

Xyrichtys splendens (Green Razorfish)

Family: Labridae (Wrasses)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Green razorfish, *Xyrichtys splendens*.

[http://en.microcosmaquariumexplorer.com/wiki/Green_Razorfish, downloaded 9 March 2017]

TRAITS. The green razorfish *Xyrichtys splendens* is of a relatively small size, varying around 5-10cm in length. The maximum size this fish can grow is 12cm which is a rare case. They possess a long body, of almost uniform height their entire length. The name razorfish comes from its thin laterally-compressed body with a blunt snout (Victor et al., 2001). This species colour ranges from green to yellow to a reddish brown. Sometimes they may display irregular vertical bands. The males have one or two dark spots in the mid-body region (Fig. 1) whilst the females have no distinct markings or spots (Fig. 2). They have a rounded tail and can curl the body to imitate the shape of a seagrass blade.

DISTRIBUTION. This species is widespread in the western tropical Atlantic, from Bermuda and southern Florida to Brazil and throughout the Caribbean Sea (Fig. 3).

HABITAT AND ACTIVITY. The green razorfish lives in shallow areas, predominantly seagrass meadows or sandy flats, in areas of soft sand or near gorgonians or coral heads (Nemtsov, 1997). The preferred depth range is 3-15m, at temperatures from 24-28 °C.

FOOD AND FEEDING. The primary source of food are shrimps. They also eat small fish and molluscs, and planktonic copepods (drifting in the sea water) as well as benthic prey (living on the ocean floor) including amphipods, miniscule snails and clams. Their diet is dependent upon the habitat; if they are found in coral rubble sites and sandy flats they feed on plankton and in seagrass they feed on benthos among the grass blades.

REPRODUCTION. These fish are wrasses that engage in broadcast mating; the fish quickly swim directly to the surface in pairs to allow the eggs (fertilized externally) to drift through the water via the currents. The planktonic larvae are not under parental care. Spawning takes place during the evening. They are protogynous hermaphrodites, which means that all fish start out as females and then turn into males as they grow (Roede, 1972; Nemtzov, 1992). While spawning is occurring, the males gather a harem of females and spawn with several of them during the breeding season. The reproductive success relies mainly on the sum of females that travels within the male harem (Clutton-Brock, 1988) and this is directly related to the potential of the male to rule over the females or to provide the essential resources that they may require (Emlen and Oring, 1977).

BEHAVIOUR. The species, because of their laterally compressed body and steep snout, it aids in sand diving. In the event of being attacked by potential predators, these fish can dive into the sandy bottom for protection. *Xyrichtys splendens*, when in different habitats their behaviour varies in order to avoid predators. For instance, when the species is in a coral-rubble area, they maintain a target area where it is sandy and around 10cm in width, the fish continuously dives in that area so the softness is maintained for facilitating future avoidance of predator. This site is also alongside rocks covered in algae or fragments of coral rubble (Nemtzov, 1994). Therefore, when a predator is seen by the *Xyrichtys splendens* they hide themselves near the rock but it is important to note that they only dive into the sand when attacked in this habitat. On the other hand, the other habitat is the sandbed areas and there is no need for the fish to maintain sites to dive in since it is conveniently sandy and soft for diving into to hide from predators (Nemtzov, 1994). Finally, for the grassbed habitats, the fish remain hidden at all times from the predators amongst the glass blades. Some of the predators that this species tries to avoid are tunas, barracudas, groupers and snappers.

APPLIED ECOLOGY. The species are not placed under measures for conservation since there is no significant threats known. Since the species is common and abundant locally throughout its range it is listed as Least Concern (IUCN, 2017).

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Fig. 2. Female green razorfish (no spots or marks).

[http://media.eol.org/content/2015/03/18/00/52879_580_360.jpg, downloaded 9 March 2017]



Fig. 3. Green razorfish geographic distribution.

[<http://maps.iucnredlist.org/map.html?id=187670>, downloaded 9 March 2017]

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