

## *Epinephelus morio* (Red Grouper)

Family: Serranidae (Groupers and Sea Bass)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



**Fig. 1.** Red grouper, *Epinephelus morio*.

[<http://ourfloridareefs.org/fish/>, downloaded 20 October 2016]

**TRAITS.** The red grouper is large species that grows to a length of 125cm and weight of 23kg. The body is usually reddish-brown with white spots (Fig. 1). If the red grouper is provoked they change colour extremely rapidly, with parts of the body becoming white (Wikipedia, 2016).

**DISTRIBUTION.** The red grouper is found in the western Atlantic, including the Gulf of Mexico and the Caribbean, from North Carolina, USA, to southern Brazil (Fig. 2) (Luna, 2016).

**HABITAT AND ECOLOGY.** Red groupers are sometimes called the engineers of the sea due to their tendency to actively excavate the sea floor (Fig. 3). The highest abundances of red groupers are usually found at depths of 50-300m over sandy to muddy sea floor. Younger red

groupers are often sighted in shallow water in seagrass beds and coastal reefs, whereas older red groupers can be seen in holes and shelves in coral reefs at depths of 5-25m. They feed on benthic (sea-floor) invertebrates such as crabs and juvenile spiny lobsters, and some fish, with adults taking more fish (IUCN, 2004).

**REPRODUCTION.** Red groupers shed their eggs and sperm in offshore waters, as the eggs require high salinity (32 ppt) to be able to float. About 30 hours later, the eggs hatch into larvae and live as part of the zooplankton. After 30-50 days the larvae leave the plankton and move to the bottom substrate, when they are about 20-25mm in length.

**BEHAVIOUR.** During the cooler parts of the year outside the tropics, red groupers tend to move closer to the shore to find warmer waters. In deeper waters, they can be found in reef crevices, ledges and other secluded areas; inshore in winter they can be found by bridges and docks. Production of sound by red groupers is part of territorial displays and courtship. Red groupers excavate the sea bed, displacing rubble and deposits using their caudal fins and mouths (Wikipedia, 2016).

**APPLIED BIOLOGY.** The red grouper is listed as Near Threatened on the IUCN Red List thus it is not yet endangered (IUCN, 2004).

#### REFERENCES

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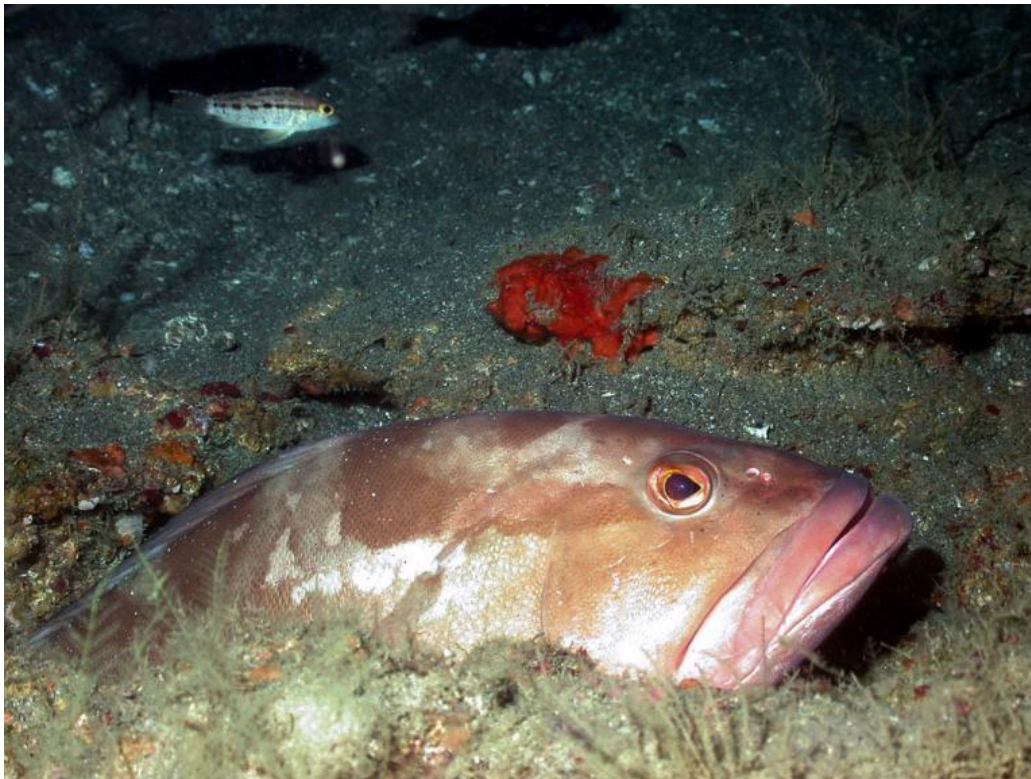
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**Fig. 2.** Red grouper distribution.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/epinephelus-morio/>, downloaded 20 October 2016]



**Fig. 3.** Red grouper excavating the sea floor.

[<http://news.nationalgeographic.com/news/2010/01/100125-fish-engineers-groupers-florida/>, downloaded 20 October 2016]