

## ALIEN SPECIES IN SWEDISH SEAS AND COASTAL AREAS

This is a list of plant and animal species that have been introduced into Swedish seas or coastal areas. It has been compiled by Swedish and international marine scientists and is continuously updated as new information becomes available. An up-to-date version of the list is always posted on the site, which also features fact sheets on most of the species listed (published as they are produced). The fact sheets will be updated when important new information becomes available. They are published in Swedish and will gradually also be made available in English.

This website is a joint information channel for the three regional Information Offices along the Swedish coast: the Skagerrak/Kattegat area on the west coast of Sweden, the Baltic Sea proper, and the Gulf of Bothnia. The work of the Information Offices is commissioned by the Swedish Environmental Protection Agency and the Swedish Agency for Marine and Water Management. The website has been produced in close collaboration with the Swedish AquAliens programme, which ended in January 2008.

### Parasitic protozoans

*Marteilia refringens* V

### Microalgae

#### DINOFLLAGELLATES

*Alexandrium minutum* V !

*Alexandrium ostenfeldii* (Ö) ! 1

*Dicroerisma psilonereiella* V

*Dissodinium pseudocalani* V

*Gyrodinium corallinum* V

*Karenia mikimotoi* V ! 2

*Oxytoxum criophilum* V

*Peridinium quinquecorne* V

*Prorocentrum minimum* (Ö) 3

#### DIATOMS

*Chaetoceros concavicornis* V, Ö

*Chaetoceros convolutus* V, Ö

*Coscinodiscus wailesii* V !

*Odontella sinensis* V !

*Pleurosira laevis f. polymorpha* Ö 4

*Thalassiosira punctigera* V

#### RAPHIDOPHYTES

*Fibrocapsa japonica* V

### Macroalgae

#### BROWN ALGAE

[\*Colpomenia peregrina\*](#) (oyster thief) V

[\*Fucus evanescens\*](#) V 5

[\*Sargassum muticum\*](#) (japweed, wireweed, strangle weed) V !

#### RED ALGAE

*Aglaothamnion halliae* V

[\*Bonnemaisonia hamifera\*](#) (pink cotton wool) V !

[\*Dasya baillouviana\*](#) V

[\*Gracilaria vermiculophylla\*](#) V

[\*Heterosiphonia japonica\*](#) V

*Neosiphonia harveyi* V

#### GREEN ALGAE

*Codium fragile* sp. (dead man's fingers, green fleece, green sea fingers) V !

#### STONEWARTS

[\*Chara connivens\*](#) (convergent stonewort) Ö

#### Vascular plants

##### FLOWERING PLANTS

[\*Elodea canadensis\*](#) (Canadian waterweed, common waterweed, American waterweed, American elodea) Ö !

[\*Elodea nuttallii\*](#) (Nuttall's waterweed, Nuttall's pondweed, free flowered/-flowering waterweed, western waterweed) Ö

*Spartina anglica* (common cordgrass, rice grass) V !

#### Invertebrates

##### CNIDARIANS

[\*Cordylophora caspia\*](#) V, Ö !

[\*Gonionemus vertens\*](#) V

##### COMB JELLIES

\* *Mertensia ovum* (Arctic comb jelly) Ö 6 \*

[\*Mnemiopsis leidyi\*](#) (American comb jelly, sea walnut) V, Ö ! 7

##### FLATWORMS

*Gyrodactylus salaris* (salmon fluke) (V) 8

*Pseudobacciger harengulae* V

*Pseudodactylogyrus anguillae* Ö

*Pseudodactylogyrus bini* Ö

##### NEMATODES

[\*Anguillicoloides crassus\*](#) (eel swimbladder nematode) V, Ö ! 9

##### ANNELID WORMS

###### Polychaetes

[\*Alkmaria romijni\*](#) Ö

*Marenzelleria arctica* (red-gilled mud worm) Ö 10

[\*Marenzelleria neglecta\*](#) (red-gilled mud worm) Ö 11 !

*Marenzelleria viridis* (red-gilled mud worm) V 12

###### Oligochaetes

*Paranais frici* Ö

*Potamothrix bavaricus* Ö

*Potamothrix heuscheri* Ö

*Potamothrix vejdoskyi* Ö

*Tubificoides pseudogaster* V

## ARTHROPODS

### Water fleas

[\*Cercopagis pengoi\*](#) (fishhook waterflea) Ö !

*Evadne anonyx* Ö

*Penilia avirostris* V 13

### Barnacles

[\*Balanus improvisus\*](#) (bay barnacle) V, Ö !

### Copepods

[\*Acartia tonsa\*](#) V, Ö

### Malacostraca

#### Mysids

[\*Hemimysis anomala\*](#) (bloody-red shrimp) Ö

#### Amphipods

*Caprella mutica* (japanese skeleton shrimp) V

*Gammarus tigrinus* Ö

*Platorchestia platensis* V, Ö

#### Decapods (crabs, lobsters and shrimps)

*Homarus americanus* (American lobster) V !

[\*Eriocheir sinensis\*](#) (Chinese mitten crab, Chinese river crab) V, Ö !

### Insects

*Telmatogeton japonicus* V, Ö

## MOLLUSCS

### Bivales

*Crassostrea gigas* (giant oyster, giant Pacific oyster, Japanese oyster) V !

[\*Dreissena polymorpha\*](#) (zebra mussle) Ö 14 !

[\*Ensis directus\*](#) (American razor clam, razorback, razorfish, American jack knife clam)  
V ! 15

[\*Mya arenaria\*](#) (sand gaper) V, Ö

*Mytilopsis leucophaeata* (Conrad's false mussel) Ö ! 16

[\*Petricola pholadiformis\*](#) (American piddock, false angle wing) V 17

[\*Teredo navalis\*](#) (great shipworm, common shipworm) V, Ö !

### Snails

[\*Crepidula fornicata\*](#) (slipper limpet, American slipper limpet) V !

[\*Potamopyrgus antipodarum\*](#) (New Zealand mudsnail, Jenkin's spire snail) V, Ö !

## BRYOZOANS

*Bugula neritina* V !

[\*Victorella pavid\*](#) (trembling sea mat) V

## UROCHORDATA

### Ascidians

*Molgula manhattensis* (sea grapes) V 18

## Vertebrates

### CRANIATA

#### Bony fishes

*Acipenser gueldenstaedtii* (Russian sturgeon) Ö 19

*Cyprinus carpio* (common carp) Ö ! 20

[\*Neogobius melanostomus\*](#) (round goby, black-spotted goby) Ö ! 21

[\*Oncorhynchus gorbuscha\*](#) (pink salmon, humpback salmon) Ö 22

[\*Oncorhynchus kisutch\*](#) (coho salmon, silver salmon) Ö 23

[\*Oncorhynchus mykiss\*](#) (rainbow trout) V, Ö !

[\*Salvelinus fontinalis\*](#) (brook trout) Ö !

[\*Salvelinus namaycush\*](#) (lake trout, grey trout) Ö

#### Mammals

*Ondatra zibethicus* (muskrat) Ö !

*Neovison vison* (American mink) V, Ö ! 24

*Nyctereutes procyonoides* (raccoon dog) Ö !

Key:

**V** The species has been recorded as found in the Swedish part of the Skagerrak/Kattegat (Västerhavet: V).

**Ö** The species has been recorded as found in the Swedish part of the Baltic Sea area (Östersjöområdet: Ö).

**(Ö)** The species has been recorded as found in the Swedish part of the Baltic Sea, but it is uncertain whether it should be regarded as alien in that area as it is native to the Swedish part of the Skagerrak/Kattegat (Västerhavet).

**(V)** The species has been recorded as found in Swedish part of the Skagerrak/Kattegat, but it is uncertain whether it should be regarded as alien in that area as it is native to the Swedish part of the Baltic Sea.

**!** The species is according to international species lists (NOBANIS, DAISIE, GISD, IOC) considered to be very invasive. It does not necessarily mean that the species is invasive in Swedish waters.

1. Indigenous in the Skagerrak/Kattegat, introduced in the Baltic Sea area
2. Previously known as *Gymnodinium mikimotoi*, also confused with *Gyrodinium cf. aureolum*
3. Indigenous in the Skagerrak/Kattegat, introduced in the Baltic Sea area
4. Cryptic. Alien in the Bothnian Sea (Forsmark)?
5. Found in the southwestern part of the Baltic in Denmark and Germany
6. Probably a native glacial relict that has been confused with *Mnemiopsis leidyi* and *Pleurobrachia pileus* and will therefore probably be taken away from the list.

7. Also known as *Mnemiopsis gardeni* and *Mnemiopsis mccradyi*, respectively. However, the three *Mnemiopsis* species are believed to represent a single variable species
8. Indigenous in the Baltic area, introduced in the Skagerrak/Kattegat
9. Also known as *Anguillicola crassus*
10. Previously known in the Baltic Sea area as *Marenzelleria cf. viridis*
11. Previously known in the Baltic Sea area as *Marenzelleria cf. viridis*
12. *Marenzelleria viridis* is the Atlantic species (see also notes 10 and 11)
13. Could be a case of natural expansion
14. Recorded in Lännerstasundet 1941, Naturhistoriska riksmuseets samlingar
15. Also known as *Ensis americanus*
16. Also known as *Mytilopsis leucophaeta*
17. Also known as *Petricolaria pholadiformis*
18. Cryptic. Could be an early immigrant from North America.
19. Recorded off the Swedish coast in 1966-70
20. Recorded in Hanöbukten in 1952 and in the Östergötland archipelago in 1992
21. Also called *Apollonia melanostoma*
22. About forty specimens recorded along the Swedish east coast and in some rivers during the seventies
23. Recorded once, 1984, outside Gotland
24. Also known as *Mustela vison*