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

# Biodiversity survey for iSimangaliso Wetland Park

# Interim Results Not for public distribution



Credit: iSimangaliso Wetland Park Authority.

### **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 iSimangaliso Wetland Park in April 2023. A total of 21 samples were collected at 5 locations in the park covering different habitats: bhanga\_neck, ingwe\_beach, mission\_rock, sodwana\_bay, and st\_lucia\_lake (Figure 1). Up to 1,500 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. DNA from the 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.



Figure 1: Map of the sampling locations.

## **DNA** sequencing

Sequencing of the DNA from 21 samples resulted in over 40 million sequence reads, from which we collected 45,732 unique sequences or ASVs (Tables 1 and 2).

reads	asvs
40891951	45732

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 684 species, including 341 fish species, 5 mammalian species, and 5 turtle species (Table 3).

locality	materialSampleID	sampleSize	reads	asvs	species
Bhanga Nek	EE0372	1500	1653788	11539	211
Bhanga Nek	EE0373	1500	2964767	12674	203
Bhanga Nek	EE0380	1500	1593059	10267	155
Bhanga Nek	EE0397	1500	2025234	9983	190
Ingwe beach	EE0379	1500	1550789	320	4
Ingwe beach	EE0381	1500	1822778	12343	227
Ingwe beach	EE0382	1500	2265113	11934	173
Ingwe beach	EE0395	1500	2186342	13003	194
Ingwe beach	EE0401	1500	2313957	678	15
Mission Rock	EE0375	1500	1183120	10014	215
Mission Rock	EE0376	1500	1484709	9992	215
Mission Rock	EE0378	1500	1849064	12245	231
Mission Rock	EE0398	1500	2847369	7968	131
Sodwana Bay	EE0374	1500	1099081	393	8
Sodwana Bay	EE0394	1500	2316899	13731	246
Sodwana Bay	EE0396	1500	2532503	11497	210
Sodwana Bay	EE0461	1500	3153691	12151	199
St. Lucia Lake	EE0371	1500	2569575	3833	55
St. Lucia Lake	EE0383	1500	1075973	2972	48
St. Lucia Lake	EE0384	1500	1199948	2504	48
St. Lucia Lake	EE0385	1500	1204192	3002	52

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

Species from other groups, such as algae, molluscs, copepods, cnidarians, and crustaceans, were also detected (Figures 2 and 3). This number of species detected represents about 24% of the 3,662 species known from iSimangaliso Wetland Park in the OBIS database. Of the 684 species detected, 333 are not among the species previously reported from iSimangaliso Wetland Park to the UNESCO OBIS database. 22 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	341	1422	0.24
mammals	5	14	0.36
turtles	0	4	

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	4	14	0.29
EN	5	31	0.16
VU	13	64	0.20

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

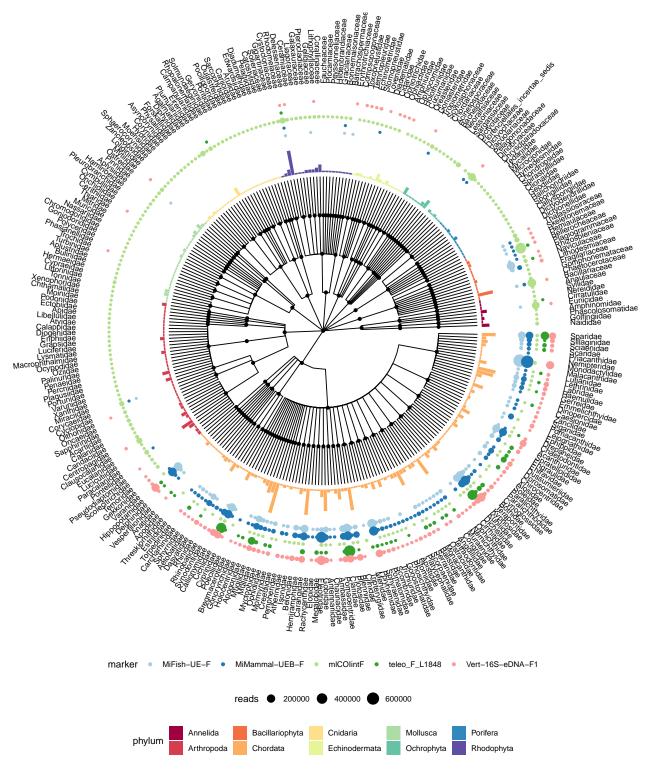


Figure 2: Number of DNA reads (bubbles) and species detected (bars) by family.

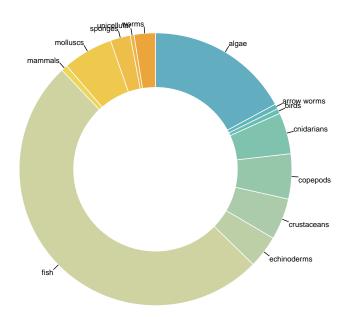


Figure 3: Distribution of detected species across groups.

phylum	class		species	group	category	new	vernacular
Annelida	Clitella <sup>-</sup>	ta	Aulophorus borellii	worms		yes	
Annelida	Clitella	ta	Chaetogaster diastrophus	worms		yes	
Annelida	Clitella	ta	Dero obtusa	worms		yes	
Annelida	Clitella		Limnodrilus hoffmeisteri	worms		yes	
Annelida	Clitella		Paranais frici	worms		yes	
Annelida	Polycha		Eunice afra	worms		, 00	
Annelida	Polycha		Eusyllis kupfferi	worms		yes	
Annelida	Polycha		Lysidice natalensis	worms		yes	
Annelida	Polycha		Marphysa corallina	worms		yes	
Annelida	Polycha		Nereis splendida	worms		yes	
Annelida	Polycha		Nicidion notata	worms		yes	
Annelida	Polycha		Pherecardia striata	worms		yes	
Annelida	Polycha		Timarete punctata			-	
	Polycha	aeta	•	worms		yes	
Annelida			Phascolosoma (Phascolosoma) nigrescens	worms		yes	
Annelida			Phascolosoma (Phascolosoma) stephensoni	worms		yes	
Annelida	Б		Themiste (Lagenopsis) minor	worms		yes	
Arthropoda	Branch	•	Moina micrura	crustaceans		yes	
Arthropoda	Branch	•	Pseudevadne tergestina	crustaceans		yes	
Arthropoda	Сорерс		Acartia (Acartia) negligens	copepods		yes	
Arthropoda	Сорерс		Acrocalanus gracilis	copepods		yes	
Arthropoda	Сорерс		Calanopia elliptica	copepods		yes	
Arthropoda	Сорерс	oda	Calanopia minor	copepods		yes	
Arthropoda	Copepo	oda	Calocalanus minutus	copepods		yes	
Arthropoda	Сорерс	oda	Calocalanus pavo	copepods		yes	
Arthropoda	Сорерс	oda	Calocalanus plumulosus	copepods		yes	
Arthropoda	Сорерс	oda	Calocalanus styliremis	copepods		yes	
Arthropoda	Copepo	oda	Candacia catula	copepods		yes	
Arthropoda	Copepo	oda	Candacia curta	copepods		yes	
Arthropoda	Copepo	oda	Canthocalanus pauper	copepods		yes	
Arthropoda .	Copepo	oda	Centropages furcatus	copepods		yes	
Arthropoda .	Copepo		Clausocalanus furcatus	copepods		yes	
Arthropoda .	Copepo		Clausocalanus jobei	copepods		yes	
Arthropoda	Сорерс		Clausocalanus paululus	copepods		yes	
Arthropoda	Copepo		Clausocalanus pergens	copepods		yes	
Arthropoda	Сорерс		Farranula gibbula	copepods		yes	
Arthropoda	Copepo		Labidocera minuta	copepods		yes	
Arthropoda	Сорерс		Lucicutia flavicornis	copepods		yes	
Arthropoda	Сорерс		Macrosetella gracilis	copepods		yes	
Arthropoda	Сорерс		Mesocyclops (Mesocyclops) pehpeiensis	copepods		yes	
Arthropoda	Сорерс		Oithona attenuata	copepods		yes	
Arthropoda	Сорерс		Oncaea media	copepods		yes	
Arthropoda	Сорерс		Paracalanus denudatus	copepods		-	
•			Paracalanus indicus			yes	
Arthropoda	Copepo		Paracalanus indicus Paracalanus nanus	copepods		yes	
Arthropoda	Copepo			copepods		yes	
Arthropoda	Copepo		Pontella fera	copepods		yes	
Arthropoda	Сорерс		Pseudodiaptomus serricaudatus	copepods		yes	
Arthropoda	Copepo		Sapphirina stellata	copepods		yes	
Arthropoda	Сорерс		Scolecithricella longispinosa	copepods		yes	
Arthropoda	Copepo		Scolecithrix danae	copepods		yes	
Arthropoda	Copepo	oda	Subeucalanus pileatus	copepods		yes	

phylum	class	species	group	category	new	vernacular
Arthropoda	Copepoda	Subeucalanus subcrassus	copepods			
Arthropoda	Copepoda	Temora discaudata	copepods			
Arthropoda	Copepoda	Temora turbinata	copepods			
Arthropoda	Copepoda	Undinula vulgaris	copepods			
Arthropoda	Hexapoda	Apis mellifera			yes	
Arthropoda	Hexapoda	Blattella germanica			yes	
Arthropoda	Hexapoda	Tholymis tillarga		LC	yes	
Arthropoda	Malacostraca	Calappa hepatica	crustaceans			smooth box crab
Arthropoda	Malacostraca	Caridina natalensis	crustaceans	LC	yes	
Arthropoda	Malacostraca	Chaenostoma boscii	crustaceans		yes	
Arthropoda	Malacostraca	Charybdis (Charybdis) annulata	crustaceans		yes	
Arthropoda	Malacostraca	Charybdis (Charybdis) orientalis	crustaceans		,	
Arthropoda	Malacostraca	Cyclodius paumotensis	crustaceans		yes	
Arthropoda	Malacostraca	Dardanus crassimanus	crustaceans		, 00	
Arthropoda	Malacostraca	Epixanthus frontalis	crustaceans			
Arthropoda	Malacostraca	Eriphia smithii	crustaceans			rough redeye crab
Arthropoda	Malacostraca	Grapsus albolineatus	crustaceans		yes	mottled lightfoot crab
Arthropoda	Malacostraca	Grapsus abolineatus Grapsus tenuicrustatus	crustaceans		yes	Natal lightfoot crab
•		•				ivatal lightroot crab
Arthropoda	Malacostraca	Lophozozymus pulchellus	crustaceans		yes	at an it and it as the many many transfer and a second an
Arthropoda	Malacostraca	Lucifer typus	crustaceans		yes	standard lucifer prawn, gamba des monts sous-marins
Arthropoda	Malacostraca	Lysmata hochi	crustaceans		yes	
Arthropoda	Malacostraca	Macromedaeus quinquedentatus	crustaceans		yes	
Arthropoda	Malacostraca	Ocypode ceratophthalmus	crustaceans			horned ghost crab
Arthropoda	Malacostraca	Ocypode ryderi	crustaceans			
Arthropoda	Malacostraca	Pachygrapsus minutus	crustaceans			
Arthropoda	Malacostraca	Panulirus homarus	crustaceans	LC		scalloped spiny crawfish, langouste festonnee
Arthropoda	Malacostraca	Penaeus japonicus	crustaceans			Kuruma shrimp, crevette kuruma
Arthropoda	Malacostraca	Percnon planissimum	crustaceans			flat rock crab
Arthropoda	Malacostraca	Pilodius areolatus	crustaceans		yes	areolated xanthid crab
Arthropoda	Malacostraca	Plagusia squamosa	crustaceans		yes	scaly rock crab
Arthropoda	Malacostraca	Portunus pubescens	crustaceans		yes	
Arthropoda	Malacostraca	Portunus sanguinolentus	crustaceans			blood-spotted swimming crab
Arthropoda	Malacostraca	Thalamita gloriensis	crustaceans		yes	
Arthropoda	Malacostraca	Tubuca urvillei	crustaceans			
Arthropoda	Malacostraca	Varuna litterata	crustaceans			
Arthropoda	Thecostraca	Chthamalus barilani	crustaceans		yes	
Arthropoda	Thecostraca	Chthamalus dentatus	crustaceans			
Arthropoda	Thecostraca	Octomeris angulosa	crustaceans			
Bacillariophyta	Bacillariophyceae	Anaulus australis	algae		yes	
Bacillariophyta	Bacillariophyceae	Asterionellopsis thurstonii	algae		yes	
Bacillariophyta	Bacillariophyceae	Bellerochea polymorpha	algae		yes	
Bacillariophyta	Bacillariophyceae	Chaetoceros socialis	algae		yes	
Bacillariophyta	Bacillariophyceae	Cylindrotheca closterium	algae		yes	
Bacillariophyta	Bacillariophyceae	Ditylum brightwellii	algae		yes	
Bacillariophyta	Bacillariophyceae	Eucampia striata	algae		yes	
Bacillariophyta	Bacillariophyceae	Eucampia zodiacus	algae		yes	
Bacillariophyta	Bacillariophyceae	Gomphonema parvulum	algae		yes	
Bacillariophyta	Bacillariophyceae	Helicotheca tamesis	algae		yes	
Bacillariophyta	Bacillariophyceae	Microsiphona potamos	algae			
Bacillariophyta	Bacillariophyceae	Navicula minima	algae		yes ves	
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Bacillariophyta
Continued on next page

phylum	class	species	group	category	new	vernacular
Bacillariophyta	Bacillariophyceae	Nitzschia palea	algae		yes	
Bacillariophyta	Bacillariophyceae	Plagiogramma staurophorum	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia abrensis	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia caciantha	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia circumpora	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia cuspidata	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia delicatissima	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia lundholmiae	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia multistriata	algae		yes	
Bacillariophyta	Bacillariophyceae	Pseudo-nitzschia sabit	algae		yes	
Bacillariophyta	Bacillariophyceae	Skeletonema ardens	algae		yes	
Bacillariophyta	Bacillariophyceae	Skeletonema grevillei	algae		yes	
Bacillariophyta	Bacillariophyceae	Sundstroemia setigera	algae		yes	
Basidiomycota	Agaricomycetes	Schizophyllum commune	3		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	Flaccisagitta enflata	arrow worms		yes	
Chaetognatha	Sagittoidea	Zonosagitta pulchra	arrow worms		yes	
Chlorophyta	Mamiellophyceae	Dolichomastix tenuilepis	algae		yes	
Chlorophyta	Mamiellophyceae	Micromonas pusilla	algae		yes	
Chlorophyta	Pyramimonadophyceae	Pycnococcus provasolii	algae		yes	
Chlorophyta	i yraiiiiiioiiadopiiyeeae	Chloroparvula pacifica	algae		yes	
Chlorophyta		Chloropicon laureae	algae		yes	
Chlorophyta		Chloropicon mariensis	algae		-	
Chlorophyta		Chloropicon maureeniae	algae algae		yes	
Chlorophyta		Chloropicon primus			yes	
Chlorophyta		Chloropicon roscoffensis	algae		yes	
Chlorophyta		Chloropicon sieburthii	algae algae		yes	
Chordata	Aves	Apus affinis	birds	LC	yes	
				LC	yes	
Chordata	Aves	Bostrychia hagedash	birds		yes	
Chordata	Aves	Cairina moschata	birds	LC	yes	
Chordata	Aves	Estrilda astrild	birds	LC	yes	
Chordata	Elasmobranchii	Acroteriobatus annulatus	fish	VU		
Chordata	Elasmobranchii	Aetobatus narinari	fish	EN	yes	spotted eagle ray
Chordata	Elasmobranchii	Carcharhinus brevipinna	fish	VU		spinner shark
Chordata	Elasmobranchii	Carcharhinus leucas	fish	VU		bull shark, requin-bouledogue
Chordata	Elasmobranchii	Himantura leoparda	fish	VU		
Chordata	Elasmobranchii	Himantura uarnak	fish	EN		honeycomb stingray
Chordata	Elasmobranchii	Maculabatis gerrardi	fish	EN		
Chordata	Elasmobranchii	Pastinachus sephen	fish	NT		
Chordata	Elasmobranchii	Pateobatis fai	fish	VU		
Chordata	Elasmobranchii	Pateobatis jenkinsii	fish	VU		
Chordata	Elasmobranchii	Rhizoprionodon acutus	fish	VU		milk shark
Chordata	Elasmobranchii	Rhynchobatus australiae	fish	CR	yes	
Chordata	Elasmobranchii	Rhynchobatus djiddensis	fish	CR	yes	whitespotted wedgefish
Chordata	Elasmobranchii	Sphyrna lewini	fish	CR		scalloped hammerhead
C dutu						
Chordata	Elasmobranchii	Sphyrna mokarran	fish	CR		great hammerhead shark

phylum	class	species	group	category	new	vernacular
Chordata	Elasmobranchii	Torpedo sinuspersici	fish	DD		marbled electric eel
Chordata	Mammalia	Hippopotamus amphibius	mammals	VU	yes	
Chordata	Mammalia	Pipistrellus hesperidus	mammals	LC	yes	
Chordata	Mammalia	Stenella longirostris	mammals	LC		long-snouted spinner dolphin, dauphin longirostre
Chordata	Mammalia	Tursiops aduncus	mammals	NT		Indo-Pacific bottlenose dolphin, tursiops abusalam
Chordata	Mammalia	Tursiops truncatus	mammals	LC		bottlenose dolphin, grand dauphin
Chordata	Teleostei	Abantennarius coccineus	fish	LC		1 7 3
Chordata	Teleostei	Ablennes hians	fish	LC		flat needlefish
Chordata	Teleostei	Abudefduf sexfasciatus	fish	LC		scissortail sergeant
Chordata	Teleostei	Abudefduf sordidus	fish	LC		blackspot sergeant
Chordata	Teleostei	Abudefduf vaigiensis	fish	LC		Indo-Pacific sergeant
Chordata	Teleostei	Acanthopagrus vagus	fish	VÜ		
Chordata	Teleostei	Acanthurus dussumieri	fish	LC		eyestripe surgeonfish
Chordata	Teleostei	Acanthurus lineatus	fish	LC.		lined surgeonfish
Chordata	Teleostei	Acanthurus mata	fish	LC		blue-lined surgeonfish
Chordata	Teleostei	Acanthurus nigrofuscus	fish	LC		brown surgeonfish
Chordata	Teleostei	Acanthurus triostegus	fish	LC		convict surgeonfish
Chordata	Teleostei	Ambassis ambassis	fish	LC.		convict surgeomism
Chordata	Teleostei	Ambassis dussumieri	fish	LC		
Chordata	Teleostei	Ambassis dussumen Ambassis natalensis	fish	LC		slender glassy
Chordata	Teleostei	Amblyrhynchotes honckenii	fish	LC		evileye blaasop
Chordata	Teleostei	Anguilla bicolor	fish	NT		evileye biaasop
Chordata	Teleostei	•	fish	LC		giant mottled eel
Chordata	Teleostei	Anguilla marmorata Anguilla mossambica	fish	NT		African longfin eel
		3		LC		<u> </u>
Chordata	Teleostei	Antennablennius bifilum	fish	LC		horned rockskipper
Chordata	Teleostei	Antennarius pictus	fish			painted angler
Chordata	Teleostei	Apistus carinatus	fish	LC		ocellated waspfish
Chordata	Teleostei	Apogon semiornatus	fish	LC		obliquebanded cardinalfish
Chordata	Teleostei	Apogonichthys ocellatus	fish	LC		ocellated cardinalfish
Chordata	Teleostei	Archamia bleekeri	fish			
Chordata	Teleostei	Argyrosomus japonicus	fish	EN		Japanese meagre
Chordata	Teleostei	Arothron hispidus	fish	LC		bristly puffer
Chordata	Teleostei	Atherinomorus lacunosus	fish	LC		robust silverside
Chordata	Teleostei	Avocettina infans	fish	LC	yes	avocet snipe-eel, avocette immature
Chordata	Teleostei	Awaous aeneofuscus	fish	LC		
Chordata	Teleostei	Bathygobius coalitus	fish	LC		
Chordata	Teleostei	Bathygobius cocosensis	fish	LC		
Chordata	Teleostei	Bathygobius cotticeps	fish	LC		
Chordata	Teleostei	Bathygobius cyclopterus	fish	LC		roundfin goby
Chordata	Teleostei	Bathygobius fuscus	fish	LC		dusky frill-goby
Chordata	Teleostei	Benthosema pterotum	fish	LC	yes	skinnycheek lanternfish
Chordata	Teleostei	Benthosema suborbitale	fish	LC	yes	Smallfin lanternfish
Chordata	Teleostei	Blenniella gibbifrons	fish	LC	-	humpheaded blenny
Chordata	Teleostei	Bolinichthys longipes	fish	LC	yes	•
Chordata	Teleostei	Bolinichthys supralateralis	fish	LC	yes	
Chordata	Teleostei	Bothus pantherinus	fish	LC	<i>y</i>	panther flounder
Chordata	Teleostei	Bregmaceros mcclellandi	fish		ves	Unicorn cod
Chordata	Teleostei	Brotula multibarbata	fish	LC	,	goatsbeard brotula
Chordata	Teleostei	Caesio caerulaurea	fish	LC		blue and gold fusilier
Chordata	Teleostei	Caesio lunaris	fish	LC		lunar fusilier

Chordata
Continued on next page

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Caesio teres	fish	LC		yellow and blueback fusilier
Chordata	Teleostei	Caesio varilineata	fish	LC		variable-lined fusilier
Chordata	Teleostei	Caesio xanthonota	fish	LC		yellowback fusilier
Chordata	Teleostei	Callechelys catostoma	fish	LC	yes	
Chordata	Teleostei	Calotomus carolinus	fish	LC		Carolines parrotfish
Chordata	Teleostei	Cantherhines pardalis	fish	LC		wier-net filefish
Chordata	Teleostei	Carangoides ferdau	fish	LC		blue trevally
Chordata	Teleostei	Caranx heberi	fish	LC		blacktip trevally
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	Caranx sexfasciatus	fish	LC		bigeye trevally
Chordata	Teleostei	Cephalopholis sonnerati	fish	LC		tomato hind
Chordata	Teleostei	Ceratoscopelus warmingii	fish	LC	ves	Warming's lantern fish
Chordata	Teleostei	Chaetodon kleinii	fish	LC	yes	sunburst butterflyfish
	Teleostei	Chaetodon kielili Chaetodon lunula	fish	LC		•
Chordata						raccoon butterflyfish
Chordata	Teleostei	Chaunax penicillatus	fish	LC	yes	
Chordata	Teleostei	Chelon dumerili	fish	DD		
Chordata	Teleostei	Chirocentrus dorab	fish	LC		dorab wolf-herring
Chordata	Teleostei	Chromis xanthochira	fish	LC	yes	
Chordata	Teleostei	Chrysiptera brownriggii	fish	LC		
Chordata	Teleostei	Cirrhitichthys aprinus	fish	LC		spotted hawkfish
Chordata	Teleostei	Cirrhitichthys oxycephalus	fish	LC		pixy hawkfish
Chordata	Teleostei	Cirrhitus pinnulatus	fish	LC		stocky hawkfish
Chordata	Teleostei	Clarias gariepinus	fish	LC	yes	
Chordata	Teleostei	Clarias theodorae	fish	LC	yes	
Chordata	Teleostei	Clinus superciliosus	fish	LC	yes	
Chordata	Teleostei	Cociella heemstrai	fish	LC		
Chordata	Teleostei	Conger cinereus	fish	LC		mustache conger
Chordata	Teleostei	Coptodon rendalli	fish	LC		-
Chordata	Teleostei	Coptodon zillii	fish	LC	yes	
Chordata	Teleostei	Coris caudimacula	fish	LC	,	spottail coris
Chordata	Teleostei	Crossorhombus valderostratus	fish	LC		broadbrow flounder
Chordata	Teleostei	Ctenochaetus striatus	fish	LC		lined bristletooth
Chordata	Teleostei	Cyclothone alba	fish	LC	ves	albino anglemouth
Chordata	Teleostei	Cyclothone microdon	fish	LC	ves	veiled anglemouth, cyclothone à petites dents
Chordata	Teleostei	Cyclothone pallida	fish	LC	ves	bicolored bristlemouth, cyclothone pâle
Chordata	Teleostei	Cyclothone pseudopallida	fish	LC	ves	slender bristlemouth, cyclothone mince
Chordata	Teleostei	Cynoglossus lida	fish	LC	yes	roughscale tonguesole
Chordata	Teleostei	Cyprinocirrhites polyactis	fish	LC		swallowtail hawfish
Chordata	Teleostei	Dagetichthys marginatus	fish	DD	yes	Swanowtan nawnsh
Chordata	Teleostei	Decapterus macarellus	fish	LC	ves	mackerel scad
Chordata	Teleostei	Decapterus macrosoma	fish	LC	yes	shortfin scad
Chordata	Teleostei	Decapterus macrosoma Decapterus russelli	fish	LC		Indian scad
Chordata	Teleostei	Decapterus russelli Deveximentum insidiator	fish	LC		mulan scau
Chordata	Teleostei	Diaphus brachycephalus	fish	LC	Vec	short-headed lantern fish
Chordata	Teleostei	Diaphus brachycephalus Diaphus hudsoni	fish	LC	yes	Hudson's lanternfish
		•		LC	yes	
Chordata	Teleostei	Diaphus mollis	fish		yes	Soft lanternfish
Chordata	Teleostei	Diaphus richardsoni	fish	LC	yes	Richardson's headlightfish
Chordata	Teleostei	Dichistius capensis	fish			

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Dichistius multifasciatus	fish			
Chordata	Teleostei	Dinoperca petersi	fish			lampfish
Chordata	Teleostei	Diogenichthys atlanticus	fish	LC	yes	
Chordata	Teleostei	Diplodus cervinus	fish	LC	-	zebra seabream, sar tambour
Chordata	Teleostei	Diplodus kotschyi	fish			
Chordata	Teleostei	Diplodus sargus	fish	LC		white seabream, sar commun du Maroc
Chordata	Teleostei	Dipterygonotus balteatus	fish	LC		mottled fusilier
Chordata	Teleostei	Draculo celetus	fish			dainty dragonet
Chordata	Teleostei	Drepane longimana	fish			Concertina fish
Chordata	Teleostei	Echidna nebulosa	fish	LC		snowflake moray
Chordata	Teleostei	Echidna polyzona	fish	LC		barred moray
Chordata	Teleostei	Eleotris acanthopomus	fish	LC	yes	
Chordata	Teleostei	Eleotris fusca	fish	LC	,	dusky sleeper
Chordata	Teleostei	Eleotris melanosoma	fish	LC		dusity steeper
Chordata	Teleostei	Elops saurus	fish	LC		ladyfish
Chordata	Teleostei	Emmelichthys struhsakeri	fish	LC	yes	Bonnetmouth
Chordata	Teleostei	Encrasicholina heteroloba	fish	LC	ves	shorthead anchovy
Chordata	Teleostei	Encrasicholina punctifer	fish	LC	ycs	buccaneer anchovy
Chordata	Teleostei	Enteromius paludinosus	fish	LC	1/06	buccaneer anchovy
Chordata	Teleostei	Enteromius trimaculatus	fish	LC	yes	
			fish	LC	yes	
Chordata	Teleostei	Entomacrodus epalzeocheilos	fish	LC		week weeking blooms.
Chordata	Teleostei	Entomacrodus striatus				reef margin blenny
Chordata	Teleostei	Entomacrodus thalassinus	fish	LC	yes	
Chordata	Teleostei	Epinephelus andersoni	fish			catface grouper
Chordata	Teleostei	Epinephelus epistictus	fish			dotted grouper
Chordata	Teleostei	Epinephelus marginatus	fish			dusky grouper, mérou noir
Chordata	Teleostei	Epinephelus merra	fish	LC		honeycomb grouper
Chordata	Teleostei	Epinephelus poecilonotus	fish			dot-dash grouper
Chordata	Teleostei	Epinephelus rivulatus	fish	LC		halfmoon grouper
Chordata	Teleostei	Epinephelus tukula	fish	LC		potato grouper
Chordata	Teleostei	Etrumeus sadina	fish	LC		
Chordata	Teleostei	Etrumeus whiteheadi	fish	LC	yes	whitehead's round herring
Chordata	Teleostei	Euthynnus affinis	fish	LC		kawakawa, thonine orientale
Chordata	Teleostei	Gazza minuta	fish	LC		toothpony
Chordata	Teleostei	Gerres filamentosus	fish	LC		whipfin silver-biddy
Chordata	Teleostei	Gerres longirostris	fish	LC		
Chordata	Teleostei	Gerres macracanthus	fish			
Chordata	Teleostei	Gerres methueni	fish			
Chordata	Teleostei	Gilchristella aestuaria	fish	LC		
Chordata	Teleostei	Glossogobius aureus	fish	LC	yes	
Chordata	Teleostei	Glossogobius callidus	fish	LC		
Chordata	Teleostei	Glossogobius giuris	fish	LC		tank goby
Chordata	Teleostei	Gonorynchus abbreviatus	fish		yes	
Chordata	Teleostei	Gonostoma atlanticum	fish	LC	yes	Atlantic fangjaw
Chordata	Teleostei	Gymnothorax eurostus	fish	LC	-	
Chordata	Teleostei	Gymnothorax favagineus	fish	LC		laced moray
Chordata	Teleostei	Gymnothorax flavimarginatus	fish	LC		yellowmargin moray
Chordata	Teleostei	Gymnothorax meleagris	fish	LC		turkey moray
	Teleostei	Gymnothorax pictus	fish	LC		
Chordata	releostei					

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Gymnothorax thyrsoideus	fish	LC	yes	
Chordata	Teleostei	Halichoeres lapillus	fish	LC	-	jewelled wrasse
Chordata	Teleostei	Helcogramma rharhabe	fish	LC		•
Chordata	Teleostei	Hemiramphus lutkei	fish		ves	Lutke's halbeak
Chordata	Teleostei	Herklotsichthys quadrimaculatus	fish	LC	,	fourspot sardine
Chordata	Teleostei	Heteropriacanthus cruentatus	fish	LC		glasseye snapper
Chordata	Teleostei	Hilsa kelee	fish	LC		Kelee shad
Chordata	Teleostei	Hoplolatilus fronticinctus	fish			pastel tilefish
Chordata	Teleostei	Hygophum hygomii	fish	LC	yes	paster thensh
Chordata	Teleostei	Hygophum proximum	fish	LC	ves	Firefly lanternfish
Chordata	Teleostei	Hyporhamphus affinis	fish	LC	ycs	tropical halfbeak
Chordata	Teleostei	Hypseleotris cyprinoides	fish	DD		tropical naribeak
Chordata	Teleostei	Hypseleotris cypinioides Hypseleotris tohizonae	fish	DD	1/06	
Chordata	Teleostei	Idiacanthus fasciola	fish	LC	yes	ribbon sawtailfish
Chordata	Teleostei	Iso natalensis	fish	LC	yes	TIDDOTI SAWLAIITISTI
				LC		1
Chordata	Teleostei	Istiblennius bellus	fish			imspringer
Chordata	Teleostei	Istiblennius dussumieri	fish	LC		streaky rockskipper
Chordata	Teleostei	Istiblennius edentulus	fish	LC		rockskipper
Chordata	Teleostei	Istiblennius lineatus	fish	LC	yes	
Chordata	Teleostei	Johnius amblycephalus	fish	LC		bearded croaker
Chordata	Teleostei	Johnius fuscolineatus	fish	LC	yes	
Chordata	Teleostei	Kuhlia mugil	fish	LC		barred flagtail
Chordata	Teleostei	Kyphosus bigibbus	fish	LC		grey sea chub
Chordata	Teleostei	Kyphosus cinerascens	fish	LC		snubnose chub
Chordata	Teleostei	Kyphosus vaigiensis	fish	LC		brassy chub
Chordata	Teleostei	Lacustricola katangae	fish		yes	
Chordata	Teleostei	Lacustricola myaposae	fish		yes	
Chordata	Teleostei	Lampadena luminosa	fish	LC	yes	Luminous lanternfish
Chordata	Teleostei	Lampanyctus alatus	fish	LC		Winged lanternfish
Chordata	Teleostei	Lampanyctus intricarius	fish	LC	yes	
Chordata	Teleostei	Lethrinus harak	fish	LC	yes	blackspot emperor
Chordata	Teleostei	Limnichthys nitidus	fish	LC	-	
Chordata	Teleostei	Lithognathus mormyrus	fish	LC		striped seabream, marbre
Chordata	Teleostei	Lobianchia gemellarii	fish	LC	ves	Cocco's lantern fish
Chordata	Teleostei	Lutjanus argentimaculatus	fish	LC	,	river snapper
Chordata	Teleostei	Lutjanus fulviflamma	fish	LC		dory snapper
Chordata	Teleostei	Lutjanus fulvus	fish	LC		blacktail snapper
Chordata	Teleostei	Lutjanus rivulatus	fish	LC		blubberlip snapper
Chordata	Teleostei	Marcusenius caudisquamatus	fish	ĒN	yes	
Chordata	Teleostei	Marcusenius senegalensis	fish	LC	yes	
Chordata	Teleostei	Megalaspis cordyla	fish	LC	yes	torpedo scad
Chordata	Teleostei	Megalops cyprinoides	fish	DD		Indo-Pacific tarpon
Chordata	Teleostei	Mene maculata	fish	DD	yes	moonfish
Chordata	Teleostei	Monodactylus argenteus	fish	LC	yes	mono
Chordata	Teleostei	Mugil cephalus	fish	LC		grey mullet, muge
Chordata	Teleostei	Mugil curema	fish	LC	ves	silverside mullet
Chordata	Teleostei	Mulloidichthys vanicolensis	fish	LC	yes	yellowfin goatfish
Chordata	Teleostei	Myctophum aurolaternatum	fish	LC	Vec	yenowini godinsh
		,			yes	lantorofich
Chordata	Teleostei	Myctophum nitidulum	fish	LC	yes	lanternfish
Chordata	Teleostei	Myripristis amaena	fish	LC	yes	

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Myripristis berndti	fish	LC		blotcheye soldierfish
Chordata	Teleostei	Nemanthias carberryi	fish	LC		threadfin anthias
Chordata	Teleostei	Neoscorpis lithophilus	fish			stone-bream
Chordata	Teleostei	Notolychnus valdiviae	fish	LC	yes	topside lampfish
Chordata	Teleostei	Novaculoides macrolepidotus	fish			seagrass wrasse
Chordata	Teleostei	Odonus niger	fish	LC		red-toothed triggerfish
Chordata	Teleostei	Oligolepis acutipennis	fish	LC		sharptail goby
Chordata	Teleostei	Omobranchus banditus	fish	LC		bandit blenny
Chordata	Teleostei	Omobranchus elongatus	fish	LC	yes	cloister blenny
Chordata	Teleostei	Omobranchus punctatus	fish	LČ	ves	muzzled blenny
Chordata	Teleostei	Oreochromis mossambicus	fish	VU	,	Mozambique tilapia, tilapia du Mozambique
Chordata	Teleostei	Oreochromis niloticus	fish	ĹĊ	ves	Nile tilapia, tilapia du Nil
Chordata	Teleostei	Osteomugil cunnesius	fish	20	yes	Title thapia, thapia da Titl
Chordata	Teleostei	Osteomugil robustus	fish			
Chordata	Teleostei	Ostorhinchus taeniophorus	fish			
Chordata	Teleostei	Otolithes ruber	fish	LC		tiger-toothed croaker
Chordata	Teleostei	Oxycheilinus bimaculatus	fish	LC		twospot wrasse
Chordata	Teleostei	Oxyurichthys keiensis	fish	LC		twospot wrasse
	Teleostei	, ,		LC		
Chordata		Pagellus bellottii	fish		yes	red pandora, pageot à tache rouge
Chordata	Teleostei	Parablennius cornutus	fish	LC		
Chordata	Teleostei	Parablennius pilicornis	fish	LC		
Chordata	Teleostei	Paralichthodes algoensis	fish	LC	yes	peppered flounder
Chordata	Teleostei	Paramonacanthus pusillus	fish	LC		
Chordata	Teleostei	Parascolopsis eriomma	fish	LC	yes	rosy dwarf monocle bream
Chordata	Teleostei	Parupeneus ciliatus	fish	LC		whitesaddle goatfish
Chordata	Teleostei	Parupeneus indicus	fish	LC		Indian goatfish, rouget-barbet indien
Chordata	Teleostei	Parupeneus jansenii	fish	LC	yes	
Chordata	Teleostei	Pelates quadrilineatus	fish		yes	fourlined terapon
Chordata	Teleostei	Pempheris mangula	fish			
Chordata	Teleostei	Pempheris schwenkii	fish			
Chordata	Teleostei	Pervagor janthinosoma	fish	LC		blackbar filefish
Chordata	Teleostei	Planiliza alata	fish	LC		
Chordata	Teleostei	Planiliza macrolepis	fish	LC		
Chordata	Teleostei	Platybelone argalus	fish	LC		keeltail needlefish
Chordata	Teleostei	Plectorhinchus flavomaculatus	fish			lemonfish
Chordata	Teleostei	Plectorhinchus gibbosus	fish	LC		Harry Hotlips
Chordata	Teleostei	Plectorhinchus playfairi	fish	LC		whitebarred rubberlips
Chordata	Teleostei	Plectorhinchus schotaf	fish	LC		minstrel sweetlips
Chordata	Teleostei	Plectorhinchus sordidus	fish	LC		sordid rubberlips
Chordata	Teleostei	Plectroglyphidodon leucozonus	fish	LC.		
Chordata	Teleostei	Plotosus lineatus	fish			striped eel catfish
Chordata	Teleostei	Plotosus nkunga	fish			stinging eel catfish
Chordata	Teleostei	Polydactylus plebeius	fish			striped threadfin, barbure rayé
Chordata	Teleostei	Polydactylus sextarius	fish		ves	blackspot threadfin, barbure à tâche noire
Chordata	Teleostei	Pomacanthus rhomboides	fish	LC	, 55	and a more more
Chordata	Teleostei	Pomadasys commersonnii	fish	LC		smallspotted grunter
Chordata	Teleostei	Pomadasys furcatus	fish	LC		banded grunt
Chordata	Teleostei	Pomadasys kaakan	fish	LC		javelin grunter
Chordata	Teleostei	Pomadasys maculatus	fish	LC		saddle grunt
Chordata	Teleostei		fish	LC		•
Chordata	reieostei	Pomadasys olivaceus	nsn	LC		olive grunt

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Pomadasys striatus	fish	LC	yes	striped grunter
Chordata	Teleostei	Pomatomus saltatrix	fish	VU		blue fish, tassergal
Chordata	Teleostei	Pomatoschistus microps	fish	LC	yes	common goby, gobie buhotte
Chordata	Teleostei	Pristipomoides sieboldii	fish	LC	yes	lavender jobfish
Chordata	Teleostei	Pseudanthias squamipinnis	fish	LC	•	sea goldie
Chordata	Teleostei	Pseudocrenilabrus philander	fish	LC	yes	3
Chordata	Teleostei	Pseudomyxus capensis	fish		,	
Chordata	Teleostei	Pseudorhombus arsius	fish	LC		largetooth flounder
Chordata	Teleostei	Pteragogus flagellifer	fish	LC	ves	cocktail wrasse
Chordata	Teleostei	Pterocaesio marri	fish	ĹĊ	,	Marr's fusilier
Chordata	Teleostei	Pterois miles	fish	LC		devil firefish
Chordata	Teleostei	Pterois mombasae	fish	LC		frillfin turkeyfish
Chordata	Teleostei	Pycnochromis nigrurus	fish	LC		Thin turney non
Chordata	Teleostei	Rachycentron canadum	fish	LC		cobia, mafou
Chordata	Teleostei	Rastrelliger kanagurta	fish	DD	ves	Indian mackerel
Chordata	Teleostei	Rhabdosargus sarba	fish	LC	ycs	vellowfin bream
Chordata	Teleostei	Rhabdosargus thorpei	fish	LC		bigeye stumpnose
Chordata	Teleostei	Rhinecanthus rectangulus	fish	LC		wedge-tail triggerfish
Chordata	Teleostei		fish	LC		serrated flathead
		Rogadius serratus		LC	yes	
Chordata	Teleostei	Sarda orientalis	fish			striped bonito, bonite oriental
Chordata	Teleostei	Sardinella albella	fish	LC	yes	white sardinella
Chordata	Teleostei	Sardinella gibbosa	fish	LC		goldstripe sardinella
Chordata	Teleostei	Sardinops sagax	fish	LC		California pilchard, pilchard sudaméricain
Chordata	Teleostei	Sargocentron punctatissimum	fish	LC		speckled squirrelfish
Chordata	Teleostei	Sarpa salpa	fish	LC		Saunders's tern , saupe
Chordata	Teleostei	Scartella emarginata	fish	LC		
Chordata	Teleostei	Scarus ghobban	fish	LC		bluechin parrotfish
Chordata	Teleostei	Scarus rubroviolaceus	fish	LC		ember parrotfish
Chordata	Teleostei	Scomberoides commersonnianus	fish	LC		talang queenfish
Chordata	Teleostei	Scomberoides lysan	fish	LC		doublespotted queenfish
Chordata	Teleostei	Scomberomorus commerson	fish	NT		narrow-barred Spanish mackerel
Chordata	Teleostei	Scomberomorus plurilineatus	fish	DD		Kanadi kingfish
Chordata	Teleostei	Sebastapistes mauritiana	fish	LC		spineblotch scorpionfish
Chordata	Teleostei	Selar crumenophthalmus	fish	LC		bigeye scad
Chordata	Teleostei	Seriola rivoliana	fish	LC		Almaco jack, sériole limon
Chordata	Teleostei	Siganus canaliculatus	fish	LC	yes	white-spotted spinefoot
Chordata	Teleostei	Siganus fuscescens	fish	LC	•	
Chordata	Teleostei	Siganus sutor	fish	LC		shoemaker spinefoot
Chordata	Teleostei	Sillaginopodys chondropus	fish			'
Chordata	Teleostei	Sillago attenuata	fish	LC	yes	
Chordata	Teleostei	Sillago sihama	fish	LC	,	silver sillago
Chordata	Teleostei	Sorsogona portuguesa	fish	DD		Sirver sinage
Chordata	Teleostei	Sphyraena chrysotaenia	fish	22		
Chordata	Teleostei	Sphyraena japonica	fish		yes	
Chordata	Teleostei	Sphyraena pinguis	fish		yes	
Chordata	Teleostei	Spratelloides delicatulus	fish	LC	ycs	delicate round herring
Chordata	Teleostei	Stenogobius genivittatus	fish	LC	Vec	deneate round nerring
Chordata	Teleostei	Stethojulis interrupta	fish	LC	yes	cutribbon wrasse
		,		LC		
Chordata	Teleostei Teleostei	Stethojulis strigiventer	fish			three-ribbon rainbowfish
Chordata	Teleostei	Stolephorus indicus	fish	LC	yes	Indian anchovy

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Stomias boa	fish	LC	yes	boa dragonfish, dragon-boa
Chordata	Teleostei	Strophidon sathete	fish	LC		slender giant moray
Chordata	Teleostei	Sufflamen chrysopterum	fish	LC		
Chordata	Teleostei	Symbolophorus evermanni	fish	LC	yes	Evermann's lantern fish
Chordata	Teleostei	Terapon jarbua	fish	LC	-	Jarbua terapon
Chordata	Teleostei	Tetrosomus concatenatus	fish		yes	triangular boxfish
Chordata	Teleostei	Thalassoma amblycephalum	fish	LC	,	bluntheaded wrasse
Chordata	Teleostei	Thalassoma hebraicum	fish	LC		goldbar wrasse
Chordata	Teleostei	Thalassoma purpureum	fish	LC		surge wrasse
Chordata	Teleostei	Thalassoma quinquevittatum	fish	ĹĊ		
Chordata	Teleostei	Thalassoma trilobatum	fish	LC		Christmas wrasse
Chordata	Teleostei	Thryssa setirostris	fish	LC		longjaw thryssa
Chordata	Teleostei	Tilapia sparrmanii	fish	LC	ves	iongjan am josa
Chordata	Teleostei	Trachinocephalus myops	fish	LC	yes	snakefish
Chordata	Teleostei	Trachinotus baillonii	fish	LC		smallspotted dart
Chordata	Teleostei	Trachinotus blochii	fish	LC		snubnose pompano
Chordata	Teleostei	Trachinotus botla	fish	LC		largespotted dart
Chordata	Teleostei	Trichiurus lepturus	fish	LC		largehead hairtail, poisson-sabre commun
Chordata	Teleostei	Tripterodon orbis	fish	LC		African spadefish
	Teleostei	Tylerius spinosissimus	fish	LC		•
Chordata		•		LC		spiny blaasop
Chordata	Teleostei	Tylosurus acus	fish		yes	agujon needlefish houndfish
Chordata	Teleostei	Tylosurus crocodilus	fish	LC		nounarish
Chordata	Teleostei	Upeneus pori	fish	LC	yes	
Chordata	Teleostei	Upeneus suahelicus	fish	LC	yes	
Chordata	Teleostei	Upeneus tragula	fish	LC	yes	freckled goatfish
Chordata	Teleostei	Uropterygius macrocephalus	fish	LC	yes	largehead moray
Chordata	Teleostei	Uropterygius micropterus	fish	LC	yes	
Chordata	Teleostei	Vinciguerria nimbaria	fish	LC	yes	oceanic lightfish
Chordata	Teleostei	Yongeichthys criniger	fish		yes	
Chordata	Teleostei	Zanclus cornutus	fish	LC		Moorish idol
Chordata		Hemidactylus mabouia		LC	yes	
Chordata		Varanus niloticus		LC	yes	
Cnidaria	Anthozoa	Arula petunia	cnidarians		yes	
Cnidaria	Anthozoa	Carijoa riisei	cnidarians		yes	white telesto
Cnidaria	Anthozoa	Diadumene leucolena	cnidarians		yes	white anemone
Cnidaria	Anthozoa	Edwardsia longicornis	cnidarians		yes	
Cnidaria	Anthozoa	Lobophytum crassum	cnidarians			
Cnidaria	Anthozoa	Oulastrea crispata	cnidarians	LC	yes	zebra coral
Cnidaria	Anthozoa	Porites rus	cnidarians	LC	yes	hump coral
Cnidaria	Anthozoa	Stylophora pistillata	cnidarians	NT		hood coral
Cnidaria	Hydrozoa	Asyncoryne ryniensis	cnidarians		yes	
Cnidaria	Hydrozoa	Campanularia hincksii	cnidarians			
Cnidaria	Hydrozoa	Clytia gracilis	cnidarians		yes	
Cnidaria	Hydrozoa	Clytia noliformis	cnidarians		yes	
Cnidaria	Hydrozoa	Diphyes dispar	cnidarians		yes	
Cnidaria	Hydrozoa	Eirene hexanemalis	cnidarians		yes	
Cnidaria	Hydrozoa	Euphysilla pyramidata	cnidarians		yes	
Cnidaria	Hydrozoa	Forskalia tholoides	cnidarians		yes	
Cnidaria	Hydrozoa	Hydra sinensis	cnidarians		yes	

phylum	class	species	group	category	new	vernacular
Cnidaria	Hydrozoa	Liriope tetraphylla	cnidarians		yes	
Cnidaria	Hydrozoa	Moerisia inkermanica	cnidarians		yes	
Cnidaria	Hydrozoa	Nanomia bijuga	cnidarians		yes	
Cnidaria	Hydrozoa	Obelia dichotoma	cnidarians			sea thread hydroid
Cnidaria	Hydrozoa	Orthopyxis caliculata	cnidarians		yes	
Cnidaria	Hydrozoa	Orthopyxis crenata	cnidarians		yes	
Cnidaria	Hydrozoa	Physalia physalis	cnidarians			Portuguese man-of-war, galère portugaise
Cnidaria	Hydrozoa	Plumularia filicaulis	cnidarians			
Cnidaria	Hydrozoa	Rhopalonema velatum	cnidarians		yes	veiled medusa
Cnidaria	Hydrozoa	Solmundella bitentaculata	cnidarians		yes	
Cnidaria	Hydrozoa	Sphaerocoryne bedoti	cnidarians		yes	
Cnidaria	Hydrozoa	Stauridiosarsia nipponica	cnidarians		yes	
Cnidaria	Hydrozoa	Zancleopsis dichotoma	cnidarians		yes	
Cnidaria	Scyphozoa	Crambionella stuhlmanni	cnidarians		yes	
Cnidaria	Scyphozoa	Pelagia noctiluca	cnidarians		ves	purplestripped jelly, méduse pélagique
Cryptophyta	Cryptophyceae	Hemiarma marina			yes	hankisanikhan 2019), 1112-1121 kanasa kanasa kanasa
Cryptophyta	Cryptophyceae	Hemiselmis andersenii			yes	
Echinodermata	Asteroidea	Fromia indica	echinoderms		, 00	
Echinodermata	Asteroidea	Protoreaster lincki	echinoderms		yes	
Echinodermata	Crinoidea	Tropiometra carinata	echinoderms		yes	
Echinodermata	Echinoidea	Echinocardium cordatum	echinoderms		ves	sea-potato, oursin de sable
Echinodermata	Echinoidea	Echinometra mathaei	echinoderms		ycs	rock-boring urchin
Echinodermata	Echinoidea	Echinostrephus molaris	echinoderms			rock borning drennin
Echinodermata	Echinoidea	Echinothrix calamaris	echinoderms			banded sea urchin
Echinodermata	Echinoidea	Echinothrix diadema	echinoderms			blue-black urchin
Echinodermata	Echinoidea	Eucidaris metularia	echinoderms			blue bluek ureliili
Echinodermata	Echinoidea	Salmaciella oligopora	echinoderms		yes	
Echinodermata	Echinoidea	Stomopneustes variolaris	echinoderms		yes	
Echinodermata	Echinoidea	Temnopleurus toreumaticus	echinoderms			
Echinodermata	Echinoidea	Tripneustes gratilla	echinoderms			collector urchin
Echinodermata	Holothuroidea	Actinopyga echinites	echinoderms	VU		collector dicinii
Echinodermata	Holothuroidea	Pseudocnella sykion	echinoderms	VU		
Echinodermata	Ophiuroidea	Amphipholis squamata	echinoderms			dwarf brittle star
Echinodermata Echinodermata	Ophiuroidea	Breviturma brevipes	echinoderms			dwari brittle star
	Ophiuroidea	·				
Echinodermata	•	Macrophiothrix demessa	echinoderms			
Echinodermata	Ophiuroidea	Macrophiothrix longipeda	echinoderms			
Echinodermata	Ophiuroidea	Ophiactis picteti	echinoderms			
Echinodermata	Ophiuroidea	Ophiactis savignyi	echinoderms			
Echinodermata	Ophiuroidea	Ophiocnemis marmorata	echinoderms			
Echinodermata	Ophiuroidea	Ophiocoma erinaceus	echinoderms			
Echinodermata	Ophiuroidea	Ophiocomella valenciae	echinoderms			
Echinodermata	Ophiuroidea	Ophiothrix (Ophiothrix) echinotecta	echinoderms			
Echinodermata	Ophiuroidea	Ophiothrix (Ophiothrix) trilineata	echinoderms			
Euglenozoa	Euglenoidea	Lepocinclis steinii	i		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	
Mollusca	Bivalvia	Brachidontes variabilis	molluscs		yes	variable mussel
Mollusca	Bivalvia	Ostrea stentina	molluscs		ves	

phylum	class	species	group	category	new	vernacular
Mollusca	Bivalvia	Perna perna	molluscs			brown mussel, moule de roche sudaméricaine
Mollusca	Bivalvia	Pinna muricata	molluscs			prickly pen shell
Mollusca	Bivalvia	Saccostrea cuccullata	molluscs			
Mollusca	Bivalvia	Saccostrea mordax	molluscs		yes	
Mollusca	Bivalvia	Striostrea margaritacea	molluscs	LC		Cape rock oyster
Mollusca	Cephalopoda	Loligo reynaudii	molluscs	LC	yes	Cape Hope squid, calmar du Cap
Mollusca	Gastropoda	Afrolittorina africana	molluscs		,	
Mollusca	Gastropoda	Aplysia oculifera	molluscs		ves	spotted sea hare
Mollusca	Gastropoda	Aplysia parvula	molluscs		,	dwarf sea hare, petit lièvre de mer
Mollusca	Gastropoda	Bulinus umbilicatus	molluscs	LC	ves	•
Mollusca	Gastropoda	Bullia natalensis	molluscs			pleated plough shell
Mollusca	Gastropoda	Cerithium nesioticum	molluscs		yes	
Mollusca	Gastropoda	Corolla spectabilis	molluscs		yes	
Mollusca	Gastropoda	Echinolittorina natalensis	molluscs		,	
Mollusca	Gastropoda	Haloa pemphis	molluscs		yes	
Mollusca	Gastropoda	Hydatina physis	molluscs		,	striped bubble shell
Mollusca	Gastropoda	Littoraria subvittata	molluscs			Surped Babble Silen
Mollusca	Gastropoda	Lyncina carneola	molluscs			
Mollusca	Gastropoda	Melanoides tuberculata	molluscs	LC	yes	
Mollusca	Gastropoda	Monetaria caputserpentis	molluscs		yes	serpent's head cowry
Mollusca	Gastropoda	Naria helvola	molluscs			Scipent 3 nead cowry
Mollusca	Gastropoda	Okenia aurorapapillata	molluscs		yes	
Mollusca	Gastropoda	Oxystele tabularis	molluscs		yes	
Mollusca	Gastropoda	Peronia madagascariensis	molluscs		yes	
Mollusca	Gastropoda	Phanerophthalmus lentigines	molluscs		yes	
Mollusca	Gastropoda	Pleurobranchus varians	molluscs		yes	
Mollusca	Gastropoda	Polybranchia jensenae	molluscs		ves	
Mollusca	Gastropoda	Purpura bufo	molluscs		yes	toad purple
Mollusca	Gastropoda	Semiricinula tissoti	molluscs			toad purple
Mollusca	Gastropoda	Strigatella litterata	molluscs			
Mollusca	Gastropoda	Stylocheilus striatus	molluscs		V/05	
Mollusca	Gastropoda Gastropoda	Tarebia granifera	molluscs	LC	yes	
Mollusca	Gastropoda Gastropoda	Thecacera pennigera	molluscs	LC	yes	thecacera, thécacère
Mollusca	Gastropoda	Tonna allium	molluscs		yes	costate tun
Mollusca	•	Tricolia kochii	molluscs		yes	costate tun
	Gastropoda					
Mollusca	Gastropoda	Turbo radiatus	molluscs			
Mollusca	Gastropoda	Verconia simplex	molluscs			
Mollusca	Gastropoda	Xenophora solarioides	molluscs			
Myzozoa	Dinophyceae	Yihiella yeosuensis	unicellular		yes	
Nemertea	Hoplonemertea	Prostoma graecense	worms		yes	
Ochrophyta	Chrysoparadoxophyceae	Chrysoparadoxa australica	algae		yes	
Ochrophyta	Chrysophyceae	Poterioochromonas malhamensis	algae		yes	
Ochrophyta	Dictyochophyceae	Octactis octonaria	algae		yes	
Ochrophyta	Dictyochophyceae	Pseudochattonella farcimen	algae		yes	
Ochrophyta	Dictyochophyceae	Vicicitus globosus	algae		yes	
Ochrophyta	Pelagophyceae	Aureococcus anophagefferens	algae		yes	
Ochrophyta	Pelagophyceae	Pelagomonas calceolata	algae		yes	
Ochrophyta	Phaeophyceae	Bachelotia antillarum	algae		yes	
Ochrophyta	Phaeophyceae	Canistrocarpus cervicornis	algae			
Ochrophyta	Phaeophyceae	Colpomenia sinuosa	algae			

phylum	class	species	group	category	new	vernacular
Ochrophyta	Phaeophyceae	Dictyota acutiloba	algae			
Ochrophyta	Phaeophyceae	Dictyota ciliolata	algae			
Ochrophyta	Phaeophyceae	Dictyota rigida	algae			
Ochrophyta	Phaeophyceae	Ecklonia radiata	algae		yes	
Ochrophyta	Phaeophyceae	Feldmannia mitchelliae	algae		yes	
Ochrophyta	Phaeophyceae	Hecatonema terminale	algae		yes	
Ochrophyta	Phaeophyceae	Hydroclathrus clathratus	algae		,	
Ochrophyta	Phaeophyceae	Hydroclathrus tenuis	algae		yes	
Ochrophyta	Phaeophyceae	Hydroclathrus tilesii	algae		yes	
Ochrophyta	Phaeophyceae	Neoralfsia expansa	algae		ves	
Ochrophyta	Phaeophyceae	Padina boergesenii	algae		, 00	
Ochrophyta	Phaeophyceae	Padina gymnospora	algae			
Ochrophyta	Phaeophyceae	Rosenvingea intricata	algae			
Ochrophyta	Phaeophyceae	Sargassum aquifolium	algae			
Ochrophyta	Phaeophyceae	Sargassum oligocystum	algae		yes	
Ochrophyta	Phaeophyceae	Sargassum polycystum	algae		yes	
Ochrophyta	Raphidophyceae	Chattonella marina	9			
	Карпіцорпусеае		algae		yes	
Platyhelminthes Porifera	D	Paraplanocera marginata			yes	
Porifera	Demospongiae	Batzella aurantiaca	sponges		yes	
	Demospongiae	Callyspongia (Cladochalina) diffusa	sponges			
Porifera Porifera	Demospongiae	Clathria (Clathria) unica	sponges		yes	
	Demospongiae	Clionaopsis platei	sponges		yes	
Porifera	Demospongiae	Dictyonella funicularis	sponges		yes	
Porifera	Demospongiae	Geodia vosmaeri	sponges		yes	
Porifera	Demospongiae	Hymeniacidon flavia	sponges		yes	
Porifera	Demospongiae	Igernella notabilis	sponges		yes	
Porifera	Demospongiae	Mycale (Carmia) cecilia	sponges		yes	
Porifera	Demospongiae	Phorbas bihamiger	sponges		yes	
Porifera	Demospongiae	Phorbas clathratus	sponges		yes	
Porifera	Demospongiae	Pione vastifica	sponges		yes	boring sponge, clione rouge
Porifera	Demospongiae	Pione velans	sponges		yes	
Porifera	Demospongiae	Spirastrella hartmani	sponges		yes	
Porifera	Demospongiae	Spongilla manconiae	sponges		yes	
Porifera	Demospongiae	Tedania (Tedania) tubulifera	sponges		yes	
Rhodophyta	Compsopogonophyceae	Compsopogon caeruleus	algae		yes	
Rhodophyta	Compsopogonophyceae	Erythrotrichia carnea	algae		yes	
Rhodophyta	Florideophyceae	Amphiroa anceps	algae			
Rhodophyta	Florideophyceae	Amphiroa beauvoisii	algae			
Rhodophyta	Florideophyceae	Amphiroa bowerbankii	algae			
Rhodophyta	Florideophyceae	Asparagopsis taxiformis	algae			
Rhodophyta	Florideophyceae	Centroceras gasparrinii	algae		yes	
Rhodophyta	Florideophyceae	Chondracanthus acicularis	algae		yes	
Rhodophyta	Florideophyceae	Chondracanthus saundersii	algae		yes	
Rhodophyta	Florideophyceae	Chondria armata	algae		-	
Rhodophyta	Florideophyceae	Chondria baileyana	algae		yes	
Rhodophyta	Florideophyceae	Chondria dasyphylla	algae		yes	
Rhodophyta	Florideophyceae	Dasya corymbifera	algae		yes	
Rhodophyta	Florideophyceae	Dichotomaria tenera	algae		•	
Rhodophyta	Florideophyceae	Gelidium abbottiorum	algae		yes	
	Florideophyceae	Gelidium crinale	algae		yes	

phylum	class	species	group	category	new	vernacular
Rhodophyta	Florideophyceae	Gloiocladia iyoensis	algae			
Rhodophyta	Florideophyceae	Gracilaria arcuata	algae		yes	
Rhodophyta	Florideophyceae	Herposiphonia akidoglossa	algae		yes	
Rhodophyta	Florideophyceae	Herposiphonia prorepens	algae		yes	
Rhodophyta	Florideophyceae	Herposiphonia secunda	algae			
Rhodophyta	Florideophyceae	Hildenbrandia rubra	algae		yes	
Rhodophyta	Florideophyceae	Hypnea nigrescens	algae		yes	
Rhodophyta	Florideophyceae	Hypnea rosea	algae			
Rhodophyta	Florideophyceae	Hypnea spinella	algae		yes	
Rhodophyta	Florideophyceae	Hypnea tenuis	algae		yes	
Rhodophyta	Florideophyceae	Jania adhaerens	algae			
Rhodophyta	Florideophyceae	Jania cultrata	algae			
Rhodophyta	Florideophyceae	Jania prolifera	algae			
Rhodophyta	Florideophyceae	Jania rosea	algae			
Rhodophyta	Florideophyceae	Jania verrucosa	algae			
Rhodophyta	Florideophyceae	Kumanoa globospora	algae		yes	
Rhodophyta	Florideophyceae	Laurencia dendroidea	algae		yes	
Rhodophyta	Florideophyceae	Laurencia natalensis	algae			
Rhodophyta	Florideophyceae	Laurencia obtusa	algae		yes	
Rhodophyta	Florideophyceae	Liagora ceranoides	algae			
Rhodophyta	Florideophyceae	Lophosiphonia obscura	algae		yes	
Rhodophyta	Florideophyceae	Ohelopapa flexilis	algae		yes	
Rhodophyta	Florideophyceae	Ophidocladus simpliciusculus	algae		yes	
Rhodophyta	Florideophyceae	Plocamium cartilagineum	algae		yes	
Rhodophyta	Florideophyceae	Polysiphonia caespitosa	algae		yes	
Rhodophyta	Florideophyceae	Polysiphonia scopulorum	algae			
Rhodophyta	Florideophyceae	Polyzonia elegans	algae			
Rhodophyta	Florideophyceae	Pterocladiella bartlettii	algae		yes	
Rhodophyta	Florideophyceae	Pterocladiella psammophila	algae		yes	
Rhodophyta	Florideophyceae	Ramicrusta textilis	algae		yes	
Rhodophyta	Florideophyceae	Sarconema filiforme	algae			
Rhodophyta	Florideophyceae	Tricleocarpa cylindrica	algae			
Rhodophyta	Florideophyceae	Wilsonosiphonia fujiae	algae		yes	
Tracheophyta	Magnoliopsida	Musa acuminata		LC	yes	