

Aulostomus maculatus (Trumpetfish)

Family: Aulostomidae (Trumpetfish)

Order: Syngnathiformes (Seahorses and Pipefish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Trumpetfish, *Aulostomus maculatus*.

[http://es.wikipedia.org/wiki/Aulostomus_maculatus, downloaded 14 May 2015]

TRAITS. The trumpetfish has a long extended body that is very narrow in shape, and a long snout that is shaped like a tube (Fig. 1). At the tip of the lower jaw is a protruding pointed barbel. Their seemingly small mouths can open very widely when ingesting prey, mimicking the shape of a trumpet, hence its name. These fish grow at least 70cm long and can grow up to 1m. The trumpetfish has its dorsal and anal fins positioned close to the rear end of its body and they are very small and situated opposite each other. There is a series of 8-12 dorsal spines leading to the dorsal fin. The caudal fin, which is located at the posterior end of the body, is rounded in shape (flmnh.ufl.edu, 2015). Trumpetfish exist in a wide array of colours due to their camouflaging abilities. They can be found appearing most commonly as reddish-brown, and less frequently in colours such as grey-blue, yellow or green. They may also be spotted with black dots or have grey or white lines running along the length of their bodies (Snyderman and Wiseman, 1949).

DISTRIBUTION. These fish are found in the western Atlantic Ocean in the tropics, from southern Florida to the northern coast of South America (Fig. 2). They can also be found in the eastern Atlantic Ocean off St. Paul's Rocks (flmnh.ufl.edu, 2015). Additionally, they reside in the Caribbean, Bermuda, and the Gulf of Mexico (Marinebio.org, 2015).

HABITAT AND ACTIVITY. Trumpetfish typically reside in shallow waters in depths from about 2-20m. They usually live near grassy or weedy areas and are quite abundant in coral reefs and lagoons (marinebio.org, 2015). Trumpetfish are diurnal creatures and only hunt in the daytime. This is one reason why they need to rely on their camouflaging abilities for shadow-stalking to be able to remain hidden from their prey.

FOOD AND FEEDING. Trumpetfish are predators and normally hunt their food by ambush. They employ two strategies to accomplish this ambushing technique. Firstly, they may hover vertically, with their heads down and tails up making themselves parallel to the long branches of gorgonians, elongate sponges and long artificial items that may be in the water. By remaining motionless they are able to be swayed with the water currents and they are essentially concealed from their intended prey until it is too late (Aronson, 1983). Any prey that swims beneath it is then susceptible to attack, and is caught via a mechanism where the mouth creates a large amount of suction that sucks the fish up in a process called "pipette feeding". This suction is created by broadening the mouth to a size that is equivalent to the diameter of its body. Fish larger than the trumpet fish's mouth can also be eaten because of the elasticity of its mouth (marinebio.org, 2015). The other strategy utilized by this animal is a shadowing technique. This is done by tucking itself close at the side of or behind larger herbivorous fishes using it as a camouflage or hiding space. They may remain shadowing another fish until it gets close enough to its prey to strike. They then dart out and use the same sucking motion previously described to capture its prey (marinebio.org, 2015). These fish are piscivorous which means that their diet consists primarily of small fish including species like the squirrelfish and damselfish (flmnh.ufl.edu, 2015).

POPULATION ECOLOGY. Typically, trumpetfish are solitary creatures and spends the majority of its time alone and hunting for food. However, as night falls, they can be found sleeping together in groups back in their vertical hiding positions with their snout facing downward, drifting among sea grass and long weeds. This tactic is used as a mode of defence, shielding themselves from night predators to which they are prey.

REPRODUCTION. The specifics of trumpetfish reproduction are not studied extensively; however it is well known that they conduct an elaborate mating or courtship ritual display. This takes place in shallow waters or near to the surface of the water (artssciences.lamar.edu, 2015). During this courtship "dance" they can be seen swimming around each other parallel to each other, sometimes facing the same direction, and at other times facing each other with their long snouts touching frequently. Their chromatophore (pigment cell) colour-changing capability is also utilized in this mating ritual as they display a changing of colour during this activity. These fish are not viviparous but rather they are egg-laying. In the trumpetfish, the male holds the responsibility of carrying and caring for the eggs that the female lays, like in its related species, the seahorses. After the mating dance, the female passes her eggs to the male who fertilizes them. They are then placed in his specialized pouch where they remain until they are ready to hatch (marinebio.org, 2015).

BEHAVIOUR. Trumpetfish have the position of both predator and prey. Their behaviour therefore is tailored to both of these roles. Trumpetfish have specialized colour cells called chromatophores that contain pigments that allow them to change their colour according to their environs. Their swimming abilities are rather poor and they must therefore depend on their camouflaging abilities to provide protection from their predators as well as a way of hiding from their prey to obtain food. To do this they vertically align themselves among sea whips and gorgonians (Fig. 3) and allow themselves to be swayed back and forth by the water current to go unseen as both predators and prey mistake them for something else (fishbase.org.).

APPLIED ECOLOGY. Trumpetfishes are not evaluated by the IUCN. The three species of trumpetfish worldwide are so widespread and have a huge geographical range that they are not considered endangered or vulnerable (iucn-seahorse.org, 2015).

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Fig. 2. Trumpetfish distribution map.

[<http://www.flmnh.ufl.edu/fish/gallery/Descript/Trumpetfish/Trumpetfish.html>, downloaded 4 April 2015]



Fig. 3. Trumpetfish hiding in coral.

[[http://commons.wikimedia.org/wiki/File:Trumpetfish_Aulostomus_maculatus_\(4675209995\).jpg](http://commons.wikimedia.org/wiki/File:Trumpetfish_Aulostomus_maculatus_(4675209995).jpg), downloaded 14 May 2015]

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