

## *Xanthichthys ringens* (Sargassum Triggerfish)

Family: Balistidae (Triggerfish)

Order: Tetraodontiformes (Pufferfish, Triggerfish and Boxfish)

Class: Actinopterygii (Ray-finned Fish)



**Fig. 1.** Sargassum triggerfish, *Xanthichthys ringens*.

[<http://www.marineaquariumsa.com/threads/sargassum-triggerfish.14947>, downloaded 21 October 2016]

**TRAITS.** The sargassum triggerfish is also referred to as the red tail triggerfish due to the red region on their caudal fin (Fig. 1). Colour is light brown to a chalky blue or purple, and the body resembles a slightly elongated rhomboid (Michael, 1998). Dark coloration occurs at the base of the dorsal and anal fins as well as the top of the head. They do not commonly use their caudal (tail) fin for locomotion, but undulation of their dorsal and anal fins (Fig. 2). Rows of dark spots cover both sides of the body and there are also dark horizontal stripes across each operculum (Michael, 1988). Each eye can move in all directions independent of the other. There is a small upward-pointing mouth upper jaw which has specialized rigid teeth (Fig. 3) adapted for removing the hard shells of some invertebrates (Michael, 1998). Both adult males and females can reach lengths up

to 25cm. The species does not display sexual dimorphism; there is no visual difference in appearance between the males and females (Michael, 1988).

**DISTRIBUTION.** Dispersed across the western Atlantic Ocean and extending across the entire Caribbean Sea (Feitoza et al., 2005). Adults do not usually exceed the depth range of 30-60m, however they can be found at depths ranging from 0-90m (Wirtz et al., 2014). Native to Trinidad and Tobago among many other countries spanning the geographical area.

**HABITAT AND ECOLOGY.** Found in marine environments, in close association with deep water reefs which may reach depths 50-70m off steep edges (Feitoza et al., 2005). A carnivorous species with the capability of destroying the reef as they feed on a range of species found on the reef such as sea urchins, crabs and in some cases, they may even eat zooplankton (Robins and Ray, 1986). Diurnal in activity and abundant in their habitat. Juveniles have been seen swimming among sargassum seaweed (Feitoza et al., 2005).

**REPRODUCTION.** The sargassum triggerfish is an egg-laying species, which lays eggs on the sea floor and exhibits biparental egg care; where both the male and the female equally care for the fertilized eggs (Robins and Ray, 1986). Before actual spawning takes place, both male and female work together to set up the site where the eggs are to be laid by blowing water on the site to make a nest, then they touch the newly made spot with their stomachs (Wirtz et al., 2014). Reproduction occurs quite frequently and is timed with lunar and tidal cycles, usually some days prior to full moon then again at new moon (Michael, 1988). Thousands of tiny eggs are laid on the sea floor, some of which attach themselves to particles of sand but because of their small size many eggs are scattered from the water movement.

**BEHAVIOUR.** Commonly seen foraging with both related and unrelated groups of fish on the reef and are considered moderately aggressive in that they only sometimes display aggression towards other species of triggerfish (Feitoza et al., 2005). To protect themselves while sleeping, the second dorsal spine becomes erect which then allows the first spine to become erect which the fish lodges into a rock to keep it in place. This first spine is also used to defend against other fish that may be a threat (Feitoza et al., 2005).

**APPLIED BIOLOGY.** The sargassum triggerfish is carnivorous reef fish which feeds heavily on crustaceans and zooplankton. They can destroy the reef while foraging for food, however this damage has not posed a problem to any of the reefs they inhabit. The IUCN Red List categorizes it as a species of Least Concern and its population is considered stable (IUCN, 2016). They do not pose a pest problem in the reef ecosystems, but due to their beauty they are caught and sold as pets for aquariums which serves as a localized threat.

## REFERENCES

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- Robins, C.R. and Ray, G.C. (1986). A field guide to Atlantic coast fishes of North America. Boston: Houghton Mifflin Company.

Wirtz, P., Bingeman, J., Bingeman, J., Fricke, R., Hook, T.J. and Young, J. (2014.) The fishes of Ascension Island, central Atlantic Ocean—new records and an annotated checklist. *Journal of the Marine Biological Association of the United Kingdom*: **44**: 1-16.

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**Fig. 2.** Undulating motion of the dorsal and anal fins for swimming.

[[http://www.aquariumdomain.com/images/fish\\_marine/sargassumTriggerfish2.jpg](http://www.aquariumdomain.com/images/fish_marine/sargassumTriggerfish2.jpg), downloaded 29 October 2016]



**Fig. 3.** Specialized teeth seen in sargassum triggerfish and other triggerfish species.

[<http://www.stripersonline.com/surftalk/topic/22517-teeth/>, downloaded 26 October 2016]

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