



THE NORTH MARINE BIOREGIONAL PLAN

# BIOREGIONAL PROFILE

## APPENDIX D4

# NORTH MARINE REGION PROTECTED SPECIES GROUP REPORT CARDS: SEASNAKES



A DESCRIPTION OF THE ECOSYSTEMS, CONSERVATION VALUES AND USES  
OF THE NORTH MARINE REGION



Australian Government

Department of the Environment, Water, Heritage and the Arts

## D4 North Marine Region Protected Species Group Report Card – Seasnakes

Current at February 2008. For updates see [www.environment.gov.au/coasts/mbp/north](http://www.environment.gov.au/coasts/mbp/north).

### General information

Seasnakes are reptiles, and as such have lungs and must surface to breathe. Most species of seasnakes have tropical and subtropical distribution. Few seasnakes inhabit oceanic waters and most species live in shallower waters around reefs and inshore environments. Of the 35 species of seasnake (including sea kraits) known to inhabit Australian waters, 19 species are found in the Region with nine species considered as vagrants or that may occur in the Region.

There are two families of seasnakes: Hydrophiinae, which are aquatic species that never leave the water, and Laticaudinae, which are amphibious species that can live on land and in water.

Species of note in the Region include:

- olive-headed seasnake (*Disteira major*), which is widely distributed in the tropical waters of northern Australia and moves southward along the western and eastern Australian coasts during the

wet season. This species has been found in sandy and muddy habitats in water depths between 3–10 m, as well as in deeper trawled areas of the Northern Prawn Fishery;

- ornate seasnake (*Hydrophis ornatus*), which occurs in tropical northern Western Australia, the Northern Territory and northern Queensland. This species sometimes occurs further south in the wet season (December–March), extending its range as far as Tasmania (Cogger 2000). The ornate seasnake occurs in a variety of habitats, including clear water near coral reefs and turbid (muddy) water in estuaries (Cogger 2000); and
- elegant seasnake (*Hydrophis elegans*), which is widespread in tropical Australia, occurring in Queensland, Western Australia and the Northern Territory (Dell and Fry 2003). The distribution of this species extends from Shark Bay in Western Australia Papua New Guinea and Moreton Bay in Queensland (Cogger 2000; Storr *et al.* 2002). The elegant seasnake uses a variety of marine and estuarine habitats, from sandy substrates in less than 2 m of water, to depths of approximately 80 m (Limpus 1975). It is one of two species of seasnake in northern Australia that are most likely to occur in areas of soft sediment where prawn trawling occurs (Milton 2001).



Olive seasnake. Photo: Great Barrier Reef Marine Park Authority.



Species with tropical and subtropical distribution that might occur as vagrants or are not resident in the Region include:

- leaf-scaled seasnake (*Aipysurus foliosquama*)
- turtle-headed seasnake (*Emydocephalus annulatus*)
- yellow-lipped sea krait (*Laticauda colubrina*)
- large-scaled sea krait (*Laticauda laticaudata*)

## Nationally protected species

All seasnakes are listed under Section 248 of the EPBC Act and are protected as listed marine species. No species of seasnake has been listed as threatened or migratory under the EPBC Act.

## Ecology of protected species in the North Marine Region

### Seasnakes

Seasnakes occupy diverse habitats including coral reefs, turbid water habitats, and deeper waters (Guinea *et al.* 2004). The distribution of seasnakes is influenced by time of day as well as seasonal factors associated with mating or breeding aggregations of gravid females. The presence of seasnakes as by-catch varies with locality, depth, season and previous trawl history of the area (Ward 2000). The majority of the information about the location of seasnakes in the Region has been obtained from trawl by-catch logs.

Seasnakes exhibit specialisation for their aquatic environment, with a paddle-like tail, dorsally positioned nostrils each with a valve, fangs at the front of the mouth, salt-regulating glands, and a single lung that extends nearly the full length of the body (Dunson 1975). Most seasnakes feed on eels, fish and/or their eggs. In the Region, only the yellow-bellied seasnake (*Pelamis platurus*) has the ability to capture fish in open water. Other seasnake species found in the Region corner their prey in burrows or crevices (Kropach 1975; Jayne *et al.* 1988).

## Important areas for seasnakes in the North Marine Region

None known (data deficient).

## Known interactions, threats and mitigation measures

### Commercial fisheries

In the Region, seasnakes are caught accidentally in the trawl nets of the Northern Prawn Fishery. The most common seasnakes in commercial trawl by-catch include the elegant seasnake, the olive-headed seasnake and the ornate seasnake. Up to half of the seasnakes that are caught as by-catch die (Wassenberg *et al.* 1994). Significant reductions in seasnake by-catch have occurred since the introduction of by-catch reduction devices (Brewer *et al.* 1998).

### Trade

Seasnake-skin goods are sold widely in northern Australia. There are currently no commercial export permits for Australian seasnakes issued by the Australian Government.

### Other interactions/threats

Seasnakes have been found in derelict fishing nets in northern Australia. Having a tendency to frequent slicks and drift lines at sea, the yellow-bellied seasnake may be vulnerable to oil spills.

## Key references and further reading

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Saltwater crocodile. Photo: Robert Thorn, Department of the Environment, Heritage, Water and the Arts.

## D5 North Marine Region Protected Species Group Report Card – Crocodiles

Current at February 2008. For updates see <[www.environment.gov.au/coasts/mbp/north](http://www.environment.gov.au/coasts/mbp/north)>.

### General information

The saltwater (or estuarine) crocodile (*Crocodylus porosus*) belongs to the family Crocodylidae. It has a tropical distribution that extends to the north coast of Australia, where crocodiles inhabit coastal waters, estuaries and freshwater lakes, inland swamps and marshes (Webb *et al.* 1987).

### Nationally protected species

The saltwater crocodile is listed under Section 248 of the EPBC Act and is protected as a listed migratory and marine species. The saltwater crocodile is also listed on Appendix I of CITES in all countries other than Australia, Papua New Guinea and Indonesia, where it is listed on Appendix II (Ross 1998). The Australian population of *Crocodylus porosus* was transferred to Appendix II in 1985 following a proposal (Webb *et al.* 1984) to pursue sustainable use through ranching, which aims to save wild populations and their habitat by placing a commercial value on wild stocks (Webb and Vardon 1996). In 1994 the Australian population was given an unqualified Appendix II listing under CITES to allow the incentive-driven conservation programme to extend beyond ranching to limited wild harvest.

