|  |  |  |
| --- | --- | --- |
| **Name** | **Chapter** | **Slide** |
| *Adinandra belukar* | Secondary | 5/26 |
| African Tulip | Waste | 53 |
| African Land snail | Human | 62 |
| Albizia | Waste | 25/37 |
| Albizia | Challenges | 65 |
| Albizia *Falcataria moluccana* | Waste | 34 |
| Albizia flowering | Secondary | 44 |
| *Albizia saman* | Managed | 30 |
| Alexandra palm | Managed | 36 |
| Algal bed(Chek Jawa) | Intertidal | 23 |
| American bullfrog | Human | 55 |
| American bullfrog | Challenges | 53 |
| American cockroach | Introduction | 56 |
| American cockroach (*Periplanata americana*) | Primary | 14 |
| *Anacardiaceae*(Mango family) | Primary | 68 |
| Ancher fish | Coastal | 66 |
| *Anopheles epiroticus* | Coastal | 8 |
| *Anopheles sinensis* | Coastal | 8 |
| Ant | Coastal | 64 |
| Antplant | Secondary | 46 |
| *api api*, sea holly | Coastal | 23/27/31 |
| *Aranda* hybrid | Managed | 70 |
| *Arantheras* hybrid | Managed | 70 |
| Asian Arowana | Challenges | 60 |
| Asian Bonytongue | Challenges | 60 |
| *Asian soft shell turtle* | Human | 56 |
| Asian toad | Waste | 46 |
| Asiophlugis thaumasia | Human | 41 |
| *Asthenodiapsas laevis* (smooth slug snake) | Introduction | 45 |
| *attap chee* | Coastal | 70 |
| Avian Influenza | Managed | 53 |
| *Avicennia marina* | Human | 73 |
| *bakau* | Coastal | 11/23/25/31/33 |
| Baler shell (*Melo melo*) | Subtidal | 22 |
| Banded bay cuckoo | Challenges | 28 |
| Banded bullfrog | Waste | 46 |
| Banded leaf monkey | Primary | 79 |
| *Barbula indica* | Managed | 38 |
| Barnacles | Intertidal | 26/52 |
| Basket star (*Gorgonocephalus caputmedusae*) | Subtidal | 23 |
| Black-lipped conch, *Strombus urceus/gong gong* | Intertidal | 70 |
| Black striped mussel, *Mytlopsis sallei* | Human | 65 |
| Blue spike moss (*Selaginella willdenowii*) | Primary | 13 |
| Bony fish | Subtidal | 40 |
| Bottlenose Dolphins | Subtidal | 47 |
| Brittle stars | Intertidal | 81 |
| *Bronchocela cristatella* (Green crested lizard) | Introduction | 58 |
| *Bronchocela cristatella* (Green crested lizard) | Waste | 57 |
| *Bronchocela cristatella* (Green crested lizard) | Human | 50 |
| Brown shrike | Waste | 45 |
| *Bruguiena* | Coastal | 23/31 |
| *Bruguiera hainesii* | Coastal | 35-37 |
| *Bruguiera hainesii* | Introduction | 42 |
| *Bruguiera sexangula* | Coastal | 35 |
| *Bruguiera sexangula* | Introduction | 42 |
| *Bruguiera* species | Coastal | 31 |
| Byrophyte | Human | 29 |
| *Buah kana* | Primary | 69 |
| Buffalo grass, *Axonopus compressus* | Managed | 49 |
| Bukit Timah NR | Primary | 64 |
| Bulbil | Challenges | 62 |
| *Burseraceae*(Chinese Olive family) | Primary | 68 |
| *Calotes versicolor* | Human | 50 |
| *Carp* | Human | 58 |
| Carpenter bee | Secondary | 30/31 |
| *Casuarina* | Waste | 25/27 |
| *Casuarina spp.* | Biodiversity | 34 |
| Cattail*, Typha sp.* | Managed | 13 |
| *caulerpa spp*(sea grapes) | Intertidal | 33 |
| Central Catchment NR | Primary | 66 |
| Changeable lizard | Waste | 48 |
| Changeable lizard (*Calotes versicolor*) | Introduction | 58 |
| Charybdis japonica | Challenges | 58 |
| Chestnut breasted malkoha | Challenges | 29 |
| Chinese soft shell turtle | Human | 55 |
| *Chloris barbata* | Managed | 52 |
| Chytrid fungus, *Batrachochytrium dendrobatidis* | Challenges | 53 |
| Cicada | Coastal | 39 |
| Cicada tree (*Ploiarium alternifolium*) | Primary | 13 |
| *Cissus Quadrangularis* | Biodiversity | 23 |
| Clams | Subtidal | 26 |
| Clarias batrachus | Challenges | 59 |
| *Clitoria ternatea* | Biodiversity | 22 |
| Clown barb*, Puntius dunckeri* | Lost | 52 |
| Coastal horseshoe crab, *Tachypleus gigas* | Challenges | 37 |
| Cockle | Subtidal | 26 |
| Coconut | Waste | 25/29 |
| Coffee family(*silver timon,wild randa*) | Secondary | 45 |
| Common acacia | Secondary | 29/37 |
| Common acacia | Waste | 25/37 |
| Common birdwing （*Troides helena cerberus*) | Primary | 13 |
| Common mollies, *Peocilia sphenops* | Human | 54 |
| common nerite *Nerita sp.* | Coastal | 62 |
| Cone shell (*Conus spp.*) | Subtidal | 55 |
| Copepods | Subtidal | 36 |
| Coral | Intertidal | 61 |
| coralline algae | Intertidal | 30 |
| Crab-eating frog | Waste | 46 |
| Cream-coloured qiant squirrel | Primary | 79 |
| Cream-coloured qiant squirrel | Human | 7 |
| crowries | Intertidal | 71 |
| *Crustaceans* | Subtidal | 79 |
| *Crustaceans* | Managed | 6 |
| *Culex quinquefasciatus* | Coastal | 10 |
| Custard apple family*(Cyathocalyx, Xylopia*) | Secondary | 45 |
| *Cymodocea serrulata* | Intertidal | 43 |
| *Cyperus rotundus* | Managed | 52 |
| *Dendrobium* hybrid | Managed | 70 |
| Diatoms | Subtidal | 33 |
| *Dinoflagellates* (Red Tide ) | Subtidal | 34 |
| *Dioscorea sansibarensis* | Challenges | 62 |
| *Diploastrea spp.* | Subtidal | 74 |
| Dipterocarp forest | Primary | 67 |
| Dipterocarpaceae (*Meranti* family) | Primary | 68 |
| dog-faced water snake | Coastal | 67 |
| dog-faced water snake | Human | 45 |
| Dragon’s scales | Managed | 37 |
| *Dugong* | Subtidal | 51 |
| Dumeril’s monitor | Human | 30 |
| *dungun* | Coastal | 25/31 |
| Dusky-gilled mudskipper (*Periophthalmus novemradiatus*) | Intertidal | 60 |
| Dwarf Snakehead, *Channa gachua* | Lost | 73 |
| Dwarf Snakehead | Human | 30 |
| Eel Loach, *Panglo muraeformis* | Lost | 32 |
| Egeria | Managed | 25 |
| Elephantopus scaber | Managed | 51 |
| Elodea | Managed | 25 |
| *Enhalus acoroides* | Intertidal | 44 |
| estuarine crocodile | Coastal | 67 |
| *Euphorbia hirta* | Managed | 52 |
| *Fabaceae*(Bean family) | Primary | 68 |
| face-banded sesarmine | Coastal | 63 |
| False killer whale | Subtidal | 49 |
| *Favites spp.* | Subtidal | 73 |
| Fern | Human | 29 |
| Fiddler crab, *Uca spp.* | Coastal | 63 |
| Fiddler crab, Uca spp. | Intertidal | 79 |
| figs(*Ficus* species) Hemi-Epiphyte | Primary | 53 |
| file snake | Coastal | 64 |
| Firefly (*Pteroptyx valida*) | Coastal | 40 |
| Flatback *Chelonia depressa* | Intertidal | 47 |
| Flower crabs*(Portunus pelagicus*) | Subtidal | 53 |
| Flying Lemur, *Cynocephalus variegatus* | Lost | 71 |
| Forest Fighting Fish, *Betta pugnax* | Lost | 53 |
| Funeral Nudibranch | Human | 73 |
| Freshwater South American stingrays | Challenges | 55 |
| Frogfish | Intertidal | 86 |
| Gambier | Secondary | 13 |
| Gambier | Human | 10 |
| Garden supple skink | Waste | 48 |
| German cockroach | Introduction | 56 |
| Giant African land snail | Introduction | 56 |
| Giant clam | Intertidal | 55 |
| Giant clams | Subtidal | 78 |
| Giant mudskipper (*Periophthalmodon schlosseri*) | Intertidal | 60 |
| Golden Arowana | Challenges | 60 |
| Golden Dragon Fish | Challenges | 60 |
| Golden Orb Spider | Secondary | 54 |
| *Gong gong* | Intertidal | 70 |
| Goose Barnacles | Managed | 7 |
| Gray Loach, *Nemacheilus selangoricus* | Lost | 32 |
| Greater mousedeer | Human | 30 |
| Green Broadbill, *Calyptomena viridis* | Lost | 55 |
| Green sea turtle *Chelonia mydas* | Intertidal | 47 |
| Green turtle | Subtidal | 43 |
| Grey-headed Fish Eagle | Challenges | 28 |
| Grey Land Crab, *Discoplax hirtipes* | Lost | 54 |
| *gula Melaka* | Coastal | 70 |
| Guppies | Introduction | 56 |
| Guppies | Human | 54 |
| *halimeda spp* | Intertidal | 34 |
| *halimeda spp* | Subtidal | 77 |
| *Halophila ovalis* | Intertidal | 41 |
| *Halophila spinulosa* | Intertidal | 42 |
| Harlequin Rasbora, *Trigonomorpha heteromorpha* | Lost | 65 |
| *Hawksbill Eretmochelys imbricata* | Intertidal | 47 |
| Hermit crabs | Intertidal | 67 |
| *Hevea brasiliensis*(rubber) | Secondary | 18 |
| House crow | Waste | 45 |
| Houseshoe crab | Coastal | 77 |
| Houseshoe crab, *Limulus, Tachypleus, Carcinoscorpius* | Challenges | 37 |
| Hydilla | Secondary | 52 |
| *Hydrilla verticillata* | Managed | 21 |
| Hydroids | Subtidal | 79 |
| Indo-Pacific Humpbacked Dolphins | Subtidal | 46 |
| *Irmengardia johnsonl* | Lost | 34 |
| Jaguar guapote | Human | 60 |
| Javan myna | Waste | 45 |
| jelly fish | Subtidal | 52 |
| *Johora Singaporensis* | Lost | 34 |
| *Kacang Kacang* | Coastal | 27 |
| King cobra(*Ophiophagus Hannah*) | Waste | 60 |
| Knife fish | Human | 60 |
| Knobby sea star, *Protoreaster nodosus* | Intertidal | 82 |
| Knobby sea star | Human | 73 |
| Koi | Human | 58 |
| Koster's curse | Primary | 93 |
| *Lalang* | Biodiversity | 23 |
| *Lalang* | Secondary | 6 |
| *Lalang* grass root | Biodiversity | 23 |
| Land hermit crab | Waste | 47 |
| Laurel family(*Litsea, shiny laurel*) | Secondary | 45 |
| Leaf-fish, *Nandus nebulosis* | Lost | 33 |
| Leafy Liverwort | Secondary | 39/40 |
| Leatherback turtle | Subtidal | 44 |
| Leathery turtle, *Dermochelys coriacea* | Lost | 56 |
| Lee Crab, *Leelumnus radium* | Lost | 69 |
| Lesser dog-faced fruit bat | Secondary | 30/54 |
| Lesser Mousedeer,*Tragulus kanchil* | Human | 41 |
| Lesser trema(*trema cannabina*) | Secondary | 22 |
| Leucaena | Waste | 25/39 |
| Leucosid crabs | Intertidal | 75 |
| *Ligia spp.* (sea cockroach) | Intertidal | 67 |
| Lithophyte | Managed | 38 |
| Lithophyte fern, *Pteris vittata* | Managed | 40 |
| Loggerhead Caretta caretta | Intertidal | 47 |
| Loggerhead turtle | Subtidal | 42 |
| Long legged fly | Human | 32 |
| Long-tailed macaque | Primary | 80 |
| Long-tailed macaque | Secondary | 54 |
| Long-tailed macaque | Human | 7 |
| Lotus | Secondary | 52 |
| Lowland freshwater Crab, *Parathelphusa macula*ta | Lost | 66 |
| Lumnitzera | Coastal | 23 |
| *Macaranga gigantea* | Secondary | 46 |
| Macroalgae | Intertidal | 29 |
| Macroalgal Beds | Intertidal | 36 |
| *Mahang* | Secondary | 46 |
| Malayan Cherry | Waste | 54 |
| Malayan colugo(flying lemur) | Primary | 79 |
| Malayan pangolin | Secondary | 54 |
| Malayan porcupine | Human | 30 |
| *Mangosteen* family(bintangor, wild Kandis) | Secondary | 45 |
| Mangrove Horseshoe crab*, Carcinoscorpius rotundicauda* | Challenges | 37 |
| mangrove periwinkle | Coastal | 62 |
| mangrove slug | Coastal | 62 |
| Mangrove(Sungei Buloh) | Intertidal | 20 |
| *Marchantia sp.* Liverwort | Primary | 50 |
| Marine snails | Subtidal | 26 |
| Marine snails *Turbo bruneus* | Intertidal | 68 |
| Marine turtles *Hawksbill turtle* | Subtidal | 41 |
| Mayan Cichlid | Human | 60 |
| Meiofauna | Intertidal | 50 |
| *Melastoma malabathricum* | Secondary | 48 |
| *mentigi* | Coastal | 60 |
| *Mikania micrantha* | Challenges | 62 |
| Mile-A-Minute | Waste | 55 |
| mistletoe | Primary | 52 |
| *Mokara* hybrid | Managed | 71 |
| Molluscs | Subtidal | 79 |
| Monopterus albus | Challenges | 59 |
| Moon Crabs *Matuta planipes /Ashtoret lunaris* | Intertidal | 58 |
| Moss | Primary | 50 |
| Moss | Secondary | 39/41 |
| mound crab | Coastal | 64 |
| Mud Lobster | Biodiversity | 27 |
| Mud Lobsters *Thalassina anomala* | Coastal | 63 |
| Mud Lobsters *Thalassina anomala* | Intertidal | 57 |
| mud shrimp | Coastal | 64 |
| Mudflat | Intertidal | 17 |
| Mudskipper | Coastal | 66 |
| Mudskipper | Intertidal | 59 |
| Mussles | Intertidal | 26 |
| Mynas | Human | 52 |
| Mynas | Challenges | 68 |
| Myrtle family(silver back) | Secondary | 45 |
| Mytilopsis sallei | Challenges | 57 |
| Naiads | Managed | 25 |
| Narrow-lidded pitcher plant | Secondary | 29/34 |
| nipah palm | Coastal | 27/70 |
| Noble volute (*Cymbiola nobilis*) | Subtidal | 21 |
| Norway rat (*Pattus norvegicus*) | Primary | 14 |
| *Nudibranch* | Subtidal | 78 |
| nyirah(*Xylocarpus)* | Coastal | 25/30/31 |
| Nypa fruiticans | Coastal | 71 |
| Oak leaf fern | Managed | 37 |
| Olive Ridley Lepidochelys olivacea | Intertidal | 47 |
| *Oncidium* hybrid | Managed | 71 |
| *Ophioglossum nudicaule* | Managed | 50 |
| Oriental pied hornbill | Primary | 89 |
| Oriental pied hornbill | Human | 45 |
| Orthopteran | Human | 41 |
| Owl chick | Human | 45 |
| Oysters | Intertidal | 53 |
| Pacific yew (*Taxus brevifolia*) | Primary | 23 |
| *Padina spp* | Intertidal | 31 |
| *Padina spp.* | Subtidal | 77 |
| Pagolin*, Manis javanica* | Lost | 72 |
| Pangolin | Human | 43 |
| Paku laut(*Acrosticum aureum*) | Waste | 33 |
| Palm civet | Primary | 82 |
| Parasite | Primary | 56 |
| Passenger Pigeon, *Ectopistes migratorius* | Lost | 16 |
| Passiflora foetida | Challenges | 62 |
| pelir musang | Coastal | 60 |
| Pepper | Secondary | 13 |
| Pepper | Human | 10 |
| perepat | Coastal | 23/31 |
| *Phyllophorus sp*(sea cucumber) | Biodiversity | 20 |
| *Phytolopsis punctata* (Blackwater mud snake) | Introduction | 45 |
| *piai raya* | Coastal | 33 |
| Pieapple | Secondary | 13 |
| Pied Hornbill | Lost | 75 |
| Pigeon | Challenges | 71 |
| Pikehead, *Luciocephalus pulcher* | Lost | 32 |
| Pilumnid crab *Leelumnus radium* | Intertidal | 74 |
| Plantian squirrel | Secondary | 54 |
| *Platygyra spp* | Subtidal | 73 |
| *Pong pong* | Coastal | 77 |
| *Presbytis femoralis femoralis* | Lost | 36 |
| Raffles' pitcher plant | Secondary | 29/34 |
| *Rafflesia arnoldii* | Primary | 56 |
| *Ratufa affinis affinis* | Lost | 35 |
| Rays | Subtidal | 38 |
| red berry shell | Coastal | 62 |
| Red crowned barbet | Challenge | 28 |
| Red ear slider | Biodiversity | 40 |
| Red ear slider | Introduction | 59 |
| Red egg crab, *Atergatis integerrimus* | Intertidal | 76 |
| Red jungle fowl | Waste | 59 |
| Red jungle fowl | Challenge | 28 |
| Red-eared slider | Primary | 93 |
| Red-eared slider | Human | 57 |
| Reef flat(Chek Jawa) | Intertidal | 21 |
| Reticulated python | Primary | 78 |
| Reticulated python | Secondary | 55 |
| Reticulated Swamp Crab, *Parathelphusa reticulata* | Lost | 82 |
| *Rhizophora* | Biodiversity | 74 |
| *Rhizophora* | Coastal | 11 |
| *Rhizophora mucronata* | Coastal | 28 |
| Rock Barnacles | Managed | 7 |
| Rockweed | Intertidal | 26 |
| Rocky shore(Laborador, Chek jawa,St John's island | Intertidal | 22 |
| Rough trema(*trema* *tomentosa*) | Secondary | 22 |
| Rubber | Secondary | 13 |
| Rubber family(*mahang*) | Secondary | 45/56 |
| Rufous woodpecker | Challenges | 28 |
| Saga(*Adenanthera paronina*) | Waste | 30 |
| Samber deer | Primary | 66/77 |
| Sand Anemones | Intertidal | 51 |
| Sand crab, *Scopimera spp.* | Intertidal | 62 |
| Sand tubeworm | Intertidal | 64 |
| Sandflat(Chek Jawa) | Intertidal | 19 |
| Sapotaceae(Chiku family) | Primary | 68 |
| Saprophyte | Primary | 55 |
| *sargassum spp* | Intertidal | 32 |
| *sargassum spp* | Subtidal | 33/77 |
| Scarlet-backed FLowerpecker | Human | 45 |
| Screw pine(*Pandanus odoratissimus*) | Waste | 32 |
| Sea almond | Coastal | 77 |
| Sea anemone | Subtidal | 80 |
| Sea cockroach | Managed | 6 |
| Sea cow *Dugong dugon* | Intertidal | 47 |
| Sea cucumbers | Intertidal | 83 |
| Sea fan | Subtidal | 19 |
| Sea fans | Subtidal | 79 |
| sea grapes | Intertidal | 33 |
| sea hibiscus | Coastal | 33 |
| Sea Lettuce | Waste | 25 |
| Sea pen | Subtidal | 20 |
| Sea purselane | Coastal | 60 |
| Sea Putat(*Barringtonia asisatica*) | Coastal | 51/53 |
| Sea slater, *Ligia sp.* | Managed | 6 |
| Sea snake (*Laticauda colubrina*) | Subtidal | 45 |
| sea teak | Coastal | 60 |
| Sea urchins | Subtidal | 78 |
| Seagrass(Chek Jawa) | Intertidal | 18 |
| Sealing wax palm | Managed | 36 |
| Seashore morning glory(*Ipmoea pes-caprae*) | Coastal | 51/52 |
| Seashore morning glory(*Ipmoea pes-caprae*) | Waste | 25 |
| Seashore Pandanus | Coastal | 34 |
| Senduduk | Secondary | 47 |
| Seraya = *Shorea curtisii* | Primary | 71 |
| *Seriatopora hystrix* | Subtidal | 65 |
| Silver back *Rhodamnia cinerea* | Secondary | 48 |
| Simpoh air | Secondary | 29 |
| Singapore Freshwater Crab, *Johora Singaporensis* | Lost | 67 |
| Singapore Kopsia, *Kopsia Singaporensis* | Lost | 64 |
| Singapuriola separata | Human | 41 |
| Six-banded barb, *Puntius Johorensis* | Lost | 32 |
| Small-clawed Otter, *Amblonyx cinerea* | Lost | 70 |
| Smooth coated otter | Human | 45 |
| Snakehead | Human | 60 |
| Soft corals | Subtidal | 79 |
| Solefish | Subtidal | 26 |
| South American armoured catfish | Human | 58 |
| South American apple snail, *Pomacea canaliculata* | Human | 61 |
| Sperm whale | Subtidal | 50 |
| Spider conch, *Lambis lambis* | Intertidal | 72 |
| Spitting cobra(*Naja sumatrana*) | Waste | 58 |
| Sponges | Subtidal | 79 |
| Spotted wood owl | Challenges | 28 |
| Stingray | Primary | 93 |
| *Stylophora pistillata* | Subtidal | 65 |
| Sun bear | Human | 7 |
| Sunda Pangolin, *Manis javanica* | Human | 41 |
| Sunflower Mushroom Corals | Human | 73 |
| superb fig | Coastal | 60 |
| Swamp forest crab (*Parathelphusa reticulata*) | Primary | 75 |
| Syzygium grande | Waste | 31 |
| T-barb, *Puntius lateristriga* | Lost | 33 |
| Tapioca | Secondary | 13 |
| Tekong oysters | Intertidal | 54 |
| telescope shell | Coastal | 62 |
| Temasek Tree Snail, *Amphidromus stricallosus temasek* | Lost | 68 |
| Tembusu | Secondary | 29 |
| Tembusu | Managed | 33 |
| tengar | Coastal | 31 |
| *Thismia aseroe* | Primary | 55 |
| Tilapia | Introduction | 56 |
| Tilapia, *Oreochromis mossambicus* | Human | 53 |
| Tiup tiup(*Adinandra dumosa*) | Secondary | 26/28/29 |
| Tom’s Giant Fighting Fish, *Betta tomi* | Lost | 53 |
| tree-climbing crab | Coastal | 63 |
| Tremellia timah | Human | 41 |
| *Tridax procumbens* | Managed | 50 |
| Traveller’s palm | Managed | 36 |
| Trema *belukar* | Secondary | 5/22/24 |
| Tributyltin | Human | 66 |
| *Trochus spp* | Intertidal | 69 |
| Tropical pitcher plants | Secondary | 29/36 |
| Tunicates | Subtidal | 78 |
| *Turbinaria spp.* | Subtidal | 74 |
| *Ulva spp* | Intertidal | 35 |
| *Ulva spp* | Subtidal | 77 |
| *Vanda Miss Joaquim* | Biodiversity | 13 |
| Velcro crab, *Camposcia retusa* | Intertidal | 77 |
| *Vitex pinnata* | Secondary | 18 |
| *Vrydagzynea lancifolia* orchid | Human | 30 |
| Wart snake *Acrochordus granulatus* | Intertidal | 47 |
| Water hyacinth | Managed | 14 |
| Water lilis | Secondary | 52 |
| water monitor | Coastal | 67 |
| Water spangle, *Salvinia molesta* | Managed | 19 |
| Whale Shark, *Rhinodou typus* | Subtidal | 39 |
| Whalebone whale | Subtidal | 48 |
| White-headed munia(Javan sparrow) | Waste | 45 |
| Wikimedia | Human | 11 |
| wild magnolia flower | Biodiversity | 22 |
| Wild Tumeric | Biodiversity | 23 |
| *Xanthid* crabs | Intertidal | 73 |
| Yellow crazy ant | Human | 63 |
| Yellow flame | Coastal | 77 |
| Yellow flame | Managed | 31 |
| Yellow-vented bulbul | Secondary | 31/37 |
| Zooxanthellae | Subtidal | 66 |
| *Zoysia matrella* | Managed | 49 |