

By a nose

Pot-belly, upside-down, weedy – seahorse, pipefish, seadragon. All mingle in our marine environment.

THE SPARKLING ocean inlet of Port Stephens, more than twice the size of Sydney Harbour and nestled between Nelson Bay and Hawks Nest on the NSW lower north coast, is a seahorse hotspot, with four species found here – this phenomenon occurs nowhere else in the country, and is considered rare worldwide. Members of the syngnathid family, which includes seahorses, along with pipefish, pipehorses and seadragons, are unique: they're the only animals in the world in which the male gives birth. (Once a male does so, the hatchlings fend for themselves – there's no parental care.) Seahorses and most pipefishes have pouches on their abdomen to carry the young while seadragons, pipehorses and some pipefish species are tail brooders. Syngnathids also have tube-like snouts through which they inhale food, including 1–20 mm shrimp-like mysids, shrimps and other crustaceans. At least 220 species of syngnathid are found worldwide. Sizes range from 2.5 cm to 65 cm fully grown.

Since 2005, research has been conducted on the syngnathid species of Port Stephens, documenting their distribution, abundance and preferred habitat. Each seahorse encountered is tagged using a fluorescent dye inserted just under the skin, ensuring every animal can be identified. Population analysis from subsequent sightings of tagged animals has found that at least a thousand individual seahorses call the waters of Port Stephens home.

TEXT BY DAVE HARASTI

Dave Harasti is a marine scientist with the NSW Marine Parks Authority and is completing a PhD on seahorse conservation.

ILLUSTRATIONS BY ROBERT KAYGANICH

POT-BELLY SEAHORSE

Hippocampus abdominalis

One of the world's largest seahorse species, the pot-belly lives among kelp and sponges, and also calls artificial structures such as jetties and shark nets home. Members of this species are considered rather promiscuous – mating with several different partners during the breeding season.

Length: 35 cm **Depth:** 35 m
Distribution: Port Stephens, NSW, to Victoria

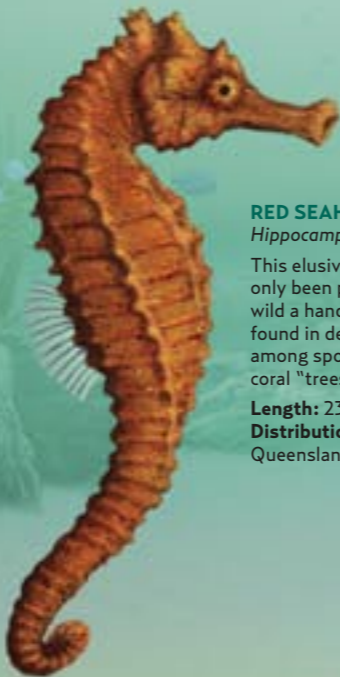


BEND STICK PIPEFISH

Trachyrhamphus bicoarctatus

Members of this tropical species are recognised by their bent head and red or yellow colouring. You'll find them living among sponges and soft corals in silty habitats. Members of this species make their way to Port Stephens on the East Australian Current (EAC).

Length: 40 cm **Depth:** 25 m
Distribution: Indo-Pacific, Red Sea to Africa, Japan and Australia (central coast WA, tropical north and south to Sydney)



RED SEAHORSE

Hippocampus sp.

This elusive species, which has only been photographed in the wild a handful of times, is generally found in deep water where it hides among sponge gardens and black coral "trees".

Length: 23 cm **Depth:** 35-plus m
Distribution: South-east Queensland to Port Stephens, NSW

ORNATE GHOSTPIPEFISH

Solenostomus paradoxus

Travelling on the EAC, this tropical species is occasionally found at Port Stephens and Sydney Harbour during the summer months. Find it among the branches of black coral "trees" and feather stars. Females of this species brood the eggs.

Length: 11 cm **Depth:** 35 m
Distribution: Point Quobba, WA, tropical north to Shellharbour, NSW

WHITE'S SEAHORSE

Hippocampus whitei

Found among seagrass meadows, sponge gardens and soft corals, this shy species becomes more active in the summertime breeding season when animals pair up to mate; pairs have been found together over subsequent breeding seasons.

Length: 15 cm **Depth:** 20 m
Distribution: Large estuaries in the Sydney region and north to Forster, NSW

THORNY SEAHORSE

Hippocampus histrix

In a scene straight out of *Finding Nemo*, this intrepid traveller hitches a ride on the EAC to Port Stephens, and is appropriately named given the thorny appendages covering its body.

Length: 17 cm **Depth:** 20 m
Distribution: Widespread Indo-Pacific, mainly from Japan, Indonesia and the Coral Sea. Three specimens have been recorded in Port Stephens, NSW

WEEDY SEADRAGON

Phyllopteryx taeniolatus

Endemic to southern Australian waters, this iconic species is a master of camouflage and is found drifting among kelp, one of its favourite habitats. After summer mating, a male carries up to 300 eggs on the underside of his tail. Young hatch 4–6 weeks later.

Length: 45 cm **Depth:** 25 m
Distribution: Southern Australian waters from Port Stephens, NSW, to Rottnest Island, WA

EASTERN UPSIDE-DOWN PIPEFISH

Heraldia nocturna

It's difficult to tell which way's up or down when looking at this unusual pipefish, which lives in caves and under ledges on rocky reefs. It typically swims upside down. Try a night dive to observe members of this species, it's most active after dark.

Length: 8 cm **Depth:** 20 m
Distribution: NSW from Seal Rocks to Jervis Bay

SPOTTED PIPEFISH

Stigmatopora argus

Difficult to see lying along blades of seagrass – camouflaged from potential predators such as flathead, cuttlefish and octopus – this species is found in shallow estuarine waters, usually in pairs. It feeds on small crustaceans attached to seagrass leaves.

Length: 28 cm **Depth:** 10 m
Distribution: Southern Queensland to Tasmania and Shark Bay, WA

