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

Biodiversity survey for Aldabra Atoll

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



Credit: Seychelles Island Foundation.

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 Aldabra Atoll in April 2023. A total of 20 samples were collected at 5 locations in the park covering different habitats: Bras Monsieur Claremont, Ile esprit, Polymnie, Settlement beach, and West Grand terre (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, 10 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 10 samples that were analyzed covering all locations that were sampled in the World Heritage site.

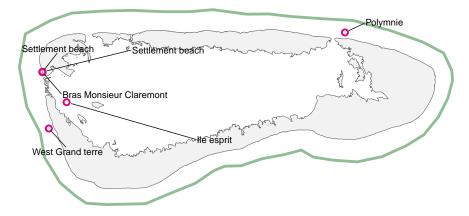


Figure 1: Map of the sampling locations.

DNA sequencing

Sequencing of the DNA from 10 samples resulted in over 20 million sequence reads, from which we collected 27,478 unique sequences or ASVs (Tables 1 and 2).

reads	asvs
20773852	27478

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

locality	materialSampleID	sampleSize	reads	asvs	species
Bras Monsieur Claremont	EE0475	1500	1536911	8743	198
Bras Monsieur Claremont	EE0480	1560	2318711	8796	218
lle esprit	EE0472	1800	2398657	11901	258
lle esprit	EE0479	1800	1660528	7143	200
Polymnie	EE0487	1500	1272506	6747	208
Polymnie	EE0489	20	1326312	4327	83
Settlement beach	EE0473	1313	3038109	12103	303
Settlement beach	EE0474	1500	3033773	10723	306
Settlement beach	EE0488	1500	2824796	13373	308

West Grand terre EE0490	1500	1363549	6610	191
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Table 2: Reads, ASVs, and species by sample.

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 640 species, including 303 fish species, 2 mammalian species, and 2 turtle species (Table 3). Species from other groups, such as algae, molluscs, crustaceans, sponges, and cnidarians, were also detected (Figures 2 and 3). This number of species detected represents about 35% of the 1,619 species known from Aldabra Atoll in the OBIS database. Of the 640 species detected, 362 are not among the species previously reported from Aldabra Atoll to the UNESCO OBIS database. 18 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.

group	eDNA species	total species	fraction
fish	303	864	0.35
mammals	2	3	0.67
turtles	1	3	0.33

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	1	2	0.50
EN	7	15	0.47
VU	10	85	0.12

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

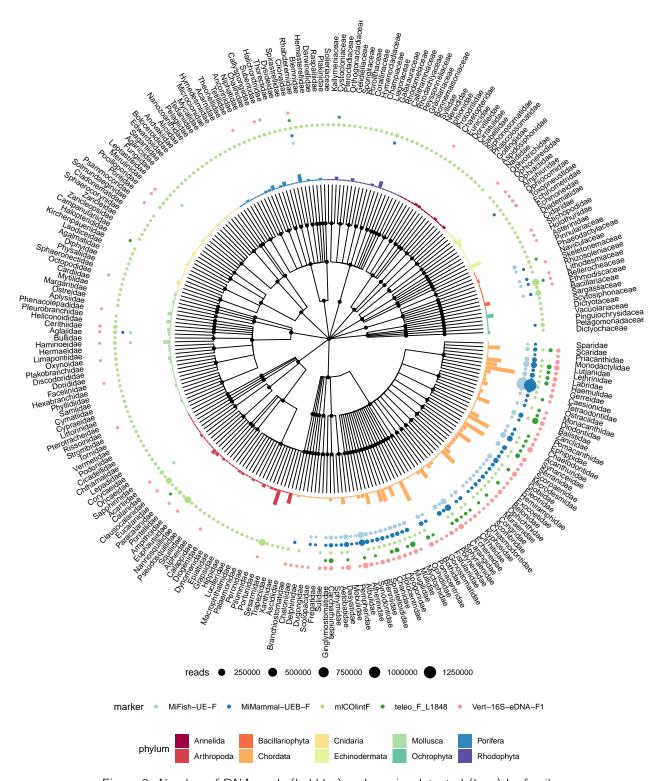


Figure 2: Number of DNA reads (bubbles) and species detected (bars) by family.

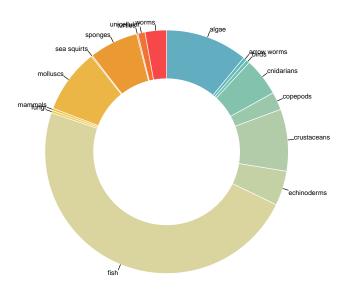


Figure 3: Distribution of detected species across groups.

phylum	class	species	group	category	new	vernacular
Amoebozoa	Discosea	Neoparamoeba aestuarina	unicellular		yes	
Amoebozoa	Discosea	Neoparamoeba pemaquidensis	unicellular		yes	
Annelida	Clitellata	Doliodrilus tener	worms		yes	
Annelida	Clitellata	Heronidrilus fastigatus	worms		yes	
Annelida	Polychaeta	Astomus taenioides	worms		yes	
Annelida	Polychaeta	Bispira manicata	worms		yes	
Annelida	Polychaeta	Chaetopterus variopedatus	worms		yes	parchment worm, grand chétoptère
Annelida	Polychaeta	Ctenodrilus pacificus	worms		yes	
Annelida	Polychaeta	Eunice afra	worms		yes	
Annelida	Polychaeta	Iphione henshawi	worms		yes	
Annelida	Polychaeta	Leonnates decipiens	worms		yes	
Annelida	Polychaeta	Marphysa mossambica	worms		yes	
Annelida	Polychaeta	Ophryotrocha macrovifera	worms		yes	
Annelida	Polychaeta	Phyllochaetopterus verrilli	worms		yes	
Annelida	Polychaeta	Syllis picta	worms		yes	
Annelida	•	Aspidosiphon (Akrikos) albus	worms		yes	
Annelida		Phascolosoma (Phascolosoma) nigrescens	worms		yes	
Annelida		Phascolosoma (Phascolosoma) stephensoni	worms		yes	
Annelida		Siphonosoma funafuti	worms		yes	
Annelida		Themiste (Lagenopsis) lageniformis	worms		yes	
Arthropoda	Branchiopoda	Pseudevadne tergestina	crustaceans		yes	
Arthropoda	Copepoda	Acartia (Acartia) negligens	copepods		yes	
Arthropoda	Copepoda	Acrocalanus gracilis	copepods		yes	
Arthropoda	Copepoda	Calocalanus pavo	copepods		yes	
Arthropoda	Copepoda	Calocalanus plumulosus	copepods		yes	
Arthropoda	Copepoda	Calocalanus styliremis	copepods		yes	
Arthropoda	Copepoda	Clausocalanus furcatus	copepods		yes	
Arthropoda	Copepoda	Copilia hendorffi	copepods		yes	
Arthropoda	Copepoda	Farranula gibbula	copepods		yes	
Arthropoda	Copepoda	Labidocera detruncata	copepods		yes	
Arthropoda	Copepoda	Labidocera madurae	copepods		yes	
Arthropoda	Copepoda	Oncaea media	copepods		yes	
Arthropoda	Copepoda	Pareucalanus attenuatus	copepods		yes	
Arthropoda	Copepoda	Pontella fera	copepods		yes	
Arthropoda	Copepoda	Sapphirina stellata	copepods		yes	
Arthropoda	Copepoda	Undinula vulgaris	copepods		ycs	
Arthropoda	Hexapoda	Macrosteles quadrilineatus	сорероиз		yes	
Arthropoda	Malacostraca	Alima pacifica	crustaceans		yes	
Arthropoda	Malacostraca	Alpheus pacificus	crustaceans		yes	
Arthropoda	Malacostraca	Calappa exanthematosa	crustaceans		yes	
Arthropoda	Malacostraca	Calappa examinematosa Calappa hepatica	crustaceans		yes	smooth box crab
Arthropoda	Malacostraca	Chaenostoma boscii	crustaceans		yes	SHIOOTH DOV CLUD
Arthropoda	Malacostraca	Chaenostoma sinuspersici	crustaceans		yes	
Arthropoda	Malacostraca	Cycloachelous granulatus	crustaceans		yes	
Arthropoda	Malacostraca	Cyclodius obscurus	crustaceans		-	
Arthropoda	Malacostraca	Cymadusa filosa	crustaceans		yes	
Arthropoda	Malacostraca	Dardanus deformis	crustaceans		yes	pale anemone hermit
Arthropoda	Malacostraca	Dardanus deformis Dardanus scutellatus			\ (OC	paic anemone nermit
•			crustaceans		yes	
Arthropoda	Malacostraca	Dynomene praedator	crustaceans		yes	
Arthropoda	Malacostraca	Etisus bifrontalis	crustaceans		yes	

phylum	class	species	group	category	new	vernacular
Arthropoda	Malacostraca	Euphausia diomedeae	crustaceans		yes	
Arthropoda	Malacostraca	Euphausia tenera	crustaceans		yes	
Arthropoda	Malacostraca	Gaillardiellus rueppelli	crustaceans		yes	
Arthropoda	Malacostraca	Gonioinfradens paucidentatus	crustaceans			
Arthropoda	Malacostraca	Hippa adactyla	crustaceans		yes	
Arthropoda	Malacostraca	Kraussia rugulosa	crustaceans		yes	
Arthropoda	Malacostraca	Leptodius gracilis	crustaceans		yes	
Arthropoda	Malacostraca	Liomera bella	crustaceans		yes	pretty liomera
Arthropoda	Malacostraca	Lucifer typus	crustaceans		yes	standard lucifer prawn, gamba des monts sous-marins
Arthropoda Arthropoda	Malacostraca	Lybia tessellata	crustaceans		yes	carrying crab
Arthropoda	Malacostraca	Macrophthalmus (Macrophthalmus) milloti	crustaceans		yes	
Arthropoda	Malacostraca	Menaethius monoceros	crustaceans		yes	
Arthropoda	Malacostraca	Metopograpsus thukuhar	crustaceans		yes	
Arthropoda	Malacostraca	Pachygrapsus minutus	crustaceans		yes	
Arthropoda	Malacostraca	Palaemonella aliska	crustaceans		yes	
Arthropoda	Malacostraca	Parasesarma samawati	crustaceans		yes	
Arthropoda	Malacostraca	Percnon abbreviatum	crustaceans		yes	
Arthropoda	Malacostraca	Percnon guinotae	crustaceans		yes	
Arthropoda	Malacostraca	Pilodius areolatus	crustaceans		yes	areolated xanthid crab
Arthropoda	Malacostraca	Pilumnus tahitensis	crustaceans		yes	areolated Admitted Crab
Arthropoda	Malacostraca	Pilumnus vespertilio	crustaceans		yes	
Arthropoda	Malacostraca	Pseudosquilla ciliata	crustaceans		yes	
Arthropoda	Malacostraca	Pullosquilla litoralis	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita admete	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita damete Thalamita chaptalii	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita chaptaiii Thalamita coeruleipes	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita cocraicipes Thalamita crenata	crustaceans		ycs	crenate swimming crab
Arthropoda	Malacostraca	Thalamita gatavakensis	crustaceans		yes	Cremate swimming crab
Arthropoda	Malacostraca	Thalamita gatavakensis Thalamita gloriensis	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita gioriciisis Thalamita integra	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita integra Thalamita parvidens	crustaceans		yes	
Arthropoda	Malacostraca	Thalamita seurati	crustaceans		•	
Arthropoda	Malacostraca	Thalamita seurati Thalamita stephensoni	crustaceans		yes yes	
Arthropoda	Malacostraca	Trapezia lutea	crustaceans			
Arthropoda	Malacostraca	Xiphonectes iranjae	crustaceans		yes	
Arthropoda	Malacostraca	Zosimus aeneus	crustaceans		yes	
Arthropoda	Thecostraca	Lepas (Lepas) anserifera				googo harnagla
	Thecostraca	Tetrachthamalus oblitteratus	crustaceans		yes	goose barnacle
Arthropoda			crustaceans		yes	
Ascomycota	Dothideomycetes	Cladosporium herbarum	fungi		yes	
Ascomycota	Eurotiomycetes	Penicillium digitatum	fungi		yes	
Bacillariophyta	Bacillariophyceae	Bellerochea polymorpha	algae		yes	
Bacillariophyta	Bacillariophyceae	Cylindrotheca closterium	algae		yes	
Bacillariophyta	Bacillariophyceae	Ethmodiscus punctiger	algae		yes	
Bacillariophyta	Bacillariophyceae	Haslea pseudostrearia	algae		yes	
Bacillariophyta	Bacillariophyceae	Lithodesmioides polymorpha	algae		yes	
Bacillariophyta	Bacillariophyceae	Navicula minima	algae		yes	
Bacillariophyta	Bacillariophyceae	Phaeodactylum tricornutum	algae		yes	
Bacillariophyta	Bacillariophyceae	Pinnularia acrosphaeria	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia abrensis	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia caciantha	algae		yes	

Bacıllarıophyta
Continued on next page

D '11 ' 1 '		species	group	category	new	vernacular
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia pseudodelicatissima	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia sabit	algae		yes	
Bacillariophyta	Bacillariophyceae	Skeletonema menzelii	algae		yes	
Bacillariophyta	Bacillariophyceae	Sundstroemia setigera	algae		yes	
Bigyra	Bicoecea	Caecitellus parvulus			yes	
Cercozoa	Chlorarachnea	Bigelowiella natans	unicellular		yes	
Cercozoa	Chlorarachnea	Chlorarachnion reptans	unicellular		yes	
Chaetognatha	Sagittoidea	Aidanosagitta neglecta	arrow worms		yes	
Chaetognatha	Sagittoidea	Ferosagitta robusta	arrow worms		yes	
Chaetognatha	Sagittoidea	Krohnitta subtilis	arrow worms		yes	
Chlorophyta	Mamiellophyceae	Dolichomastix tenuilepis	algae		yes	
Chlorophyta	Mamiellophyceae	Mantoniella squamata	algae		yes	
Chlorophyta	Mamiellophyceae	Micromonas pusilla	algae		yes	
Chlorophyta		Chloroparvula pacifica	algae		yes	
Chlorophyta		Chloropicon laureae	algae		yes	
Chlorophyta		Chloropicon mariensis	algae		yes	
Chlorophyta		Chloropicon primus	algae		yes	
Chlorophyta		Chloropicon roscoffensis	algae		yes	
Chlorophyta		Chloropicon sieburthii	algae			
Chordata	Ascidiacea	Ascidia ahodori			yes	
Chordata		Arenaria interpres	sea squirts birds	LC	yes	
Chordata	Aves Aves		birds	LC		ruddy turnstone, tournepierre à collier
		Fregata minor				great frigatebird, frégate du Pacifique
Chordata	Aves	Sula sula	birds	LC		red-footed booby, fou à pieds rouges
Chordata	Elasmobranchii	Aetobatus narinari	fish	EN	yes	spotted eagle ray
Chordata	Elasmobranchii	Carcharhinus amblyrhynchos	fish	EN		grey reef shark
Chordata	Elasmobranchii	Carcharhinus melanopterus	fish	VU		blacktip reef shark
Chordata	Elasmobranchii	Himantura leoparda	fish	VU	yes	
Chordata	Elasmobranchii	Himantura uarnak	fish	EN	yes	honeycomb stingray
Chordata	Elasmobranchii	Mobula birostris	fish	EN	yes	
Chordata	Elasmobranchii	Nebrius ferrugineus	fish	VU		tawny nurse shark, requin nourrice fauve
Chordata	Elasmobranchii	Negaprion acutidens	fish	EN		sicklefin lemon shark
Chordata	Elasmobranchii	Pateobatis fai	fish	VU		
Chordata	Elasmobranchii	Pateobatis hortlei	fish	NT	yes	
Chordata	Elasmobranchii	Sphyrna lewini	fish	CR		scalloped hammerhead
Chordata	Elasmobranchii	Taeniurops meyeni	fish	VU		
Chordata	Elasmobranchii	Urogymnus asperrimus	fish	VU	yes	porcupine ray
Chordata	Leptocardii	Asymmetron lucayanum			yes	
Chordata	Leptocardii	Epigonichthys maldivensis			yes	
Chordata	Mammalia	Dugong dugon	mammals	VU	yes	dugong
Chordata	Mammalia	Stenella longirostris	mammals	LC	yes	long-snouted spinner dolphin, dauphin longirostre
Chordata	Teleostei	Abudefduf sexfasciatus	fish	LC	,	scissortail sergeant
Chordata	Teleostei	Abudefduf vaigiensis	fish	LC		Indo-Pacific sergeant
Chordata	Teleostei	Acanthurus blochii	fish	LC		ringtail surgeonfish
Chordata	Teleostei	Acanthurus leucosternon	fish	LC		powder-blue 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
	Teleostei	Acanthurus nigricauda Acanthurus nigriofuscus	fish	LC		brown surgeonfish
Chardata			HSH	LC		DIOWII SUIGEOIIISII
Chordata Chordata	Teleostei	Acanthurus tennentii	fish	LC		.

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Acanthurus xanthopterus	fish	LC		yellowfin surgeonfish
Chordata	Teleostei	Acentrogobius nebulosus	fish		yes	
Chordata	Teleostei	Aethaloperca rogaa	fish			redmouth grouper
Chordata	Teleostei	Albula glossodonta	fish	VU	yes	roundjaw bonefish
Chordata	Teleostei	Amblycirrhitus bimacula	fish	LC		
Chordata	Teleostei	Amblygobius phalaena	fish	LC		
Chordata	Teleostei	Anampses caeruleopunctatus	fish	LC		bluespotted wrasse
Chordata	Teleostei	Apogon semiornatus	fish	LC		obliquebanded cardinalfish
Chordata	Teleostei	Apogonichthys perdix	fish		yes	perdix cardinalfish
Chordata	Teleostei	Aprion virescens	fish	LC		green jobfish
Chordata	Teleostei	Arothron hispidus	fish	LC		bristly puffer
Chordata	Teleostei	Arothron meleagris	fish	LC		Guineafowl puffer
Chordata	Teleostei	Arothron nigropunctatus	fish	LC		blackspotted puffer
Chordata	Teleostei	Aspidontus taeniatus	fish	LC		mimic blenny
Chordata	Teleostei	Asterropteryx semipunctata	fish	LC		,
Chordata	Teleostei	Atherinomorus lacunosus	fish	LC	ves	robust silverside
Chordata	Teleostei	Balistapus undulatus	fish	LC	,	orangestriped
Chordata	Teleostei	Balistoides viridescens	fish	LC		titan triggerfish
Chordata	Teleostei	Blenniella chrysospilos	fish	LC		gg
Chordata	Teleostei	Blenniella periophthalmus	fish	LC		blue-dashed rockskipper
Chordata	Teleostei	Bothus pantherinus	fish	LC		panther flounder
Chordata	Teleostei	Brotula multibarbata	fish	LC		goatsbeard brotula
Chordata	Teleostei	Caesio caerulaurea	fish	LC		blue and gold fusilier
Chordata	Teleostei	Callechelys catostoma	fish	LC		Sido dila gola lasino.
Chordata	Teleostei	Callechelys marmorata	fish	LC		marbled snake eel
Chordata	Teleostei	Calotomus carolinus	fish	LC		Carolines parrotfish
Chordata	Teleostei	Calotomus spinidens	fish	LC		spinytooth parrotfish
Chordata	Teleostei	Cantherhines dumerilii	fish	LC		barred filefish
Chordata	Teleostei	Canthernines damernin	fish	LC		wier-net filefish
Chordata	Teleostei	Canthigaster bennetti	fish	LC		Bennett's sharpnose puffer
Chordata	Teleostei	Caracanthus maculatus	fish	LC	ves	spotted coral croucher
Chordata	Teleostei	Carangoides ferdau	fish	LC	ycs	blue trevally
Chordata	Teleostei	Caranx ignobilis	fish	LC		giant trevally
Chordata	Teleostei	Caranx melampyqus	fish	LC		bluefin trevally
Chordata	Teleostei	Caranx sexfasciatus	fish	LC		bigeye trevally
Chordata	Teleostei	Centropyge multispinis	fish	LC		dusky angelfish
Chordata	Teleostei	Cephalopholis argus	fish	LC		peacock grouper
Chordata	Teleostei	Cephalopholis miniata	fish	LC		coral grouper
Chordata	Teleostei	Cephalopholis sexmaculata	fish	LC		sixspot grouper
Chordata	Teleostei	Cephalopholis sonnerati	fish	LC		tomato hind
Chordata	Teleostei	Cephalopholis urodeta	fish	LC		darkfin hind
Chordata	Teleostei	Cetoscarus bicolor	fish	LC		
						bicolour parrotfish
Chordata Chordata	Teleostei Teleostei	Chaetodon auriga	fish fish	LC LC	1/00	threadfin butterflyfish
Chordata Chordata	Teleostei Teleostei	Chaetodon austriaciones		LC	yes	exquisite butterflyfish
		Chaetodon guttatissimus	fish			peppered butterflyfish
Chordata	Teleostei	Chaetodon kleinii	fish	LC		sunburst butterflyfish
Chordata	Teleostei	Chaetodon melannotus	fish	LC		blackback butterflyfish
Chordata	Teleostei	Chaetodon meyeri	fish	LC		scrawled butterflyfish
Chordata	Teleostei	Charles to the least of	fish	LC		milkfish, chano
Chordata	Teleostei	Cheilinus trilobatus	fish	LC		tripletail wrasse

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Cheilinus undulatus	fish	EN		humphead wrasse
Chordata	Teleostei	Cheilopogon cyanopterus	fish	LC	yes	margined flyingfish
Chordata	Teleostei	Cheilopogon spilonotopterus	fish		yes	stained flyingfish
Chordata	Teleostei	Chlorurus sordidus	fish	LC	-	
Chordata	Teleostei	Chromis viridis	fish	LC		blue-green damselfish
Chordata	Teleostei	Chromis xanthochira	fish	LC	ves	3
Chordata	Teleostei	Chrysiptera biocellata	fish	LC	J	twinspot damselfish
Chordata	Teleostei	Chrysiptera brownriggii	fish	LC		
Chordata	Teleostei	Chrysiptera unimaculata	fish	LC		onespot damselfish
Chordata	Teleostei	Cirrhitichthys oxycephalus	fish	LČ		pixy hawkfish
Chordata	Teleostei	Cirripectes castaneus	fish	LC		chestnut blenny
Chordata	Teleostei	Cirripectes polyzona	fish	LC		barred blenny
Chordata	Teleostei	Cirripectes quagga	fish	LC		squiqqly blenny
Chordata	Teleostei	Cirripectes quagga Cirripectes stigmaticus	fish	LC	ves	red-streaked blenny
Chordata	Teleostei	Conger cinereus	fish	LC	yes	mustache conger
Chordata	Teleostei	Coris aygula	fish	LC		clown wrasse
	Teleostei	, ,		LC		
Chordata		Coris caudimacula	fish			spottail coris
Chordata	Teleostei	Coris dorsomacula	fish	LC	yes	
Chordata	Teleostei	Crenimugil crenilabis	fish	LC		fringelip mullet
Chordata	Teleostei	Crenimugil seheli	fish	LC	yes	
Chordata	Teleostei	Ctenochaetus binotatus	fish	LC		twospot surgeonfish
Chordata	Teleostei	Ctenochaetus flavicauda	fish	LC	yes	
Chordata	Teleostei	Ctenochaetus striatus	fish	LC		lined bristletooth
Chordata	Teleostei	Ctenogobiops feroculus	fish	LC	yes	
Chordata	Teleostei	Cyclothone pseudopallida	fish	LC	yes	slender bristlemouth, cyclothone mince
Chordata	Teleostei	Cymolutes praetextatus	fish	LC		
Chordata	Teleostei	Dascyllus trimaculatus	fish	LC		domino
Chordata	Teleostei	Dasyscopelus spinosus	fish		yes	
Chordata	Teleostei	Diagramma pictum	fish		yes	grunt
Chordata	Teleostei	Diodon hystrix	fish	LC	yes	spot-fin porcupinefish
Chordata	Teleostei	Diodon liturosus	fish		,	black-blotched porcupinefish
Chordata	Teleostei	Diplodus kotschyi	fish		yes	Siddit Stoteriou per capitione
Chordata	Teleostei	Dysalotus alcocki	fish	LC	yes	
Chordata	Teleostei	Echeneis naucrates	fish	LC	ycs	sharksucker
Chordata	Teleostei	Echidna nebulosa	fish	LC		snowflake moray
Chordata	Teleostei	Echidna polyzona	fish	LC		barred moray
Chordata	Teleostei	Eleotris fusca	fish	LC		dusky sleeper
	Teleostei			LC	yes	dusky sleeper
Chordata		Eleotris melanosoma	fish		yes	
Chordata	Teleostei	Epinephelus coeruleopunctatus	fish	LC	yes	
Chordata	Teleostei	Epinephelus corallicola	fish	LC	yes	
Chordata	Teleostei	Epinephelus fasciatus	fish	LC		blacktip grouper, mérou oriflamme
Chordata	Teleostei	Epinephelus hexagonatus	fish	LC		starspotted grouper
Chordata	Teleostei	Epinephelus malabaricus	fish	LC		Malabar grouper
Chordata	Teleostei	Epinephelus merra	fish	LC		honeycomb grouper
Chordata	Teleostei	Epinephelus spilotoceps	fish	LC		foursaddle grouper
Chordata	Teleostei	Eviota prasina	fish	LC		green bubble goby
Chordata	Teleostei	Eviota punctulata	fish	LC	yes	finespot eviota
Chordata	Teleostei	Exocoetus volitans	fish	LC	yes	flying fish, poisson volant
Chordata	Teleostei	Ferdauia orthogrammus	fish		-	· ·
Chordata	Teleostei	Fibramia amboinensis	fish		yes	

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Fibramia lateralis	fish			
Chordata	Teleostei	Fistularia commersonii	fish	LC		cornetfish
Chordata	Teleostei	Foa brachygramma	fish	LC		weed cardinalfish
Chordata	Teleostei	Forcipiger flavissimus	fish	LC		forcepsfish
Chordata	Teleostei	Fowleria variegata	fish	LC		variegated cardinalfish
Chordata	Teleostei	Gerres longirostris	fish	LC		·-··-g·
Chordata	Teleostei	Gerres oblongus	fish	LC		slender silver-biddy
Chordata	Teleostei	Gnathanodon speciosus	fish	LC		golden trevally
Chordata	Teleostei	Gnatholepis anjerensis	fish	LC		goldon crotany
Chordata	Teleostei	Gnatholepis cauerensis	fish	LC		eyebar goby
Chordata	Teleostei	Gomphosus caeruleus	fish	LC		Red Sea bird wrasse
Chordata	Teleostei	Grammistes sexlineatus	fish	LC		goldenstriped soapfish
Chordata	Teleostei	Gunnellichthys monostigma	fish	LC		gordenstriped souphism
Chordata	Teleostei	Gymnothorax breedeni	fish	LC		blackcheek moray
Chordata	Teleostei	Gymnothorax bircedeni Gymnothorax buroensis	fish	LC		vagrant moray
Chordata	Teleostei	Gymnothorax chilospilus	fish	LC		lipspot moray
Chordata	Teleostei	Gymnothorax Chilosphus Gymnothorax flavimarginatus	fish	LC		yellowmargin moray
Chordata	Teleostei	,	fish	LC		
Chordata	Teleostei	Gymnothorax margaritophorus	fish	LC		blotched-neck moray
		Gymnothorax miliaris		LC	yes	goldentail moray
Chordata	Teleostei	Gymnothorax pictus	fish	LC		
Chordata	Teleostei	Gymnothorax richardsonii	fish	LC		handed means.
Chordata	Teleostei	Gymnothorax rueppelliae	fish			banded moray
Chordata	Teleostei	Gymnothorax undulatus	fish	LC		undulated moray
Chordata	Teleostei	Halichoeres hortulanus	fish	LC		checkerboard wrasse
Chordata	Teleostei	Halichoeres nebulosus	fish	LC		nebulous wrasse
Chordata	Teleostei	Halichoeres scapularis	fish	LC		zigzag wrasse
Chordata	Teleostei	Halichoeres trimaculatus	fish	LC	yes	
Chordata	Teleostei	Hemiramphus far	fish		yes	spotted halfbeak
Chordata	Teleostei	Heniochus monoceros	fish	LC		masked bannerfish
Chordata	Teleostei	Heteropriacanthus cruentatus	fish	LC		glasseye snapper
Chordata	Teleostei	Hipposcarus harid	fish	LC		longnose parrotfish
Chordata	Teleostei	Hypoatherina barnesi	fish			Barnes' silverside
Chordata	Teleostei	Hypoatherina temminckii	fish			Samoan silverside
Chordata	Teleostei	Hyporhamphus affinis	fish			tropical halfbeak
Chordata	Teleostei	Kyphosus cinerascens	fish	LC		snubnose chub
Chordata	Teleostei	Kyphosus elegans	fish	LC	yes	Cortez sea chub
Chordata	Teleostei	Kyphosus vaigiensis	fish	LC	yes	brassy chub
Chordata	Teleostei	Lactoria cornuta	fish			longhorn cowfish
Chordata	Teleostei	Lepidozygus tapeinosoma	fish	LC		fusilier damselfish
Chordata	Teleostei	Lethrinus atkinsoni	fish	LC	yes	
Chordata	Teleostei	Lethrinus genivittatus	fish	LC	yes	longspine emperor
Chordata	Teleostei	Lethrinus harak	fish	LC		blackspot emperor
Chordata	Teleostei	Lethrinus miniatus	fish	LC	yes	trumpet emperor
Chordata	Teleostei	Lethrinus nebulosus	fish	LC	-	spangled emperor
Chordata	Teleostei	Lethrinus obsoletus	fish	LC		orange-striped emperor
Chordata	Teleostei	Lethrinus rubrioperculatus	fish	LC		spotcheek emperor
Chordata	Teleostei	Lethrinus xanthochilus	fish	LC		yellowlip emperor
Chordata	Teleostei	Lutjanus argentimaculatus	fish	LC		river snapper
Chordata	Teleostei	Lutjanus bohar	fish	LC		twinspot snapper
Chordata	Teleostei	Lutjanus ehrenbergii	fish	LC		blackspot snapper

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Lutjanus fulviflamma	fish	LC		dory snapper
Chordata	Teleostei	Lutjanus fulvus	fish	LC		blacktail snapper
Chordata	Teleostei	Lutjanus gibbus	fish	LC		humpback snapper
Chordata	Teleostei	Lutjanus kasmira	fish	LC		common bluestripe snapper
Chordata	Teleostei	Lutjanus monostigma	fish	LC		one-spot snapper
Chordata	Teleostei	Lutjanus quinquelineatus	fish	LC	yes	
Chordata	Teleostei	Lutjanus rivulatus	fish	LC	,	blubberlip snapper
Chordata	Teleostei	Luzonichthys waitei	fish	LC		Waite's splitfin
Chordata	Teleostei	Macolor niger	fish	LC		black and white snapper
Chordata	Teleostei	Macropharyngodon bipartitus	fish	LC		vermiculate wrasse
Chordata	Teleostei	Melichthys indicus	fish	LC		Indian triggerfish
Chordata	Teleostei	Melichthys niger	fish	LC		black durgon
Chordata	Teleostei	Melichthys vidua	fish	LC	ves	pinktail triggerfish
Chordata	Teleostei	Monodactylus argenteus	fish	LC	,	mono
Chordata	Teleostei	Monotaxis grandoculis	fish	LC		bigeye emperor
Chordata	Teleostei	Mulloidichthys flavolineatus	fish	LC		vellowstripe goatfish
Chordata	Teleostei	Mulloidichthys vanicolensis	fish	LC		yellowfin goatfish
Chordata	Teleostei	Myrichthys colubrinus	fish	LC		harleguin snake-eel
Chordata	Teleostei	Myrichthys maculosus	fish	LC		tiger snake-eel
Chordata	Teleostei	Myripristis adusta	fish	LC		shadowfin soldierfish
Chordata	Teleostei	Myripristis addsta Myripristis berndti	fish	LC		blotcheye soldierfish
Chordata	Teleostei	Myripristis berndti Myripristis kuntee	fish	LC		pearly soldierfish
Chordata	Teleostei	Myripristis kuntee Myripristis pralinia	fish	LC	ves	scarlet soldierfish
Chordata	Teleostei	Myripristis violacea	fish	LC	yes	Scarlet Soluleriisii
Chordata	Teleostei	Naso brevirostris	fish	LC		anattad unicornfish
				LC		spotted unicornfish
Chordata	Teleostei	Naso elegans	fish			alaalu uudaa uu fiala
Chordata	Teleostei	Naso hexacanthus	fish	LC		sleek unicornfish
Chordata	Teleostei	Naso thynnoides	fish	LC		oneknife unicornfish
Chordata	Teleostei	Naso unicornis	fish	LC		bluespine unicornfish
Chordata	Teleostei	Naso vlamingii	fish	LC		bignose unicornfish
Chordata	Teleostei	Nemanthias carberryi	fish	LC		threadfin anthias
Chordata	Teleostei	Neoniphon sammara	fish	LC		sammara squirrelfish
Chordata	Teleostei	Novaculichthys taeniourus	fish	LC		rockmover wrasse
Chordata	Teleostei	Novaculoides macrolepidotus	fish			seagrass wrasse
Chordata	Teleostei	Odonus niger	fish	LC		red-toothed triggerfish
Chordata	Teleostei	Ophiocara porocephala	fish	LC	yes	northern mud gudgeon
Chordata	Teleostei	Oplopomus oplopomus	fish	LC	yes	spinecheek goby
Chordata	Teleostei	Ostorhinchus apogonoides	fish	LC		
Chordata	Teleostei	Ostorhinchus fleurieu	fish		yes	
Chordata	Teleostei	Oxycheilinus bimaculatus	fish	LC		twospot wrasse
Chordata	Teleostei	Oxyporhamphus micropterus	fish			smallwing flyingfish
Chordata	Teleostei	Paracirrhites arcatus	fish	LC		arc-eye hawkfish
Chordata	Teleostei	Paracirrhites forsteri	fish	LC		blackside hawkfish
Chordata	Teleostei	Parioglossus raoi	fish	LC	yes	
Chordata	Teleostei	Parupeneus barberinus	fish	LC		dash-and-dot goatfish
Chordata	Teleostei	Parupeneus cyclostomus	fish	LC		yellowsaddle goatfish
Chordata	Teleostei	Parupeneus insularis	fish	LC	yes	
Chordata	Teleostei	Parupeneus macronemus	fish	LC		
Chordata	Teleostei	Parupeneus pleurostigma	fish	LC		sidespot goatfish
Chordata	Teleostei	Parupeneus trifasciatus	fish	LC		

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Pempheris schwenkii	fish		yes	
Chordata	Teleostei	Periophthalmus kalolo	fish	LC	yes	common mudskipper
Chordata	Teleostei	Pervagor janthinosoma	fish	LC		blackbar filefish
Chordata	Teleostei	Petroscirtes mitratus	fish	LC		floral blenny
Chordata	Teleostei	Platax orbicularis	fish	LC		circular spadefish
Chordata	Teleostei	Platybelone argalus	fish	LC		keeltail needlefish
Chordata	Teleostei	Plectorhinchus albovittatus	fish			two-stripe sweetlips
Chordata	Teleostei	Plectorhinchus gibbosus	fish	LC		Harry Hotlips
Chordata	Teleostei	Plectorhinchus plagiodesmus	fish	LC		barred rubberlip
Chordata	Teleostei	Plectorhinchus vittatus	fish	LC		, , , , , , , , , , , , , , , , , , ,
Chordata	Teleostei	Plectroglyphidodon dickii	fish	NT		blackbar devil
Chordata	Teleostei	Plectroglyphidodon fasciolatus	fish	LC		
Chordata	Teleostei	Plectroglyphidodon johnstonianus	fish	LC		Johnston Island damsel
Chordata	Teleostei	Plectroglyphidodon leucozonus	fish	LC		Someten Islana dames.
Chordata	Teleostei	Polydactylus sexfilis	fish		ves	sixfinger threadfin, barbure à six doigts
Chordata	Teleostei	Pomacentrus agassizii	fish		ves	Sixtinger timedami, barbare a six doigts
Chordata	Teleostei	Pristiapogon kallopterus	fish	LC	ycs	
Chordata	Teleostei	Pseudamia gelatinosa	fish	LC		gelatinous cardinalfish
Chordata	Teleostei	Pseudanthias squamipinnis	fish	LC		sea goldie
Chordata	Teleostei	Pseudechidna brummeri	fish	LC		sea goidle
Chordata	Teleostei	Pseudobalistes flavimarginatus	fish	LC		valloumarain triagarfish
Chordata	Teleostei	Pseudocheilinus hexataenia	fish	LC		yellowmargin triggerfish sixstripe wrasse
Chordata	Teleostei		fish	LC		•
Chordata	Teleostei	Pseudogramma polyacantha	fish			honeycomb podge
	Teleostei	Ptereleotris zebra	fish	LC		Chinese zebra goby
Chordata		Pterocaesio marri		LC	yes	Marr's fusilier
Chordata	Teleostei	Pterocaesio tile	fish	LC		dark-banded fusilier
Chordata	Teleostei	Pycnochromis dimidiatus	fish	1.6		
Chordata	Teleostei	Pycnochromis nigrurus	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	Sargocentron caudimaculatum	fish	LC		silverspot squirrelfish
Chordata	Teleostei	Sargocentron punctatissimum	fish	LC		speckled squirrelfish
Chordata	Teleostei	Sargocentron spiniferum	fish	LC		sabre squirrelfish
Chordata	Teleostei	Sargocentron tiere	fish	LC		bluelined squirrelfish
Chordata	Teleostei	Saurida nebulosa	fish	LC		clouded lizardfish
Chordata	Teleostei	Scarus ferrugineus	fish	LC		rusty parrotfish
Chordata	Teleostei	Scarus ghobban	fish	LC		bluechin parrotfish
Chordata	Teleostei	Scarus psittacus	fish	LC		palenose parrotfish
Chordata	Teleostei	Scarus rubroviolaceus	fish	LC		ember parrotfish
Chordata	Teleostei	Scarus tricolor	fish	LC		tricolour parrotfish
Chordata	Teleostei	Schismorhynchus labialis	fish	LC		
Chordata	Teleostei	Scolecenchelys gymnota	fish			
Chordata	Teleostei	Scomberoides lysan	fish	LC		doublespotted queenfish
Chordata	Teleostei	Scorpaenopsis diabolus	fish	LC		devil scorpionfish
Chordata	Teleostei	Sebastapistes cyanostigma	fish	LC		•
Chordata	Teleostei	Sebastapistes mauritiana	fish	LC		spineblotch scorpionfish
Chordata	Teleostei	Sphaeramia orbicularis	fish	LC		orbiculate cardinalfish
Chordata	Teleostei	Sphyraena barracuda	fish	LC		great barracuda
Chordata	Teleostei	Sphyraena helleri	fish	-	ves	Heller's barracuda

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Sphyraena jello	fish		yes	pickhandle barracuda
Chordata	Teleostei	Spratelloides delicatulus	fish	LC		delicate round herring
Chordata	Teleostei	Stegastes lacrymatus	fish			
Chordata	Teleostei	Stegastes nigricans	fish	LC		black damselfish
Chordata	Teleostei	Stethojulis albovittata	fish	LC		bluelined wrasse
Chordata	Teleostei	Stethojulis bandanensis	fish	LC	ves	
Chordata	Teleostei	Stethojulis strigiventer	fish	LC	,	three-ribbon rainbowfish
Chordata	Teleostei	Sufflamen chrysopterum	fish	LC		
Chordata	Teleostei	Synanceia verrucosa	fish	LC		stonefish
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 hebraicum	fish	LC		goldbar wrasse
Chordata	Teleostei	Thalassoma lunare	fish	LC		moon wrasse
Chordata	Teleostei	Thalassoma purpureum	fish	LC		surge wrasse
Chordata	Teleostei	Thunnus alalunga	fish	LC	ves	albacore, thon blanc
Chordata	Teleostei	Torquigener hypselogeneion	fish	LC	ves	orange-spotted toadfish
Chordata	Teleostei	Trachinotus baillonii	fish	LC	yes	smallspotted dart
Chordata	Teleostei	Trachinotus carolinus	fish	LC	yes	pompano
Chordata	Teleostei	Tylosurus acus	fish	LC	ves	agujon needlefish
Chordata	Teleostei	Tylosurus crocodilus	fish	LC	yes	houndfish
Chordata	Teleostei	Upeneus taeniopterus	fish	LC		fin-stripe goatfish
Chordata	Teleostei	Uropterygius xanthopterus	fish	LC		freckleface reef-eel
Chordata	Teleostei	Valenciennea sexquttata	fish	LC		sixspot goby
Chordata	Teleostei	Valenciennea scrigata Valenciennea strigata	fish	LC		blueband goby
Chordata	Teleostei	Vanderhorstia ornatissima	fish	LC		ornate prawn-goby
Chordata	Teleostei	Variola louti	fish	LC		lunartail grouper
Chordata	Teleostei	Xanthichthys mento	fish	LC	yes	redtail triggerfish
Chordata	Teleostei	Zanclus cornutus	fish	LC	yes	Moorish idol
Chordata	Teleostei	Zebrasoma velifer	fish	LC		MOORISH Idol
Chordata	releoster	Chelonia mydas	turtles	EN		green turtle, tortue verte
Cnidaria	Anthozoa	Andvakia discipulorum	cnidarians	LIN	1,000	green turtie, tortue verte
Cnidaria	Anthozoa	Boloceroides mcmurrichi	cnidarians		yes yes	
Cnidaria	Anthozoa	Edwardsia longicornis	cnidarians		,	
Cnidaria	Anthozoa	Favites pentagona	cnidarians	LC	yes	larger star coral
Cnidaria	Anthozoa	. 3	cnidarians	LC		crust coral
		Leptastrea purpurea		LC		Crust Coral
Cnidaria	Anthozoa Anthozoa	Nanozoanthus harenaceus	cnidarians	VU	yes	last some
Cnidaria		Pavona cactus	cnidarians	VU		leaf coral
Cnidaria	Anthozoa	Pocillopora acuta Porites lutea	cnidarians	LC	yes	homos and
Cnidaria	Anthozoa		cnidarians			hump coral
Cnidaria	Anthozoa	Psammocora nierstraszi	cnidarians	LC		
Cnidaria	Anthozoa	Sagartia lacerata	cnidarians		yes	
Cnidaria	Anthozoa	Sinuorota hexagonalis	cnidarians	LC		
Cnidaria	Anthozoa	Stylaraea punctata	cnidarians	DD		
Cnidaria	Anthozoa	Triactis producta	cnidarians		yes	crab anemone
Cnidaria	Hydrozoa	Antennella secundaria	cnidarians		yes	
Cnidaria	Hydrozoa	Cladonema multiramosum	cnidarians		yes	
Cnidaria	Hydrozoa	Clytia gracilis	cnidarians		yes	
Cnidaria	Hydrozoa	Diphyes bojani	cnidarians			
Cnidaria	Hydrozoa	Diphyes dispar	cnidarians		yes	

phylum	class	species	group	category	new	vernacular
Cnidaria	Hydrozoa	Euphysilla pyramidata	cnidarians		yes	
Cnidaria	Hydrozoa	Kirchenpaueria halecioides	cnidarians		yes	
Cnidaria	Hydrozoa	Laodicea undulata	cnidarians		yes	
Cnidaria	Hydrozoa	Lensia campanella	cnidarians		yes	
Cnidaria	Hydrozoa	Nanomia bijuga	cnidarians		yes	
Cnidaria	Hydrozoa	Obelia bidentata	cnidarians		yes	doubletoothed hydroid
Cnidaria	Hydrozoa	Physalia physalis	cnidarians		yes	Portuguese man-of-war, galère portugaise
Cnidaria	Hydrozoa	Solmundella bitentaculata	cnidarians		-	
Cnidaria	Hydrozoa	Sphaerocoryne bedoti	cnidarians		yes	
Cnidaria	Hydrozoa	Sphaeronectes koellikeri	cnidarians		yes	
Cnidaria	Hydrozoa	Zanclea divergens	cnidarians		yes	
Cnidaria	Hydrozoa	Zancleopsis dichotoma	cnidarians		ves	
Cnidaria	Scyphozoa	Pelagia panopyra	cnidarians		yes	
Cryptophyta	Cryptophyceae	Hemiarma marina			yes	
Echinodermata	Asteroidea	Aguilonastra anomala	echinoderms		yes	
Echinodermata	Echinoidea	Echinostrephus molaris	echinoderms		yes	
Echinodermata	Echinoidea	Echinothrix calamaris	echinoderms		yes	banded sea urchin
Echinodermata	Echinoidea	Eucidaris metularia	echinoderms		yes	banded sed drenm
Echinodermata	Echinoidea	Koehleraster abnormalis	echinoderms		yes	
Echinodermata	Echinoidea	Toxopneustes pileolus	echinoderms		ycs	
Echinodermata	Echinoidea	Tripneustes depressus	echinoderms		yes	
Echinodermata	Echinoidea	Tripneustes gratilla	echinoderms		yes	collector urchin
Echinodermata	Holothuroidea	Actinopyga mauritiana	echinoderms	VU	yes	conector dicinii
Echinodermata	Holothuroidea	Actinopyga mauntiana Actinopyga obesa	echinoderms	DD	yes	
Echinodermata	Holothuroidea	Bohadschia cousteaui	echinoderms	LC	-	
Echinodermata	Holothuroidea	Bohadschia koellikeri	echinoderms	DD	yes	
				DD	yes	
Echinodermata	Holothuroidea	Bohadschia vitiensis	echinoderms	טט	yes	
Echinodermata	Holothuroidea	Holothuria (Lessonothuria) pardalis	echinoderms		yes	
Echinodermata	Holothuroidea	Holothuria (Stauropora) pervicax	echinoderms		yes	
Echinodermata	Holothuroidea	Holothuria (Thymiosycia) arenicola	echinoderms		yes	
Echinodermata	Holothuroidea	Holothuria atra	echinoderms	LC	yes	
Echinodermata	Holothuroidea	Stichopus chloronotus	echinoderms	LC		
Echinodermata	Ophiuroidea	Amphipholis squamata	echinoderms			dwarf brittle star
Echinodermata	Ophiuroidea	Amphiura (Amphiura) velox	echinoderms		yes	
Echinodermata	Ophiuroidea	Breviturma brevipes	echinoderms			
Echinodermata	Ophiuroidea	Breviturma doederleini	echinoderms		yes	
Echinodermata	Ophiuroidea	Macrophiothrix longipeda	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophiactis picteti	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophiactis savignyi	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma erinaceus	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma scolopendrina	echinoderms			
Echinodermata	Ophiuroidea	Ophiocomella valenciae	echinoderms		yes	
Echinodermata	Ophiuroidea	Ophionereis porrecta	echinoderms		yes	
Gastrotricha		Urodasys calicostylis			yes	
Haptophyta	Coccolithophyceae	Chrysochromulina tobinii	algae		yes	
Haptophyta	Coccolithophyceae	Emiliania huxleyi	algae		yes	
Haptophyta	Coccolithophyceae	Phaeocystis globosa	algae		yes	
Haptophyta	Coccolithophyceae	Phaeocystis pouchetii	algae		yes	
Hemichordata	Enteropneusta	Ptychodera flava	, 3 , -		yes	Hawaiian acorn worm
Mollusca	Bivalvia	Brachidontes variabilis	molluscs		ves	variable mussel

Mollusca
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phylum	class	species	group	category	new	vernacular
Mollusca	Bivalvia	Dendostrea sandvichensis	molluscs		yes	
Mollusca	Bivalvia	Leiosolenus hanleyanus	molluscs		yes	
Mollusca	Bivalvia	Pinctada persica	molluscs		yes	
Mollusca	Bivalvia	Tridacna squamosa	molluscs	LR/cd	yes	giant clam
Mollusca	Cephalopoda	Callistoctopus aspilosomatis	molluscs	LC	yes	
Mollusca	Cephalopoda	Octopus cyanea	molluscs	LC		Cyane's octopus
Mollusca	Gastropoda	Aliculastrum parallelum	molluscs		yes	
Mollusca	Gastropoda	Apataxia cerithiiformis	molluscs		yes	
Mollusca	Gastropoda	Atys semistriatus	molluscs		yes	
Mollusca	Gastropoda	Berthellina delicata	molluscs		yes	
Mollusca	Gastropoda	Bulla vernicosa	molluscs		yes	
Mollusca	Gastropoda	Canarium mutabile	molluscs		yes	
Mollusca	Gastropoda	Carminodoris grandiflora	molluscs		yes	
Mollusca	Gastropoda	Cerithium egenum	molluscs		yes	
Mollusca	Gastropoda	Cerithium nesioticum	molluscs		yes	
Mollusca	Gastropoda	Cerithium rostratum	molluscs		,	
Mollusca	Gastropoda	Chelidonura hirundinina	molluscs		yes	
Mollusca	Gastropoda	Cyerce elegans	molluscs		yes	
Mollusca	Gastropoda	Dendropoma platypus	molluscs		yes	
Mollusca	Gastropoda	Dolabella auricularia	molluscs		yes	wedge sea hare
Mollusca	Gastropoda	Dolabrifera dolabrifera	molluscs		yes	wedge sea hare
Mollusca	Gastropoda	Dolabrifera edmundsi	molluscs		yes	
Mollusca	Gastropoda	Doriopsis pecten	molluscs		yes	
Mollusca	Gastropoda	Elysia obtusa	molluscs		yes	
Mollusca	Gastropoda	Elysia ornata	molluscs		yes	lettuce slug
Mollusca	Gastropoda	Elysia pusilla	molluscs		yes	lettuce slug
Mollusca	Gastropoda	Ercolania annelyleorum	molluscs		yes	
Mollusca	Gastropoda	Favorinus japonicus	molluscs		yes	
Mollusca	Gastropoda	Gutturnium muricinum	molluscs		yes	
Mollusca	Gastropoda	Halgerda indotessellata	molluscs		yes	
Mollusca	Gastropoda	Haloa pemphis	molluscs		yes	
Mollusca	Gastropoda	Heliconoides inflatus	molluscs		yes	
Mollusca	Gastropoda	Hexabranchus sanguineus	molluscs		yes	Spanish dancer
Mollusca	Gastropoda	Hyalopatina planata	molluscs			Spanish dancer
Mollusca	Gastropoda	Littoraria subvittata	molluscs		yes	
	•		molluscs		1,000	
Mollusca	Gastropoda	Lophocochlias parvissimus			yes	
Mollusca	Gastropoda	Monoplex mundus	molluscs		yes	
Mollusca	Gastropoda	Naria helvola	molluscs			
Mollusca	Gastropoda	Oxynoe viridis	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus lentigines	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus minikoiensis	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus paulayi	molluscs		yes	
Mollusca	Gastropoda	Philinopsis speciosa	molluscs		yes	
Mollusca	Gastropoda	Phyllidia coelestis	molluscs		yes	
Mollusca	Gastropoda	Placida kevinleei	molluscs		yes	
Mollusca	Gastropoda	Pleurobranchus forskalii	molluscs			Forskal's sidegill slug
Mollusca	Gastropoda	Pleurobranchus peronii	molluscs		yes	
Mollusca	Gastropoda	Pleurobranchus varians	molluscs		yes	
Mollusca	Gastropoda	Polybranchia jensenae	molluscs		yes	
Mollusca	Gastropoda	Pterotrachea hippocampus	molluscs		yes	

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Mollusca	Gastropoda	Rissoina ambigua	molluscs		yes	
Mollusca	Gastropoda	Samla bicolor	molluscs		yes	
Mollusca	Gastropoda	Stylocheilus striatus	molluscs		yes	
Myzozoa	Dinophyceae	Amphidinium massartii	unicellular		yes	
Myzozoa	Dinophyceae	Crypthecodinium cohnii	unicellular		yes	
Ochrophyta	Dictyochophyceae	Octactis octonaria	algae		yes	
Ochrophyta	Dictyochophyceae	Vicicitus globosus	algae		yes	
Ochrophyta	Pelagophyceae	Pelagomonas calceolata	algae		yes	
Ochrophyta	Phaeophyceae	Canistrocarpus cervicornis	algae		yes	
Ochrophyta	Phaeophyceae	Dictyota bartayresiana	algae		yes	
Ochrophyta	Phaeophyceae	Dictyota ceylanica	algae		yes	
Ochrophyta	Phaeophyceae	Dictyota friabilis	algae		yes	
Ochrophyta	Phaeophyceae	Hydroclathrus tenuis	algae		yes	
Ochrophyta	Phaeophyceae	Lobophora obscura	algae		yes	
Ochrophyta	Phaeophyceae	Padina boergesenii	algae		yes	
Ochrophyta	Phaeophyceae	Turbinaria conoides	algae		,	
Ochrophyta	Pinguiophyceae	Pinguiococcus pyrenoidosus	algae		yes	
Ochrophyta	Raphidophyceae	Haramonas dimorpha	algae		yes	
Platyhelminthes	Rapinaophyceae	Prosthiostomum torquatum	uigue		yes	
Porifera	Demospongiae	Acanthotetilla celebensis	sponges		yes	
Porifera	Demospongiae	Axechina raspailioides	sponges		yes	
Porifera	Demospongiae	Biemna ehrenbergi	sponges		yes	
Porifera	Demospongiae	Callyspongia (Cladochalina) plicifera	sponges		yes	
Porifera	Demospongiae	Chalinula molitba	sponges		yes	
Porifera	Demospongiae	Chelonaplysilla erecta	sponges		yes	
Porifera	Demospongiae	Cladocroce burapha	sponges		yes	
Porifera	Demospongiae	Clathria (Clathria) unica	sponges		yes	
Porifera	Demospongiae	Clathria (Wilsonella) rugosa	sponges		yes	
Porifera	Demospongiae	Cliona dissimilis	, ,			
Porifera	Demospongiae	Cliona mariae	sponges sponges		yes yes	Maria Santana's Cliona
Porifera	Demospongiae	Cliona yorkin			yes	Yorkin Cliona
Porifera	Demospongiae	Cliothosa aurivillii	sponges			TOTKITI CITOTIA
Porifera	Demospongiae	Cliothosa delitrix	sponges sponges		yes	
Porifera	Demospongiae	Dysidea arenaria			yes	crater change
Porifera	Demospongiae	Ectyoplasia ferox	sponges		yes	crater sponge
Porifera	, ,	3 ·	sponges		yes	
	Demospongiae	Fasciospongia cavernosa	sponges		yes	
Porifera Porifera	Demospongiae	Galaxia gaviotensis	sponges		yes	
	Demospongiae	Gelliodes wilsoni	sponges		yes	December 12 - halfalan dis
Porifera	Demospongiae	Halichondria (Halichondria) bowerbanki	sponges		yes	Bowerbank's halichondria
Porifera	Demospongiae	Halichondria (Halichondria) okadai	sponges		yes	
Porifera	Demospongiae	Haliclona (Halichoclona) vansoesti	sponges		yes	
Porifera	Demospongiae	Haliclona pigmentifera	sponges		yes	
Porifera	Demospongiae	Hymeniacidon chloris	sponges		yes	
Porifera	Demospongiae	Hymeniacidon flavia	sponges		yes	
Porifera	Demospongiae	Mycale (Carmia) cecilia	sponges		yes	
Porifera	Demospongiae	Pachychalina tenera	sponges		yes	
Porifera	Demospongiae	Paracornulum dubium	sponges		yes	
Porifera	Demospongiae	Phorbas bihamiger	sponges		yes	
Porifera	Demospongiae	Pione vastifica	sponges		yes	boring sponge, clione rouge
Porifera	Demospongiae	Pione velans	sponges		yes	

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Porifera	Demospongiae	Rhabderemia sorokinae	sponges	-	yes	
Porifera	Demospongiae	Sigmaxinella hipposiderus	sponges		yes	
Porifera	Demospongiae	Spirastrella hartmani	sponges		yes	
Porifera	Demospongiae	Stelletta mediterranea	sponges		yes	
Porifera	Demospongiae	Stryphnus mucronatus	sponges		yes	
Porifera	Demospongiae	Tedania (Tedania) tubulifera	sponges		yes	
Porifera	Demospongiae	Terpios gelatinosus	sponges		yes	
Porifera	Demospongiae	Terpios hoshinota	sponges		yes	
Porifera	Demospongiae	Theonella swinhoei	sponges		yes	
Porifera	Homoscleromorpha	Plakortis deweerdtaephila	sponges		yes	
Rhodophyta	Florideophyceae	Acanthophora spicifera	algae		yes	
Rhodophyta	Florideophyceae	Aphanta ligulata	algae		yes	
Rhodophyta	Florideophyceae	Asparagopsis taxiformis	algae		yes	
Rhodophyta	Florideophyceae	Asteromenia pseudocoalescens	algae		yes	
Rhodophyta	Florideophyceae	Calliblepharis jubata	algae		yes	
Rhodophyta	Florideophyceae	Coelothrix irregularis	algae		yes	
Rhodophyta	Florideophyceae	Galaxaura filamentosa	algae		yes	
Rhodophyta	Florideophyceae	Ganonema pinnatiramosa	algae		yes	
Rhodophyta	Florideophyceae	Gelidiella fanii	algae		yes	
Rhodophyta	Florideophyceae	Gracilaria babae	algae		yes	
Rhodophyta	Florideophyceae	Harveylithon munitum	algae		yes	
Rhodophyta	Florideophyceae	Herposiphonia pecten-veneris	algae		yes	
Rhodophyta	Florideophyceae	Hypnea nigrescens	algae		yes	
Rhodophyta	Florideophyceae	Hypnea spinella	algae			
Rhodophyta	Florideophyceae	Jania adhaerens	algae			
Rhodophyta	Florideophyceae	Kapraunia schneideri	algae		yes	
Rhodophyta	Florideophyceae	Laurencia dendroidea	algae		yes	
Rhodophyta	Florideophyceae	Liagora ceranoides	algae			
Rhodophyta	Florideophyceae	Meredithia compaginata	algae		yes	
Rhodophyta	Florideophyceae	Neogoniolithon brassica-florida	algae		yes	
Rhodophyta	Florideophyceae	Neogoniolithon rhizophorae	algae		yes	
Rhodophyta	Florideophyceae	Neogoniolithon trichotomum	algae		yes	
Rhodophyta	Florideophyceae	Palisada parvipapillata	algae		yes	
Rhodophyta	Florideophyceae	Pterocladiella caerulescens	algae		yes	
Rhodophyta	Florideophyceae	Ramicrusta lateralis	algae		yes	
Rhodophyta	Florideophyceae	Rhodachlya madagascarensis	algae		yes	
Rhodophyta	Florideophyceae	Sarconema filiforme	algae		yes	
Rhodophyta	Florideophyceae	Spyridia filamentosa	algae		yes	
Rhodophyta	Florideophyceae	Wilsonosiphonia fujiae	algae		yes	
		Amastigomonas debruynei			yes	