

Mycteroperca venenosa (Yellowfin Grouper)

Family: Serranidae (Groupers and Sea Bass)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Yellowfin grouper, *Mycteroperca venenosa*.

[http://flowergarden.noaa.gov/image_library/fish/yellowfingroupergps.jpg, downloaded 15 October 2016]

TRAITS. *Mycteroperca venenosa* is an average to large grouper species (Burton et al., 2015), the heaviest is noted at 18.5kg (Huether and Logan, 2013). The main characteristic is yellow edges to the fins. The males are somewhat bigger than the females and can be easily identified by the distinctive yellow marks on both jaws (Fig. 1) whilst the females' lower jaw is red. The colour of their bodies is exceptionally changeable due to pigment-containing and light-reflecting cells (chromatophores) to adapt to their environment. When the fish is hiding its colour is completely dark with no yellow patch, and males are white-headed when attracting females to mate. The dorsal fin contains 11 spines with 15-16 soft rays.

DISTRIBUTION. *Mycteroperca venenosa* is widely distributed across the western Atlantic, along the eastern and northern coasts of South America, in the Gulf of Mexico and the Caribbean and reaching south to Sao Paulo in Brazil (Heemstra and Randall, 1993).

HABITAT AND ECOLOGY. The habitat of the species is tropical marine (Huether and Logan, 2013). The young yellowfin groupers are found in turtle grass beds (seagrass), which is in shallow waters. The adult *Mycteroperca venenosa* can be discovered in rocks and coral reefs since places that offer shelter are preferred (Froese and Pauly, 2016). These fish feed on fish and squid and are a source of food for sharks. Yellowfin groupers are protogynous hermaphrodites, females change sex to males at about 8-9 years old and 65cm long. This species lives up to 15 years old in the wild (Huether and Logan, 2013).

REPRODUCTION. These fish gather together at a particular area and time for mating purposes, determined by the amount of yellowfin groupers in that particular area. The cluster can range from 2-4 individuals, up to hundreds for a large group. The males have a white head and display to females by placing themselves beside them and rotating 90° over the females, simultaneously jerking their body. Females are signalled to gather by noises made by the males (Cushion et al., 2008; Schärer et al., 2012).

BEHAVIOUR. *Mycteroperca venenosa* change colour when they switch homes. Yellowfin groupers are solitary and do not interact unless they are in a mating cluster. They signal mating using colour changes and noises.

APPLIED BIOLOGY. The yellowfin grouper numbers have been reduced drastically (Schärer et al., 2012). It is listed on the IUCN Red List as Near Threatened. *Mycteroperca venenosa* numbers have decreased as a result of a lot of fishing (IUCN, 2016).

REFERENCES

- Burton, M. L., Potts, J. C. and Carr, D. R. 2015. Age, growth, and natural mortality of yellowfin grouper (*Mycteroperca venenosa*) from the southeastern United States. doi: 10.7717/peerj.1099
- Froese, R. and Pauly, D. 2016. *Mycteroperca venenosa* (Linnaeus, 1758) Yellowfin grouper. FishBase. World Wide Web electronic publication. <http://www.fishbase.org>.
- Heemstra, P.C. and Randall, J. E. 1993. Groupers of the world (family Serranidae, subfamily Epinephelinae). FAO Species Catalogue 1993 (16): 382.
- Huether, E. and Logan L. 2013. *Mycteroperca venenosa*. Animal Diversity Web. http://animaldiversity.org/accounts/Mycteroperca_venenosa/.
- IUCN (2016). *Mycteroperca venenosa* (Yellowfin Grouper). IUCN Red List. <http://www.iucnredlist.org/details/44683/0>.
- Schärer, M. T., Nemeth, M. I., Mann, D., Locascio, J., Appeldoorn, R. S. and Rowell. T. J. 2012. Sound production and reproductive behavior of yellowfin grouper, *Mycteroperca venenosa* (Serranidae) at a spawning aggregation. *Copeia* **2012** (1): 135-144.

Author: Amanda Y. Gangerbissoon

Posted online: 2016