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

# Biodiversity survey for The Sundarbans

# Interim Results Not for public distribution



Credit: Sher-e-Bangla Agricultural University.

### **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 The Sundarbans in January 2023. A total of 20 samples were collected at 5 locations in the park covering different habitats: sundarbans\_1, sundarbans\_2, sundarbans\_3, sundarbans\_4, and sundarbans\_5 (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. 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.

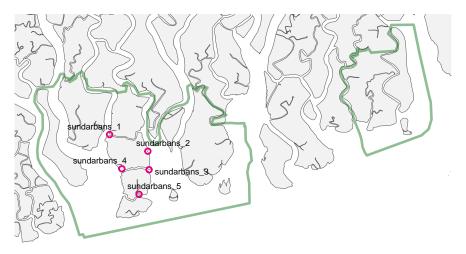


Figure 1: Map of the sampling locations.

#### **DNA** sequencing

Sequencing of the DNA from 20 samples resulted in over 25 million sequence reads, from which we collected 15,803 unique sequences or ASVs (Tables 1 and 2).

reads	asvs			
25835775	15803			

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 198 species, including 124 fish species, 5 mammalian species, and 0 turtle species (Table 3). Species from other groups, such as algae, copepods, crustaceans, cnidarians, and molluscs, were also detected (Figures 2 and 3). This number of species detected represents about 22% of the 596 species known from The Sundarbans in the OBIS database. Of the 198 species detected, 102 are not among the species previously reported from The Sundarbans to the UNESCO OBIS database. 9 of the detected species are listed as threatened on the IUCN Red List (Table 4). A full list of species is added at the end of this report.

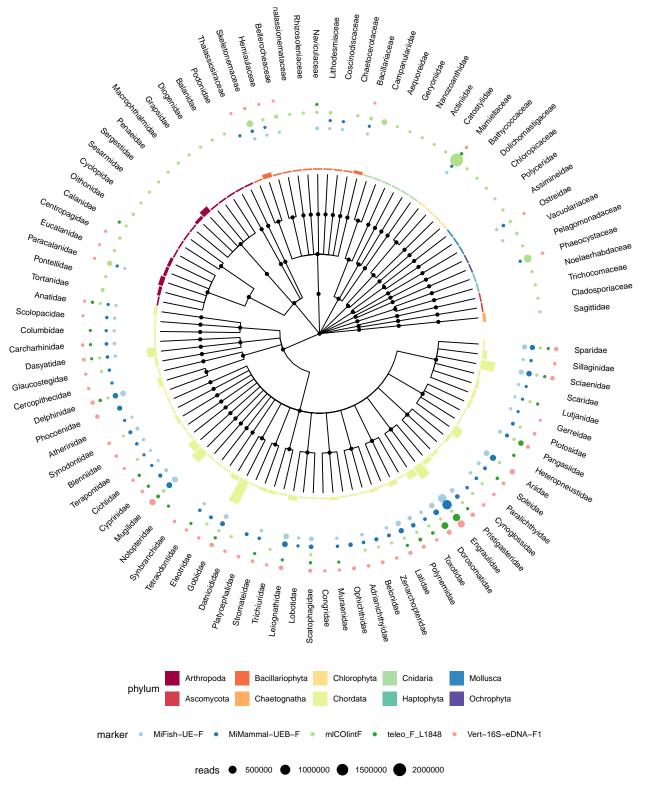


Figure 2: Number of DNA reads (bubbles) and species detected (bars) by family.

locality	materialSampleID	sampleSize	reads	asvs	species
Sundarban West Wildlife Sanctuary	EE0332	1800	1444767	5956	67
Sundarban west wildlife sanctuary	EE0330	1800	1753183	4600	67
Sundarban west wildlife sanctuary	EE0331	1800	767271	4386	64
Sundarban west wildlife sanctuary	EE0334	1800	1869098	4892	86
Sundarban west wildlife sanctuary	EE0337	1800	1438481	4869	61
Sundarban west wildlife sanctuary	EE0347	1800	1895505	6093	85
Sundarban west wildlife sanctuary	EE0360	1800	1067381	5121	68
Sundarban west wildlife sanctuary	EE0361	1800	1427194	4706	64
Sundarban west wildlife sanctuary	EE0363	1800	1459676	371	19
Sundarban west wildlife sanctuary	EE0364	1620	1440685	5154	61
Sundarban's west wildlife sanctuary	EE0351	1800	1348204	5025	78
Sundarbans West Wildlife Sanctuary	EE0345	1800	926509	4463	63
Sundarbans West Wildlife Sanctuary	EE0344	1800	18085	52	3
Sundarbans West Wildlife Sanctuary	EE0350	1800	874715	4310	83
Sundarbans West Wildlife Sanctuary	EE0365	1800	1392590	4346	72
Sundarbans west wildlife sanctuary	EE0336	1800	1786004	5816	83
Sundarbans west wildlife sanctuary	EE0338	1800	1158873	3972	56
Sundarbans west wildlife sanctuary	EE0339	1800	774806	2788	54
Sundarbans west wildlife sanctuary	EE0348	1800	1304487	4783	79
Sundarbans west wildlife sanctuary	EE0362	1800	1688261	5099	76

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

group	eDNA species	total species	fraction
fish	124	569	0.22
mammals	5	6	0.83

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	2	14	0.14
EN	5	14	0.36
VU	2	22	0.09

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

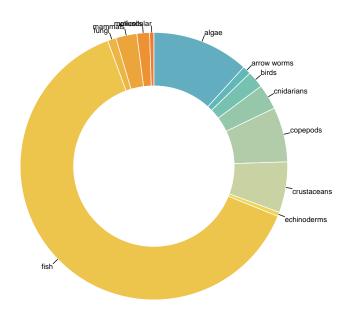


Figure 3: Distribution of detected species across groups.

~	

phylum Case species species or caregory have defined by special company of the property of the	_							
Arthropoda Copepoda Centroages furcitus copepods yes Arthropoda Copepoda Centroages furcitus copepods yes Arthropoda Copepoda Centroages furcitus copepods yes Arthropoda Copepoda Centroages featurems copeda yes Arthropoda Copepoda Centroages featurems copeda yes Centroages featurems copeda yes Centropode Copepoda Labidocera roturida copepoda Arthropoda Copepoda Dirbona attenuata copepoda yes Arthropoda Copepoda Paracalanus indicus copepoda yes Centropode Copepoda Paracalanus indicus copepoda yes Centropoda Copepoda Paracalanus indicus copepoda yes Centropoda Copepoda Paracalanus indicus yes Centropoda Copepoda Paracalanus indicus yes Centropoda Copepoda Paracalanus indicus yes Centropoda Copepoda Copepoda Paracalanus subcrissais copepoda yes Centropoda Copepoda Copepoda Subescialanus subcrissais copepoda yes Centropoda Copepoda Copepoda Copepoda Copepoda Copepoda Copepoda Copepoda Thermocyclogo decipiens copepoda yes Centropoda Copepoda Copepoda Thermocyclogo decipiens copepoda yes Centropoda Malacostraca Acetes indicus custaceans yes Centropoda Malacostraca Acetes indicus custaceans yes Centropoda Malacostraca Metopograpsus latifrons Copepoda Copepoda Malacostraca Metopograpsus latifrons Copepoda Malacostraca Metopograpsus latifrons Copepoda Malacostraca Metopograpsus latifrons Copepoda Copepoda Copepoda Malacostraca Metopograpsus Copepoda Copepoda Copepoda Cope	_	phylum	class	species	group	category	new	vernacular
Arthropoda Copepoda Centropages furactus copepods yes Arthropoda Copepoda Labidocer pectinala copepoda yes Arthropoda Copepoda Centropages furactus copepoda yes Arthropoda Copepoda Centropages furactus copepoda yes Arthropoda Copepoda Paracalamis indicus copepoda yes Arthropoda Copepoda Paracalamis indicus copepoda yes Arthropoda Copepoda Paracalamis subcriassus copepoda yes Arthropoda Copepoda Subecucialarius subcriassus copepoda yes Arthropoda Malacostraca Acetes indicus Arthropoda Malacostraca Acetes indicus control de copepoda Arthropoda Malacostraca Acetes indicus control de copepoda yes Arthropoda Malacostraca Merophanianis (Maracotis) tomentosus yes control de copepoda yes Arthropoda Malacostraca Merophanianis (Maracotis) tomentosus yes control de copepoda yes Arthropoda Malacostraca Merophanianis control de copepoda yes arthropoda Malacostraca Merophanianis (Maracotis) tomentosus yes yellow prawn yell		•	•	3			yes	
Arthropoda Copepoda Centropages funcionals copepods yes Arthropoda Copepoda Labidocera pecinata copepods yes Arthropoda Copepoda Labidocera rotunda copepoda yes Arthropoda Copepoda Labidocera rotunda copepoda yes Arthropoda Copepoda Orthona attenuta copepoda yes Copepoda Copepoda Orthona attenuta copepoda yes Copepoda Copepoda Copepoda Copepoda Copepoda Sibeucalnaus authornas copepoda yes Copepoda Copepoda Sibeucalnaus authornas copepoda yes Copepoda Copepoda Sibeucalnaus authornas copepoda yes Copepoda Copepod		•					yes	
Arthropoda Copepoda Centropages tenuiremis copepods yes Arthropoda Copepoda Labidocera pettinata copepods yes Arthropoda Copepoda Labidocera pettinata copepods yes Arthropoda Copepoda Copepoda Copepoda Copepoda Copepoda Paracalanus indicus copepoda yes Arthropoda Copepoda Paracalanus indicus copepoda yes Arthropoda Copepoda Paracalanus indicus copepoda yes Arthropoda Copepoda Subeucalanus sultenuis copepoda yes Arthropoda Copepoda Thermocycleps decipiens copepoda yes Arthropoda Malacostraca Acates indicus curstaceans yes curstaceans yes Arthropoda Malacostraca Acates indicus curstaceans yes Carthropoda Malacostraca Acates indicus curstaceans yes Carthropoda Malacostraca Microphamburis (Meropia) tomentous Carthropoda Malacostraca Microphamburis (M		•		Canthocalanus pauper	copepods		yes	
Arthropoda Copepoda Labidocera petcinata copepods yes Arthropoda Copepoda Othona attenuata copepods yes Arthropoda Copepoda Othona attenuata copepods yes Arthropoda Copepoda Othona attenuata copepods yes Arthropoda Copepoda Paracalamus indicus copepods yes Arthropoda Copepoda Paracalamus indicus copepods yes Arthropoda Copepoda Paracalamus indicus copepods yes Arthropoda Copepoda Subeucalamus subtraissus copepods yes Arthropoda Arthropoda Arthropoda Arthropoda Malacostraca Acetes indicus crustaceans yes crustaceans yes crustaceans Arthropoda Malacostraca Clibariamus padavensis crustaceans yes crustaceans yes Arthropoda Malacostraca Macophatalmus (Mareots) tomentous Arthropoda Malacostraca Macophatalmus (Mareots) tomentous Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes crustaceans yes Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes crustaceans yes Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes Arthropoda Malacostraca Metapenaeis brevicoria Curstaceans yes yellow prawn yes Arthropoda Malacostraca Metapenaeis previcoria Curstaceans yes yellow prawn yes Arthropoda Malacostraca Metapenaeis previcoria Curstaceans yes yellow prawn yes Arthropoda Malacostraca Metapenaeis previcoria Curstaceans yes yellow prawn yes Arthropoda Malacostraca Metapenaeis previcoria yes yes Arthropoda Malacostraca Metapenaeis yes Curstaceans yes yes Arthropoda Malacostraca Metapenaeis yes Curstaceans yes yes Arthropoda Malacostraca Metapenaeis yes Curstaceans yes yes Arthropoda Malacostraca Selection yes yes Arthropoda Malacostraca Metapen		•		Centropages furcatus	copepods		yes	
Arthropoda Copepoda Labidocera rotunda copepods yes Arthropoda Copepoda Orthon attenuata copepods yes Arthropoda Copepoda Paracalanus indicus copepods yes Arthropoda Copepoda Paracalanus indicus copepods yes Arthropoda Copepoda Subeucalanus subcrassus copepods yes Copepoda Copepoda Subeucalanus subcrassus copepods yes Copepoda Copepoda Tortanus Tortanus Copepoda yes Copepoda Copepoda Tortanus Cortanus Copepoda yes Copepoda Copepoda Tortanus Cortanus Copepoda yes Cortanus Copepoda Cope		Arthropoda	Copepoda	Centropages tenuiremis	copepods		yes	
Arthropoda Copepoda Oithona attemuata copepods yes Arthropoda Copepoda Parocalanus indicus copepods yes Arthropoda Copepoda Parocalanus cassirostris copepods yes Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Thermocyclops decipiens copepods yes Copepoda Tortimus (Tortimus) fioripatus copepods yes Copepoda Copepoda Tortimus (Tortimus) fioripatus copepods yes Copepoda Copepo		Arthropoda	Copepoda	Labidocera pectinata	copepods		yes	
Arthropoda Copepoda Parcalamus indicus copepods yes Arthropoda Copepoda Parocalamus crassirostris copepods yes Arthropoda Copepoda Subeucalamus subcrassus copepods yes Arthropoda Copepoda Subeucalamus subtremis copepods yes Arthropoda Copepoda Thermocyclopa decipiens copepods yes Arthropoda Malacostraca Acetes indicus crustaceams yes Arthropoda Malacostraca Clabanarius padavensis crustaceams yes Arthropoda Malacostraca Clabanarius padavensis crustaceams yes Arthropoda Malacostraca Clabanarius padavensis crustaceams yes Arthropoda Malacostraca Macrophthalmis (Mareotis) tomentosus crustaceams yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceams yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceams yes Arthropoda Malacostraca Mierspenaeopsis surfitines crustaceams yes Arthropoda Malacostraca Mierspenaeopsis surgitiis crustaceams yes Arthropoda Malacostraca Penaeus indicus crustaceams yes Acomycota Dothideomycetes Acomycota Eurotemycetes Penicilium digitatum fungi yes Ascomycota Bacillarophycae Chaetocores occilis algae yes Bacillarophycae Bacillarophycae Checores occilis algae yes Bacillarophycae Bacillarophycae Checores occilis algae yes Bacillarophycae Bacillarophycae Checores occilis algae yes Bacillarophycae Seletonema acetas algae yes Bacillarophycae Seletonema scenius algae yes Bacillarophycae Se		Arthropoda	Copepoda	Labidocera rotunda	copepods		yes	
Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Subeucalanus subtenuis copepods yes Arthropoda Copepoda Thermocyclops decipiens copepods yes Arthropoda Copepoda Thermocyclops decipiens copepods yes Arthropoda Copepoda Tortanus (Tortanus) forcipatus copepods yes Arthropoda Malacostraca Acetes sidicus crustaceans yes Arthropoda Malacostraca Acetes sidicus crustaceans yes Arthropoda Malacostraca Episesama versicolor crustaceans yes Arthropoda Malacostraca Episesama versicolor crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentous yes Arthropoda Malacostraca Metapenaeus brevicormis crustaceans yes Arthropoda Malacostraca Metapenaeus indicus crustaceans yes Acomycota Dethideomycetes Cladosprium herbarum fungi yes Ascomycota Dethideomycetes Cladosprium herbarum fungi yes Bacillanophycae Belierochea polymorpha Bacillanophycae Coscinodiscus granii algae yes Bacillanophycae Bacillanophycae Navicula tsukamotol algae yes Bacillanophycae Bacillanophycae Hemiaulus sinensis algae yes Bacillanophycae Seletonema acretis algae yes Bacillanophycae Seletonema Settigera algae yes Bacillanophycae Seletonema acretis algae yes Bacillanophycae Seletonema Settigera algae yes Bacillanophycae Seletonema Settigera algae yes Bacillanophycae Seletonema Settigera algae yes Bacillanophycae Seleto		Arthropoda	Copepoda	Oithona attenuata	copepods		yes	
Arthropoda Copepoda Subeucalanus subbrassus copepods yes Arthropoda Copepoda Subeucalanus subbrassus copepods yes Arthropoda Copepoda Thermocyclops decipiens copepods yes Arthropoda Copepoda Toraus (Tortanus (Tortanus Coreans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Cibanarius padavensis crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotts) tomentosus Arthropoda Malacostraca Metapenaeus brevicomis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis fandwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis fandwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Thecostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Malacostraca Penaeus indicus riziophorae crustaceans yes Indian white shrimp Arthropoda Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Coscnodiscus granii algae yes Bacillariophyta Bacillariophyceae Coscnodiscus granii algae yes Bacillariophyta Bacillariophyceae Penicillum diplatum algae yes Bacillariophyta Bacillariophyceae Penicillum diplatum algae yes Bacillariophyta Bacillariophyceae Seletonema costatum algae yes Bacillariop		Arthropoda	Copepoda	Paracalanus indicus	copepods		yes	
Arthropoda Copepoda Themocyclops decipiens copepods yes Arthropoda Copepoda Themocyclops decipiens copepods yes Arthropoda Copepoda Thoranus (Tortanus) forcipatus copepods yes Arthropoda Malacostraca Acetes indicus crustaceans yes Arthropoda Malacostraca Clibanarius padavensis crustaceans yes Arthropoda Malacostraca Clibanarius padavensis crustaceans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Clibanarius padavensis crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareetis) tomentosus crustaceans yes Arthropoda Malacostraca Metaperaeus brevicornis crustaceans yes Arthropoda Malacostraca Metaperaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Metaperaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Metaperaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans yes Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Acomycota Dothideonycetes Cladosorium herbarum fungi yes Acomycota Dothideonycetes Cladosorium herbarum fungi yes Bacillariophycae Beleroche polymorpha algae yes Bacillariophyta Bacillariophyceae Beleroche polymorpha algae yes Bacillariophyta Bacillariophyceae Cosinodiscus granii algae yes Bacillariophyta Bacillariophyceae Cladosorium herbarum algae yes Bacillariophyta Bacillariophyceae Cladosorium herbarum algae yes Bacillariophyta Bacillariophyceae Skeletonema arceini algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema marceini		Arthropoda	Copepoda	Parvocalanus crassirostris	copepods		yes	
Arthropoda Copepoda Tortanus (Tortanus) forcipatus copepods yes Arthropoda Malacostraca Acetes indicus crustaceans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Acetes sindicus crustaceans yes Arthropoda Malacostraca Episeasma versicolor crustaceans yes Arthropoda Malacostraca Episeasma versicolor crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Acomycota Dothideomycetes Cladosporium herbarum fungi yes Accomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophycea Ellerocha polymorpha algae yes Bacillariophyta Bacillariophyceae Contenceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Penicullium fungi algae yes Bacillariophyta Bacillariophyceae Skeletonema sortens algae yes Bacillariophyta Bacillariophyceae Penicullium fungi algae yes Bacillariophyta Bacillariophyceae Skeletonema sortens algae yes Bacillariophyta Bacillariophyceae Penicullium fungi algae yes Bacillariophyta Bacillariophyceae Penicullium fungi algae yes Bacillariophyta Bacillariophyceae Skeletonema sortens algae yes Bacillariophyta Bacillariophyceae Skeletonema		Arthropoda	Copepoda	Subeucalanus subcrassus	copepods		yes	
Arthropoda Malacostraca Acets indicus crustaceans yes Arthropoda Malacostraca Acets indicus crustaceans yes Arthropoda Malacostraca Clibararius padavensis crustaceans yes Arthropoda Malacostraca Clibararius padavensis crustaceans yes Arthropoda Malacostraca Macrophtalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Macrophtalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes Arthropoda Malacostraca Mierspenaeposis bardwickii crustaceans yes Arthropoda Malacostraca Mierspenaeposis Sculptilis crustaceans yes Arthropoda Malacostraca Mierspenaeposis Sculptilis crustaceans yes Arthropoda Malacostraca Mierspenaeposis Sculptilis crustaceans yes Arthropoda Malacostraca Merspenaeposis Sculptilis crustaceans yes Arthropoda Thecostraca Amphibalnus rhizophorae crustaceans yes Ascomycota Eurotiomycetes Peniclilium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chactoceros socialis algae yes Bacillariophyta Bacillariophyceae Chactoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Pitylum brightwellii algae yes Bacillariophyta Bacillariophyceae Pitylum brightwellii algae yes Bacillariophyta Bacillariophyceae Pitylum brightwellii algae yes Bacillariophyta Bacillariophyceae Skeletonema constatum algae yes Bacillariophyta Bacillariophyc		Arthropoda	Copepoda	Subeucalanus subtenuis	copepods		yes	
Arthropoda Malacostraca Acetes sibogae crustaceans yes Arthropoda Malacostraca Acetes sibogae crustaceans yes Cilibanarius padavensis crustaceans yes Arthropoda Malacostraca Episearma versicolor crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Metapenaeus prawn Arthropoda Malacostraca Metapenaeus prawn Arthropoda Malacostraca Merapenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimpoda Arthropoda Malacostraca Penaeus indicus yes Indianophyta Bacillaniphyteae Chartoceros socialis algae yes Bacillaniphyta Bacillaniphyceae Chartoceros socialis algae yes Bacillaniphyta Bacillaniphyceae Chartoceros socialis algae yes Bacillaniphyta Bacillaniphyceae Henialus sinensis algae yes Bacillaniphyta Bacillaniphyceae Henialus sinensis algae yes Bacillaniphyta Bacillaniphyceae Skeletonema acostatum algae yes Bacillaniphyta Bacillaniphyceae Skeletonema acostatum algae yes Bacillaniphyta Bacillaniphyceae Skeletonema acostatum algae yes Bacillaniphyta Bacillaniphyceae Skeletonema constatura algae yes Bacillaniphyta Bacillaniphyceae Skeletonema constatura algae yes Bacillaniphyta Bacillaniphyceae Schizophyliam commune Schizophyta Bacill		Arthropoda	Copepoda	Thermocyclops decipiens	copepods		yes	
Arthropoda Malacostraca (Dibanarius padavensis crustaceans yes Arthropoda Malacostraca (Dibanarius padavensis crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis bardwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis sulptimis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sulptimis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sulptimis crustaceans yes Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Acomycota Dothideomycetes Cladosporium herbarum fungi yes Bacillariophyta Bacillariophycae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Skeletonema croatatum algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Schizophylum commune Schizophylum commun		Arthropoda	Copepoda	Tortanus (Tortanus) forcipatus	copepods		yes	
Arthropoda Malacostraca Cilbanarius padavensis crustaceans yes contrologo Malacostraca Episesarma versicolor victaceans yes crustaceans yes pes acciliariophyta Baciliariophyteae Bellerochea polymorpha algae yes saciliariophyta Baciliariophyceae Ditylum brightwellii algae yes saciliariophyta Baciliariophyceae Nacional suitamoto algae yes saciliariophyta Baciliariophyceae Seletonema ardens algae yes saciliariophyta Baciliariophyceae Seletonema ardens algae yes saciliariophyta Baciliariophyceae Seletonema costatum algae yes saciliariophyta Baciliariophyceae Seletonema menzelii algae yes saciliariophyta Baciliariophyceae Seletonema menzelii algae yes saciliariophyta Baciliariophyceae Seletonema menzelii algae yes saciliariophyta Baciliariophyceae Chiorophyta Amiellophyceae Chiorophyta Mamiellophyceae Chiorophyta Mamiellophyceae Seletonema		Arthropoda	Malacostraca	Acetes indicus	crustaceans		yes	
Arthropoda Malacostraca Cilbanarius padavensis crustaceans yes chropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes yes yes crustaceans yes crustaceans yes crustaceans yes yes yes crustaceans yes yes yes crustaceans yes yes yes accompany yes yes accompany yes ac		Arthropoda	Malacostraca	Acetes sibogae	crustaceans		yes	
Arthropoda Malacostraca Episearma versicolor crustaceans yes de Arthropoda Malacostraca Metapenaeus brevicomis crustaceans yes vellow prawn de Malacostraca Metapenaeus brevicomis crustaceans yes vellow prawn de Malacostraca Metapenaeus brevicomis crustaceans yes de Malacostraca Metapenaeus latifrons crustaceans yes vellow prawn de Malacostraca Mierspenaeopsis hardwickii crustaceans yes de Malacostraca Mierspenaeopsis bardwickii crustaceans yes de Malacostraca Mierspenaeopsis bardwickii crustaceans yes de Malacostraca Mierspenaeopsis bardwickii crustaceans yes de Malacostraca Malacostraca Mierspenaeopsis bardwickii crustaceans yes de Malacostraca Malacostraca Mierspenaeopsis sculptilis crustaceans yes de Malacostraca Malacostraca Mierspenaeopsis sculptilis crustaceans yes de Malacostraca Malacostraca Mierspenaeopsis sculptilis de Malacostraca Malacostraca Mierspenaeopsis sculptilis crustaceans yes de Malacostraca Malacostraca Mierspenaeopsis sculptilis yes de Malacostraca Mierspenaeopsis crustaceans yes de Malacostraca Mierspenaeopsis crustacans yes de Mierspenaeopsis crustacans yes de Malacostraca Mierspenaeopsis crustacans yes de Malacostraca Mierspenaeopsis crustacans		Arthropoda	Malacostraca	Clibanarius padavensis	crustaceans		-	
Arthropoda Malacostraca Macrophthalmus (Mareotis) tomentosus crustaceans yes yellow prawn Arthropoda Malacostraca Metopograpsus latifrons crustaceans yes yellow prawn Malacostraca Metopograpsus latifrons crustaceans yes Arthropoda Malacostraca Metopograpsus latifrons crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Difylum brightwellii algae yes Bacillariophyta Bacillariophyceae Difylum brightwellii algae yes Bacillariophyta Bacillariophyceae Difylum brightwellii algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Schizophylum commune Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Schizophylum commune Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chiorophyta Mamiellophyceae Chiorophyta Mamiellophyceae Chio		Arthropoda	Malacostraca		crustaceans		-	
Arthropoda Malacostraca Metapenaeus brevicornis crustaceans yes yellow prawn Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis sculptiis crustaceans Arthropoda Malacostraca Mierspenaeopsis sculptiis crustaceans Arthropoda Thecostraca Penaeus indicus crustaceans Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Scheltomema setigera algae yes Chactognatha Sagittoidea Flaccisagitate enflata arrow worms yes Chactognatha Sagittoidea Flaccisagitate enflata arrow worms yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorop		Arthropoda	Malacostraca	Macrophthalmus (Mareotis) tomentosus	crustaceans		-	
Arthropoda Malacostraca Metopograpsus latifrons crustaceans Arthropoda Malacostraca Mierspenaeopsis hardwickii crustaceans Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Indian white shrimp Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Thecostraca Amphibalanius rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sheletonema menzelii algae yes Chicrophyta Ghiorophyta Chicrophyta Chicrophyta Chicrophyta Chicrophyteae Chicrophyta Mamiellophyceae Dolichomastix tenuliepis algae yes Chicrophyta Mamiellophyceae Dolichomastix tenuliepis algae yes Chicrophyta Mamiellophyceae Chicropavula pacifica algae yes Chicrophyta Mamiellophyceae C		•					-	vellow prawn
Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Indian white shrimp Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema cardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Chicrophyta Sagittoidea Flaccisagitta enflata arrow worms yes Chicrophyta Mamiellophyceae Dilchomastix tenulepis algae yes Chicrophyta Mamiellophyceae Dilchoroproscoffensis algae yes Chicrophyta				•			-	3 I
Arthropoda Malacostraca Mierspenaeopsis sculptilis crustaceans yes Arthropoda Malacostraca Penaeus indicus crustaceans yes Indian white shrimp Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Navicuda tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicuda tsukamotoi algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema macralii algae yes Bacillariophyta Bacillariophyceae Skeletonema intzschiodes algae yes Bacillariophyta Bacillariophyceae Skeletonema macralii algae yes Bacillariophyta Bacillariophyceae Skeletonema macralii algae yes Bacillariophyta Bacillariophyceae Skeletonema macralii algae yes Bacillariophyta Bacillariophyceae Shophyceae Shophylum commune yes Schizophylum commune Yes Schizophylum Commune Schizophylum Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Chloropicophyceae Dichomastix tenulepis algae yes Chlorophyta Mamiellophyceae Chloropicorn roscoffensis algae yes Chlorophyta Mamiellophyceae Dichomastix tenulepis algae yes Chlorophyta Mamiellophyceae Dichomastix tenulepis algae yes Chlorophyta Mamiellophyceae Dichomastix tenulepis algae yes Chlorophyta Mamiell							,	
Arthropoda Malacostraca Amphibalanus rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscindiscus granii algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Nectonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassioria rotula algae yes Bacillariophyta Bacillariophyceae Thalassioria rotula algae yes Bacillariophyta Bacillariophyceae Thalassioria rotula algae yes Chiorophyta Chloropicophyceae Chloroparvula pacifica arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Chloroporon rosoffensis algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophy							ves	
Arthropoda Thecostraca Amphibalanus rhizophorae crustaceans yes Ascomycota Dothideomycetes Cladosporium herbarum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscindiscus granii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema rostatum algae yes Bacillariophyta Bacillariophyceae Skeletonema rostatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Chiorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chiorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes		•					,	Indian white shrimp
Ascomycota Dothideomycetes Penicillium digitatum fungi yes Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema rocstatum algae yes Bacillariophyta Bacillariophyceae Skeletonema nerzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema intzschioides algae yes Bacillariophyta Bacillariophyceae Skeletonema rotula algae yes Bacillariophyta Bacillariophyceae Thalassionema rotula algae yes Bacillariophyta Bacillariophyceae Thalassioriar otula algae yes Basillariophyta Bacillariophyceae Thalassioriar otula algae yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Marinellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Marinellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Marinellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Chloropicon roscoffensis algae yes		•	Thecostraca	Amphibalanus rhizophorae			ves	,
Ascomycota Eurotiomycetes Penicillium digitatum fungi yes Bacillariophyta Bacillariophyceae Bellerochea polymorpha algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sheletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sheletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sheletonema mitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassioinar rotula algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Zonosagitta enflata arrow worms yes Chlorophyta Chloropicophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Batycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromoas pusilla algae yes Chlorophyta Mamiellophyceae Micromoas pusilla algae yes Chlorophyta Chloropicophyceae Chloropicophyceae Alexandrica algae yes Chlorophyta Chloropicophyceae Dolichomastix tenuilepis algae yes		•	Dothideomycetes	·			-	
Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Chaetoceros socialis algae yes Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Chaetognatha Sagittoidea Zonosagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes		3	•		9		-	
Bacillariophyta Bacillariophyceae Coscinodiscus granii algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema mitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes		-	•		•		-	
Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Cylindrotheca closterium algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschiodes algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilia algae yes		. ,	. ,					
Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Ditylum brightwellii algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema renzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycocus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Chloropicon roscoffensis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Chloropicon roscoffensis algae yes		. ,	. ,	Coscinodiscus granii	•		,	
Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Hemiaulus sinensis algae yes Bacillariophyta Bacillariophyceae Navicula tsukamotoi algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Basillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Chloropicon roscoffensis algae yes		. ,		3	3		-	
BacillariophytaBacillariophyceaeHemiaulus sinensisalgaeyesBacillariophytaBacillariophyceaeNavicula tsukamotoialgaeyesBacillariophytaBacillariophyceaePseudo-nitzschia cuspidataalgaeyesBacillariophytaBacillariophyceaeSkeletonema ardensalgaeyesBacillariophytaBacillariophyceaeSkeletonema costatumalgaeyesBacillariophytaBacillariophyceaeSkeletonema menzeliialgaeyesBacillariophytaBacillariophyceaeSundstroemia setigeraalgaeyesBacillariophytaBacillariophyceaeThalassiosira rotulaalgaeyesBacillariophytaBacillariophyceaeThalassiosira rotulaalgaeyesBasidiomycotaAgaricomycetesSchizophyllum communeyesChaetognathaSagittoideaFlaccisagitta enflataarrow wormsyesChaetognathaSagittoideaFlaccisagitta enflataarrow wormsyesChlorophytaChloropicophyceaeChloroparvula pacificaalgaeyesChlorophytaMamiellophyceaeBathycoccus prasinosalgaeyesChlorophytaMamiellophyceaeDolichomastix tenuilepisalgaeyesChlorophytaMamiellophyceaeMicromonas pusiliaalgaeyesChlorophytaMamiellophyceaeMicromonas pusiliaalgaeyesChlorophytaMeniellophyceaeMicromonas pusiliaalgaeyes		. ,			3		-	
Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Pseudo-nitzschia cuspidata algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,	, ,	9			
Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		Bacillariophyta	Bacillariophyceae	Navicula tsukamotoi	algae		-	
Bacillariophyta Bacillariophyceae Skeletonema ardens algae yes Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes Chlorophyta Wamiellophyceae Algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,		9		-	
Bacillariophyta Bacillariophyceae Skeletonema costatum algae yes Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula yes Bacillariophyta Bacillariophyceae Schizophyllum commune Basidiomycota Agaricomycetes Schizophyllum commune Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,	•	9		-	
Bacillariophyta Bacillariophyceae Skeletonema menzelii algae yes Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,	Skeletonema costatum	9		,	
Bacillariophyta Bacillariophyceae Sundstroemia setigera algae yes Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,	Skeletonema menzelii	9		-	
Bacillariophyta Bacillariophyceae Thalassionema nitzschioides algae yes Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes				Sundstroemia setigera	•		-	
Bacillariophyta Bacillariophyceae Thalassiosira rotula algae yes Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes				9	9		-	
Basidiomycota Agaricomycetes Schizophyllum commune yes Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes					•		-	
Chaetognatha Sagittoidea Flaccisagitta enflata arrow worms yes Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes					3		-	
Chaetognatha Sagittoidea Zonosagitta bedoti arrow worms yes Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes					arrow worms		-	
Chlorophyta Chloropicophyceae Chloroparvula pacifica algae yes Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes		3						
Chlorophyta Mamiellophyceae Bathycoccus prasinos algae yes Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes			3				-	
Chlorophyta Mamiellophyceae Dolichomastix tenuilepis algae yes Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes				·	•		-	
Chlorophyta Mamiellophyceae Micromonas pusilla algae yes Chlorophyta Chloropicon roscoffensis algae yes			. ,		•		-	
Chlorophyta Chloropicon roscoffensis algae yes		. ,	. ,	•	9		-	
				•	•		-	
		. ,	Aves	•		LC		

Continued on next page

phylum	class	species	group	category	new	vernacular
Chordata	Aves	Anser cygnoides	birds		yes	
Chordata	Aves	Columba livia	birds	LC	yes	
Chordata	Aves	Numenius phaeopus	birds	LC		whimbrel, courlis corllieu
Chordata	Elasmobranchii	Brevitrygon imbricata	fish	VU		
Chordata	Elasmobranchii	Brevitrygon walga	fish	NT		
Chordata	Elasmobranchii	Glaucostegus granulatus	fish	CR		
Chordata	Elasmobranchii	Glaucostegus obtusus	fish	CR		
Chordata	Elasmobranchii	Himantura uarnak	fish	EN		honeycomb stingray
Chordata	Elasmobranchii	Himantura undulata	fish	EN		, , , , , , , , , , , , , , , , , , , ,
Chordata	Elasmobranchii	Pastinachus solocirostris	fish	EN	yes	
Chordata	Elasmobranchii	Scoliodon laticaudus	fish	NT	-	spadenose shark
Chordata	Elasmobranchii	Urogymnus polylepis	fish	EN	yes	'
Chordata	Mammalia	Macaca mulatta	mammals	LC	yes	
Chordata	Mammalia	Neophocaena phocaenoides	mammals	VU	ves	Indian dolphin, marsouin aptere
Chordata	Mammalia	Orcaella brevirostris	mammals	EN	,	Irrawaddy dolphin, orcelle
Chordata	Mammalia	Stenella coeruleoalba	mammals	LC	ves	striped dolphin, dauphin bleu et blanc
Chordata	Mammalia	Tursiops aduncus	mammals	NT	ves	Indo-Pacific bottlenose dolphin, tursiops abusalam
Chordata	Teleostei	Acanthopagrus datnia	fish		yes	mad i deme bottienose dolpmii, tarsiops abasaiam
Chordata	Teleostei	Acentrogobius viridipunctatus	fish	LC		
Chordata	Teleostei	Anodontostoma chacunda	fish	LC		
Chordata	Teleostei	Apocryptes bato	fish	LC		
Chordata	Teleostei	Arius arius	fish	LC		
Chordata	Teleostei	Atherinomorus lacunosus	fish	LC	V/05	robust silverside
Chordata	Teleostei	Bangana dero	fish	LC	yes	TODUST SILVETSIDE
Chordata	Teleostei	3	fish	LC	yes	
	Teleostei	Bathygobius cocosensis		LC	yes	ماريوان في المرابع
Chordata		Bathygobius fuscus	fish			dusky frill-goby
Chordata	Teleostei	Boleophthalmus boddarti	fish	LC		
Chordata	Teleostei	Boleophthalmus pectinirostris	fish		yes	
Chordata	Teleostei	Butis humeralis	fish			
Chordata	Teleostei	Butis koilomatodon	fish	LC	yes	mud sleeper
Chordata	Teleostei	Butis melanostigma	fish			
Chordata	Teleostei	Chlorurus sordidus	fish	LC	yes	
Chordata	Teleostei	Chrysochir aureus	fish	LC		
Chordata	Teleostei	Cirrhinus mrigala	fish	LC	yes	
Chordata	Teleostei	Coilia dussumieri	fish	LC		
Chordata	Teleostei	Coilia ramcarati	fish	DD		
Chordata	Teleostei	Coilia reynaldi	fish	LC		
Chordata	Teleostei	Coptodon zillii	fish	LC	yes	
Chordata	Teleostei	Cynoglossus lingua	fish	LC		
Chordata	Teleostei	Datnioides polota	fish	LC		
Chordata	Teleostei	Dichotomyctere nigroviridis	fish	LC	yes	
Chordata	Teleostei	Eleutheronema rhadinum	fish		yes	East Asian fourfinger threadfin, barbure à quatre doigts d'Asie
Chordata	Teleostei	Eleutheronema tetradactylum	fish			blunt-nosed salmon, barbure à quatre doigts
Chordata	Teleostei	Entomacrodus striatus	fish	LC	yes	reef margin blenny
Chordata	Teleostei	Escualosa thoracata	fish	LC		
Chordata	Teleostei	Eucinostomus gula	fish	LC	yes	Jenny mojarra
Chordata	Teleostei	Gerres longirostris	fish	LC	-	· •
Chordata	Teleostei	Glossogobius aureus	fish	LC	yes	
Chordata	Teleostei	Glossogobius giuris	fish	LC	<i>y</i>	tank goby
Chordata	Teleostei	Gobiopsis macrostoma	fish	-		<b>3</b>

Continued on next page

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Gymnothorax tile	fish	LC		
Chordata	Teleostei	Harpadon nehereus	fish	NT		Bombay-duck
Chordata	Teleostei	Heteropneustes fossilis	fish	LC		
Chordata	Teleostei	Hilsa kelee	fish	LC		Kelee shad
Chordata	Teleostei	Hypophthalmichthys nobilis	fish	DD	yes	bighead
Chordata	Teleostei	llisha elongata	fish	LC	,	elongate ilisha
Chordata	Teleostei	llisha melastoma	fish	LC		, and the second
Chordata	Teleostei	Johnius amblycephalus	fish	LC	ves	bearded croaker
Chordata	Teleostei	Johnius belangerii	fish	LC	,	
Chordata	Teleostei	Johnius borneensis	fish	LC		
Chordata	Teleostei	Johnius carouna	fish	LC	yes	
Chordata	Teleostei	Johnius plagiostoma	fish	LC	yes	
Chordata	Teleostei	Labeo bata	fish	LC	yes	
Chordata	Teleostei	Lates calcarifer	fish	LC	ycs	barramundi, perche barramundi
Chordata	Teleostei	Leiognathus brevirostris	fish	LC		barramundi, perche barramundi
Chordata	Teleostei	Lepturacanthus savala	fish			
		•		LC		#.ii=1.#iI
Chordata	Teleostei	Lobotes surinamensis	fish	LC		tripletail
Chordata	Teleostei	Lutjanus argentimaculatus	fish	LC		river snapper
Chordata	Teleostei	Lutjanus johnii	fish	LC		John's snapper
Chordata	Teleostei	Mugil cephalus	fish	LC		grey mullet, muge
Chordata	Teleostei	Nemapteryx caelata	fish			
Chordata	Teleostei	Nemapteryx nenga	fish			
Chordata	Teleostei	Notopterus notopterus	fish	LC		
Chordata	Teleostei	Nuchequula blochii	fish			
Chordata	Teleostei	Nuchequula nuchalis	fish		yes	
Chordata	Teleostei	Odontamblyopus rubicundus	fish	LC		
Chordata	Teleostei	Oligolepis acutipennis	fish	LC		sharptail goby
Chordata	Teleostei	Omobranchus zebra	fish	LC	yes	
Chordata	Teleostei	Ophisternon bengalense	fish	LC		
Chordata	Teleostei	Oryzias javanicus	fish	LC	yes	
Chordata	Teleostei	Osteogeneiosus militaris	fish			
Chordata	Teleostei	Osteomugil cunnesius	fish			
Chordata	Teleostei	Otolithoides pama	fish	DD		
Chordata	Teleostei	Pampus argenteus	fish			Silver pomfret
Chordata	Teleostei	Pampus chinensis	fish			
Chordata	Teleostei	Pangasius pangasius	fish	LC		
Chordata	Teleostei	Paramugil parmatus	fish	LC		
Chordata	Teleostei	Paraplagusia blochii	fish		yes	
Chordata	Teleostei	Paraplotosus albilabris	fish		ves	
Chordata	Teleostei	Parapocryptes serperaster	fish	LC	yes	
Chordata	Teleostei	Pellona ditchela	fish	LC		Indian pellona
Chordata	Teleostei	Periophthalmus chrysospilos	fish	LC		mulan penona
Chordata	Teleostei			LC		rice paddy eel
Chordata	Teleostei Teleostei	Pisodonophis boro	fish	LC LC		rice-paddy eel
		Planiliza macrolepis	fish	LC		
Chordata	Teleostei	Planiliza melinoptera	fish	1.0		
Chordata	Teleostei	Planiliza planiceps	fish	LC		
Chordata	Teleostei	Planiliza subviridis	fish	LC		
Chordata	Teleostei	Planiliza tade	fish	DD		
Chordata	Teleostei	Platycephalus cultellatus	fish		yes	
Chordata	Teleostei	Platycephalus indicus	fish	DD		Indian flathead

Continued on next page

phylum	class	species	group	category	new	vernacular
Chordata	Teleostei	Plicofollis argyropleuron	fish		yes	
Chordata	Teleostei	Plicofollis platystomus	fish	LC		
Chordata	Teleostei	Plotosus canius	fish			
Chordata	Teleostei	Polynemus paradiseus	fish	LC		paradise threadfin, barbure paradis
Chordata	Teleostei	Protonibea diacanthus	fish	NT		
Chordata	Teleostei	Pseudorhombus arsius	fish	LC		largetooth flounder
Chordata	Teleostei	Pterotolithus maculatus	fish	LC		· ·
Chordata	Teleostei	Puntius sophore	fish	LC		
Chordata	Teleostei	Sardinella albella	fish	LC	yes	white sardinella
Chordata	Teleostei	Scartelaos histophorus	fish	LC		
Chordata	Teleostei	Scatophagus argus	fish	LC		
Chordata	Teleostei	Setipinna taty	fish	LC		
Chordata	Teleostei	Setipinna tenuifilis	fish	DD		
Chordata	Teleostei	Sillaginopsis panijus	fish			
Chordata	Teleostei	Sillago maculata	fish		yes	
Chordata	Teleostei	Sillago sihama	fish	LC	,	silver sillago
Chordata	Teleostei	Solea ovata	fish	LC	yes	,
Chordata	Teleostei	Stigmatogobius sadanundio	fish		, ,	
Chordata	Teleostei	Stolephorus dubiosus	fish	LC	yes	
Chordata	Teleostei	Stolephorus insularis	fish		yes	Hardenberg's anchovy
Chordata	Teleostei	Strongylura strongylura	fish		, ,	
Chordata	Teleostei	Strophidon sathete	fish	LC		slender giant moray
Chordata	Teleostei	Synaptura commersonnii	fish			
Chordata	Teleostei	Taenioides cirratus	fish	DD		
Chordata	Teleostei	Tenualosa ilisha	fish	LC		
Chordata	Teleostei	Terapon theraps	fish	LC		largescaled therapon
Chordata	Teleostei	Thryssa hamiltonii	fish	LC		
Chordata	Teleostei	Thryssa mystax	fish	LC	ves	
Chordata	Teleostei	Toxotes chatareus	fish	LC	,	
Chordata	Teleostei	Uroconger lepturus	fish	LC		slender conger
Chordata	Teleostei	Zenarchopterus buffonis	fish	LC		3
Chordata	Teleostei	Zenarchopterus ectuntio	fish	LC		
Cnidaria	Hexacorallia	Nanozoanthus harenaceus	cnidarians		yes	
Cnidaria	Hexacorallia	Paracondylactis sinensis	cnidarians		yes	
Cnidaria	Hydrozoa	Aequorea conica	cnidarians		yes	
Cnidaria	Hydrozoa	Clytia folleata	cnidarians		yes	
Cnidaria	Hydrozoa	Liriope tetraphylla	cnidarians		yes	
Cnidaria	Scyphozoa	Acromitus flagellatus	cnidarians		yes	
Cryptophyta	Cryptophyta incertae sedis	Leucocryptos marina			yes	
Echinodermata	Ophiuroidea	Amphioplus (Lymanella) laevis	echinoderms		yes	
Haptophyta	Coccolithophyceae	Gephyrocapsa oceanica	algae		yes	
Haptophyta	Coccolithophyceae	Phaeocystis globosa	algae		yes	
Mollusca	Bivalvia	Saccostrea cuccullata	molluscs		yes	
Mollusca	Gastropoda	Gymnodoris pattani	molluscs		yes	
Mollusca	Gastropoda	Pseudomphala latericea	molluscs		yes	
Myzozoa	Dinophyceae	Heterocapsa rotundata	unicellular		yes	
Ochrophyta	Polagophycoae	Polagomonas calcoolata	algae		, roc	

unicellular algae

algae

category

new

yes

yes

group

vernacular

phylum

Myzozoa Ochrophyta

Ochrophyta

class

Dinophyceae Pelagophyceae Raphidophyceae

species

Heterocapsa rotundata Pelagomonas calceolata

Fibrocapsa japonica