Protecting South Australia's Fish, Sharks & Rays

Syngnathids including the Robust Pipehorse *(Solegnathus robustus)*

FACT SHEET #5

The syngnathids (sea dragons, seahorses and pipefish) are enchanting creatures that have captured our imaginations for centuries. There are many reasons for this fascination including the facts that some syngnathids look like little 'horses', many engage in synchronised courtship dances and in most cases the male gives birth. The well known leafy sea dragon is one of the most spectacular of the syngnathids and is South Australia's State marine emblem. One of SAs syngnathids of conservation concern is the robust pipehorse.

HABITAT AND BIOLOGY

Syngnathids occur in a range of habitats, depths and locations in South Australia but are particularly well known as inhabitants of shallow inshore waters, including seagrass areas.

However, the robust pipehorse is a continental shelf species in southern Australia. It is known mainly from 26 trawled specimens in South Australian waters, most of these from Point Weyland to Flinders Island (eastern Great Australian Bight, including coastal waters adjacent to Venus Bay and Anxious Bay), collected at depths between approximately 30 m and 70 m. Robust pipehorses have also been recorded at Corny Point at the bottom of Spencer Gulf. No more is known of the specific habitat requirements of this species.

Most syngnathids rely on camouflage to avoid predators. Usually associated with specific habitats (e.g. specific species of seagrasses) they will often attach themselves to structures using their flexible tails and feed on small animals as they drift past.

Robust pipehorses can grow to at least 35 cm and very little is known about reproduction in this species. As with other syngnathids in this group, it is the male that rears the eggs, protecting them in a brood pouch under the tail. The diet of this species is unknown, but like other species in the family, the robust pipehorse is likely to feed on tiny crustaceans.

CURRENT CONSERVATION STATUS

Since January 2006, fishes in the Syngnathidae family (sea dragons, pipefish, pipehorses) have been formally protected in SA, under the Fisheries Management Act 2007.

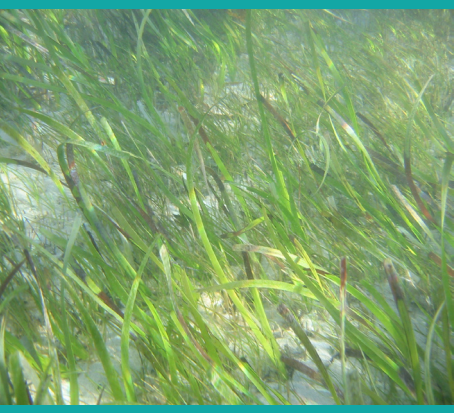
All members of the Syngnathidae and Solenostomidae (Ghost Pipefish) are 'listed marine species' under s248 of the EPBC Act (1999) (see the legislation summary produced as part of this series for details on the difference between 'listed marine species' and 'listed threatened species').

The recently described gulf pipefish (*Stigmatopora narinosa ;* Browne and Smith 2007.) Photo: K. Smith, courtesy of Seadragon Foundation Inc.
Note: No photo of the robust pipefish was available for this factsheet

In most seahorse, sea dragon and pipehorse species it is the male that carries the eggs and gives birth

THREATS AND RESPONSES

Fish, sharks and rays in SA waters face a wide variety of threats including: damage to or loss of habitat; being taken as bycatch by commercial fishers; the impacts of climate change; introduced marine pests; and an overall lack of knowledge of fish species.



Seagrass is important habitat for many SA fish species
Photo: J. Coates

Critical habitat for syngnathids such as seagrass communities are subject to a range of threats including excess nutrient inputs.

Syngnathids are generally strongly site-associated, slow moving species, commonly found in near-shore habitats, which increases their vulnerability to population decline from site-specific threats such as coastal development, trawling and dredging. Degradation of critical habitat via processes such as sand mining and pollution is also a serious threat.

Many SA syngnathid species appear to be uncommon, and have limited distributions. A number of SA syngnathid species, e.g the southern pygmy pipehorse, may also have a low reproductive rate. Both of these factors decrease the chances of bringing depleted populations back to a sustainable level.

Trawl fishing causes direct mortality (via bycatch) and habitat damage, and syngnathids captured as bycatch may not survive if released. There is a need for the ongoing collection and monitoring of bycatch data from SA fisheries. Methods for mitigation of this impact, such as gear improvements to reduce bycatch of syngnathid fishes, need to be developed.

Collection for the aquarium and traditional medicine trade is a major threat to sygnathids worldwide. The extent to which this threatens SA species needs to be investigated and monitored.

The designation of suitable non-trawl areas (such as Sanctuary Zones) within the range of the robust pipehorse and other syngnathids as part of Marine Parks may assist the survival of populations over the long term.

While the exact impacts of climate change on the marine environment are uncertain, there is little doubt that it will negatively affect marine habitats through increases in water temperature, sea level rise and changes in storm activity.

The lack of knowledge about marine fish means that it is extremely difficult to identify and implement appropriate management actions. Increased research and monitoring for non-commercial species is needed for data such as range, distribution, habitat, population ecology and reproduction.

For more information: www.ccsa.asn.au/fsr

ACKNOWLEDGEMENT

Information used in this fact sheet was compiled from:

Baker, J.L. (2007 in prep.) Status of Marine Species at Risk in South Australia: Technical Report – Bony and Cartilaginous Fish.

THE THREATENED SPECIES NETWORK is a community based partnership between WWF-Australia and the Australian Government.
http://wwf.org.au/ourwork/ species/tsn/

Threatened Species Network

Australian Government

WWF

Conservation Council of South Australia Inc

CONSERVATION COUNCIL OF SOUTH AUSTRALIA INC.
1/157 Franklin St., Adelaide 5000
Ph: 8223 5155, Fax: 8232 4782
Email: fsr@ccsa.asn.au
http://www.ccsa.asn.au/fsr