

## Dancing Fish of the Sea – Seahorses

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Illustration by Kyle Weis

Check out the corner aquarium in the Mobile Bay gallery of the Estuarium, and no doubt you'll see a crowd thronging about it. Among the most fascinating animals in the facility are the delicate, dancing seahorses, charming visitors with their brilliant colors and vibrating fins. As delicate as they are in appearance, seahorses require special attention. Following is an account by our aquarist staff, discussing the importance of seahorse husbandry in general and at our own facility:

Seahorses are members of the family Syngnathidae which also includes pipefish and sea dragons. There are two species of seahorse and seven species of pipefish that are known to have ranges that include the Northern Gulf of Mexico. These species are found in a variety of habitats including seagrass beds, sargassum floats, pelagic waters, freshwater, estuaries, and saltwater.

In the Bay area, we normally encounter the southern variety of lined seahorse (*Hippocampus erectus*), Gulf pipefish (*Syngnathus scovelli*), and chain pipefish (*S. louisianae*). [ according to [Peterson Field Guide - Atlantic Coast Fishes](#)]

The genus name for seahorses (*Hippocampus*) comes from the Greek words *hippo*, meaning horse, and *campus*, meaning sea monster.

Each species of seahorse found in our area (and those found throughout the US) is listed on the International Union for the Conservation of Nature (IUCN)'s Redlist as Vulnerable ([www.iucn.org](http://www.iucn.org) or [www.cites.org](http://www.cites.org)). When a species is given this classification it normally means that there are significant conservation issues or population trends that are threatening the survival of the species, but precise information and data have not yet been gathered to fully assess the situation.

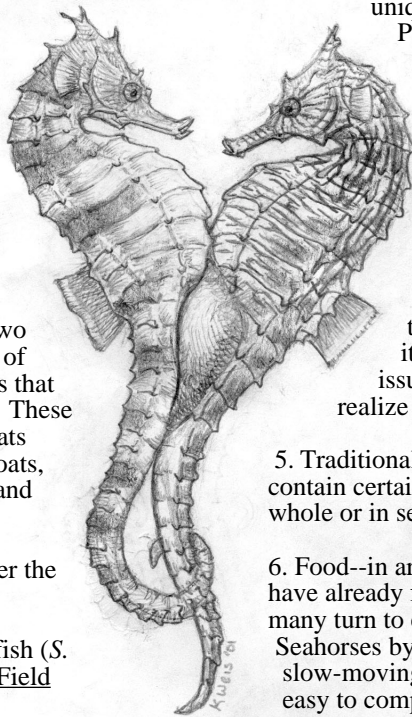
Unfortunately, although they are a very diverse family, almost all syngnathid populations around the world are in similar or worse shape than their American counterparts.

There are 6 factors that contribute most to the decline of seahorses around the world:

1. Low fecundity--a pair of seahorses may produce a maximum of only 1000 young/year. In contrast fish like cod can produce 200,000 eggs/spawn. Only a fraction of the young of any fish species survive to reproduce themselves. This means that seahorse populations will be fast to decline and slow to recover.

2. Habitat loss--most seahorse species are found in coastal ecosystems like sea grass beds, coral reefs, and mangroves. These are among the most endangered

habitats in the world, and are directly affected by pollution and human encroachment.



3. Pet trade--because of their quirky behaviors and unique appearance seahorses are very desirable. Proper care information is normally not made available to the general public, and the seahorses fail to thrive because their food and husbandry needs are not met.

4. Souvenir (curio) trade--because of their armored bodies seahorses are preserved very well simply by allowing them to dry out. They are often caught alive, dried, and sold by the boxfull next to sand dollars, seastars, and corals that probably suffered the same treatment. Those who buy these items are normally unaware of conservation issues facing these animals - or don't even realize that these items were once living creatures.

5. Traditional medicine--seahorse bodies are thought to contain certain medicinal properties and are often sold whole or in serums that promise certain benefits.

6. Food--in areas where the local economy and marine life have already failed to support impoverished families, many turn to eating or selling anything they can catch. Seahorses by nature are loyal to a specific area and are slow-moving, making them not only easy to catch but easy to completely remove from an entire area.

Public aquariums like the Estuarium are often sites for *ex situ* conservation efforts. Here formal and informal educational opportunities are available to the general public. At least five times every day there is a group of people huddled around our seahorse tank at the Estuarium remarking about how they thought seahorses were mythical creatures and they are curious about how seahorses are kept and what they eat. As aquarists, it is important that we take these opportunities to dispel myths about these animals and share knowledge that may inspire someone to get involved or simply make them want to learn more.

For the record, seahorses and their relatives are best left in their habitat or in the care of professionals. Training them to eat is an extensive and expensive proposition.

Seahorses typically only eat live prey, being visual predators with binocular vision. They cue on prey movement for feeding in the wild. Upon reading in various Websites and books about seahorses that they could be trained to eat frozen food, former aquarist Gina Fisher began slowly weaning the ponies from live prey. This is significant on a number of different levels. It is much more time-effective to dedicate a whole day to catching a 4-month supply of grass shrimp (the most available, and suitable, wild food), rather than having to go out every day to net live food. Also, by freezing the shrimp, we eliminate most pathogens and bacteria from the seahorse tank.

Initially, our seahorses would readily eat only the small grass shrimp, as their natural prey size is determined largely by the diameter of their small, straw-like mouths. Gradually the fish seemed to adapt to larger grass shrimp, which are more common. They initially slurp the food, getting the shrimp caught in the opening of their mouth. With successive “slurps,” they are able to pull the meat from the shrimp shell. In fact, if the seahorse doesn’t quickly eat the shrimp from the shell, another will steal it directly from its mouth.

The “training” of the seahorses to readily accept frozen grass shrimp was a gradual process, lasting about 3 months. However, as newly-quarantined seahorses were added to the display tank, they quickly learned from watching their veteran tankmates. Initially, only a couple of fresh-dead grass shrimp were added to the mostly live feedings. Gradually the proportion of dead-to-live was increased, until the fish were eating only dead grass shrimp. The transition from fresh dead to frozen dead was much easier.

We are now working to supplement the seahorses’ diet with live killifish larvae that we have raised from eggs in a pathogen-free environment. These baby fish are highly nutritious, and serve as a good treat for the always-hunting seahorses.