UNESCO environmental DNA (eDNA) Expeditions in marine World Heritage sites

Biodiversity survey for Lagoons of New Caledonia: Reef Diversity and Associated Ecosystems

Interim Results Based on 50% of Samples Analyzed Not for public distribution

placeholder

Credit: xxx

About eDNA Expeditions

UNESCO's eDNA Expeditions is a global, citizen science initiative that is conducted with the intention to measure marine biodiversity and predict the impact climate change on marine community composition across UNESCO World Heritage marine sites.

eDNA is a cost effective and minimally invasive method to measure biodiversity in any given area. Marine species continuously shed DNA into the water around them in the form of waste, mucus, or cells. By extracting this DNA from water samples, and subsequently multiplying and sequencing specific regions within these DNA strands, a wide variety of species can be detected without removing any organisms from their environment. The regions in the DNA targeted for sequencing are selected depending on the scope of the study: while some markers are suitable to obtain a broad overview of biodiversity across many groups of species, other markers are particularly suited to get high resolution insight for a more specific taxonomic group such as fish. The UNESCO eDNA Expeditions initiative combines a number of markers tailored for marine vertebrates (fish, mammals, and turtles). A general marker was added to also allow detection of species from other groups such as invertebrates, which can give a broader insight in the marine species diversity in a given area.

Between September 2022 and May 2023, UNESCO organized eDNA sampling campaigns in 21 marine World Heritage sites across 17 countries around the world. At every World Heritage site, about 20 samples were collected from different habitats. Over 250 young people participated in the local sampling expeditions. They were guided by local experts and park management staff, using protocols and eDNA sampling equipment provided by UNESCO.

Biodiversity inventories generated from the samples are being combined with existing species distribution data from public biodiversity databases such as the Ocean Biodiversity Information System (OBIS) in view of obtaining a comprehensive overview of marine life across marine World Heritage sites. Through the use of climate scenarios and species distribution models, an estimate will be made of the impact of climate change, in particular rising temperatures, on local biodiversity and its potential future distribution patterns.

More information about the initiative and a press kit are available on the UNESCO website: https://www.unesco.org/en/edna-expeditions.

Results

Sampling and sample processing

eDNA sampling was conducted in Lagoons of New Caledonia: Reef Diversity and Associated Ecosystems in March and April 2023. A total of 20 samples were collected at 5 locations in the park covering different habitats: Entrecasteaux, Grand Lagoon Nord, Kouare, Poe zco, and Pouebo (Figure 1). Up to 1,800 mL of seawater was filtered through filter cartridges containing a filter with a 0.8 µm pore size. After sampling, the filter cartridges were flushed with preservation liquid and shipped to UNESCO. From the 20 samples, 9 have now (December 2023) been processed. A second batch of samples will be processed by January 2024. DNA from these samples was extracted and amplified, and subsequently sent to the sequencing facility at KU Leuven in Belgium, a specialized university eDNA lab contracted by UNESCO for this work. PCR amplification was done using five primer pairs selected to capture as much biodiversity as possible in the target groups of the study: fish, mammals, and turtles. The results in this preliminary report are based on a first batch of 9 samples that were analyzed covering all locations that were sampled in the World Heritage site.

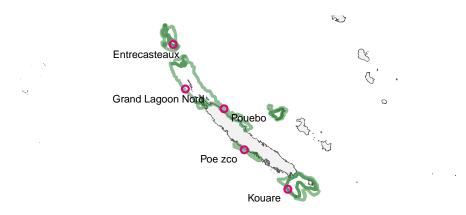


Figure 1: Map of the sampling locations.

DNA sequencing

Sequencing of the DNA from 9 samples resulted in over 18 million sequence reads, from which we collected 32,368 unique sequences or ASVs (Tables 1 and 2).

reads	asvs
18041783	32368

Table 1: Reads, ASVs, and species across all samples.

Species identification

The marker sequences obtained from sequencing were matched with sequence reference databases built using public data available from the National Center for Biotechnology Information (NCBI). This resulted in the identification of 647 species, including 342 fish species, 0 mammalian species, and 0 turtle species (Table 3). Species from other groups, such as algae, molluscs, cnidarians, echinoderms, and crustaceans, were also detected (Figures 2 and 3). This number of species detected represents about 14% of the 8,458 species known from Lagoons of New Caledonia: Reef Diversity and Associated Ecosystems in the OBIS database. Of the 647 species detected, 232 are not among the species previously reported from Lagoons of New Caledonia: Reef Diversity and Associated Ecosystems to the UNESCO OBIS database. 10 of the detected species are listed as threatened on the IUCN Red List (Table 4). A full list of species is added at the end of this report.

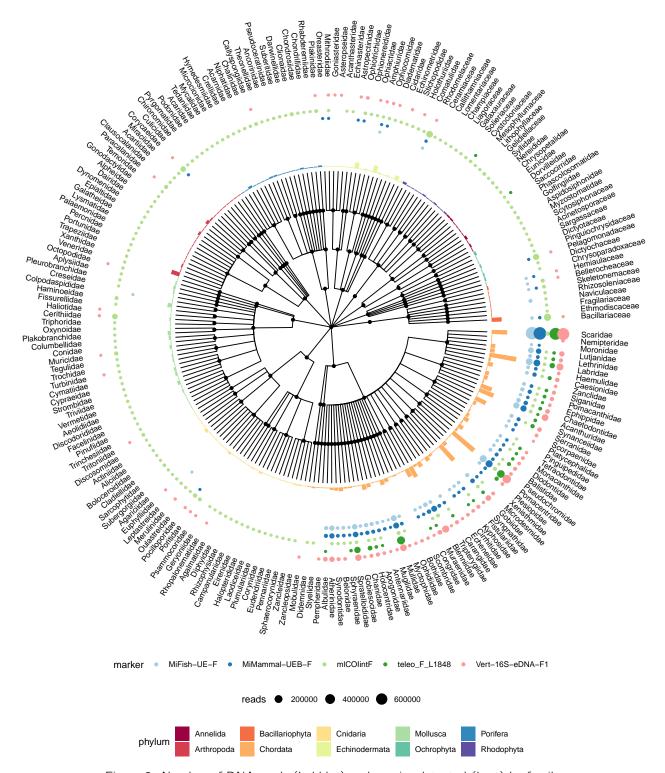


Figure 2: Number of DNA reads (bubbles) and species detected (bars) by family.

locality	materialSampleID	sampleSize	reads	asvs	species
Entrecasteaux	EE0270	1800	1892446	10320	142
Entrecasteaux	EE0279	1800	1378355	11096	210
Grand Lagoon Nord	EE0272	1800	1684933	10325	208
Kouare	EE0274	1800	2245302	12400	212
Poe zco	EE0276	1800	2612301	9731	255
Poe zco	EE0277	1800	2841495	6992	205
Pouebo	EE0271	1800	2440434	12878	259
Pouebo	EE0273	1800	1488626	11941	251
Pouebo	EE0278	1800	1457876	10719	229

Table 2: Reads, ASVs, and species by sample.

group	eDNA species	total species	fraction
fish	342	2456	0.14
mammals	0	23	
turtles	0	5	

Table 3: Number of species in the three target groups, from the OBIS database and from eDNA sampling.

category	eDNA species	total species	fraction
CR	0	6	
EN	2	26	0.08
VU	8	101	0.08

Table 4: Number of species by IUCN Red List category, from the OBIS database and from eDNA sampling.

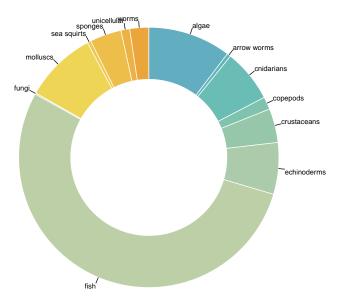


Figure 3: Distribution of detected species across groups.

phylum	class	species	group	category	new	vernacular
Amoebozoa	Discosea	Neoparamoeba aestuarina	unicellular		yes	
Amoebozoa	Discosea	Neoparamoeba pemaquidensis	unicellular		yes	
Annelida	Polychaeta	Haplosyllis tenhovei	worms		yes	
Annelida	Polychaeta	Nereis denhamensis	worms		yes	
Annelida	Polychaeta	Ophryotrocha macrovifera	worms		yes	
Annelida	Polychaeta	Palola viridis	worms		yes	Pacific palolo worm
Annelida	Polychaeta	Pharyngocirrus alanhongi	worms		yes	
Annelida	Polychaeta	Pseudonereis anomala	worms		yes	
Annelida	Polychaeta	Syllis ypsiloides	worms		yes	
Annelida	Polychaeta	Treptopale homalos	worms		yes	
Annelida	-	Aspidosiphon (Paraspidosiphon) laevis	worms		-	
Annelida		Cloeosiphon aspergillus	worms			
Annelida		Hypomyzostoma jonathoni	worms		yes	
Annelida		Nephasoma (Nephasoma) pellucidum	worms		yes	
Annelida		Phascolosoma (Phascolosoma) nigrescens	worms		,	
Annelida		Phascolosoma (Phascolosoma) pacificum	worms			
Annelida		Phascolosoma (Phascolosoma) stephensoni	worms			
Arthropoda	Arachnida	Tyrophagus putrescentiae			yes	
Arthropoda	Branchiopoda	Pseudevadne tergestina	crustaceans		yes	
Arthropoda	Copepoda	Acartia (Acartia) negligens	copepods		yes	
Arthropoda	Copepoda	Acrocalanus gracilis	copepods		yes	
Arthropoda	Copepoda	Calocalanus plumulosus	copepods		yes	
Arthropoda	Copepoda	Clausocalanus furcatus	copepods		yes	
Arthropoda	Copepoda	Clausocalanus parapergens	copepods		yes	
Arthropoda	Copepoda	Farranula gibbula	copepods		yes	
Arthropoda	Copepoda	Macrosetella gracilis	copepods		yes	
Arthropoda	Copepoda	Mecynocera clausi	copepods		yes	
Arthropoda	Copepoda	Paracalanus indicus	copepods		yes	
Arthropoda	Copepoda	Temora discaudata	copepods		yes	
Arthropoda	Hexapoda	Culex guinguefasciatus	сореродз		yes	
Arthropoda	Hexapoda	Pontomyia natans			yes	
Arthropoda	Malacostraca	Alpheus dolerus	crustaceans		yes	
Arthropoda	Malacostraca	Alpheus malleodigitus	crustaceans		yes	
Arthropoda	Malacostraca	Chlorodiella barbata	crustaceans		yes	
Arthropoda	Malacostraca	Chlorodiella laevissima	crustaceans		yes	
Arthropoda	Malacostraca	Coronalpheus natator	crustaceans		yes	
Arthropoda	Malacostraca	Cyclodius ungulatus	crustaceans		ycs	
Arthropoda	Malacostraca	Daira perlata	crustaceans			
Arthropoda	Malacostraca	Dynomene praedator	crustaceans			
Arthropoda	Malacostraca	Etisus bifrontalis	crustaceans			
Arthropoda	Malacostraca	Etisus demani	crustaceans			
Arthropoda	Malacostraca	Gaillardiellus superciliaris	crustaceans		V0C	
Arthropoda	Malacostraca	Galathea acis	crustaceans		yes	
Arthropoda	Malacostraca	Gonodactylus platysoma	crustaceans			
Arthropoda	Malacostraca	Liocarpilodes armiger	crustaceans		V0C	
Arthropoda	Malacostraca	Luniella pubescens	crustaceans		yes	
Arthropoda	Malacostraca	Luniella pugil	crustaceans			
Arthropoda	Malacostraca	Lysmata ternatensis			Vec	
•		Menaethius monoceros	crustaceans		yes	
Arthropoda	Malacostraca		crustaceans			
Arthropoda	Malacostraca	Palaemonella rotumana	crustaceans			

phylum	class	species	group	category	new	vernacular
Arthropoda	Malacostraca	Percnon abbreviatum	crustaceans			
Arthropoda	Malacostraca	Pilodius areolatus	crustaceans			areolated xanthid crab
Arthropoda	Malacostraca	Thalamita admete	crustaceans			
Arthropoda	Malacostraca	Thalamita gatavakensis	crustaceans			
Arthropoda	Malacostraca	Trapezia lutea	crustaceans			
Arthropoda	Malacostraca	Zosimus aeneus	crustaceans			
Arthropoda	Thecostraca	Savignium crenatum	crustaceans		yes	
Ascomycota	Sordariomycetes	Fusarium oxysporum	fungi		yes	
Bacillariophyta	Bacillariophyceae	Asterionellopsis thurstonii	algae		yes	
Bacillariophyta	Bacillariophyceae	Bellerochea polymorpha	algae		yes	
Bacillariophyta	Bacillariophyceae	Cylindrotheca closterium	algae		yes	
Bacillariophyta	Bacillariophyceae	Ethmodiscus punctiger	algae		yes	
Bacillariophyta	Bacillariophyceae	Eucampia striata	algae		yes	
Bacillariophyta	Bacillariophyceae	Eucampia zodiacus	algae		yes	
Bacillariophyta	Bacillariophyceae	Haslea pseudostrearia	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia abrensis	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia caciantha	algae		ves	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia circumpora	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia cuspidata	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia decipiens	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia kodamae	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia lineola	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia lundholmiae	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia pseudodelicatissima	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia sabit	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia subfraudulenta	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia subpacifica	algae		yes	
Bacillariophyta	Bacillariophyceae	Skeletonema menzelii	algae		yes	
Bacillariophyta	Bacillariophyceae	Sundstroemia setigera	algae		yes	
Cercozoa	Chlorarachnea	Bigelowiella natans	unicellular		yes	
Cercozoa	Chlorarachnea	Chlorarachnion reptans	unicellular		yes	
Chaetognatha	Sagittoidea	Aidanosagitta neglecta	arrow worms		yes	
Chaetognatha	Sagittoidea	Aidanosagitta regularis	arrow worms		yes	
Chaetognatha	Sagittoidea	Flaccisagitta enflata	arrow worms		yes	
Chlorophyta	Mamiellophyceae	Dolichomastix tenuilepis	algae		yes	
Chlorophyta	Mamiellophyceae	Mantoniella squamata	algae		yes	
Chlorophyta	Mamiellophyceae	Micromonas commoda	algae		yes	
Chlorophyta	Mamiellophyceae	Micromonas pusilla	algae		yes	
Chlorophyta	Marmenophyceae	Chloroparvula pacifica	algae		yes	
Chlorophyta		Chloropicon laureae	algae		yes	
Chlorophyta		Chloropicon mariensis	algae		yes	
Chlorophyta		Chloropicon primus	algae		yes	
Chlorophyta		Chloropicon roscoffensis	algae		-	
Chlorophyta		Chloropicon sieburthii	algae		yes yes	
Chordata	Ascidiacea	Botrylloides conchyliatus	sea squirts		yes	
Chordata	Ascidiacea	Didemnum apuroto	sea squirts sea squirts		yes	
Chordata	Ascidiacea	Didemnum cuculliferum	sea squirts sea squirts			
Chordata	Elasmobranchii	Mobula tarapacana	fish	EN	yes	sicklefin devil ray
		·			yes	Sickiellii üevii ray
Chordata	Teleostei	Ablanca biana	fish	LC		flat
Chordata	Teleostei	Ablennes hians	fish	LC		flat needlefish

Chordata Chordata	Teleostei					
Chordata	. 0.00000.	Abudefduf vaigiensis	fish	LC		Indo-Pacific sergeant
	Teleostei	Acanthurus blochii	fish	LC		ringtail surgeonfish
Chordata	Teleostei	Acanthurus lineatus	fish	LC		lined surgeonfish
Chordata	Teleostei	Acanthurus mata	fish	LC		blue-lined surgeonfish
Chordata	Teleostei	Acanthurus nigricauda	fish	LC		epaulette surgeonfish
Chordata	Teleostei	Acanthurus nigrofuscus	fish	LC		brown surgeonfish
Chordata	Teleostei	Acanthurus nigroris	fish	LC		bluelined surgeonfish
Chordata	Teleostei	Acanthurus olivaceus	fish	LC		ziaoiiioa sai geeiiioii
Chordata	Teleostei	Acanthurus triostegus	fish	LC		convict surgeonfish
Chordata	Teleostei	Acanthurus xanthopterus	fish	ĹĊ		yellowfin surgeonfish
Chordata	Teleostei	Albula glossodonta	fish	VÜ		roundjaw bonefish
Chordata	Teleostei	Aluterus scriptus	fish	ĹĊ		scrawled filefish
Chordata	Teleostei	Amanses scopas	fish	LC		broom filefish
Chordata	Teleostei	Amblycirrhitus bimacula	fish	LC		broom mensn
Chordata	Teleostei	Amblygobius phalaena	fish	LC		
Chordata	Teleostei	Amphiprion clarkii	fish	LC		yellowtail clownfish
				LC		bluespotted wrasse
Chordata	Teleostei	Anampses caeruleopunctatus	fish	LC		•
Chordata	Teleostei	Anampses geographicus	fish			geographic wrasse
Chordata	Teleostei	Anampses neoguinaicus	fish	LC		0 1
Chordata	Teleostei	Anampses twistii	fish	LC		yellowbreasted wrasse
Chordata	Teleostei	Apogon crassiceps	fish	LC		
Chordata	Teleostei	Aporops bilinearis	fish	LC		G :
Chordata	Teleostei	Arothron meleagris	fish	LC		Guineafowl puffer
Chordata	Teleostei	Arothron nigropunctatus	fish	LC		blackspotted puffer
Chordata	Teleostei	Aspasma minima	fish		yes	
Chordata	Teleostei	Asterorhombus cocosensis	fish	LC		
Chordata	Teleostei	Atrosalarias fuscus	fish	LC	yes	
Chordata	Teleostei	Atrosalarias holomelas	fish	LC		
Chordata	Teleostei	Azurina lepidolepis	fish	LC		
Chordata	Teleostei	Balistapus undulatus	fish	LC		orangestriped
Chordata	Teleostei	Balistoides conspicillum	fish	LC		clown triggerfish
Chordata	Teleostei	Balistoides viridescens	fish	LC		titan triggerfish
Chordata	Teleostei	Belonoperca chabanaudi	fish	LC		
Chordata	Teleostei	Benthosema fibulatum	fish	LC		spinycheek lanternfish
Chordata	Teleostei	Blenniella chrysospilos	fish	LC		
Chordata	Teleostei	Bolbometopon muricatum	fish	VU		bumphead parrotfish
Chordata	Teleostei	Bolinichthys longipes	fish	LC		
Chordata	Teleostei	Bothus pantherinus	fish	LC		panther flounder
Chordata	Teleostei	Brotula multibarbata	fish	LC		goatsbeard brotula
Chordata	Teleostei	Bryaninops ridens	fish	LC		3
Chordata	Teleostei	Caesio caerulaurea	fish	LC		blue and gold fusilier
Chordata	Teleostei	Caesio cuning	fish	LC		
Chordata	Teleostei	Callogobius nigromarginatus	fish		yes	
Chordata	Teleostei	Calotomus carolinus	fish	LC	,	Carolines parrotfish
Chordata	Teleostei	Cantherhines dumerilii	fish	LC		barred filefish
Chordata	Teleostei	Canthigaster jactator	fish	LC	yes	
Chordata	Teleostei	Canthigaster janthinoptera	fish	LC	, 03	spotted puffer
Chordata	Teleostei	Caracanthus maculatus	fish	LC		spotted coral croucher
	Teleostei	Caracanthus unipinna	fish	LC		pygmy coral croucher
Chordata						Prysitiv Colui ClouClici

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Caranx ignobilis	fish	LC		giant trevally
Chordata	Teleostei	Caranx melampygus	fish	LC		bluefin trevally
Chordata	Teleostei	Caranx papuensis	fish	LC		brassy trevally
Chordata	Teleostei	Centropyge bicolor	fish	LC		bicolor angelfish
Chordata	Teleostei	Centropyge bispinosa	fish	LC		
Chordata	Teleostei	Centropyge flavissima	fish	LC		
Chordata	Teleostei	Centropyge nigriocellus	fish	LC		
Chordata	Teleostei	Centropyge vrolikii	fish	LC		
Chordata	Teleostei	Cephalopholis argus	fish	LC		peacock grouper
Chordata	Teleostei	Cephalopholis sonnerati	fish	ĹĊ		tomato hind
Chordata	Teleostei	Cephalopholis urodeta	fish	LC		darkfin hind
Chordata	Teleostei	Ceratoscopelus warmingii	fish	LC		Warming's lantern fish
Chordata	Teleostei	Cetoscarus bicolor	fish	LC	yes	bicolour parrotfish
Chordata	Teleostei	Chaetodon auriga	fish	LC	, 00	threadfin butterflyfish
Chordata	Teleostei	Chaetodon citrinellus	fish	LC		threadin batternynon
Chordata	Teleostei	Chaetodon ephippium	fish	LC		
Chordata	Teleostei	Chaetodon flavirostris	fish	LC		
Chordata	Teleostei	Chaetodon kleinii	fish	LC		sunburst butterflyfish
Chordata	Teleostei	Chaetodon kienin Chaetodon lineolatus	fish	LC		lined butterflyfish
Chordata	Teleostei	Chaetodon melannotus	fish	LC		blackback butterflyfish
	Teleostei	Chaetodon pelewensis		LC		DIACKDACK DULLETTISTISTI
Chordata Chordata	Teleostei		fish fish	LC		
	Teleostei	Chaetodon plebeius		NT		ala aa a la
Chordata	Teleostei	Chaetodon trifascialis	fish	LC		chevron butterflyfish
Chordata		Chaetodon trifasciatus	fish			melon butterflyfish
Chordata	Teleostei	Chaetodon ulietensis	fish	LC		Pacific doublesaddle butterflyfish
Chordata	Teleostei	Chaetodon vagabundus	fish	LC		vagabond butterflyfish
Chordata	Teleostei	Chanos chanos	fish	LC		milkfish, chano
Chordata	Teleostei	Cheilinus chlorourus	fish	LC		floral wrasse
Chordata	Teleostei	Cheilinus oxycephalus	fish	LC		snooty wrasse
Chordata	Teleostei	Cheilinus trilobatus	fish	LC		tripletail wrasse
Chordata	Teleostei	Cheilinus undulatus	fish	EN		humphead wrasse
Chordata	Teleostei	Cheilio inermis	fish	LC		cigar wrasse
Chordata	Teleostei	Cheilodipterus quinquelineatus	fish	LC		fivelined cardinalfish
Chordata	Teleostei	Chlorurus capistratoides	fish	LC	yes	
Chordata	Teleostei	Chlorurus gibbus	fish	LC	yes	
Chordata	Teleostei	Chlorurus sordidus	fish	LC		
Chordata	Teleostei	Chromis atripectoralis	fish	LC		black-axil chromis
Chordata	Teleostei	Chromis notata	fish	LC	yes	
Chordata	Teleostei	Chromis weberi	fish	LC		Weber's chromis
Chordata	Teleostei	Chrysiptera biocellata	fish	LC		twinspot damselfish
Chordata	Teleostei	Chrysiptera brownriggii	fish	LC		
Chordata	Teleostei	Chrysiptera cyanea	fish	LC		
Chordata	Teleostei	Chrysiptera rex	fish	LC		
Chordata	Teleostei	Chrysiptera taupou	fish	LC		
Chordata	Teleostei	Chrysiptera unimaculata	fish	LC	yes	onespot damselfish
Chordata	Teleostei	Cirrhitichthys aprinus	fish	LC	yes	spotted hawkfish
Chordata	Teleostei	Cirrhitichthys falco	fish	LC	•	dwarf hawkfish
Chordata	Teleostei	Cirrhitus pinnulatus	fish	LC		stocky hawkfish
Chordata	Teleostei	Cirripectes castaneus	fish	LC		chestnut blenny
Chordata	Teleostei	Cirripectes obscurus	fish	LC	yes	,

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Cirripectes polyzona	fish	LC		barred blenny
Chordata	Teleostei	Cirripectes quagga	fish	LC	yes	squiggly blenny
Chordata	Teleostei	Cirripectes stigmaticus	fish	LC	-	red-streaked blenny
Chordata	Teleostei	Conger cinereus	fish	LC		mustache conger
Chordata	Teleostei	Coris aygula	fish	LC		clown wrasse
Chordata	Teleostei	Coris dorsomacula	fish	LC		
Chordata	Teleostei	Coris gaimard	fish	LC		
Chordata	Teleostei	Corythoichthys schultzi	fish	LC		gilded pipefish
Chordata	Teleostei	Crenimugil seheli	fish	LC		3 * * * * * * * * * * * * * * * * * * *
Chordata	Teleostei	Crossosalarias macrospilus	fish	LC		
Chordata	Teleostei	Ctenochaetus binotatus	fish	LC		twospot surgeonfish
Chordata	Teleostei	Ctenochaetus striatus	fish	LC		lined bristletooth
Chordata	Teleostei	Ctenogobiops feroculus	fish	LC		
Chordata	Teleostei	Cymolutes praetextatus	fish	LC		
Chordata	Teleostei	Cypho purpurascens	fish	LC		
Chordata	Teleostei	Dascyllus aruanus	fish	LC		banded dascyllus
Chordata	Teleostei	Diaphus garmani	fish	LC	yes	zamaca aaseymas
Chordata	Teleostei	Dicentrarchus punctatus	fish	LC	ves	spotted sea-bass, bar moucheté
Chordata	Teleostei	Diodon hystrix	fish	LC.	yes	spot-fin porcupinefish
Chordata	Teleostei	Diodon liturosus	fish	LC		black-blotched porcupinefish
Chordata	Teleostei	Echeneis naucrates	fish	LC		sharksucker
Chordata	Teleostei	Echidna polyzona	fish	LC		barred moray
Chordata	Teleostei	Elagatis bipinnulata	fish	LC		rainbow runner
Chordata	Teleostei	Enchelyurus ater	fish	LC		ranibow runner
Chordata	Teleostei	Enneapterygius fuscoventer	fish	LC	yes	
Chordata	Teleostei	Enneapterygius hemimelas	fish	LC	yes	
Chordata	Teleostei	Enneapterygius leucopunctatus	fish	NT	1/05	
Chordata	Teleostei		fish	VU	yes	brown-marbled grouper
Chordata	Teleostei	Epinephelus fuscoguttatus Epinephelus hexagonatus	fish	LC		9 ,
Chordata	Teleostei		fish	LC		starspotted grouper
	Teleostei	Epinephelus maculatus		LC		h
Chordata		Epinephelus merra	fish	VU		honeycomb grouper
Chordata	Teleostei	Epinephelus polyphekadion	fish			camouflage grouper
Chordata	Teleostei	Epinephelus tauvina	fish	DD		greasy grouper
Chordata	Teleostei	Euthynnus affinis	fish	LC		kawakawa, thonine orientale
Chordata	Teleostei	Eviota afelei	fish	LC		Afele's fringefin goby
Chordata	Teleostei	Eviota guttata	fish	LC		
Chordata	Teleostei	Eviota herrei	fish	DD		
Chordata	Teleostei	Eviota latifasciata	fish	LC		
Chordata	Teleostei	Eviota prasina	fish	LC		green bubble goby
Chordata	Teleostei	Eviota punctulata	fish	LC		finespot eviota
Chordata	Teleostei	Exallias brevis	fish	LC		shortbodied blenny
Chordata	Teleostei	Fistularia commersonii	fish	LC		cornetfish
Chordata	Teleostei	Fusigobius neophytus	fish	LC		
Chordata	Teleostei	Glyptoparus delicatulus	fish	LC		delicate blenny
Chordata	Teleostei	Gnathodentex aureolineatus	fish	LC		striped large-eye bream
Chordata	Teleostei	Gnatholepis anjerensis	fish	LC		
Chordata	Teleostei	Gnatholepis cauerensis	fish	LC		eyebar goby
Chordata	Teleostei	Gobiodon axillaris	fish	VU		
Chordata	Teleostei	Gobiodon erythrospilus	fish	VU	yes	
Chordata	Teleostei	Gobiodon histrio	fish	LC		

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Gobiodon oculolineatus	fish	LC	yes	
Chordata	Teleostei	Gobiodon quinquestrigatus	fish	LC		
Chordata	Teleostei	Gobiodon rivulatus	fish	LC		
Chordata	Teleostei	Gobiodon unicolor	fish			
Chordata	Teleostei	Gomphosus caeruleus	fish	LC	yes	Red Sea bird wrasse
Chordata	Teleostei	Grammistes sexlineatus	fish	LC	,	goldenstriped soapfish
Chordata	Teleostei	Gymnocaesio gymnoptera	fish	LC		slender fusilier
Chordata	Teleostei	Gymnothorax buroensis	fish	LC		vagrant moray
Chordata	Teleostei	Gymnothorax chilospilus	fish	LC		lipspot moray
Chordata	Teleostei	Gymnothorax javanicus	fish	ĹĊ		giant moray
Chordata	Teleostei	Gymnothorax kidako	fish	LC		g
Chordata	Teleostei	Gymnothorax margaritophorus	fish	LC		blotched-neck moray
Chordata	Teleostei	Gymnothorax meleagris	fish	LC		turkey moray
Chordata	Teleostei	Gymnothorax rueppelliae	fish	LC		banded moray
Chordata	Teleostei	Gymnothorax thyrsoideus	fish	LC		banded moray
Chordata	Teleostei	Halichoeres hortulanus	fish	LC		checkerboard wrasse
Chordata	Teleostei	Halichoeres margaritaceus	fish	LC		Checkerboard wrasse
Chordata	Teleostei	Halichoeres marginatus	fish	LC	\/OC	splendid rainbow wrasse
Chordata	Teleostei	Halichoeres trimaculatus	fish	LC	yes	spieridid railibow wrasse
Chordata	Teleostei	Hemigymnus fasciatus	fish	LC		barred wrasse
		3,		LC		
Chordata	Teleostei	Hemigymnus melapterus	fish	LC		thicklip wrasse
Chordata	Teleostei	Heniochus chrysostomus	fish			D C l.
Chordata	Teleostei	Heniochus diphreutes	fish	LC		Pennantfish
Chordata	Teleostei	Hipposcarus longiceps	fish	LC		
Chordata	Teleostei	Hypoatherina barnesi	fish			Barnes' silverside
Chordata	Teleostei	Hypoatherina temminckii	fish			Samoan silverside
Chordata	Teleostei	Kyphosus cinerascens	fish	LC		snubnose chub
Chordata	Teleostei	Kyphosus pacificus	fish			
Chordata	Teleostei	Kyphosus vaigiensis	fish	LC		brassy chub
Chordata	Teleostei	Labroides dimidiatus	fish	LC		cleaner wrasse
Chordata	Teleostei	Labropsis australis	fish	LC		
Chordata	Teleostei	Lampadena luminosa	fish	LC		Luminous lanternfish
Chordata	Teleostei	Lethrinus atkinsoni	fish	LC		
Chordata	Teleostei	Lethrinus lentjan	fish	LC		redspot emperor
Chordata	Teleostei	Lethrinus nebulosus	fish	LC		spangled emperor
Chordata	Teleostei	Lethrinus obsoletus	fish	LC		orange-striped emperor
Chordata	Teleostei	Lutjanus bohar	fish	LC		twinspot snapper
Chordata	Teleostei	Lutjanus erythropterus	fish	LC		
Chordata	Teleostei	Lutjanus fulvus	fish	LC		blacktail snapper
Chordata	Teleostei	Lutjanus gibbus	fish	LC		humpback snapper
Chordata	Teleostei	Lutjanus russellii	fish	LC		
Chordata	Teleostei	Macolor niger	fish	LC		black and white snapper
Chordata	Teleostei	Macropharyngodon meleagris	fish	LC		• •
Chordata	Teleostei	Megalaspis cordyla	fish	LC		torpedo scad
Chordata	Teleostei	Monotaxis grandoculis	fish	LC		bigeye emperor
Chordata	Teleostei	Mulloidichthys flavolineatus	fish	LC		yellowstripe goatfish
Chordata	Teleostei	Mulloidichthys vanicolensis	fish	LC		yellowfin goatfish
Chordata	Teleostei	Myripristis amaena	fish	LC		3.4.4.4
Chordata	Teleostei	Myripristis berndti	fish	LC		blotcheye soldierfish
Chordata	Teleostei	Myripristis pralinia	fish	LC		scarlet soldierfish

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Myripristis vittata	fish	LC		
Chordata	Teleostei	Naso hexacanthus	fish	LC		sleek unicornfish
Chordata	Teleostei	Naso lituratus	fish	LC		orangespine unicornfish
Chordata	Teleostei	Naso lopezi	fish	LC		orangespine ameerman
Chordata	Teleostei	Naso tonganus	fish	LC		
Chordata	Teleostei	Naso tuberosus	fish	DD		humpnose unicornfish
Chordata	Teleostei	Naso unicornis	fish	LC		bluespine unicornfish
Chordata	Teleostei	Nemateleotris decora	fish	LC		elegant firefish
Chordata	Teleostei	Nemateleotris decora	fish	LC		Clegant mensii
Chordata	Teleostei	Neoniphon sammara	fish	LC		sammara squirrelfish
Chordata	Teleostei	Novaculichthys taeniourus	fish	LC		rockmover wrasse
Chordata	Teleostei	Ostorhinchus fleurieu	fish	LC	yes	TOCKITIOVCI WI 833C
Chordata	Teleostei	Ostorhinchus taeniophorus	fish		ycs	
Chordata	Teleostei	Oxycheilinus bimaculatus	fish	LC		twospot wrasse
Chordata	Teleostei	Oxycheilinus digramma	fish	LC		twospot wrasse
Chordata	Teleostei	Oxymonacanthus longirostris	fish	VU		longnose filefish
	Teleostei	3		LC		3
Chordata		Paracirrhites arcatus	fish			arc-eye hawkfish
Chordata	Teleostei	Paracirrhites forsteri	fish	LC		blackside hawkfish
Chordata	Teleostei	Paragobiodon echinocephalus	fish	LC		redhead goby
Chordata	Teleostei	Paragobiodon xanthosoma	fish	1.6		C 1
Chordata	Teleostei	Paraluteres prionurus	fish	LC		false puffer
Chordata	Teleostei	Parapercis millepunctata	fish	LC		blackdotted sand perch
Chordata	Teleostei	Parapercis queenslandica	fish	LC		
Chordata	Teleostei	Parupeneus barberinus	fish	LC		dash-and-dot goatfish
Chordata	Teleostei	Parupeneus cyclostomus	fish	LC		yellowsaddle goatfish
Chordata	Teleostei	Parupeneus multifasciatus	fish	LC		
Chordata	Teleostei	Parupeneus pleurostigma	fish	LC		sidespot goatfish
Chordata	Teleostei	Pempheris adusta	fish		yes	
Chordata	Teleostei	Pervagor janthinosoma	fish	LC		blackbar filefish
Chordata	Teleostei	Pervagor melanocephalus	fish	LC		redtail filefish
Chordata	Teleostei	Platax orbicularis	fish	LC		circular spadefish
Chordata	Teleostei	Platax teira	fish	LC		longfin baitfish
Chordata	Teleostei	Platybelone argalus	fish	LC	yes	keeltail needlefish
Chordata	Teleostei	Plectorhinchus albovittatus	fish			two-stripe sweetlips
Chordata	Teleostei	Plectorhinchus lineatus	fish			
Chordata	Teleostei	Plectorhinchus vittatus	fish	LC		
Chordata	Teleostei	Plectroglyphidodon dickii	fish	NT		blackbar devil
Chordata	Teleostei	Plectroglyphidodon fasciolatus	fish	LC		
Chordata	Teleostei	Plectroglyphidodon gascoynei	fish			
Chordata	Teleostei	Plectroglyphidodon johnstonianus	fish	LC		Johnston Island damsel
Chordata	Teleostei	Plectroglyphidodon leucozonus	fish	LC		
Chordata	Teleostei	Plectroglyphidodon phoenixensis	fish	LC	yes	Phoenix devil
Chordata	Teleostei	Plectropomus areolatus	fish	VU		
Chordata	Teleostei	Plectropomus laevis	fish	LC		blacksaddled coralgrouper
Chordata	Teleostei	Plectropomus leopardus	fish	LC		
Chordata	Teleostei	Plesiops coeruleolineatus	fish	LC		crimsontip longfin
Chordata	Teleostei	Pleurosicya micheli	fish	LC		. 3
Chordata	Teleostei	Pomacentrus agassizii	fish		yes	
Chordata	Teleostei	Pomacentrus albicaudatus	fish	LC	yes	whitetail damselfish
Chordata	Teleostei	Pomacentrus amboinensis	fish	LC	<i>y</i>	

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Pomacentrus bankanensis	fish	LC		
Chordata	Teleostei	Pomacentrus chrysurus	fish	LC		whitetail damsel
Chordata	Teleostei	Pomacentrus coelestis	fish	LC		Willetan damsel
Chordata	Teleostei	Pomacentrus moluccensis	fish	LC		
Chordata	Teleostei	Pomacentrus pavo	fish	LC		sapphire damsel
Chordata	Teleostei	Pomacentrus vaiuli	fish	LC		Supplifie damser
Chordata	Teleostei	Pristiapogon kallopterus	fish	LC		
Chordata	Teleostei	Pseudobalistes flavimarginatus	fish	LC		yellowmargin triggerfish
Chordata	Teleostei	Pseudocheilinus hexataenia	fish	LC		sixstripe wrasse
Chordata	Teleostei	Pseudochromis cvanotaenia	fish	LC		sixstripe wrasse
Chordata	Teleostei	Pseudochromis marshallensis	fish	LC		
Chordata	Teleostei	Ptereleotris evides	fish	LC		blackfin dartfish
Chordata	Teleostei	Ptereleotris evides Ptereleotris heteroptera	fish	LC		blacktail goby
Chordata	Teleostei	Ptereleotris monoptera	fish	LC		blacktall goby
Chordata	Teleostei	Pterocaesio digramma	fish	LC		double-lined fusilier
Chordata	Teleostei	3	fish	LC		Marr's fusilier
		Pterocaesio marri		LC		
Chordata	Teleostei	Pterocaesio pisang	fish	LC LC		banana fusilier
Chordata	Teleostei	Pterocaesio tile	fish	LC		dark-banded fusilier
Chordata	Teleostei	Pycnochromis amboinensis	fish			
Chordata	Teleostei	Pycnochromis atripes	fish			
Chordata	Teleostei	Pycnochromis dimidiatus	fish		yes	
Chordata	Teleostei	Pycnochromis iomelas	fish	LC		
Chordata	Teleostei	Pycnochromis vanderbilti	fish	LC		
Chordata	Teleostei	Rhinecanthus aculeatus	fish	LC		white-banded triggerfish
Chordata	Teleostei	Rhinecanthus rectangulus	fish	LC		wedge-tail triggerfish
Chordata	Teleostei	Salarias fasciatus	fish	LC		jewelled blenny
Chordata	Teleostei	Salarias sinuosus	fish	LC	yes	fringelip blenny
Chordata	Teleostei	Sargocentron diadema	fish	LC		crown squirrelfish
Chordata	Teleostei	Sargocentron punctatissimum	fish	LC		speckled squirrelfish
Chordata	Teleostei	Saurida gracilis	fish	LC		slender lizardfish
Chordata	Teleostei	Scarus altipinnis	fish	LC		
Chordata	Teleostei	Scarus chameleon	fish	LC		
Chordata	Teleostei	Scarus festivus	fish	LC	yes	festive parrotfish
Chordata	Teleostei	Scarus forsteni	fish	LC		
Chordata	Teleostei	Scarus frenatus	fish	LC		bridled parrotfish
Chordata	Teleostei	Scarus globiceps	fish	LC		globehead parrotfish
Chordata	Teleostei	Scarus niger	fish	LC		dusky parrotfish
Chordata	Teleostei	Scarus prasiognathos	fish	LC	yes	
Chordata	Teleostei	Scarus psittacus	fish	LC		palenose parrotfish
Chordata	Teleostei	Scarus rivulatus	fish	LC		
Chordata	Teleostei	Scarus rubroviolaceus	fish	LC		ember parrotfish
Chordata	Teleostei	Scarus schlegeli	fish	LC		
Chordata	Teleostei	Scarus spinus	fish	LC		
Chordata	Teleostei	Scolopsis bilineata	fish	LC		
Chordata	Teleostei	Scomberoides lysan	fish	LC		doublespotted queenfish
Chordata	Teleostei	Scorpaenodes guamensis	fish	LC		Guam scorpionfish
Chordata	Teleostei	Scorpaenopsis diabolus	fish	LC		devil scorpionfish
Chordata	Teleostei	Scuticaria tigrina	fish	LC		tiger reef eel
Chordata	Teleostei	Siganus argenteus	fish	LC		forktail rabbitfish
Chordata	Teleostei	Siganus corallinus	fish	LC		blue-spotted spinefoot

Chordata
Continued on next page

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Siganus fuscescens	fish	LC		
Chordata	Teleostei	Siganus puellus	fish	LC		
Chordata	Teleostei	Siganus spinus	fish	LC		
Chordata	Teleostei	Sphyraena putnamae	fish			
Chordata	Teleostei	Sphyraena genie	fish			blackfin barracuda
Chordata	Teleostei	Spratelloides delicatulus	fish	LC		delicate round herring
Chordata	Teleostei	Spratelloides gracilis	fish	LC		silverstriped round herring
Chordata	Teleostei	Stanulus talboti	fish	LC		5 · · · · · · · · · · · · · · · · · · ·
Chordata	Teleostei	Stegastes albifasciatus	fish	LC		whitebar gregory
Chordata	Teleostei	Stegastes lacrymatus	fish			
Chordata	Teleostei	Stegastes nigricans	fish	LC		black damselfish
Chordata	Teleostei	Stenatherina panatela	fish			Sider damedinen
Chordata	Teleostei	Stethojulis albovittata	fish	LC	yes	bluelined wrasse
Chordata	Teleostei	Stethojulis bandanensis	fish	LC	yes	blueilled Wrusse
Chordata	Teleostei	Stethojulis strigiventer	fish	LC		three-ribbon rainbowfish
Chordata	Teleostei	Strongylura incisa	fish	LC		three-fibbon railibownsh
Chordata	Teleostei	Sufflamen chrysopterum	fish	LC		
Chordata	Teleostei	Svnanceja verrucosa	fish	LC		stonefish
Chordata	Teleostei	Synodus binotatus	fish	LC.		
		•				twospot lizardfish
Chordata	Teleostei	Synodus dermatogenys	fish	LC		
Chordata	Teleostei	Synodus variegatus	fish	LC		common lizardfish
Chordata	Teleostei	Thalassoma amblycephalum	fish	LC		bluntheaded wrasse
Chordata	Teleostei	Thalassoma hardwicke	fish	LC		
Chordata	Teleostei	Thalassoma jansenii	fish	LC		
Chordata	Teleostei	Thalassoma lutescens	fish	LC		
Chordata	Teleostei	Thalassoma quinquevittatum	fish	LC		
Chordata	Teleostei	Thysanophrys chiltonae	fish	LC		
Chordata	Teleostei	Trimma caesiura	fish	LC		
Chordata	Teleostei	Tylosurus acus	fish	LC	yes	agujon needlefish
Chordata	Teleostei	Tylosurus crocodilus	fish	LC		houndfish
Chordata	Teleostei	Upeneus tragula	fish	LC		freckled goatfish
Chordata	Teleostei	Uropterygius xanthopterus	fish	LC		freckleface reef-eel
Chordata	Teleostei	Valenciennea strigata	fish	LC		blueband goby
Chordata	Teleostei	Vanderhorstia ornatissima	fish	LC	yes	ornate prawn-goby
Chordata	Teleostei	Xenisthmus clarus	fish	LC	yes	
Chordata	Teleostei	Zanclus cornutus	fish	LC		Moorish idol
Chordata	Teleostei	Zebrasoma flavescens	fish	LC	yes	yellow tang
Chordata	Teleostei	Zebrasoma scopas	fish	LC		twotone tang
Chordata	Teleostei	Zebrasoma velifer	fish			-
Cnidaria	Anthozoa	Annella mollis	cnidarians			
Cnidaria	Anthozoa	Anthopleura elegantissima	cnidarians		yes	clonal anemone
Cnidaria	Anthozoa	Boloceroides mcmurrichi	cnidarians		yes	
Cnidaria	Anthozoa	Cladiella pachyclados	cnidarians		yes	
Cnidaria	Anthozoa	Euphyllia glabrescens	cnidarians	NT	,	ioker coral
Cnidaria	Anthozoa	Favites abdita	cnidarians	NT		larger star coral
Cnidaria	Anthozoa	Leptastrea purpurea	cnidarians	LC		crust coral
Cnidaria	Anthozoa	Leptoseris foliosa	cnidarians	LC		porcelain coral
Cnidaria	Anthozoa	Lobophytum crassum	cnidarians			po. colum colum
Cnidaria	Anthozoa	Oulastrea crispata	cnidarians	LC	yes	zebra coral
Cnidaria	Anthozoa	Pocillopora acuta	cnidarians	LC	ycs	Zebra corai
Ciliualia	AIILIIUZUa	і остпорога асита	Ciliuarialis			

phylum	class	species	group	category	new	vernacular
Cnidaria	Anthozoa	Pocillopora damicornis	cnidarians	LC		cauliflower coral
Cnidaria	Anthozoa	Porites lutea	cnidarians	LC		hump coral
Cnidaria	Anthozoa	Psammocora nierstraszi	cnidarians	LC		·
Cnidaria	Anthozoa	Rhodactis indosinensis	cnidarians		yes	hairy mushroom anemone
Cnidaria	Anthozoa	Sarcophyton ehrenbergi	cnidarians		,	•
Cnidaria	Anthozoa	Sarcophyton trocheliophorum	cnidarians			elephant ear coral
Cnidaria	Anthozoa	Sclerophytum heterospiculatum	cnidarians			
Cnidaria	Anthozoa	Stylophora pistillata	cnidarians	NT		hood coral
Cnidaria	Anthozoa	Triactis producta	cnidarians			crab anemone
Cnidaria	Hydrozoa	Aglaura hemistoma	cnidarians		ves	American pipit
Cnidaria	Hydrozoa	Antennella secundaria	cnidarians		, ,	, , , , , , , , , , , , , , , , , , ,
Cnidaria	Hydrozoa	Clytia gracilis	cnidarians		yes	
Cnidaria	Hydrozoa	Clytia noliformis	cnidarians		yes	
Cnidaria	Hydrozoa	Diphyes chamissonis	cnidarians		yes	
Cnidaria	Hydrozoa	Diphyes dispar	cnidarians		yes	
Cnidaria	Hydrozoa	Eudendrium capillare	cnidarians		,	
Cnidaria	Hydrozoa	Euphysilla pyramidata	cnidarians		yes	
Cnidaria	Hydrozoa	Helgicirrha malayensis	cnidarians		yes	
Cnidaria	Hydrozoa	Laodicea undulata	cnidarians		yes	
Cnidaria	Hydrozoa	Liriope tetraphylla	cnidarians		yes	
Cnidaria	Hydrozoa	Nanomia bijuga	cnidarians		yes	
Cnidaria	Hydrozoa	Orthopyxis integra	cnidarians		yes	
Cnidaria	Hvdrozoa	Pennaria disticha	cnidarians		,	feather hydroid
Cnidaria	Hydrozoa	Plumularia mooreana	cnidarians		yes	
Cnidaria	Hydrozoa	Rhizophysa eysenhardtii	cnidarians		yes	
Cnidaria	Hydrozoa	Sphaerocoryne bedoti	cnidarians		yes	
Cnidaria	Hydrozoa	Stauridiosarsia nipponica	cnidarians		yes	
Cnidaria	Hydrozoa	Zanclea gallii	cnidarians		yes	
Cnidaria	Hydrozoa	Zanclea sango	cnidarians		yes	
Cnidaria	Hydrozoa	Zancleopsis dichotoma	cnidarians		yes	
Cryptophyta	Cryptophyceae	Hemiarma marina			yes	
Ctenophora	Tentaculata	Ocyropsis crystallina	cnidarians		yes	ocyroé cristalline
Echinodermata	Asteroidea	Acanthaster planci	echinoderms		,	crown-of-thorns
Echinodermata	Asteroidea	Asteropsis carinifera	echinoderms			
Echinodermata	Asteroidea	Astropecten polyacanthus	echinoderms		yes	
Echinodermata	Asteroidea	Culcita novaeguineae	echinoderms		,	cushion star
Echinodermata	Asteroidea	Echinaster luzonicus	echinoderms			Luzon seastar
Echinodermata	Asteroidea	Mithrodia clavigera	echinoderms			
Echinodermata	Asteroidea	Neoferdina cumingi	echinoderms			
Echinodermata	Crinoidea	Comatella nigra	echinoderms		yes	
Echinodermata	Echinoidea	Diadema savignyi	echinoderms		,	
Echinodermata	Echinoidea	Echinometra mathaei	echinoderms			rock-boring urchin
Echinodermata	Echinoidea	Echinothrix calamaris	echinoderms			banded sea urchin
Echinodermata	Echinoidea	Eucidaris metularia	echinoderms			
Echinodermata	Echinoidea	Heterocentrotus mamillatus	echinoderms			slate pencil urchin
Echinodermata	Holothuroidea	Bohadschia argus	echinoderms	LC		and the second second
Echinodermata	Holothuroidea	Holothuria (Lessonothuria) lineata	echinoderms			
Echinodermata	Holothuroidea	Holothuria (Stauropora) pervicax	echinoderms			
Echinodermata	Holothuroidea	Holothuria (Thymiosycia) arenicola	echinoderms			
Echinodermata	Holothuroidea	Holothuria atra	echinoderms	LC		
Commoderniata	1 TOTOLITATORICA	Holodiulia atta	CCIIIIOGCIIII3			

phylum	class	species	group	category	new	vernacular
Echinodermata	Holothuroidea	Holothuria leucospilota	echinoderms	LC	TICVV	Vernacaiai
Echinodermata	Holothuroidea	Stichopus chloronotus	echinoderms	LC		
Echinodermata	Ophiuroidea	Amphipholis squamata	echinoderms	LC		dwarf brittle star
Echinodermata	Ophiuroidea	Breviturma brevipes	echinoderms			dwall bilttle stal
Echinodermata	Ophiuroidea	Breviturma dentata	echinoderms			
Echinodermata	Ophiuroidea	Breviturma gusilla	echinoderms			
Echinodermata	Ophiuroidea	Macrophiothrix demessa	echinoderms		yes	
Echinodermata	•	•	echinoderms		yes	
	Ophiuroidea Ophiuroidea	Macrophiothrix longipeda			yes	
Echinodermata		Macrophiothrix Iorioli	echinoderms		yes	
Echinodermata	Ophiuroidea	Macrophiothrix megapoma	echinoderms		yes	
Echinodermata	Ophiuroidea	Macrophiothrix propinqua	echinoderms		yes	
Echinodermata	Ophiuroidea	Macrophiothrix rhabdota	echinoderms		yes	
Echinodermata	Ophiuroidea	Macrophiothrix robillardi	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophiactis picteti	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophiactis savignyi	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma cynthiae	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma erinaceus	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma schoenleinii	echinoderms			
Echinodermata	Ophiuroidea	Ophiocomella ophiactoides	echinoderms			
Echinodermata	Ophiuroidea	Ophiomastix asperula	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophiomastix mixta	echinoderms			
Echinodermata	Ophiuroidea	Ophionereis porrecta	echinoderms			
Echinodermata	Ophiuroidea	Ophiothrix (Ophiothrix) trilineata	echinoderms		yes	
Haptophyta	Coccolithophyceae	Chrysochromulina tobinii	algae		yes	
Haptophyta	Coccolithophyceae	Emiliania huxleyi	algae		yes	
Haptophyta	Coccolithophyceae	Gephyrocapsa oceanica	algae		yes	
Haptophyta	Coccolithophyceae	Phaeocystis globosa	algae		yes	
Haptophyta	Coccolithophyceae	Phaeocystis pouchetii	algae		yes	
Hemichordata	Enteropneusta	Balanoglossus carnosus			yes	
Hemichordata	Enteropneusta	Ptychodera flava			yes	Hawaiian acorn worm
Mollusca	Bivalvia	Periglypta reticulata	molluscs			reticulated venus
Mollusca	Cephalopoda	Octopus bocki	molluscs	DD	yes	
Mollusca	Cephalopoda	Octopus cyanea	molluscs	LC		Cyane's octopus
Mollusca	Gastropoda	Aliculastrum parallelum	molluscs		yes	
Mollusca	Gastropoda	Aplysia parvula	molluscs			dwarf sea hare, petit lièvre de mer
Mollusca	Gastropoda	Berthellina delicata	molluscs		yes	
Mollusca	Gastropoda	Canarium mutabile	molluscs			
Mollusca	Gastropoda	Carminodoris grandiflora	molluscs		yes	
Mollusca	Gastropoda	Cerithium nesioticum	molluscs			
Mollusca	Gastropoda	Cerithium punctatum	molluscs			
Mollusca	Gastropoda	Colpodaspis thompsoni	molluscs			
Mollusca	Gastropoda	Conomurex Iuhuanus	molluscs			
Mollusca	Gastropoda	Conus sponsalis	molluscs	LC		sponsal cone
Mollusca	Gastropoda	Coralliophila erosa	molluscs	-		,
Mollusca	Gastropoda	Creseis virgula	molluscs		yes	
Mollusca	Gastropoda	Cupolaconcha meroclista	molluscs		yes	
Mollusca	Gastropoda	Cypraea tigris	molluscs		,	tiger cowrie
Mollusca	Gastropoda	Dendropoma gregarium	molluscs		yes	. J
Mollusca	Gastropoda	Dendropoma platypus	molluscs		yes	
Mollusca	Gastropoda	Diniatys dentifer	molluscs		yes	
ivioliusca	Gastropoda	Dimaty's defitifed	monuses		ycs	

phylum	class	species	group	category	new	vernacular
Mollusca	Gastropoda	Diodora octagona	molluscs		yes	
Mollusca	Gastropoda	Dolabrifera dolabrifera	molluscs		yes	
Mollusca	Gastropoda	Dolabrifera edmundsi	molluscs		yes	
Mollusca	Gastropoda	Drupella fragum	molluscs			
Mollusca	Gastropoda	Elysia mercieri	molluscs			
Mollusca	Gastropoda	Elysia tomentosa	molluscs		yes	
Mollusca	Gastropoda	Euplica varians	molluscs			
Mollusca	Gastropoda	Eurytrochus danieli	molluscs			
Mollusca	Gastropoda	Favorinus japonicus	molluscs		yes	
Mollusca	Gastropoda	Gibberulus gibberulus	molluscs		,	
Mollusca	Gastropoda	Halgerda guahan	molluscs		yes	
Mollusca	Gastropoda	Haliotis varia	molluscs	LC	yes	variable abalone
Mollusca	Gastropoda	Lamprohaminoea ovalis	molluscs		,	
Mollusca	Gastropoda	Limenandra confusa	molluscs		yes	
Mollusca	Gastropoda	Menathais tuberosa	molluscs		yes	humped rock shell
Mollusca	Gastropoda	Mitrella moleculina	molluscs			namped rock shen
Mollusca	Gastropoda	Monetaria caputserpentis	molluscs			serpent's head cowry
Mollusca	Gastropoda	Oxynoe viridis	molluscs			scrpent's nead cowry
Mollusca	Gastropoda	Petaloconchus keenae	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus cerverai	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus paulayi	molluscs			
Mollusca	Gastropoda Gastropoda	Phanerophthalmus perpallidus	molluscs		yes	
Mollusca	•	Phestilla minor	molluscs		yes	
	Gastropoda	Pinufius rebus			yes	
Mollusca	Gastropoda		molluscs		yes	
Mollusca	Gastropoda	Pleurehdera haraldi	molluscs		yes	
Mollusca	Gastropoda	Rochia nilotica	molluscs			
Mollusca	Gastropoda	Seminella virginea	molluscs			
Mollusca	Gastropoda	Septa rubecula	molluscs			
Mollusca	Gastropoda	Talparia talpa	molluscs			mole cowrie
Mollusca	Gastropoda	Thuridilla livida	molluscs		yes	
Mollusca	Gastropoda	Thuridilla neona	molluscs			
Mollusca	Gastropoda	Tritoniopsis elegans	molluscs			
Mollusca	Gastropoda	Trivirostra hordacea	molluscs			
Mollusca	Gastropoda	Trochus stellatus	molluscs			
Mollusca	Gastropoda	Turbo argyrostomus	molluscs			silver-mouthed turban
Mollusca	Gastropoda	Turbo chrysostomus	molluscs			gold-mouthed turban
Mollusca	Gastropoda	Viriola incisa	molluscs		yes	
Myzozoa	Dinophyceae	Amphidinium massartii	unicellular		yes	
Myzozoa	Dinophyceae	Amphidinium operculatum	unicellular		yes	
Myzozoa	Dinophyceae	Heterocapsa rotundata	unicellular		yes	
Ochrophyta	Chrysoparadoxophyceae	Chrysoparadoxa australica	algae		yes	
Ochrophyta	Dictyochophyceae	Octactis octonaria	algae		yes	
Ochrophyta	Dictyochophyceae	Vicicitus globosus	algae		yes	
Ochrophyta	Pelagophyceae	Aureococcus anophagefferens	algae		yes	
Ochrophyta	Pelagophyceae	Pelagomonas calceolata	algae		yes	
Ochrophyta	Phaeophyceae	Dictyota friabilis	algae			
Ochrophyta	Phaeophyceae	Feldmannia mitchelliae	algae		yes	
Ochrophyta	Phaeophyceae	Hydroclathrus clathratus	algae		-	
Ochrophyta	Phaeophyceae	Hydroclathrus tenuis	algae		yes	
Ochrophyta	Phaeophyceae	Hydroclathrus tilesii	algae		yes	

phylum	class	species	group	category	new	vernacular
Ochrophyta	Phaeophyceae	Lobophora variegata	algae			
Ochrophyta	Phaeophyceae	Turbinaria ornata	algae			
Ochrophyta	Pinguiophyceae	Pinguiococcus pyrenoidosus	algae		yes	
Platyhelminthes		Idioplana australiensis			yes	
Porifera	Demospongiae	Callyspongia (Cladochalina) diffusa	sponges		yes	
Porifera	Demospongiae	Callyspongia (Cladochalina) plicifera	sponges		yes	
Porifera	Demospongiae	Chelonaplysilla erecta	sponges		yes	
Porifera	Demospongiae	Chondrilla australiensis	sponges		yes	
Porifera	Demospongiae	Chondrosia collectrix	sponges		yes	
Porifera	Demospongiae	Cladocroce burapha	sponges		yes	
Porifera	Demospongiae	Clathria (Thalysias) curacaoensis	sponges		yes	
Porifera	Demospongiae	Clathria (Wilsonella) rugosa	sponges		,	
Porifera	Demospongiae	Cliona vermifera	sponges		yes	orange boring sponge
Porifera	Demospongiae	Crella (Grayella) cyathophora	sponges		yes	3 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Porifera	Demospongiae	Gelliodes wilsoni	sponges		yes	
Porifera	Demospongiae	Haliclona (Gellius) amboinensis	sponges		yes	
Porifera	Demospongiae	Hooperia anfractuosa	sponges		yes	
Porifera	Demospongiae	Mycale (Carmia) cecilia	sponges		yes	
Porifera	Demospongiae	Ophlitaspongia papilla	sponges		yes	
Porifera	Demospongiae	Paracornulum dubium	sponges		yes	
Porifera	Demospongiae	Pione vastifica	sponges		yes	boring sponge, clione rouge
Porifera	Demospongiae	Pseudoceratina purpurea	sponges		yes	borning sporige, enone rouge
Porifera	Demospongiae	Rhabderemia sorokinae	sponges		yes	
Porifera	Demospongiae	Stryphnus mucronatus	sponges		yes	
Porifera	Demospongiae	Tedania (Tedania) tubulifera	sponges		yes	
Porifera	Demospongiae	Terpios hoshinota	sponges		yes	
Porifera	Demospongiae	Theonella swinhoei	sponges		yes	
Porifera	Homoscleromorpha	Plakina kanaky	sponges		ycs	
Porifera	Homoscleromorpha	Plakinastrella onkodes	sponges		yes	
Rhodophyta	Florideophyceae	Calliblepharis jubata	algae			
Rhodophyta	Florideophyceae	Centroceras clavulatum	algae		yes	
Rhodophyta	Florideophyceae	Ceratodictyon scoparium			1,00	
Rhodophyta	Florideophyceae	Coelothrix irregularis	algae algae		yes	
Rhodophyta	Florideophyceae	Crouania attenuata	algae		yes	
Rhodophyta	Florideophyceae	Galaxaura rugosa			yes	
Rhodophyta	Florideophyceae	Ganonema pinnatiramosa	algae algae		\/OC	
					yes	
Rhodophyta	Florideophyceae	Ganonema pinnatum Gelidiella acerosa	algae		yes	
Rhodophyta	Florideophyceae		algae		yes	
Rhodophyta	Florideophyceae	Gelidiella fanii	algae		yes	
Rhodophyta	Florideophyceae	Herposiphonia secunda	algae		yes	
Rhodophyta	Florideophyceae	Hypnea valentiae	algae			
Rhodophyta	Florideophyceae	Laurencia obtusa	algae		yes	
Rhodophyta	Florideophyceae	Lithophyllum kaiseri	algae		yes	
Rhodophyta	Florideophyceae	Melyvonnea erubescens	algae		yes	
Rhodophyta	Florideophyceae	Palisada parvipapillata	algae		yes	
Rhodophyta	Florideophyceae	Sarconema filiforme	algae		yes	
		Amastigomonas debruynei			yes	