Tigrigobius multifasciatus (Greenbanded Goby)

Family: Gobiedae (Gobies)

Order: Perciformes (Perch and Allied Fish) Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Greenbanded goby, *Tigrigobius multifasciatus*.

[http://www.aquariumdomain.com/images/fish_marine/goby_greenBanded1.jpg, downloaded 26 October 2016]

TRAITS. The greenbanded goby has 17-23 yellow or pale green stripes that divide the dark green body colour into columns (Fig. 1). The head is pale yellow, with a red stripe from the gill cover to the mouth which passes through the eyes (Smith, 1997). This is a fairly small fish with a maximum length of 5cm. The body is round and elongated which is described as fusiform (spindle) shaped and is characteristic of the Gobiidae family. The greenbanded goby has both a dorsal and adipose fin on top of its body, a relatively large pair of pectoral fins, and an anal fin. The pelvic fins are fused together to form a sucker that is circular or disc shape. Often the goby is seen sticking to rocks and other objects via this adaptation (Allsop and West, 2003). The body lacks scales, and males can be identified by their longer dorsal fin and larger head (Pet Fish, 2016).

DISTRIBUTION. Found throughout Central America and northern South America. It ranges from the Bahamas to Trinidad and the small islands off the north coast of Venezuela. It is native to Trinidad and Tobago (Wikipedia, 2014).

HABITAT AND ECOLOGY. This species is very common in its geographical range and is generally found in coral reefs (Wikipedia, 2014). It lives in clear waters with limestone that contains crevices. Generally, it can be seen amidst the spines of sea urchins, which scientists speculate is for protection (Smith 1997). *Tigrigobius multifasciatus* is a diurnal carnivore. It spends its day searching holes and cracks in rocks for small prey like brine and mysid shrimps (Pet Fish, 2016).

REPRODUCTION. *Tigrigobius multifasciatus* is a protogynous hermaphrodite; greenbanded gobies are all female at birth, but when paired up they can change sex (Olivotto et al., 2005). The sex transformation takes between 21-35 days (Allsop and West 2003). This fish spawns during the winter and ordinarily females lay between 200-500 eggs (Olivotto et al., 2005). Males care for the eggs for their entire development. The greenbanded goby has a simple life cycle which starts as an egg, then to a larva, then a juvenile (which looks exactly like the adult, just smaller in size) and finally an adult (Pet Fish, 2016).

BEHAVIOUR. Adults are generally solitary or found in mating pairs and most times are seen under or in close proximity to a sea urchin for protection (Smith, 1997). Additionally, it is said that the pattern and colour of the stripes, mimics that of a juvenile schoolmaster snapper which may intimidate other predatory fish (Allsop and West, 2003). The greenbanded goby is not aggressive and gets along with other reef fish in captivity (Pet Fish, 2016).

APPLIED BIOLOGY. The greenbanded goby is globally recognized as a pet and is fairly abundant in its natural range thus being listed by the IUCN as Least Concern (IUCN, 2015).

REFERENCES

- Allsop, D.J. and West, S.A. 2003. Constant relative age and size at sex change for sequentially hermaphroditic fish. *Journal of Evolutionary Biology* **16**: 921-929.
- IUCN (2015). Greenbanded Goby. IUCN Red List. http://www.iucnredlist.org/details/185981/25, downloaded on 22 October, 2016.
- Olivotto, I., Zenobi, A., Rollo, A., Migliarini, A., Avella, M. and Carnevali, O. 2005. Breeding, rearing and feeding studies in the goby *Tigrigobius multifasciatus*. *Aquaculture* **250**: 175–182.
- Pet Fish (2016). Green Banded Goby For Sale. *Pet Fish for Sale Web site*, http://www.petfishforsale.com/green-banded-goby, on 25 October, 2016.
- Smith, C.L. 1997. National Audubon Society Field Guide to Tropical Marine Fishes of the Caribbean, the Gulf of Mexico, Florida, the Bahamas, and Bermuda. Alfred A. Knopf, Inc, New York.
- Wikipedia. (2014). *Tigrigobius multifasciatus*. https://en.wikipedia.org/wiki/Tigrigobius_multifasciatus, downloaded on 26 October, 2016.

Author: Kyle Fletcher Posted online: 2016

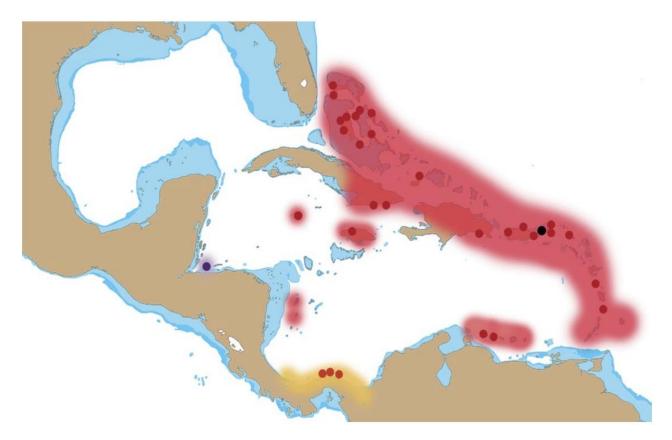


Fig. 2. Greenbanded goby distribution map.

[http://www.iucnredlist.org/pdflink.1798327, downloaded 26 October 2016]

For educational use only - copyright of images remains with original source