

MARINE LIFE PROFILE: SPOTTED & MAGNIFICANT SNAKE EELS

Hawaiian name:	<u>spotted snake eel</u> --	<u>magnificent snake eel</u> pūhi lā‘au
Scientific name:	<i>Myrichthys maculosus</i>	<i>Myrichthys magnificus</i>
Distribution:	Indo-Pacific	Hawai‘i and Johnston Island
Size:	to 3.3 feet (1.0 m)	to 2.6 feet (0.78 m)
Diet:	small fishes & crustaceans	small fishes & crustaceans

Snake eels are slender, highly modified bony fishes that may often be confused with sea snakes (which are rare in Hawai‘i). Snake eels are true fish and have gills, so they do not need to come to the surface to breathe like reptiles do. Snake eels have a long, low dorsal fin running the length of the body and they lack scales, the skin is smooth and slippery. These round-bodied eels typically live in burrows in sand or mud and may create the burrows by wiggling backwards into the sand with their stiff tail tip. There are many species found worldwide; about 24 are known from Hawai‘i. These secretive eels are less frequently seen on Hawaiian reefs than the more familiar and common moray eels.

Once considered to be the same species, the **spotted snake eel** and **magnificent snake eel** differ in the number of vertebrae in their backbone. Both are white, with large round black spots from head to tail. The spotted snake eel is found throughout the Indo-Pacific, but the highly-similar magnificent snake eel is found only in Hawai‘i and Johnston Island. Both are inhabitants of the sandy areas on reef flats, as well as lagoons and seaward reefs. Their abundance cannot be truly appreciated because they generally remain well hidden within the reef.

Snake eels are well-modified to suit their life style. The head bears tube-like nostrils that point downward for hunting in or over the sand. The mouth is held open slightly as water is pumped over the gills and the gill opening is reduced to a small hole for streamlining and protection of the delicate gills. The elongated, nearly cylindrical body bears continuous dorsal and anal fins, and small pectoral (side) fins just behind the gill opening. Snake eels swim by moving their entire body side to side in an S-shaped wave. Using this wave pattern, a snake eel can move forward or backward, an important advantage if living within sand burrows. The tail is pointed and stiff, apparently an adaptation to burrowing backward into the sand. Snake eels remain buried in the sand most of the time, but occasionally emerge to cross sand or rubble habitats and appear to be more active at night. Because of their cryptic habits, relatively little is known about most snake eel species. With more research, it is likely that more species will be discovered.

Classification:

Kingdom Animalia

Phylum Chordata, Subphylum Vertebrata

Class Osteichthyes

Order Anguilliformes

Family Ophichthidae

Genus Myrichthys

Species maculosus & magnificus