

Hippocampus reidi (Longsnout Seahorse)

Family: Syngnathidae (Seahorses and Pipefish)

Order: Syngnathiformes (Seahorses, Pipefish and Trumpetfish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Longsnout seahorse, *Hippocampus reidi*.

[<http://www.coralreefphotos.com/longsnout-seahorse-seahorse-facts-caribbean-seahorse>, downloaded 26 January 2016]

TRAITS. The longsnout seahorse, also referred to as the slender seahorse (Fig. 1), grows to approximately 17cm in length (height) and has a narrow body with a long thick snout (Lourie et al., 2004). Seahorses do not possess pelvic and caudal fins, however they have a propulsive dorsal fin and use two small pectoral fins to stabilize their bodies and steer while swimming. There is also a reduced anal fin just below the last trunk ring (Foster and Vincent, 2004). The coronet is relatively low, but large and convoluted at the top of the head. Rounded low tubercles

are typical, with an absence of spines, the lone exception being the eye spines. Males usually have longer tails than females and possess a brood pouch (Lourie et al., 1999). Both sexes are usually about the same size (Foster and Vincent, 2004). Coloration usually ranges from yellow to red, orange, brown and black (Freret-Meurer and Andreatta, 2008), profusely spotted with small brown specks on the body and smaller white spots along the tail. They sometimes exhibit lighter coloured saddles on the back and sides of the body (Lourie et al., 2004).

DISTRIBUTION. This species has a range in the western Atlantic Ocean from North Carolina and parts of southern U.S.A., throughout the Caribbean Sea and all the way to Brazil (Lourie et al., 2004) as shown in red in Fig. 2.

HABITAT AND ACTIVITY. Seahorses are marine animals found primarily in coastal areas (Foster and Vincent, 2004) and typically live sedentary lives (Vincent and Sadler, 1995) with small home ranges between 6-20m² (Rosa et al., 2002). This seahorse uses its muscular, prehensile tail to anchor itself by wrapping it around suitable objects that can act as a holdfast (Lourie et al., 1999). The holdfasts used by the longsnout seahorse provide them with shelter from strong tidal currents, camouflage from predators, and is also used during feeding and courtship (Dias and Rosa, 2003). These seahorses are frequently found from 15-55m below the ocean's surface (Lourie et al., 2004) but can occur at depths of 0.1-75m and are usually anchored to mangrove roots, sea grass stems, macroalgae, cnidarians, sponges, tunicates, gorgonians or stone corals (Rosa et al., 2005). This species is active during the daylight hours from dawn to dusk, and at night it is secured to a holdfast by its tail and will remain there until dawn (Felício et al., 2006).

FOOD AND FEEDING. Seahorses feed exclusively on live prey and use vision as the primary tool in their search for food. *Hippocampus reidi* actively feeds during daylight hours including at dawn and dusk. The longsnout seahorse is considered an ambush predator that seldomly pursues prey. Pregnant males commonly have greater frequencies of food consumption than females and non-pregnant males. Seahorses use suction to catch prey. When in close proximity to prey, it stretches forward and by expansion of its buccal cavity (mouth) creates a suction force through its snout, thus sucking the prey up into its mouth (Felício et al., 2006). Common prey of the longsnout seahorse includes copepods, marine nematodes and carids (Castro et al., 2008).

POPULATION ECOLOGY. Like many seahorse species, longsnout seahorses have been observed to maintain their own home ranges especially during mating periods. Home ranges of females are much larger than those occupied by the males. Having small home ranges may have aided this species in adopting camouflage for their particular environment as well as maintaining a stable social structure (Foster and Vincent, 2004). Seahorses are usually solitary, but may also be seen in pairs (Fig. 3), presumably mating partners (Rosa et al., 2007). Older juveniles and adults have presumably few natural predators as a result of their ability to camouflage themselves. The presence of bony plates also contributes to them being unappealing to predators (Lourie et al., 1999). Seahorses are poor swimmers, who prefer anchoring to objects such as plants, coral or substrates using its prehensile tail and seldom pursue prey in open water (Kendrick and Hyndes, 2005). Newborn juvenile longsnout seahorses are thought to be planktonic as experiments in captivity showed them to exhibit phototaxis (moving towards light) soon after exiting the brood pouch. Mortality due to predation is greatest in young juveniles

which are especially vulnerable to piscivorous fish and other planktivorous organisms (Foster and Vincent, 2004).

REPRODUCTION. This species exhibits monogamy, at least within any given breeding period, as males would only accept eggs from one given female. *Hippocampus reidi* also displays low fecundity with lengthy periods of parental care (Foster and Vincent, 2004). The mating ritual of this species lasts for about 25 minutes, and begins with a male and female moving parallel to each other around a shared holdfast, eventually they hold onto each other's tails while swirling around. They would release tails and assume a face-to-face pointing (snouts elevated) position. The ovipositor of the female is inserted into the male's brood pouch where the eggs are deposited. The male and female separate immediately after the eggs have been deposited, and each individual would grasp a holdfast about 2m apart. The male rocks back and forth for a few minutes to presumably settle the eggs in his brood pouch (Rosa et al., 2007). The average brood size of longsnout seahorse is between 1000-1500 eggs (Vincent 1990), and the gestation period is approximately 2 weeks (Lourie et al., 1999). By the end of the gestation period, males vigorously force juveniles out of the brood pouch, a process that can last a few hours (Vincent 1990). Newly born individuals are approximately 7mm long (Lourie et al., 1999)

APPLIED ECOLOGY. The IUCN Red List has categorised *Hippocampus reidi* as data deficient (IUCN, 2016). It is very popular in the pet industry and as a result it is over harvested in some areas to fuel the pet trade. The longsnout seahorse is also considered important in folk medicine and is also often dried and sold as keepsakes. This species is also threatened by shrimp trawling activities, as they are bycatch in the process (Rosa et al., 2002).

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Fig. 2. Geographic distribution of *Hippocampus reidi*.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/hippocampus-reidi/>, downloaded 26 January 2016]



Fig. 3. Male and female *Hippocampus reidi*.

[<http://www.realmonstrosities.com/2013/05/seahorse.html>, downloaded 3 March 2016]

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