

# Yankalilla

## Visitor Information Centre

### The Leafy Sea Dragon



*Sea Dragons are arguably the most spectacular and mysterious of all ocean fish. Though close relatives of sea horses, sea dragons have larger bodies and leaf-like appendages which enable them to hide among floating seaweed or kelp beds. Sea dragons feed on larval fishes and [amphipods](#), such as and small shrimp-like crustaceans called mysids ("sea lice"), sucking up their prey in their small mouths. Many of these amphipods feed on the red algae that thrives in the shade of the kelp forests where the sea dragons live.*

*As with their smaller common seahorse (and pipefish) cousins, the male sea dragon carries and incubates the eggs until they hatch. During mating the female deposits up to 250 eggs onto the "brood patch" on the underside of the male's tail. After about eight weeks, the brood hatches, but in nature only about 5 per cent of sea dragons survive to maturity (two years). A fully grown Leafy Sea Dragon grows to about 18 inches (45 cm).*

*Leafy Sea Dragons are very interesting to watch-- the leafy appendages are not used for*

*movement. The body of a sea dragon scarcely appears to move at all. Steering and turning is through movement of tiny, translucent fins along the sides of the head (pectoral fins, visible above) and propulsion derives from the dorsal fins (along the spine). Their movement is as though an invisible hand were helping, causing them to glide and tumble in peculiar but graceful patterns in slow-motion. This movement appears to mimic the swaying movements of the seaweed and kelp. Only close observation reveals movement of an eye or tiny fins.*

*Most sources of information about sea dragons say they are found in the ocean waters of southern Western Australia, South Australia and further east along the coastline of Victoria province, Australia. Sea dragons are protected under Australian law, and their export is strictly regulated. A 1996 assessment by the Australian government's Department of Environmental Heritage indicates "It [the Leafy Sea Dragon] is now completely protected in South Australia because demand for aquarium specimens threatened the species with extinction." Currently the specific law which protects them is called the [Environment Protection and Biodiversity Conservation Act 1999](#). For a February 2002 updated overview of the leafy sea dragon, see [this page](#) from the Department of Environmental Heritage site.*

## Dragon Search

'Dragon Search' is a monitoring program which encourages members of the community to provide information about sightings of the unique southern Australian fish - the seadragon. The information will be used to determine the distribution, habitat requirements and research and management priorities for these little-known species. Anyone who visits the beach in Australia can get involved.

<http://www.dragonsearch.asn.au>

## LEAFY SEA DRAGONS

Leafies are slightly smaller than weedies, some growing to 43cm, however most reach an average of 30cm. Their leafy appendages are more numerous and branching than on weedies and look distinctly like fronds of brown seaweed. Adults are green to yellow-brown with thin, pale dark-edged bands. As with many species of seahorse, seadragons are able to change colour depending on age, diet, location or even their stress level. Unlike weedies, the leafy seadragons' eyes are located slightly above the snout. Leafies have several long sharp spines along the sides of the body. These spines are thought to be used as a defence against attacking fish. New research has shown that leafy seadragons have a highly sophisticated navigation system, venturing hundreds of metres from their base but returning precisely to the same spot (Connolly 1998). The leafy seadragon has a much smaller range than the weedy. Leafies have been recorded from Geraldton in Western Australia along the southern Australian coastline to Wilsons Promontory in Victoria.



Leafy seadragon, Fleurieu Peninsula (South Australia). Photo by Mark Spencer & Becca Saunders.

## 29 January 2003 - The Dragon Search Goes On - News Release from the Government of South Australia

Hon JOHN HILL MP

Minister for Environment and Conservation

The community is being asked to keep an eye out for one of South Australia's rarest marine creatures, the Seadragon. The Minister for Environment and Conservation, John Hill said Dragon Search relies on reports from the public of the two species of Seadragon, with the information used to build up a picture of where these remarkable sea creatures occur. Little is known about the distribution, numbers and habits of the Leafy Seadragon and the Weedy Seadragon, which are both found off South Australia, so Dragon Search is collecting data which is contributing to our understanding of our marine environment, the Minister said.

Over the past 6 years the partners of the Dragon Search project have conducted a research project on the Seadragons, analysing observations of these uncommon and important creatures. While that work has been completed, the Dragon Search database will continue to operate using sightings from the community. Scuba divers, snorkellers and beach combers can contribute to the survey of Seadragons by filling in Sighting Forms on the Dragon Search web-site whenever they see a Seadragon, whether it is alive or dead. We need to expand our knowledge of the Seadragons because, like frogs in freshwater, they are good indicators of the health of the marine environment.

It's also important that the community is made aware of how delicate these creatures are.

Seadragons should not be handled and are very sensitive to human activities which may pollute or disturb their environment. We need to protect both types of Seadragon because South Australia's marine environment is a major stronghold for both species. Finding out where they occur and in what numbers is vital for their conservation. I urge the community to get involved in Dragon Search and contribute to that knowledge. The State Government is also working towards the establishment of a Marine Protected Area from Backstairs Passage to the mouth of the River Murray which is intended to provide greater protection for key marine species including the Seadragons. The draft plan for the Encounter Marine Protected Area will be released for public consultation later this year. (Contact - Vicki-Jo Russell, Threatened Species Network (SA) State Coordinator, +61 8 8223 5155 or by email: [tsnsa@ozemail.com.au](mailto:tsnsa@ozemail.com.au))

## Further Research

### Description & Behavior

The leafy sea dragon, *Phycodurus eques* (Günther, 1865), aka leafy seadragon or Glauerts seadragon, get their common names from the leaf-like appendages on the body. The leafy sea dragon has more of the leaf-like appendages on the body than the closely-related weedy sea dragon. Both species resemble floating pieces of seaweed which makes them difficult for predators to find in their natural habitat. They reach a total length of [35](#) cm.

### World Range & Habitat

These superbly camouflaged fishes are only found in Australia's temperate waters. This species has only been recorded from the southern coastline of Australia, from Kangaroo Island, South Australia to Rottnest Island, Western Australia. These fishes live over sand patches among kelp-covered rocks below the low tide line in depths from about 3-[50](#) m.

- » [GBIF occurrence data in Google Earth](#) [[Requirements](#) | [Tips](#)]
- » [Ocean Biogeographic Information System \(OBIS\)](#) [[World Map](#)] | [OBIS-SEAMAP](#) | [\[about\]](#)

### Feeding Behavior (Ecology)

The leafy sea dragon, *Phycodurus eques*, has a long pipe-like snout with a small terminal mouth. It feeds on plankton, mysids and other small crustaceans. One of the most spectacular examples of camouflage: neither prey nor predators recognize it as a fish.

### Life History

Unlike seahorses, sea dragons do not have a pouch for rearing the young. Instead, the male carries the eggs fixed to the underside of his tail from where they eventually hatch. When male sea dragons are ready to receive eggs from the female, the lower half of the tail on the male appears wrinkled. During mating, the female lays 100-250 eggs onto a special 'brood patch' on the underside of the male's tail, where they are attached and fertilized. This brood patch, consisting of cups of blood-rich tissue each holding one egg, and is specifically developed by the male for use during the breeding season of August-March. The bright pink eggs become embedded in the cups of the brood patch, receiving oxygen via the cups' blood vessels. During each breeding season, male leafy sea dragons will hatch two batches of eggs. After a period of about 4-6 weeks from conception, the male 'gives birth' to miniature juvenile versions of sea dragons. As soon as a baby sea dragon leaves the safety of its father's tail, it is independent and receives no further help from its parents. For 2-3 days after birth, the baby sea dragons are sustained by their yolk sac. After this, they hunt small zooplankton, such as copepods and rotifers, until large enough to hunt juvenile mysids. Sea dragons grow to a length of [20](#) cm after one year, reaching their mature length at two years. In the wild, young sea dragons are preyed upon by other fish, crustaceans and even sea anemones. Young sea dragons look more delicate, and are often differently colored than adults, and may hide in different types of seaweeds.

### Comments

The leafy sea dragon is a rare sight and a very fragile creature. Handling of any sort is discouraged due to the likelihood of injuring this animal. It does seem to enjoy having its picture taken though.

Leafy sea dragons, *Phycodurus eques*, are listed as Near Threatened (NT) on the [IUCN Red List of Threatened Species](#):

#### NEAR THREATENED (NT)

A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened [category](#) in the near future.

Reference <http://marinebio.org/species>

## Leafy Sea Dragon Foundation

TBA