

Lutjanus griseus (Mangrove Snapper or Grey Snapper)

Family: Lutjanidae (Snappers)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Mangrove snapper, *Lutjanus griseus*.

[<http://biodiversidadmiranda.cbm.usb.ve/organism/373/>, downloaded 22 March 2015]

TRAITS. This is one of the smaller snappers, which rarely exceeds lengths of 40-90cm. Most weigh less than 5kg, and the maximum recorded weight is 20kg (Bykov, 1983). Sexual maturity is at a length of 18-33cm at 2 years, with 25 years being the maximum estimated age of the species. The mangrove snapper has a large mouth with two large canine teeth in the upper jaw. Fine, densely packed hair-like teeth are found in both jaws (Bester, 2015). Its slender body generally has a coloration of grey to green, with small reddish/orange spots evident on the sides (Fig. 1). They have a pointed snout, and a dark stripe from the snout to the eye can be observed in the young. They have rounded anal fins and short pectoral fins.

DISTRIBUTION. Abundant around the coastline of Florida and can also be found in the western Atlantic Ocean from Massachusetts to Brazil including Bermuda, Gulf of Mexico, West Indies, Bahamas and the Caribbean Sea (Bester, 2015) (Fig. 2).

HABITAT AND ACTIVITY. Found in a wide range of environments including coastal as well as offshore areas, mangrove habitats, estuaries, rocky areas and among coral reefs. The mangrove snapper can be found at depths ranging from 30-180m. The species has also been

found in freshwater in south Florida, indicating that it can tolerate various salinity levels. Adults tend to occupy the same area for long periods once established (Bester, 2015). The species are associated with daily activities such as diurnal schooling and nocturnal feeding (Bester, 2015). The young tend to feed diurnally in seagrass beds and other vegetated areas, while adults are primarily nocturnal predators.

FOOD AND FEEDING. Snappers fall under the classification of euryphagic carnivores (Hill, 2005). Euryphagic organisms have a broad diet as opposed to stenophagic organisms with their specialized diets. The diet appears to vary at different stages in the life cycle of the mangrove snapper. The larvae feed on copepods and amphipods, with the latter being a member of the zooplankton. The juvenile mangrove snappers tend to feed diurnally among sea-grass beds, with their diet mainly consisting of crustaceans, fishes and to a lesser extent molluscs and polychaete worms. The adults are primarily nocturnal predators, forage and feed upon cephalopods, gastropods, small fish, shrimp and crabs.

POPULATION ECOLOGY. Mangrove snappers tend to form large schools (Fig. 3) which travel together to occupy various habitats. Different numbers of the species will be found in various groups depending on whether the area is at a high risk of predation and the abundance of food available in the habitat. After 2 years of age they obtain maturity and the maximum estimated age for a mangrove snapper is set at 25 years. They can occupy a particular habitat for up to about 4 years. Their longevity is mainly dependent upon the habitat they occupy, whether the food source is abundant or if there is high risk of predation. Environmental conditions also play a key role in their longevity.

REPRODUCTION. Spawning for *Lutjanus griseus* occurs offshore in groups, between the months of April through to November. Spawning peaks during the summer and the lunar cycle influences this activity. During times surrounding the full moon the mangrove snapper spawns in aggregations. The mangrove snapper can spawn repeatedly during the spawning season. The species spawns demersal eggs, i.e. eggs laying close to the floor of the sea, and approximately 20 hours after fertilization hatch sparsely pigmented larvae. Within the first 45 hours, the yolk sac is absorbed and after this the larvae feed among the plankton. The post-larval mangrove snappers inhabit estuarine habitats including mangrove and sea-grass beds. Predator protection and rich food sources are provided by these estuarine nurseries. Juvenile mangrove snappers feed daily until they are of an appropriate size and then move into rocky areas that are shallow and coastal reefs.

BEHAVIOUR. At the juvenile stage mangrove snappers are more associated with sea-grass beds which aids in giving them protection from predators, as they can hide within the sea-grass beds or mangrove roots with added protection coming from the colour of these areas. Under the food-risk trade-off, fish tend to avoid areas of higher risks, such that they are less abundant than would have been predicted by the resources of food available in high risk habitats. In a study carried out by Hannerschlag (2009), he observed that the mangrove snapper did not forage close to the edge of the mangrove where food was in abundance but the risk of predation was the highest.

APPLIED ECOLOGY. This taxon has not been assessed by the IUCN as being under any immediate threat for necessary conservation plans to be implemented.

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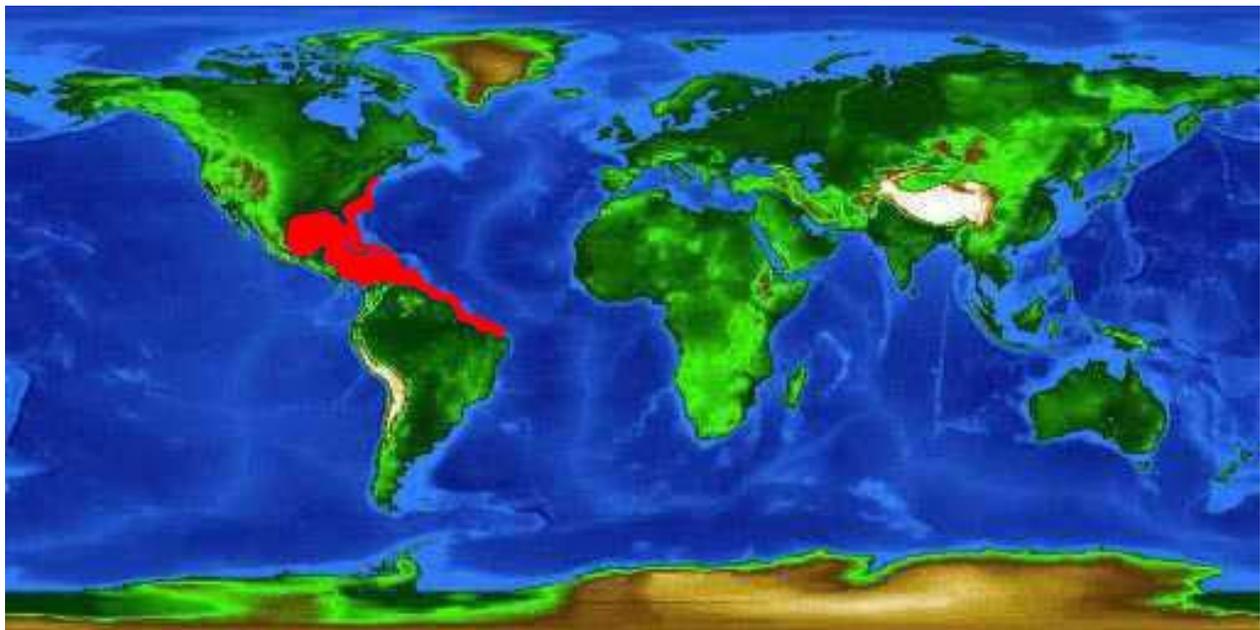


Fig. 2. World distribution map for *Lutjanus griseus*

[<http://www.flmnh.ufl.edu/fish/gallery/descript/graysnapper/graysnapper.html>, downloaded 1 April 2015]



Fig. 3. School of grey snappers.

[http://www.allposters.co.uk/-sp/School-of-Grey-Snapper-Lutjanus-Griseus-Soufriere-Bay-Scott-s-Head-Dominica-Posters_i4072029_.htm, downloaded 1 April 2015]

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