

Gymnothorax moringa (Spotted Moray)

Family: Muraenidae (Moray Eels)

Order: Anguilliformes (True Eels and Morays)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Spotted moray, *Gymnothorax moringa*.

[<http://www.coralreefphotos.com/wp-content/uploads/2011/05/Hunting-eel.jpg> downloaded 22 October 2016]

TRAITS. Spotted morays are the second largest species of moray eels in the Caribbean, with average lengths of 60-75cm and a maximum size of 1.2m. They have nostril tubes present which are used for scent tracking (Snorkelstj, 2013), a long snake-like body, white or yellowish with dark spots, and a snout like mouth with round gill openings (Fig. 1) (Prezi.com, 2016). Maximum weight is 2.51 kg (MarineBio, 2013). The dorsal fin runs the length of the body, caudal and anal fins are also present (Softschools, 2016).

DISTRIBUTION. Spotted moray eels live in tropical waters, mostly in reefs and are found at a depth of 0-200m. They can be found in the western Atlantic from North Carolina in the USA, east to Bermuda and south to Brazil. They are also found in the waters of the Gulf of Mexico and the Caribbean as seen in Fig. 2 (MarineBio, 2013).

HABITAT AND ECOLOGY. Spotted moray eels live near the ocean floor. They are shy creatures so they hide in coral reefs. They are nocturnal hunters and their diet consists of mainly invertebrates such as crustaceans and molluscs, and small fish. They use their two sets of jaws to feed on prey; one set in the mouth grabs the prey while the second set located in the pharynx (throat) pulls the food in towards the stomach (Fig. 3) (Dallas World Aquarium, 2016). They are predators that ambush their prey as they can camouflage well (BioExpedition, 2015)

REPRODUCTION. This species of eels are oviparous, meaning they produce eggs that hatch outside of the body. They do not have a specific mating season but do so when there is sufficient food and a suitable habitat for them to do it (BioExpedition, 2015). The female will lay up to 10,000 eggs (Dallas World Aquarium, 2016). She lays them in a hidden area away from predators and scatters them there. After she does this she produces a scent that attracts the males to come fertilize the eggs with their sperm. It takes 30-45 days for the eggs to hatch but this may be shorter if water temperatures are warmer. The majority of baby eels that hatches may be eaten by other predators but a few survive to adulthood. At three years they can begin to mate and reproduce (BioExpedition, 2015).

BEHAVIOUR. One distinctive behaviour that spotted moray eels have is that they often open and close their mouths in order to allow water to flow in it to help them breathe. This is because of their small gills. Moray eels can't see well, so at night when they hunt, having a strong sense of smell allows them to find prey. Prey that may have been hurt or dead creatures would be preferred by them as they are easier to locate (Dive The World, 2016). These eels are notorious for being aggressive when cornered, but most likely they just want to escape. They will act hostile when their home or territory is invaded. Small fish may swim alongside them as means of discouraging their own predators (BioExpedition, 2015). The spotted moray eel is a predator but may also be prey for other species of larger eels. Other than eels, they are also preyed upon by barracudas, large groupers and sometimes even humans (Dive The World, 2016).

APPLIED BIOLOGY. Spotted moray eels have not been identified as a protected species as they are not hunted by humans because their flesh is poisonous, but they may be captured from the wild and placed in large aquariums as pets.

REFERENCES

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SoftSchools (2016), http://www.softschools.com/facts/animals/moray_eel_facts/83/ , downloaded 23 October 2016

Author: Travis Subhan

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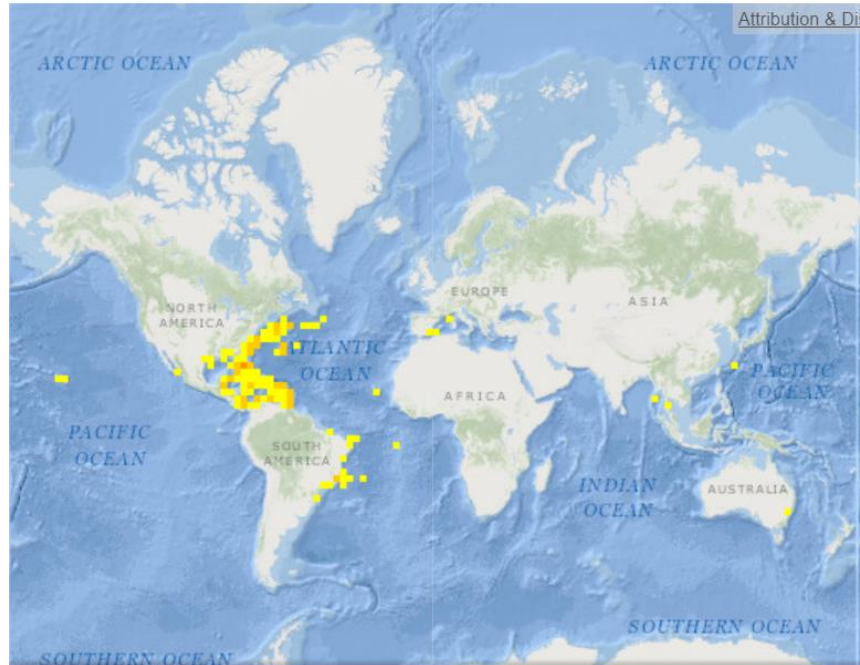


Fig. 2. Spotted moray geographic distribution.

[<http://marinebio.org/species.asp?id=928>, downloaded 27 October 2016]

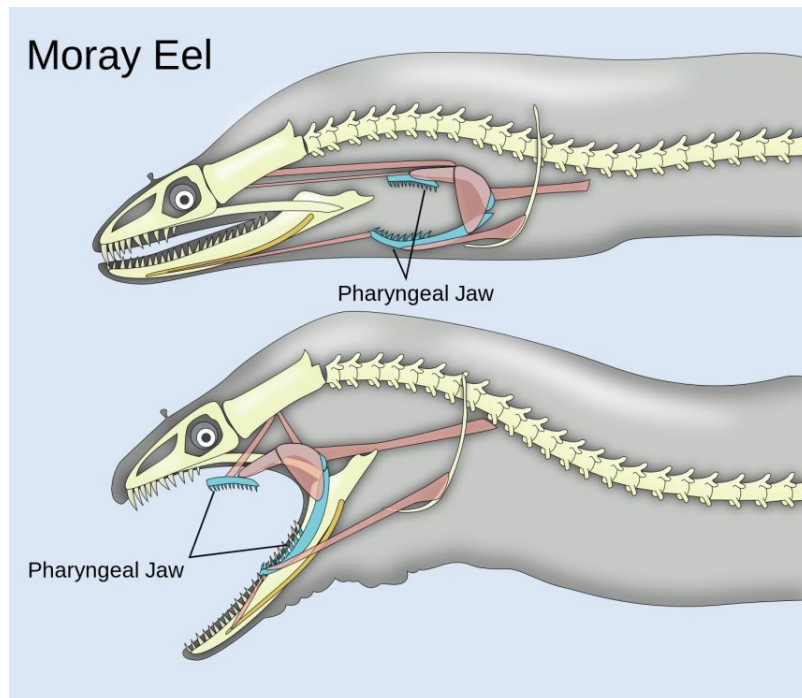


Fig. 3. Moray jaw mechanism.

[https://upload.wikimedia.org/wikipedia/commons/thumb/c/c2/Pharyngeal_jaws_of_moray_eels.svg/1500px-Pharyngeal_jaws_of_moray_eels.svg.png downloaded 27 October 2016]

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