

# OCEAN COMMOTION 2014



  
**Sea Grant**  
Louisiana

[www.lamer.lsu.edu](http://www.lamer.lsu.edu)

Lined Seahorse – *Hippocampus erectus*

## The Seahorse

Seahorses are some of the most interesting creatures found in tropical and temperate zones all around the world's ocean and coasts. Seahorses are fish, and are close relative to pipefish. Unlike fish, they swim upright. They have no scales but they have boney structures and are masters of camouflage. Seahorses can change color quickly and some grow additional appendages to blend into the environment

Seahorses remain stationary when feeding, using their tails to hold on to nearby seaweed and other vegetation. Seahorses must feed for up to ten hours every day to sustain their rapid metabolisms. Since seahorses do not have teeth or stomachs, they gather zooplankton, non-insect arthropods, and small crustaceans through their snouts. Because seahorses are not very strong swimmers, one common cause of death is over-exhaustion. In the wild, seahorses live between one and five years, although in the safety of captivity they can live much longer. Most species of seahorse rely on their camouflage abilities to protect them from predators.



**Figure 1. *Hippocampus zosterae* (Dwarf seahorse)**

The mating process between seahorses is perhaps their most peculiar characteristic. Many seahorses form monogamous relationships with one partner. These relationships can last for one breeding season (February through November) or for as long as they live. After engaging in a courtship dance during which the male seahorse flashes his colors and the pair carousel around each other, the female deposits her eggs inside the male's brood pouch. Depending on the species, seahorse gestation lasts from 4 days to 4 weeks. Baby seahorses are born alive, and a single brood can contain anywhere from 50-1500 young, with larger species producing

more offspring. Seahorses mate again a few days after each brood is born.

As some of the most interesting creatures found in the ocean, seahorses have always been of particular interest to humans. They can be found throughout recorded history in mythologies, religions, and stories. There are between 40 and 60 species of seahorses

worldwide, mostly concentrated in the Mediterranean Sea and the waters surrounding Indonesia and the Philippines. Three species can be found in the Gulf of Mexico:

*Hippocampus zosterae*, *Hippocampus erectus*, and *Hippocampus reidi*.

Also known as the Dwarf seahorse, *Hippocampus zosterae* can be found along the Mexican and Cuban coasts, inhabiting sea grass beds during the summer and coral reefs during the winter. As its name implies, the Dwarf seahorse is one of the world's smallest species of seahorse, measuring a mere 8 mm (0.3 in) at birth and reaching just 2.5 cm (1 in) at maturity. Dwarf seahorses are diverse in color, often found in bright green and yellow or beige and black, making them attractive to aquarium owners.

Another species of seahorse that can be found in the Gulf of Mexico is the Lined seahorse, or *Hippocampus erectus*, although it is not unique to the Gulf of Mexico. The Lined seahorse inhabits coastal areas extending from Canada down to Argentina, living in sea grass beds, sargassum, and coral reefs ranging from 6.5 m (21 ft) to 30 m (100 ft) deep. Lined Seahorse gestation lasts up to 21 days, and males can give birth to 650 young in each brood. At birth, these baby seahorses are about 1.7 cm (0.7 in) and reach up to 12.7 cm (5 in) at maturity. Lined seahorses live much longer than Dwarf seahorses, with a life expectancy of up to 5 years.



Figure 2. *Hippocampus erectus* (Lined seahorse)



Figure 3. *Hippocampus reidi* (Slender or longsnout seahorse)

*Hippocampus reidi*, called the Slender or Longsnout seahorse, is the third species of seahorse that can be found in the Gulf of Mexico. Like the Lined seahorse, the Slender seahorse lives in sea grass beds and sargassum patches, but it also lives in mangrove forests. This species has small dark spots and a long snout, which distinguish it from other species. This species also has eyes that can move independently from each other similar to a chameleon, which make feeding easier. Slender seahorses are very

popular in the aquarium trade because of their bright colors and large bodies, reaching up to 18 cm (7 in) at maturity. Slender seahorse embryos take roughly 14 days to hatch, and the male seahorse will give birth to up to 1500 young in each brood. These seahorses have a life expectancy of 3-5 years.

In 2000, the International Union for Conservation of Nature declared the Dwarf seahorse to be vulnerable to being threatened because of habitat loss, poor water qualifying 2011, many conservationists petitioned to place the Dwarf seahorse on the endangered species list in order to protect them. Unfortunately they have not gotten that protection and remain listed as threatened.

Many creatures in our oceans and along our coasts have suffered. All sea creatures including seahorses depend on clean, healthy water and habitats in our oceans and on our coasts. Unfortunately, people have damaged their environment through habitat destruction, water pollution, and overfishing. Seahorses are fished for the aquaculture trade, for curios and decoration such as car key rings and paperweights, and for traditional medicines. Fostering healthy water in our oceans will take a change in our habits.

### Sources

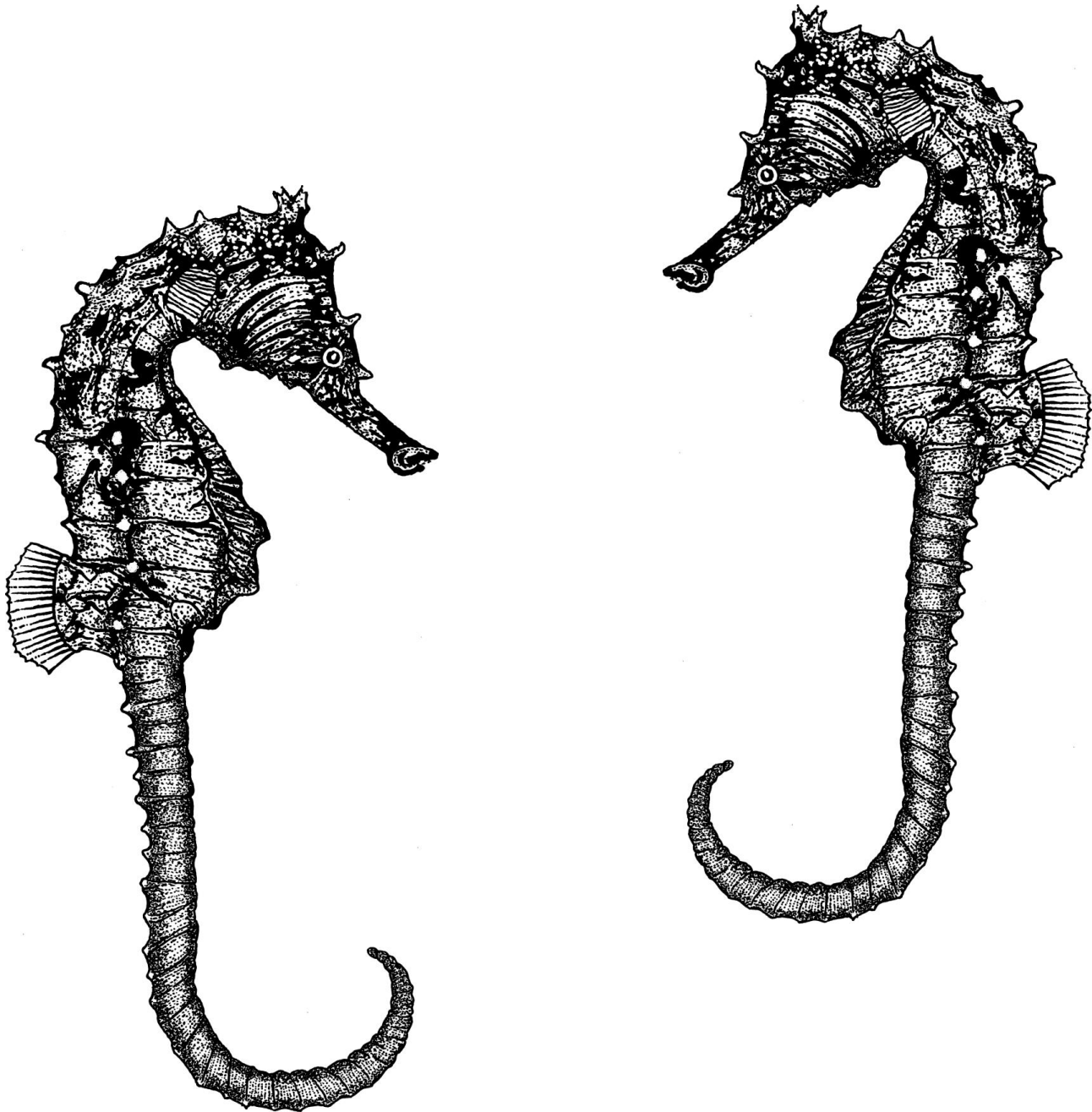
1. [http://animaldiversity.ummz.umich.edu/accounts/Hippocampus\\_erectus/](http://animaldiversity.ummz.umich.edu/accounts/Hippocampus_erectus/)
2. [http://animaldiversity.ummz.umich.edu/accounts/Hippocampus\\_zosteriae/](http://animaldiversity.ummz.umich.edu/accounts/Hippocampus_zosteriae/)
3. <http://oceana.org/en/explore/marine-wildlife/longsnout-seahorse>
4. <http://www.iucnredlist.org/details/10082/0>
5. <http://www.arkive.org/dwarf-seahorse/hippocampus-zosteriae/> (Figure1)
6. <http://www.arkive.org/lined-seahorse/hippocampus-erectus/> (Figure 2)
7. <http://www.iucnredlist.org/details/10082/0> (Figure 3)
8. <http://www.aquaticcommunity.com/Sea-horses/lined.php>
9. <http://ocean.si.edu/10-things-you-never-knew-about-seahorses>



Print and cut a female seahorse. Cut them out. Glue together attach string and hang one or make a mobile!

## Female Lined Seahorse

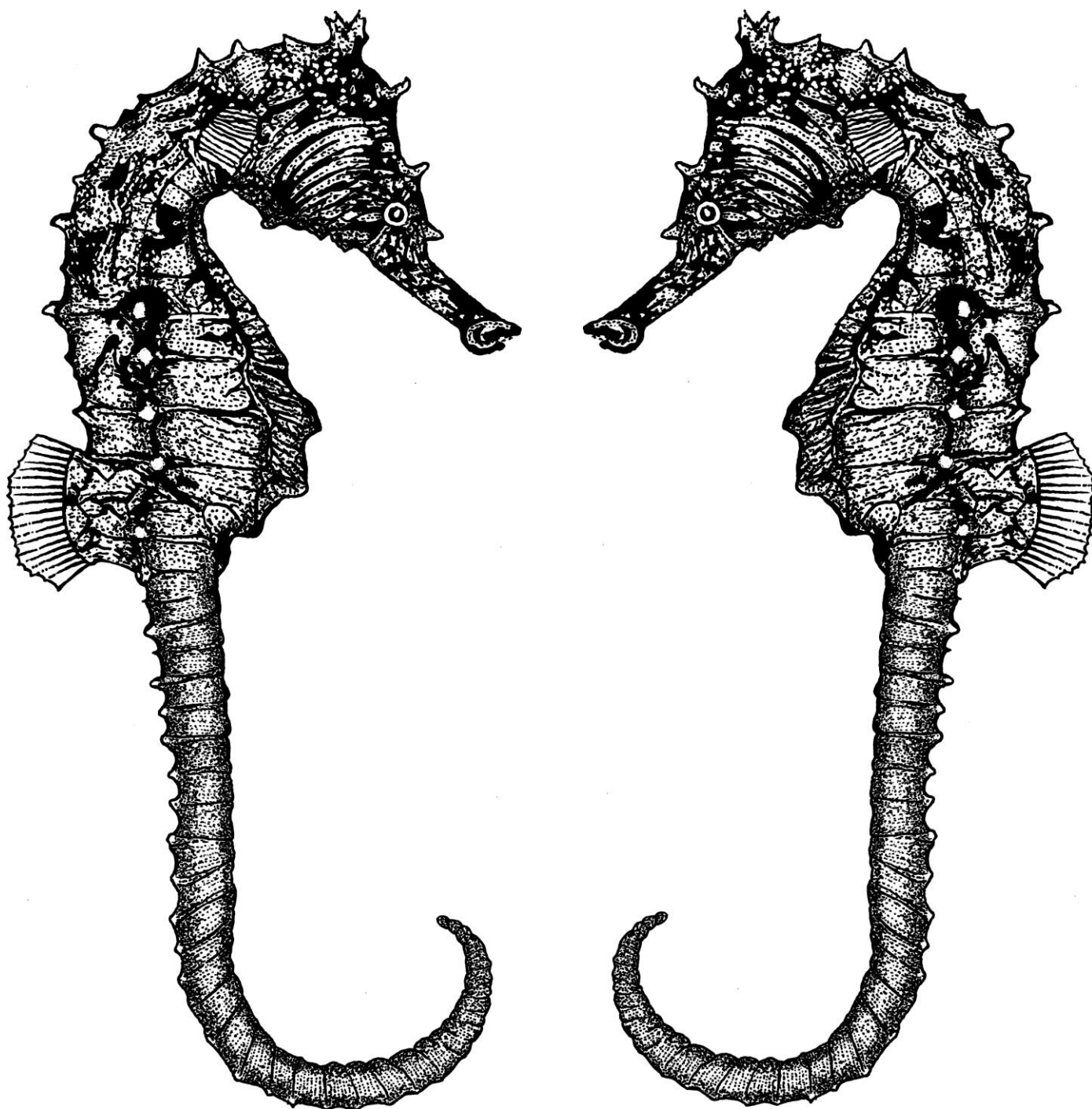
*Hippocampus erectus*



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## Female Lined Seahorse

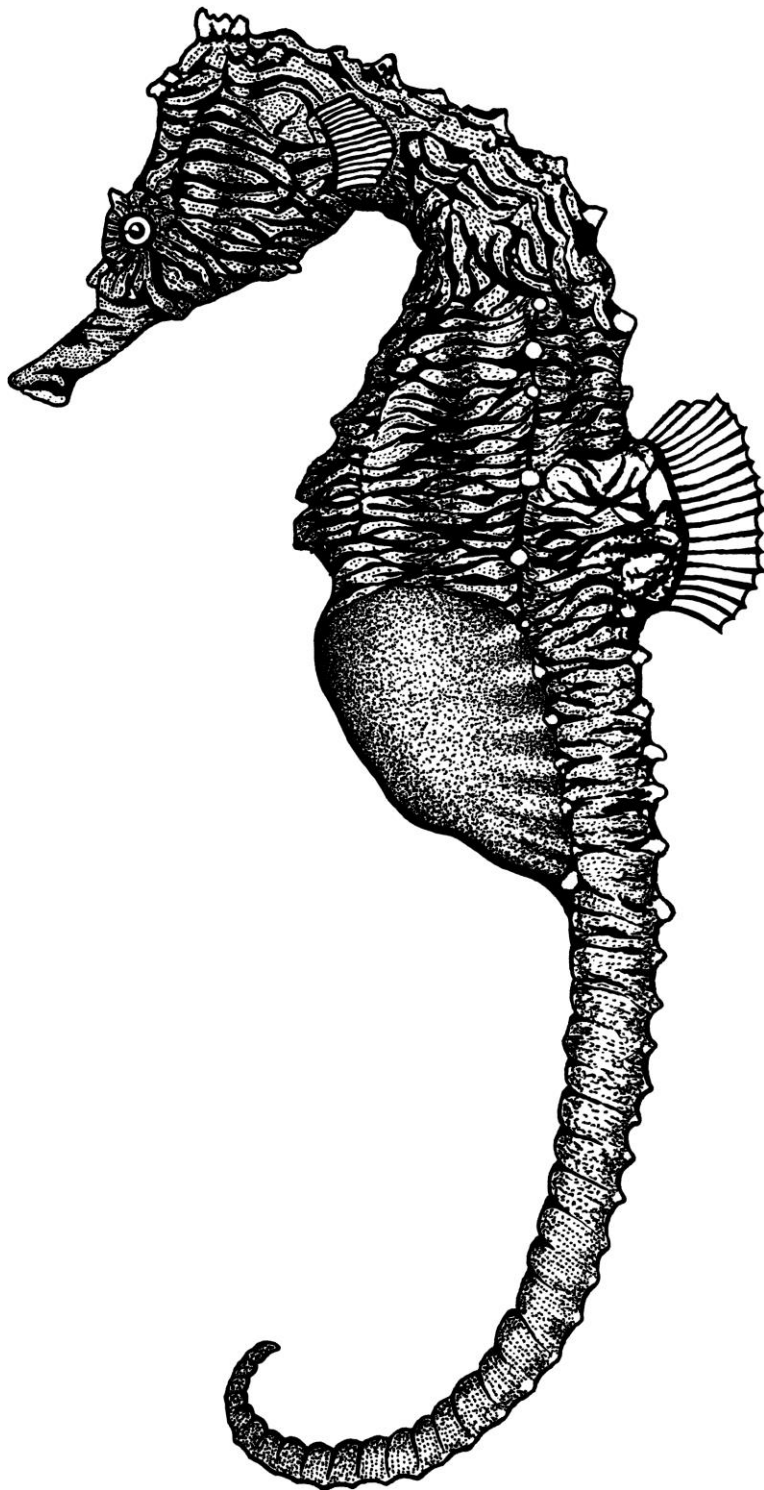
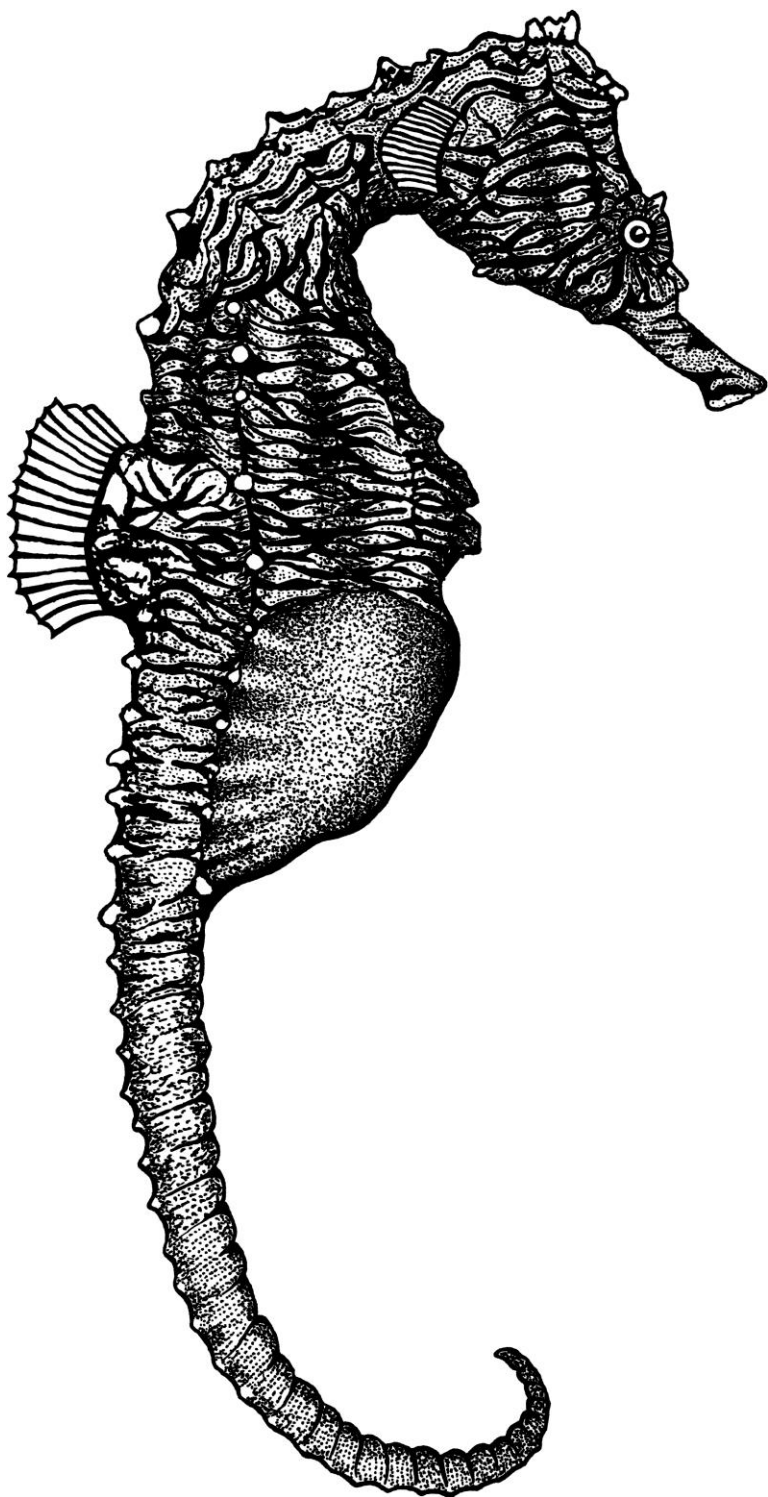
*Hippocampus erectus*





Print and cut a male seahorse. Cut them out. Glue together attach string and hang one or make a mobile!

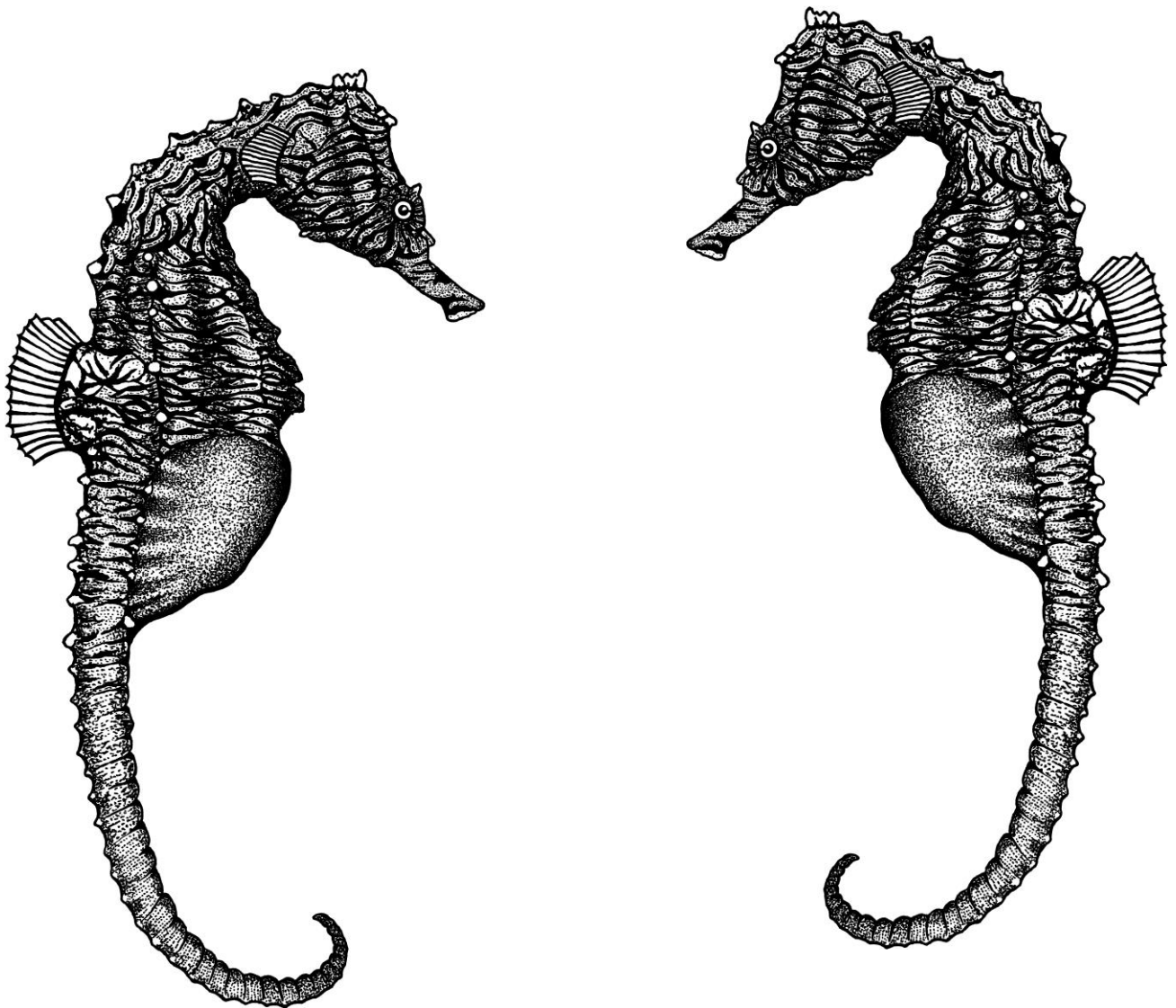
**Male Lined Seahorse**  
*Hippocampus erectus*



Print and cut a male seahorse. Cut them out. Glue together attach string and hang one or make a mobile!

## Male Lined Seahorse

*Hippocampus erectus*





# **Seahorse Books**

## **Stories**

### **The Sign of the Seahorse by Graeme Base**

Beginning at the famous Seahorse Cafe, social hub of the Old Reef, The Sign of the Seahorse takes us on a great journey. We travel from the doomed coral gardens of Reeftown to a sunken wreck and an underwater junkyard, across the barren expanse of the Withered Plain, and into the vast, uncharted chasms of the Deep, before arriving finally at the utmost edge of the Great Continental Shelf. (From Amazon)

*Grades 2 through 8*

Available at EBR Public Library

### **Sea Horse, Run! by Tammy Carter Bronson**

Brave Sea Horse defends his helpless friend, Coral, from an approaching sea dragon. A vibrant anorama at the back of the book teaches children to identify sea creatures, and fun facts inspire an appreciation for sea horses and their delicate relatives: leafy, weedy, and ribboned sea dragons. (From Amazon)

Winner – 2011 Next Generation Indie Book Award for Best Children's Picture Book.

Second place winner – Children Early Reader (6-8 years) category, 2011 Reader Views Literary Awards.

*Grades Pre-K through 3*

### **Mister Seahorse by Eric Carle**

When Mrs. Seahorse lays her eggs, she does it on Mr. Seahorse's belly! She knows he will take good care of them. While he swims waiting for the eggs to hatch, he meets some other underwater fathers caring for their babies: Mr. Tilapia, who carries his babies in his mouth; Mr. Kurtus, who keeps his on his head; and Mr. Catfish, who is baby-sitting his young hatchlings. (From Amazon)

*Grades Pre-K through 2*

Available at EBR Public Library

### **The Little Seahorse by Sheri Fink, Illustrated by Mary Erikson Washam**

The bashful Little Seahorse discovers a mysterious object during his adventures and has to learn to speak up for himself and ask for help in order to bring his mother this amazing gift. In the process, he increases his self-confidence and makes wonderful new friends.

*Grades Pre-K through 2*

Available as an e-Book

### **King Cecil the Sea Horse (a Cat in the Hat Story) by Tish Rabe, Illustrated by Christopher Moroney**

When Sally and Nick need to learn about babysitting, the Cat in the Hat takes them to meet an expert: King Cecil the Sea Horse! That's because when it comes to having babies, sea horses give birth in a very special way. The mom sea horse puts her eggs into a pouch on the dad, and he carries them there until the babies hatch (*in* his pouch) and swim out!

*Grades Pre-K through 2*

Available as an e-Book

## **Scientific**

### **Fry to Seahorse (LifeCycles) by Camilla de la Bedoyere**

Fry to Sea Horse illustrates the unusual cycle of life in the species, which features males giving birth after females lay eggs in their pouches. An appended note to parents and teachers suggests activities related to this topic. (From Amazon)

*Grades 1 through 3*

### **Sea Horse: The Shyest Fish in the Sea by Chris Butterworth, Illustrated by John Lawrence**

Dive into the warm ocean and swim around amid the coral and waving sea grass. Do you see an eye like a small black bead peering out at you? Linger for a while and discover the secrets of the sea horse - one of the shyest fish in the sea. With a head like a horse, a tail like a monkey, and a pouch like a kangaroo, the sea horse acts like a chameleon, changing color to ward off danger or to show that he and his mate are a lifelong pair. Watch their fascinating mating dance, as the two of them twine their tails together and twirl, before she places her eggs in his pouch to be born. Could there be a more intriguing creature of the sea? (From Amazon)

*Grades Pre-K through 3*

**Seahorses by Jennifer Keats Curtis**

One day, a baby seahorse is born, turning and tumbling as he floats through ocean currents alongside his three hundred brothers and sisters.

Like a tiny, mythical dragon, the seahorse is a fascinating creature: he changes color to fit in with the surroundings of his spectacular coral reef and sea grass surroundings; his lizard-like eyes can look in two directions at once; and when he has grown, he—not the female—will give birth to the next batch of whirling seahorses. (From Amazon)

*Grades Pre-K through 3*

Available as an e-Book

**Seahorses by Sylvia M. James**

Photographs and simple text show what seahorses are, their physical characteristics, and how they reproduce. (From Amazon)

*Grades 2 through 5*

**Seahorse Fry (Water Babies series) by Ruth Owen**

Describes the life of sea horses, discussing where they live, how they are born, and how they survive. (From Amazon)

*Grades K through 2*

**Seahorses and Sea Dragons (Undersea Encounters series) by Mary Jo Rhodes**

Filled with terrific photos, this book offers a good overview of these interesting creatures in a text that is accessible to many young readers. (From Amazon)

NJ Library Association Recommended Book, "Just the Facts: Nonfiction Trade Books for the Curriculum"

*Grades 2 through 6*

Available at EBR Public Library

**Poseidon's Steed: The Story of Seahorses, From Myth to Reality by Helen Scales**

*Poseidon's Steed* is a sweeping journey that takes us from the coral reefs and seagrass meadows of Indonesia where many seahorses make their natural habitat to the back streets of Hong Kong where a thriving black market seahorse trade is concealed. Throughout history, seahorses have surfaced in some unexpected places and Scales also follows the seahorse back in time, from our most rudimentary seahorse imaginings six thousand years ago on cave walls in Australia, to the myths of ancient Greece. Scientists have long puzzled over seahorses' unusual anatomy and their very strange sex lives. And male seahorses are the only males in the animal world that experience childbirth! Seahorses' delicate beauty reminds us that we rely on the seas not only to fill our dinner plates, but also to feed our imaginations. (From Amazon)

*Grades 7 through 12*

Available as an e-Book and through the EBR Public Library

**Project Seahorse (Scientists in the Field Series) by Pamela S. Turner**

In Handumon, in the Philippines, villagers and conservationists have joined to protect the seahorse and the coral reefs where they live. Amanda Vincent and Heather Koldewey, founders of Project Seahorse, work with Filipino colleagues and local fishers like "Digoy" Paden to protect seahorses and the livelihood of local fishing families. Through their efforts, the Handumon Marine Protected Area is now a model "underwater park" where seahorses and other marine life are safe from fishing. (From Amazon)

National Science Teachers' Association Outstanding Science Trade Books for Students, 2011

*Grades 5-9*

**Seahorses: Mysteries of the Ocean by Catherine Wallis**

The seahorse is one of nature's most startling creations. For the ancient Greeks and Romans, who found them washed up on shore after storms, the only explanation for such an astonishing form was a mythological one: these creatures pulled the chariots of Neptune. (From Amazon)

*Grades 6 through 9*

## Seahorse Videos

Male seahorse giving birth at the Deep Hull

<https://www.youtube.com/watch?v=MsHCqrrU-Gk>

Seahorse having babies then mating

<https://www.youtube.com/watch?v=JwlZAFoidpw>

Seahorse Mating Dance

<https://www.youtube.com/watch?v=oa3lt7ewW9U>

<https://www.youtube.com/watch?v=scj2g7iow4I>

National Geographic

Seahorses: 10 Things You Never Knew

<http://ocean.si.edu/10-things-you-never-knew-about-seahorses>

National Wildlife Federation: Ranger Rick

Seahorses

<http://www.nwf.org/kids/ranger-rick/animals/fish/seahorses.aspx>