legged Crake	Native	Not Listed	LC
Rallidae	<i>Gallirallus striatus</i>	Slaty-breasted Rail	Native	Not Listed	LC
Rallidae	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	Native	Not Listed	LC
Rallidae	<i>Porzana pusilla</i>	Baillon's Crake	Native	Not Listed	VU
Rallidae	<i>Porzana fusca</i>	Ruddy-breasted Crake	Native	NT	NT
Rallidae	<i>Porzana paykullii</i>	Band-bellied Crake	Native	Not Listed	NT
Rallidae	<i>Porzana cinerea</i>	White-browed Crake	Native	Not Listed	VU
Rallidae	<i>Gallicrex cinerea</i>	Watercock	Native	Not Listed	EN
Rallidae	<i>Porphyrio poliocephalus</i>	Grey-headed Swamphen	Native	NT	CR
Rallidae	<i>Gallinula chloropus</i>	Common Moorhen	Native	Not Listed	EN
Rallidae	<i>Fulica atra</i>	Eurasian Coot	Native	Not Listed	NE
Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Grebe	Native	CR	CR
Turnicidae	<i>Turnix suscitator</i>	Barred Buttonquail	Native	Not Listed	LC
Burhinidae	<i>Esacus magnirostris</i>	Beach Stone-curlew	Native	CR	CR
Recurvirostridae	<i>Himantopus himantopus</i>	Black-winged Stilt	Native	Not Listed	DD
Recurvirostridae	<i>Himantopus leucocephalus</i>	Pied Stilt	Native	Not Listed	DD
Charadriidae	<i>Vanellus cinereus</i>	Grey-headed Lapwing	Native	Not Listed	NE
Charadriidae	<i>Vanellus indicus</i>	Red-wattled Lapwing	Native	EN	NT
Charadriidae	<i>Pluvialis fulva</i>	Pacific Golden Plover	Native	Not Listed	VU
Charadriidae	<i>Pluvialis squatarola</i>	Grey Plover	Native	Not Listed	NT
Charadriidae	<i>Charadrius hiaticula</i>	Common Ringed Plover	Native	Not Listed	NE
Charadriidae	<i>Charadrius dubius</i>	Little Ringed Plover	Native	Not Listed	EN
Charadriidae	<i>Charadrius alexandrinus</i>	Kentish Plover	Native	Not Listed	EN
Charadriidae	<i>Anarhynchus dealbatus</i>	White-faced Plover	Native	Not Listed	EN
Charadriidae	<i>Charadrius peronii</i>	Malaysian Plover	Native	CR	CR
Charadriidae	<i>Charadrius mongolus</i>	Lesser Sand Plover	Native	Not Listed	NT
Charadriidae	<i>Charadrius leschenaultii</i>	Greater Sand Plover	Native	Not Listed	NT
Charadriidae	<i>Charadrius veredus</i>	Oriental Plover	Native	Not Listed	LC
Rostratulidae	<i>Rostratula benghalensis</i>	Greater Painted-snipe	Native	CR	EN
Jacanidae	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	Native	Not Listed	VU
Scolopacidae	<i>Numenius phaeopus</i>	Eurasian Whimbrel	Native	Not Listed	NT
Scolopacidae	<i>Numenius minutus</i>	Little Whimbrel	Native	Not Listed	NE
Scolopacidae	<i>Numenius madagascariensis</i>	Far Eastern Curlew	Native	Not Listed	EN
Scolopacidae	<i>Numenius arquata</i>	Eurasian Curlew	Native	Not Listed	EN
Scolopacidae	<i>Limosa lapponica</i>	Bar-tailed Godwit	Native	Not Listed	VU

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Scolopacidae	<i>Limosa limosa</i>	Black-tailed Godwit	Native	Not Listed	CR
Scolopacidae	<i>Arenaria interpres</i>	Ruddy Turnstone	Native	Not Listed	EN
Scolopacidae	<i>Calidris tenuirostris</i>	Great Knot	Native	Not Listed	EN
Scolopacidae	<i>Calidris canutus</i>	Red Knot	Native	Not Listed	NT
Scolopacidae	<i>Calidris pugnax</i>	Ruff	Native	Not Listed	LC
Scolopacidae	<i>Calidris falcinellus</i>	Broad-billed Sandpiper	Native	Not Listed	VU
Scolopacidae	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Native	Not Listed	NE
Scolopacidae	<i>Calidris ferruginea</i>	Curlew Sandpiper	Native	Not Listed	EN
Scolopacidae	<i>Calidris temminckii</i>	Temminck's Stint	Native	Not Listed	NE
Scolopacidae	<i>Calidris subminuta</i>	Long-toed Stint	Native	Not Listed	EN
Scolopacidae	<i>Calidris ruficollis</i>	Red-necked Stint	Native	Not Listed	NT
Scolopacidae	<i>Calidris pygmaea</i>	Spoon-billed Sandpiper	Native	Not Listed	CR
Scolopacidae	<i>Calidris alba</i>	Sanderling	Native	Not Listed	EN
Scolopacidae	<i>Calidris alpina</i>	Dunlin	Native	Not Listed	NE
Scolopacidae	<i>Calidris minuta</i>	Little Stint	Native	Not Listed	DD
Scolopacidae	<i>Calidris melanotos</i>	Pectoral Sandpiper	Native	Not Listed	NE
Scolopacidae	<i>Limnodromus semipalmatus</i>	Asian Dowitcher	Native	Not Listed	VU
Scolopacidae	<i>Scopopax rusticola</i>	Eurasian Woodcock	Native	Not Listed	NE
Scolopacidae	<i>Gallinago stenura</i>	Pin-tailed Snipe	Native	Not Listed	VU
Scolopacidae	<i>Gallinago megala</i>	Swinhoe's Snipe	Native	Not Listed	VU
Scolopacidae	<i>Gallinago gallinago</i>	Common Snipe	Native	Not Listed	VU
Scolopacidae	<i>Xenus cinereus</i>	Terek Sandpiper	Native	Not Listed	EN
Scolopacidae	<i>Phalaropus lobatus</i>	Red-necked Phalarope	Native	Not Listed	DD
Scolopacidae	<i>Actitis hypoleucos</i>	Common Sandpiper	Native	Not Listed	VU
Scolopacidae	<i>Tringa ochropus</i>	Green Sandpiper	Native	Not Listed	LC
Scolopacidae	<i>Tringa brevipes</i>	Grey-tailed Tattler	Native	Not Listed	VU
Scolopacidae	<i>Tringa totanus</i>	Common Redshank	Native	Not Listed	VU
Scolopacidae	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Native	Not Listed	EN
Scolopacidae	<i>Tringa glareola</i>	Wood Sandpiper	Native	Not Listed	EN
Scolopacidae	<i>Tringa erythropus</i>	Spotted Redshank	Native	Not Listed	NE
Scolopacidae	<i>Tringa nebularia</i>	Common Greenshank	Native	Not Listed	VU
Scolopacidae	<i>Tringa guttifer</i>	Nordmann's Greenshank	Native	Not Listed	EN
Glareolidae	<i>Glareola maldivarum</i>	Oriental Pratincole	Native	Not Listed	EN
Glareolidae	<i>Glareola lactea</i>	Small Pratincole	Native	Not Listed	NE
Laridae	<i>Chroicocephalus brunnicephalus</i>	Brown-headed Gull	Native	Not Listed	NE
Laridae	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	Native	Not Listed	NT
Sternidae	<i>Gelochelidon nilotica</i>	Gull-billed Tern	Native	Not Listed	DD
Sternidae	<i>Hydroprogne caspia</i>	Caspian Tern	Native	Not Listed	NE
Sternidae	<i>Thalasseus bergii</i>	Greater Crested Tern	Native	Not Listed	EN
Sternidae	<i>Thalasseus bengalensis</i>	Lesser Crested Tern	Native	Not Listed	EN
Sternidae	<i>Sternula albifrons</i>	Little Tern	Native	EN	EN
Sternidae	<i>Onychoprion aleuticus</i>	Aleutian Tern	Native	Not Listed	VU
Sternidae	<i>Onychoprion anaethetus</i>	Bridled Tern	Native	Not Listed	EN
Sternidae	<i>Sterna dougallii</i>	Roseate Tern	Native	Not Listed	NE
Sternidae	<i>Sterna sumatrana</i>	Black-naped Tern	Native	EN	EN
Sternidae	<i>Sterna hirundo</i>	Common Tern	Native	Not Listed	LC
Sternidae	<i>Chlidonias hybrida</i>	Whiskered Tern	Native	Not Listed	LC
Sternidae	<i>Chlidonias leucopterus</i>	White-winged Tern	Native	Not Listed	EN
Stercorariidae	<i>Stercorarius parasiticus</i>	Parasitic Jaeger	Native	Not Listed	LC
Stercorariidae	<i>Stercorarius longicaudus</i>	Long-tailed Jaeger	Native	Not Listed	LC
Hydrobatidae	<i>Oceanodroma monorhis</i>	Swinhoe's Storm Petrel	Native	Not Listed	NT
Procellariidae	<i>Ardenna tenuirostris</i>	Short-tailed Shearwater	Native	Not Listed	NE

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Ciconiidae	<i>Anastomus oscitans</i>	Asian Openbill	Native	Not Listed	LC
Ciconiidae	<i>Leptoptilos javanicus</i>	Lesser Adjutant	Native	Not Listed	VU
Fregatidae	<i>Fregata ariel</i>	Lesser Frigatebird	Native	Not Listed	LC
Sulidae	<i>Sula sula</i>	Red-footed Booby	Native	Not Listed	LC
Sulidae	<i>Sula leucogaster</i>	Brown Booby	Native	Not Listed	LC
Anhingidae	<i>Anhinga melanogaster</i>	Oriental Darter	Native	Not Listed	NT
Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	Native	Not Listed	NE
Ardeidae	<i>Ixobrychus sinensis</i>	Yellow Bittern	Native	Not Listed	VU
Ardeidae	<i>Ixobrychus eurhythmus</i>	Von Schrenck's Bittern	Native	Not Listed	NT
Ardeidae	<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	Native	Not Listed	VU
Ardeidae	<i>Ixobrychus flavicollis</i>	Black Bittern	Native	Not Listed	LC
Ardeidae	<i>Gorsachius melanophorus</i>	Malayan Night Heron	Native	Not Listed	NT
Ardeidae	<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	Native	CR	EN
Ardeidae	<i>Butorides striata</i>	Striated Heron	Native	Not Listed	NT
Ardeidae	<i>Ardeola grayii</i>	Indian Pond Heron	Native	Not Listed	NE
Ardeidae	<i>Ardeola bacchus</i>	Chinese Pond Heron	Native	Not Listed	LC
Ardeidae	<i>Ardeola speciosa</i>	Javan Pond Heron	Native	Not Listed	LC
Ardeidae	<i>Bubulcus coromandus</i>	Eastern Cattle Egret	Native +	Not Listed	VU
			Introduced		
Ardeidae	<i>Ardea cinerea</i>	Grey Heron	Native	VU	LC
Ardeidae	<i>Ardea sumatrana</i>	Great-billed Heron	Native	CR	CR
Ardeidae	<i>Ardea purpurea</i>	Purple Heron	Native	EN	EN
Ardeidae	<i>Ardea alba</i>	Great Egret	Native	Not Listed	VU
Ardeidae	<i>Ardea intermedia</i>	Intermediate Egret	Native	Not Listed	LC
Ardeidae	<i>Egretta garzetta</i>	Little Egret	Native	Not Listed	LC
Ardeidae	<i>Egretta sacra</i>	Pacific Reef Heron	Native	Not Listed	EN
Ardeidae	<i>Egretta eulophotes</i>	Chinese Egret	Native	Not Listed	EN
Pandionidae	<i>Pandion haliaetus</i>	Western Osprey	Native	Not Listed	LC
Accipitridae	<i>Elanus caeruleus</i>	Black-winged Kite	Native	Not Listed	VU
Accipitridae	<i>Pernis ptilorhynchus</i>	Crested Honey Buzzard	Native	Not Listed	LC
Accipitridae	<i>Aviceda jerdoni</i>	Jerdon's Baza	Native	Not Listed	LC
Accipitridae	<i>Aviceda leuphotes</i>	Black Baza	Native	Not Listed	LC
Accipitridae	<i>Gyps himalayensis</i>	Himalayan Vulture	Native	Not Listed	NT
Accipitridae	<i>Spilornis cheela</i>	Crested Serpent Eagle	Native	CR	CR
Accipitridae	<i>Circaetus gallicus</i>	Short-toed Snake Eagle	Native	Not Listed	LC
Accipitridae	<i>Macheiramphus alcinus</i>	Bat Hawk	Native	Not Listed	LC
Accipitridae	<i>Nisaetus cirrhatus</i>	Changeable Hawk-Eagle	Native	EN	VU
Accipitridae	<i>Lophotriorchis kienerii</i>	Rufous-bellied Eagle	Native	Not Listed	LC
Accipitridae	<i>Clanga clanga</i>	Greater Spotted Eagle	Native	Not Listed	VU
Accipitridae	<i>Hieraetus pennatus</i>	Booted Eagle	Native	Not Listed	LC
Accipitridae	<i>Aquila nipalensis</i>	Steppe Eagle	Native	Not Listed	NE
Accipitridae	<i>Aquila heliaca</i>	Eastern Imperial Eagle	Native	Not Listed	NE
Accipitridae	<i>Accipiter trivirgatus</i>	Crested Goshawk	Native	CR	NT
Accipitridae	<i>Accipiter badius</i>	Shikra	Native	Not Listed	NE
Accipitridae	<i>Accipiter soloensis</i>	Chinese Sparrowhawk	Native	Not Listed	LC
Accipitridae	<i>Accipiter gularis</i>	Japanese Sparrowhawk	Native	Not Listed	LC
Accipitridae	<i>Accipiter virgatus</i>	Besra	Native	Not Listed	LC
Accipitridae	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	Native	Not Listed	NE
Accipitridae	<i>Circus spilonotus</i>	Eastern Marsh Harrier	Native	Not Listed	EN
Accipitridae	<i>Circus melanoleucus</i>	Pied Harrier	Native	Not Listed	LC
Accipitridae	<i>Milvus migrans</i>	Black Kite	Native	Not Listed	EN
Accipitridae	<i>Haliastur indus</i>	Brahminy Kite	Native	Not Listed	LC

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Accipitridae	<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	Native	Not Listed	LC
Accipitridae	<i>Haliaeetus ichthyaetus</i>	Grey-headed Fish Eagle	Native	CR	VU
Accipitridae	<i>Butastur indicus</i>	Grey-faced Buzzard	Native	Not Listed	NT
Accipitridae	<i>Buteo buteo</i>	Common Buzzard	Native	Not Listed	LC
Tytonidae	<i>Tyto javanica</i>	Eastern Barn Owl	Native	Not Listed	LC
Strigidae	<i>Otus lempiji</i>	Sunda Scops Owl	Native	Not Listed	LC
Strigidae	<i>Otus sunia</i>	Oriental Scops Owl	Native	Not Listed	NT
Strigidae	<i>Bubo sumatranus</i>	Barred Eagle Owl	Native	Not Listed	CR
Strigidae	<i>Ketupa ketupu</i>	Buffy Fish Owl	Native	CR	VU
Strigidae	<i>Strix seloputo</i>	Spotted Wood Owl	Native	CR	VU
Strigidae	<i>Strix leptogrammica</i>	Brown Wood Owl	Native	Not Listed	CR
Strigidae	<i>Ninox scutulata</i>	Brown Hawk-Owl	Native	Not Listed	LC
Strigidae	<i>Ninox japonica</i>	Northern Boobook	Native	Not Listed	DD
Strigidae	<i>Asio flammeus</i>	Short-eared Owl	Native	Not Listed	LC
Bucerotidae	<i>Anthracoceros albirostris</i>	Oriental Pied Hornbill	Native	CR	NT
Bucerotidae	<i>Anthracoceros malayanus</i>	Black Hornbill	Native	Not Listed	NT
Coraciidae	<i>Eurystomus orientalis</i>	Oriental Dollarbird	Native	Not Listed	LC
Alcedinidae	<i>Pelargopsis capensis</i>	Stork-billed Kingfisher	Native	Not Listed	LC
Alcedinidae	<i>Halcyon coromanda</i>	Ruddy Kingfisher	Native	CR	CR
Alcedinidae	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	Native	Not Listed	LC
Alcedinidae	<i>Halcyon pileata</i>	Black-capped Kingfisher	Native	Not Listed	VU
Alcedinidae	<i>Todiramphus chloris</i>	Collared Kingfisher	Native	Not Listed	LC
Alcedinidae	<i>Alcedo meninting</i>	Blue-eared Kingfisher	Native	CR	EN
Alcedinidae	<i>Alcedo atthis</i>	Common Kingfisher	Native	Not Listed	VU
Alcedinidae	<i>Ceyx erithaca</i>	Oriental Dwarf Kingfisher	Native	Not Listed	NT
Alcedinidae	<i>Ceryle rudis</i>	Pied Kingfisher	Native	Not Listed	NE
Meropidae	<i>Merops philippinus</i>	Blue-tailed Bee-eater	Native	Not Listed	LC
Meropidae	<i>Merops viridis</i>	Blue-throated Bee-eater	Native	Not Listed	LC
Megalaimidae	<i>Psilopogon lineatus</i>	Lineated Barbet	Introduced	Not Listed	NA
Megalaimidae	<i>Psilopogon rafflesii</i>	Red-crowned Barbet	Native	Not Listed	VU
Megalaimidae	<i>Psilopogon haemacephalus</i>	Coppersmith Barbet	Native	Not Listed	LC
Picidae	<i>Yungipicus moluccensis</i>	Sunda Pygmy Woodpecker	Native	Not Listed	LC
Picidae	<i>Dryocopus javensis</i>	White-bellied Woodpecker	Native	CR	CR
Picidae	<i>Chrysophlegma miniaceum</i>	Banded Woodpecker	Native	Not Listed	LC
Picidae	<i>Picus puniceus</i>	Crimson-winged Woodpecker	Native	Not Listed	LC
Picidae	<i>Picus vittatus</i>	Laced Woodpecker	Native	Not Listed	LC
Picidae	<i>Dinopium javanense</i>	Common Flameback	Native	Not Listed	LC
Picidae	<i>Micropternus brachyurus</i>	Rufous Woodpecker	Native	Not Listed	LC
Picidae	<i>Meiglyptes tristis</i>	Buff-rumped Woodpecker	Native	Not Listed	LC
Picidae	<i>Mulleripicus pulverulentus</i>	Great Slaty Woodpecker	Native	Not Listed	VU
Falconidae	<i>Microhierax fringillarius</i>	Black-thighed Falconet	Native	CR	LC
Falconidae	<i>Falco naumanni</i>	Lesser Kestrel	Native	Not Listed	NE
Falconidae	<i>Falco tinnunculus</i>	Common Kestrel	Native	Not Listed	LC
Falconidae	<i>Falco amurensis</i>	Amur Falcon	Native	Not Listed	NE
Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon	Native	Not Listed	LC
Falconidae	<i>Falco subbuteo</i>	Eurasian Hobby	Native	Not Listed	NE
Cacatuidae	<i>Cacatua goffiniana</i>	Tanimbar Corella	Introduced	Not Listed	NA
Cacatuidae	<i>Cacatua sulphurea</i>	Yellow-crested Cockatoo	Introduced	Not Listed	NA
Psittaculidae	<i>Psittinus cyanurus</i>	Blue-rumped Parrot	Native	CR	EN
Psittaculidae	<i>Psittacula alexandri</i>	Red-breasted Parakeet	Introduced	Not Listed	NA
Psittaculidae	<i>Psittacula longicauda</i>	Long-tailed Parakeet	Native	Not Listed	NT
Psittaculidae	<i>Psittacula krameri</i>	Rose-ringed Parakeet	Introduced	Not Listed	NA

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Psittaculidae	<i>Trichoglossus haematodus</i>	Coconut Lorikeet	Introduced	Not Listed	NA
Psittaculidae	<i>Loriculus galgulus</i>	Blue-crowned Hanging Parrot	Native	EN	LC
Eurylaimidae	<i>Cymbirhynchus macrorhynchos</i>	Black-and-red Broadbill	Native	Not Listed	CR
Calyptomenidae	<i>Calyptomena viridis</i>	Green Broadbill	Native	Not Listed	NT
Pittidae	<i>Pitta sordida</i>	Hooded Pitta	Native	Not Listed	LC
Pittidae	<i>Pitta nympha</i>	Fairy Pitta	Native	Not Listed	DD
Pittidae	<i>Pitta moluccensis</i>	Blue-winged Pitta	Native	Not Listed	LC
Pittidae	<i>Pitta megarhyncha</i>	Mangrove Pitta	Native	CR	CR
Acanthizidae	<i>Gerygone sulphurea</i>	Golden-bellied Gerygone	Native	Not Listed	NT
Vangidae	<i>Hemipus hirundinaceus</i>	Black-winged Flycatcher-shrike	Native	Not Listed	DD
Vangidae	<i>Tephrodornis virgatus</i>	Large Woodshrike	Native	Not Listed	DD
Aegithinidae	<i>Aegithina tiphia</i>	Common Iora	Native	Not Listed	LC
Campephagidae	<i>Pericrocotus speciosus</i>	Scarlet Minivet	Native	CR	CR
Campephagidae	<i>Pericrocotus divaricatus</i>	Ashy Minivet	Native	Not Listed	LC
Campephagidae	<i>Lalage nigra</i>	Pied Triller	Native	Not Listed	LC
Campephagidae	<i>Lalage fimbriata</i>	Lesser Cuckooshrike	Native	CR	CR
Pachycephalidae	<i>Pachycephala cinerea</i>	Mangrove Whistler	Native	NT	EN
Laniidae	<i>Lanius tigrinus</i>	Tiger Shrike	Native	Not Listed	NT
Laniidae	<i>Lanius cristatus</i>	Brown Shrike	Native	Not Listed	VU
Laniidae	<i>Lanius schach</i>	Long-tailed Shrike	Native	Not Listed	LC
Vireonidae	<i>Erpornis zantholeuca</i>	White-bellied Erpornis	Native	Not Listed	LC
Oriolidae	<i>Oriolus chinensis</i>	Black-naped Oriole	Native	Not Listed	LC
Dicruridae	<i>Dicrurus macrocercus</i>	Black Drongo	Native	Not Listed	VU
Dicruridae	<i>Dicrurus leucophaeus</i>	Ashy Drongo	Native	Not Listed	LC
Dicruridae	<i>Dicrurus annectens</i>	Crow-billed Drongo	Native	Not Listed	NT
Dicruridae	<i>Dicrurus hottentottus</i>	Hair-crested Drongo	Native	Not Listed	NE
Dicruridae	<i>Dicrurus paradiseus</i>	Greater Racket-tailed Drongo	Native	Not Listed	LC
Rhipiduridae	<i>Rhipidura javanica</i>	Malaysian Pied Fantail	Native	Not Listed	LC
Monarchidae	<i>Hypothymis azurea</i>	Black-naped Monarch	Native	CR	CR
Monarchidae	<i>Terpsiphone paradisi</i>	Indian Paradise Flycatcher	Native	Not Listed	NE
Monarchidae	<i>Terpsiphone affinis</i>	Blyth's Paradise Flycatcher	Native	Not Listed	LC
Monarchidae	<i>Terpsiphone inciei</i>	Amur Paradise Flycatcher	Native	Not Listed	LC
Monarchidae	<i>Terpsiphone atrocauda</i>	Japanese Paradise Flycatcher	Native	Not Listed	NT
Corvidae	<i>Corvus splendens</i>	House Crow	Introduced	Not Listed	NA
Corvidae	<i>Corvus macrorhynchos</i>	Large-billed Crow	Native	Not Listed	VU
Paridae	<i>Parus minor</i>	Japanese Tit	Native	Not Listed	NE
Alaudidae	<i>Alauda arvensis</i>	Eurasian Skylark	Native	Not Listed	NE
Pycnonotidae	<i>Pycnonotus zeylanicus</i>	Straw-headed Bulbul	Native	EN	EN
Pycnonotidae	<i>Pycnonotus melanoleucus</i>	Black-and-white Bulbul	Native	Not Listed	NT
Pycnonotidae	<i>Pycnonotus atriceps</i>	Black-headed Bulbul	Native	CR	CR
Pycnonotidae	<i>Pycnonotus flaviventris</i>	Black-crested Bulbul	Introduced	Not Listed	NA
Pycnonotidae	<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	Introduced	Not Listed	NA
Pycnonotidae	<i>Pycnonotus aurigaster</i>	Sooty-headed Bulbul	Introduced	Not Listed	NA
Pycnonotidae	<i>Pycnonotus goiavier</i>	Yellow-vented Bulbul	Native	Not Listed	LC
Pycnonotidae	<i>Pycnonotus plumosus</i>	Olive-winged Bulbul	Native	Not Listed	LC
Pycnonotidae	<i>Pycnonotus simplex</i>	Cream-vented Bulbul	Native	NT	VU
Pycnonotidae	<i>Pycnonotus brunneus</i>	Asian Red-eyed Bulbul	Native	EN	VU
Pycnonotidae	<i>Iole crypta</i>	Buff-vented Bulbul	Native	CR	CR
Pycnonotidae	<i>Ixos malaccensis</i>	Streaked Bulbul	Native	Not Listed	NT
Pycnonotidae	<i>Hemixos cinereus</i>	Cinereous Bulbul	Native	Not Listed	LC
Hirundinidae	<i>Riparia riparia</i>	Sand Martin	Native	Not Listed	LC
Hirundinidae	<i>Hirundo rustica</i>	Barn Swallow	Native	Not Listed	NT

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Hirundinidae	<i>Hirundo tahitica</i>	Pacific Swallow	Native	Not Listed	LC
Hirundinidae	<i>Delichon dasypus</i>	Asian House Martin	Native	Not Listed	LC
Hirundinidae	<i>Delichon urbica (lagopodum)</i>	Common House Martin	Native	Not Listed	NE
Hirundinidae	<i>Cecropis daurica</i>	Red-rumped Swallow	Native	Not Listed	LC
Phylloscopidae	<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	Native	Not Listed	LC
Phylloscopidae	<i>Phylloscopus fuscatus</i>	Dusky Warbler	Native	Not Listed	NE
Phylloscopidae	<i>Phylloscopus coronatus</i>	Eastern Crowned Warbler	Native	Not Listed	LC
Phylloscopidae	<i>Phylloscopus borealoides</i>	Sakhalin Leaf Warbler	Native	Not Listed	NT
Phylloscopidae	<i>Phylloscopus borealis</i>	Arctic Warbler	Native	Not Listed	LC
Acrocephalidae	<i>Acrocephalus orientalis</i>	Oriental Reed Warbler	Native	Not Listed	VU
Acrocephalidae	<i>Acrocephalus bistrigiceps</i>	Black-browed Reed Warbler	Native	Not Listed	NT
Acrocephalidae	<i>Iduna caligata</i>	Booted Warbler	Native	Not Listed	NE
Locustellidae	<i>Helopsaltes certhiola</i>	Pallas' Grasshopper Warbler	Native	Not Listed	LC
Locustellidae	<i>Locustella lanceolata</i>	Lanceolated Warbler	Native	Not Listed	NT
Cisticolidae	<i>Cisticola juncidis</i>	Zitting Cisticola	Native	Not Listed	VU
Cisticolidae	<i>Prinia flaviventris</i>	Yellow-bellied Prinia	Native	Not Listed	NT
Cisticolidae	<i>Orthotomus sutorius</i>	Common Tailorbird	Native	Not Listed	LC
Cisticolidae	<i>Orthotomus atrogularis</i>	Dark-necked Tailorbird	Native	Not Listed	LC
Cisticolidae	<i>Orthotomus sericeus</i>	Rufous-tailed Tailorbird	Native	Not Listed	NT
Cisticolidae	<i>Orthotomus ruficeps</i>	Ashy Tailorbird	Native	Not Listed	LC
Timaliidae	<i>Mixornis gularis</i>	Pin-striped Tit-Babbler	Native	Not Listed	LC
Timaliidae	<i>Cyanoderma erythroptera</i>	Chestnut-winged Babbler	Native	EN	CR
Pellorneidae	<i>Malacocincla abbotti</i>	Abbott's Babbler	Native	Not Listed	LC
Pellorneidae	<i>Malacocteron magnirostre</i>	Moustached Babbler	Native	CR	CR
Pellorneidae	<i>Pellorneum malaccensis</i>	Short-tailed Babbler	Native	Not Listed	VU
Pellorneidae	<i>Pellorneum rostratum</i>	White-chested Babbler	Native	CR	CR
Leiotrichidae	<i>Garrulax leucolophus</i>	White-crested Laughingthrush	Introduced	Not Listed	NA
Leiotrichidae	<i>Garrulax canorus</i>	Chinese Hwamei	Introduced	Not Listed	NA
Zosteropidae	<i>Zosterops simplex</i>	Swinhoe's White-eye	Native +	Not Listed	VU
Zosteropidae			Introduced		
Irenidae	<i>Irena puella</i>	Asian Fairy-bluebird	Native	NT	NT
Sittidae	<i>Sitta frontalis</i>	Velvet-fronted Nuthatch	Native	Not Listed	LC
Sturnidae	<i>Aplonis panayensis</i>	Asian Glossy Starling	Native	Not Listed	LC
Sturnidae	<i>Gracula religiosa</i>	Common Hill Myna	Native	NT	NT
Sturnidae	<i>Acridotheres cristatellus</i>	Crested Myna	Introduced	Not Listed	NA
Sturnidae	<i>Acridotheres javanicus</i>	Javan Myna	Introduced	Not Listed	NA
Sturnidae	<i>Acridotheres tristis</i>	Common Myna	Native	Not Listed	LC
Sturnidae	<i>Acridotheres melanopterus</i>	Black-winged Starling	Introduced	Not Listed	NA
Sturnidae	<i>Spodiopsar sericeus</i>	Red-billed Starling	Native	Not Listed	NE
Sturnidae	<i>Spodiopsar cineraceus</i>	White-cheeked Starling	Native	Not Listed	NE
Sturnidae	<i>Agropsar sturninus</i>	Daurian Starling	Native	Not Listed	LC
Sturnidae	<i>Agropsar philippensis</i>	Chestnut-cheeked Starling	Native	Not Listed	DD
Sturnidae	<i>Sturnia sinensis</i>	White-shouldered Starling	Native	Not Listed	LC
Sturnidae	<i>Sturnia pagodarum</i>	Brahminy Starling	Native/	Not Listed	NE
Sturnidae			Introduced?		
Sturnidae	<i>Pastor roseus</i>	Rosy Starling	Native	Not Listed	NE
Turdidae	<i>Geokichla citrina</i>	Orange-headed Thrush	Native	Not Listed	NT
Turdidae	<i>Geokichla sibirica</i>	Siberian Thrush	Native	Not Listed	NT
Turdidae	<i>Turdus mandarinus</i>	Chinese Blackbird	Native	Not Listed	NE
Turdidae	<i>Turdus obscurus</i>	Eyebrowed Thrush	Native	Not Listed	NT
Muscicapidae	<i>Copsychus saularis</i>	Oriental Magpie-Robin	Native	EN	VU

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Muscicapidae	<i>Copsychus malabaricus</i>	White-rumped Shama	Native + Introduced	CR	EN
Muscicapidae	<i>Muscicapa griseisticta</i>	Grey-streaked Flycatcher	Native	Not Listed	NE
Muscicapidae	<i>Muscicapa sibirica</i>	Dark-sided Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	Native	Not Listed	LC
Muscicapidae	<i>Muscicapa williamsoni</i>	Brown-streaked Flycatcher	Native	Not Listed	LC
Muscicapidae	<i>Muscicapa ferruginea</i>	Ferruginous Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Cyornis glaucicomans</i>	Chinese Blue Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Cyornis rufigastra</i>	Mangrove Blue Flycatcher	Native	CR	CR
Muscicapidae	<i>Cyornis brunneatus</i>	Brown-chested Jungle Flycatcher	Native	Not Listed	VU
Muscicapidae	<i>Cyanoptila cyanomelana</i>	Blue-and-white Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Cyanoptila cumatilis</i>	Zappey's Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Eumyias thalassinus</i>	Verditer Flycatcher	Native	Not Listed	NE
Muscicapidae	<i>Larvivora cyane</i>	Siberian Blue Robin	Native	Not Listed	NT
Muscicapidae	<i>Ficedula zanthopygia</i>	Yellow-rumped Flycatcher	Native	Not Listed	LC
Muscicapidae	<i>Ficedula narcissina</i>	Narcissus Flycatcher	Native	Not Listed	DD
Muscicapidae	<i>Ficedula elisae</i>	Green-backed Flycatcher	Native	Not Listed	NT
Muscicapidae	<i>Ficedula mugimaki</i>	Mugimaki Flycatcher	Native	Not Listed	LC
Muscicapidae	<i>Ficedula albicilla</i>	Taiga Flycatcher	Native	Not Listed	NE
Muscicapidae	<i>Phoenicurus auroreus</i>	Daurian Redstart	Native	Not Listed	NE
Muscicapidae	<i>Monticola solitarius</i>	Blue Rock Thrush	Native	Not Listed	LC
Muscicapidae	<i>Monticola gularis</i>	White-throated Rock Thrush	Native	Not Listed	NT
Muscicapidae	<i>Saxicola stejnegeri</i>	Stejneger's Stonechat	Native	Not Listed	NT
Chloropseidae	<i>Chloropsis sonneratii</i>	Greater Green Leafbird	Native	CR	CR
Chloropseidae	<i>Chloropsis cyanopogon</i>	Lesser Green Leafbird	Native	CR	CR
Chloropseidae	<i>Chloropsis cochinchinensis</i>	Blue-winged Leafbird	Native	NT	NT
Dicaeidae	<i>Prionochilus thoracicus</i>	Scarlet-breasted Flowerpecker	Native	Not Listed	NT
Dicaeidae	<i>Dicaeum agile</i>	Thick-billed Flowerpecker	Native	Not Listed	DD
Dicaeidae	<i>Dicaeum chrysorrheum</i>	Yellow-vented Flowerpecker	Native	CR	CR
Dicaeidae	<i>Dicaeum trigonostigma</i>	Orange-bellied Flowerpecker	Native	Not Listed	NT
Dicaeidae	<i>Dicaeum cruentatum</i>	Scarlet-backed Flowerpecker	Native	Not Listed	LC
Nectariniidae	<i>Chalcoparia singalensis</i>	Ruby-cheeked Sunbird	Native	Not Listed	DD
Nectariniidae	<i>Anthreptes simplex</i>	Plain Sunbird	Native	CR	CR
Nectariniidae	<i>Anthreptes malaccensis</i>	Brown-throated Sunbird	Native	Not Listed	LC
Nectariniidae	<i>Leptocoma brasiliiana</i>	Van Hasselt's Sunbird	Native	Not Listed	LC
Nectariniidae	<i>Leptocoma calcostetha</i>	Copper-throated Sunbird	Native	NT	VU
Nectariniidae	<i>Cinnyris jugularis</i>	Olive-backed Sunbird	Native	Not Listed	LC
Nectariniidae	<i>Aethopyga siparaja</i>	Crimson Sunbird	Native	Not Listed	LC
Nectariniidae	<i>Arachnothera longirostra</i>	Little Spiderhunter	Native	Not Listed	NT
Nectariniidae	<i>Arachnothera crassirostris</i>	Thick-billed Spiderhunter	Native	CR	CR
Nectariniidae	<i>Arachnothera chrysogenys</i>	Yellow-eared Spiderhunter	Native	CR	CR
Passeridae	<i>Passer domesticus</i>	House Sparrow	Introduced	Not Listed	NA
Passeridae	<i>Passer montanus</i>	Eurasian Tree Sparrow	Native?	Not Listed	LC
Ploceidae	<i>Ploceus manyar</i>	Streaked Weaver	Introduced	Not Listed	NA
Ploceidae	<i>Ploceus philippinus</i>	Baya Weaver	Native	Not Listed	VU
Estrildidae	<i>Amandava amandava</i>	Red Avadavat	Introduced	Not Listed	NA
Estrildidae	<i>Lonchura striata</i>	White-rumped Munia	Native	CR	CR
Estrildidae	<i>Lonchura leucogastroides</i>	Javan Munia	Introduced	Not Listed	NA
Estrildidae	<i>Lonchura punctulata</i>	Scaly-breasted Munia	Native	Not Listed	LC
Estrildidae	<i>Lonchura atricapilla</i>	Chestnut Munia	Native	Not Listed	VU
Estrildidae	<i>Lonchura maja</i>	White-headed Munia	Native	Not Listed	LC
Motacillidae	<i>Dendronanthus indicus</i>	Forest Wagtail	Native	Not Listed	LC

Family	Taxon Name	Common Name	Origin	RDB2	RDB3
Motacillidae	<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	Native	Not Listed	VU
Motacillidae	<i>Motacilla citreola</i>	Citrine Wagtail	Native	Not Listed	NE
Motacillidae	<i>Motacilla cinerea</i>	Grey Wagtail	Native	Not Listed	LC
Motacillidae	<i>Motacilla alba</i>	White Wagtail	Native	Not Listed	LC
Motacillidae	<i>Anthus rufulus</i>	Paddyfield Pipit	Native	Not Listed	LC
Motacillidae	<i>Anthus hodgsoni</i>	Olive-backed Pipit	Native	Not Listed	NE
Motacillidae	<i>Anthus cervinus</i>	Red-throated Pipit	Native	Not Listed	LC

Checklist of Marine Mammal Species with their Category of Threat Status for Singapore

Prepared by Sirius Z.H. Ng, Zeehan Jaafar

Family	Genus	Species	Authority	Common Name	RDB2	RDB3
Delphinidae	<i>Orcaella</i>	<i>brevirostris</i>	(Owen in Gray, 1866)	Irrawaddy Dolphin	Not Listed	CR
Delphinidae	<i>Pseudorca</i>	<i>crassidens</i>	(Owen, 1846)	False Killer Whale	Not Listed	NE
Delphinidae	<i>Sousa</i>	<i>chinensis</i>	(Osbeck, 1765)	Indo-Pacific Humpback Dolphin	EN	CR
Delphinidae	<i>Tursiops</i>	<i>aduncus</i>	(Ehrenberg, 1833)	Indo-Pacific Bottlenose Dolphin	Not Listed	CR
Phocoenidae	<i>Neophocaena</i>	<i>phocaenoides</i>	(Cuvier, 1829)	Finless Porpoise	CR	CR
Physeteridae	<i>Physeter</i>	<i>macrocephalus</i>	Linnaeus, 1758	Sperm Whale	Not Listed	NE
Dugongidae	<i>Dugong</i>	<i>dugon</i>	(Müller, 1776)	Dugong	CR	CR

Checklist of Terrestrial Mammal Species with their Category of Threat Status for Singapore

Prepared by Norman T-L. Lim, Benjamin P.Y.-H. Lee, Robert C.H. Teo, Marcus A.H. Chua,
Suay Hwee Yeo, Max D.Y. Khoo, Tze Kwan Fung

Family	Genus	Species	Authority	Common Name	Origin	RDB2	RDB3
Cynocephalidae	<i>Galeopterus</i>	<i>variegatus</i>	(Audebert, 1799)	Sunda Colugo	Native	Not Listed	NT
Manidae	<i>Manis</i>	<i>javanica</i>	Desmarest, 1822	Sunda Pangolin	Native	CR	CR
Sciuridae	<i>Callosciurus</i>	<i>notatus</i>	(Boddart, 1785)	Plantain Squirrel	Native	Not Listed	LC
Sciuridae	<i>Callosciurus</i>	<i>finlaysonii</i>	(Horsfield, 1823)	Variable Squirrel	Introduced	Not Listed	NA
Sciuridae	<i>Hylopetes</i>	<i>spadiceus</i>	(Blyth, 1847)	Red-cheeked Flying Squirrel	Native	CR	CR
Sciuridae	<i>Iomys</i>	<i>horsfieldii</i>	(Waterhouse, 1838)	Horsfield's Flying Squirrel	Native	Not Listed	EN
Sciuridae	<i>Lariscus</i>	<i>insignis</i>	(F. Cuvier, 1821)	Three-striped Ground Squirrel	Native	Not Listed	NEx
Sciuridae	<i>Petaurista</i>	<i>petaurista</i>	(Pallas, 1766)	Red Giant Flying Squirrel	Native	CR	CR
Sciuridae	<i>Ratufa</i>	<i>affinis</i>	(Raffles, 1821)	Cream-coloured Giant Squirrel	Native	CR	NEx
Sciuridae	<i>Rhinosciurus</i>	<i>laticaudatus</i>	(Müller, 1840)	Shrew-faced Ground Squirrel	Native	CR	CR
Sciuridae	<i>Sundasciurus</i>	<i>tenuis</i>	(Horsfield, 1824)	Slender Squirrel	Native	Not Listed	LC
Muridae	<i>Maxomys</i>	<i>rajah</i>	(Thomas, 1894)	Brown Spiny Rat	Native	EN	CR
Muridae	<i>Maxomys</i>	<i>surifer</i>	(Miller, 1900)	Red Spiny Rat	Native	Not Listed	NEx
Muridae	<i>Mus</i>	<i>musculus</i>	Linnaeus, 1758	Asian House Mouse	Native	Not Listed	LC
Muridae	<i>Rattus</i>	<i>exulans</i>	(Peale, 1848)	Pacific Rat	Native	Not Listed	LC
Muridae	<i>Rattus</i>	<i>norvegicus</i>	(Berkenhout, 1769)	Brown Rat	Introduced	Not Listed	NA
Muridae	<i>Rattus</i>	<i>tanezumi</i>	(Temminck, 1845)	Asian House Rat	Native	Not Listed	LC
Muridae	<i>Rattus</i>	<i>tiomanicus</i>	(Miller, 1900)	Malaysian Wood Rat	Native	Not Listed	LC
Muridae	<i>Sundamys</i>	<i>annandalei</i>	(Bonhote, 1903)	Annandale's Rat	Native	Not Listed	LC
Hystricidae	<i>Hystrix</i>	<i>brachyura</i>	Linnaeus, 1758	Malayan Porcupine	Native	CR	CR
Felidae	<i>Panthera</i>	<i>pardus</i>	(Linnaeus, 1758)	Leopard	Native	Not Listed	NEx
Felidae	<i>Panthera</i>	<i>tigris</i>	(Linnaeus, 1758)	Tiger	Native	Not Listed	NEx
Felidae	<i>Prionailurus</i>	<i>bengalensis</i>	(Kerr, 1792)	Mainland Leopard Cat	Native	CR	CR
Viverridae	<i>Arctogalidia</i>	<i>trivirgata</i>	(Gray, 1832)	Small-toothed Palm Civet	Native	CR	CR
Viverridae	<i>Paguma</i>	<i>larvata</i>	(C.E.H. Smith, 1827)	Masked Palm Civet	Native	CR	CR
Viverridae	<i>Paradoxurus</i>	<i>musangus</i>	(Raffles, 1821)	Sumatran Palm Civet	Native	Not Listed	LC
Viverridae	<i>Viverra</i>	<i>tangalunga</i>	Gray, 1832	Malay Civet	Native	Not Listed	CR
Viverridae	<i>Viverra</i>	<i>zibetha</i>	Linnaeus, 1758	Large Indian Civet	Native	CR	CR
Mustelidae	<i>Aonyx</i>	<i>cinereus</i>	(Illiger, 1815)	Asian Small-clawed Otter	Native	CR	CR
Mustelidae	<i>Lutra</i>	<i>sumatrana</i>	(Gray, 1865)	Hairy-nosed Otter	Native	Not Listed	NEx
Mustelidae	<i>Lutrogale</i>	<i>perspicillata</i>	(Geoffroy Saint Hilaire, 1826)	Smooth Otter	Native	CR	EN
Suidae	<i>Sus</i>	<i>scrofa</i>	Linnaeus, 1758	Eurasian Wild Boar	Native	Not Listed	LC
Tragulidae	<i>Tragulus</i>	<i>kanchil</i>	(Raffles, 1821)	Lesser Mouse-deer	Native	CR	EN
Tragulidae	<i>Tragulus</i>	<i>napu</i>	(F. Cuvier, 1822)	Greater Mouse-deer	Native	Not Listed	CR

Family	Genus	Species	Authority	Common Name	Origin	RDB2	RDB3
Cervidae	<i>Muntiacus</i>	<i>muntjak</i>	(Zimmermann, 1780)	Red Muntjac	Native	Not Listed	CR
Cervidae	<i>Rusa</i>	<i>unicolor</i>	(Kerr, 1792)	Sambar Deer	Origin Uncertain	Not Listed	NA
Lorisidae	<i>Nycticebus</i>	<i>coucang</i>	(Boddaert, 1785)	Sunda Slow Loris	Native	CR	EN
Cercopithecidae	<i>Macaca</i>	<i>fascicularis</i>	(Raffles, 1821)	Long-tailed Macaque	Native	Not Listed	LC
Cercopithecidae	<i>Presbytis</i>	<i>femoralis</i>	(Martin, 1838)	Raffles's Banded Langur	Native	CR	CR
Cercopithecidae	<i>Trachypithecus</i>	<i>obscurus</i>	(Reid, 1837)	Dusky Langur	Origin Uncertain	Not Listed	NA
Tupaiidae	<i>Tupaia</i>	<i>glis</i>	(Diard, 1820)	Common Treeshrew	Native	Not Listed	LC
Soricidae	<i>Crocidura</i>	<i>malayana</i>	Robinson & Kloss, 1911	Malayan Shrew	Native	Not Listed	DD
Soricidae	<i>Suncus</i>	<i>murinus</i>	(Linnaeus, 1766)	House Shrew	Native	Not Listed	LC
Pteropodidae	<i>Cynopterus</i>	<i>brachyotis</i>	(Müller, 1838)	Lesser Short-nosed Fruit Bat	Native	Not Listed	LC
Pteropodidae	<i>Eonycteris</i>	<i>spelaea</i>	(Dobson, 1871)	Cave Nectar Bat	Native	Not Listed	VU
Pteropodidae	<i>Macroglossus</i>	<i>minimus</i>	(É. Geoffroy, 1810)	Lesser Long-tongued Nectar Bat	Native	VU	VU
Pteropodidae	<i>Penthetor</i>	<i>lucasii</i>	(Dobson, 1880)	Dusky Fruit Bat	Native	EN	CR
Pteropodidae	<i>Pteropus</i>	<i>vampyrus</i>	(Linnaeus, 1758)	Large Flying Fox	Native	Not Listed	CR
Rhinolophidae	<i>Rhinolophus</i>	<i>refulgens</i>	K. Andersen, 1905	Glossy Horseshoe Bat	Native	Not Listed	LC
Rhinolophidae	<i>Rhinolophus</i>	<i>morio</i>	Gray, 1842	Greater Woolly Horseshoe Bat	Native	CR	CR
Rhinolophidae	<i>Rhinolophus</i>	<i>stheno</i>	K. Andersen, 1905	Lesser Brown Horseshoe Bat	Native	Not Listed	CR
Rhinolophidae	<i>Rhinolophus</i>	<i>trifoliatus</i>	Temminck, 1834	Trefoil Horseshoe Bat	Native	CR	EN
Hipposideridae	<i>Hipposideros</i>	<i>bicolor</i>	Temminck, 1834	Bicoloured Roundleaf Bat	Native	Not Listed	EN
Hipposideridae	<i>Hipposideros</i>	<i>cervinus</i>	(Gould, 1854)	Fawn Roundleaf	Native	Not Listed	CR
Hipposideridae	<i>Hipposideros</i>	<i>cineraceus</i>	Blyth, 1853	Ashy Roundleaf Bat	Native	Not Listed	CR
Hipposideridae	<i>Hipposideros</i>	<i>ridleyi</i>	Robinson & Kloss, 1911	Ridley's Roundleaf Bat	Native	Not Listed	CR
Megadermatidae	<i>Megaderma</i>	<i>spasma</i>	(Linnaeus, 1758)	Lesser Asian False-Vampire Bat	Native	CR	EN
Emballonuridae	<i>Emballonura</i>	<i>monticola</i>	Temminck, 1838	Lesser Sheath-tailed Bat	Native	CR	CR
Emballonuridae	<i>Saccopteryx</i>	<i>saccopteryx</i>	(Temminck, 1838)	Pouched Tomb Bat	Native	Not Listed	LC
Emballonuridae	<i>Taphozous</i>	<i>longimanus</i>	Hardwicke, 1825	Long-winged Tomb Bat	Native	Not Listed	CR
Emballonuridae	<i>Taphozous</i>	<i>melanopogon</i>	Temminck, 1841	Black-bearded Tomb Bat	Native	EN	LC
Nycteridae	<i>Nycteris</i>	<i>tragata</i>	(K. Andersen, 1912)	Malayan Slit-faced Bat	Native	CR	CR
Molossidae	<i>Chaerephon</i>	<i>plicata</i>	(Buchannan, 1800)	Asian Wrinkle-lipped Bat	Native	Not Listed	NEx
Molossidae	<i>Cheiromeles</i>	<i>torquatus</i>	Horsfield, 1824	Naked Bat	Native	CR	CR
Vespertilionidae	<i>Hypsugo</i>	<i>macrotis</i>	(Temminck, 1840)	Big-eared Pipistrelle	Native	Not Listed	CR
Vespertilionidae	<i>Kerivoula</i>	<i>hardwickii</i>	(Horsfield, 1824)	Hardwicke's Woolly Bat	Native	Not Listed	CR

Family	Genus	Species	Authority	Common Name	Origin	RDB2	RDB3
Vespertilionidae	<i>Murina</i>	<i>suilla</i>	(Temminck, 1840)	Lesser Tube-nosed Bat	Native	CR	CR
Vespertilionidae	<i>Myotis</i>	<i>horsfieldii</i>	(Temminck, 1840)	Horsfield's Myotis	Native	Not Listed	LC
Vespertilionidae	<i>Myotis</i>	<i>muricola</i>	(Gray, 1846)	Asian Whiskered Myotis	Native	Not Listed	LC
Vespertilionidae	<i>Pipistrellus</i>	<i>javanicus</i>	(Gray, 1838)	Javan Pipistrelle	Native	Not Listed	LC
Vespertilionidae	<i>Pipistrellus</i>	<i>stenopterus</i>	(Dobson, 1875)	Narrow-winged Pipistrelle	Native	CR	LC
Vespertilionidae	<i>Scotophilus</i>	<i>kuhlii</i>	Leach, 1821	Lesser Asian House Bat	Native	Not Listed	LC
Vespertilionidae	<i>Tylonycteris</i>	<i>fulvida</i>	(Blyth, 1859) / (Peters, 1872)	Lesser Bamboo Bat	Native	CR	VU
Vespertilionidae	<i>Tylonycteris</i>	<i>malayana</i>	Chasen, 1940	Greater Bamboo Bat	Native	Not Listed	VU
Tapiridae	<i>Tapirus</i>	<i>indicus</i>	Desmarest, 1819	Malayan Tapir	Vagrant	Not Listed	NA
Elephantidae	<i>Elephas</i>	<i>maximus</i>	Linnaeus, 1758	Asian Elephant	Vagrant	Not Listed	NA

