

Haemulon plumierii (White Grunt)

Family: Haemulidae (Grunts)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. White grunt, *Haemulon plumierii*.

[<http://www.ryanphotographic.com/haemulidae.htm>, downloaded 2 October,2016]

TRAITS. The white grunt was previously known as *Labrus plumierii*. Currently, it is known as *Haemulon plumierii*, sometimes incorrectly spelt as *Haemulon plumieri* (IUCN, 2016). This fish is characterized by its silver lined body, with distinctly coloured blue and yellow stripes. The stripes intersect closer to the dorsal fin while those closer to its arrowed-shaped mouth are horizontal (Fig. 1). There is no sexual dimorphism, both sexes are similar (Palazón-Fernández, 2007). In general, white grunts grow to 16-41cm in length (Murie and Parkyn, 2005).

DISTRIBUTION. The white grunt, native to Trinidad and Tobago, is found throughout the Caribbean region. In places such as Bahamas, Bermuda, Brazil down south and also along the seacoast of the neighbouring continents, North and South America (Fig. 2). Juveniles may migrate while the adults are more settled in one area (IUCN, 2016).

ECOLOGY AND HABITAT. *Haemulon plumierii* dwells in very nutrient dense areas such as diverse coral reefs, rocky, sandy and grassy marine areas not surpassing 40m in depth. They are not only found surrounding sheltered island coasts, but also in continental waters (Murie and Parkyn, 2005). It is a carnivorous fish which consumes mainly echinoderms (Fig. 3) and crustaceans (Tulevech and Recksiek, 2003). Some fish carry out diurnal activity, while most adults feed nocturnally with little to no day time activity (IUCN, 2016). The longevity for females is 18 years, three years more than males at 15 years. Acceleration of growth is steepest in the first 4 years of life. Although faced with many problems such as overfishing, white grunts remain one of the most abundant species in its native geographical areas (IUCN, 2016).

REPRODUCTION. The males have a testis and the females have ovaries, making them gonochoristic fish (separate sexes). During spawning, a female white grunt releases approximately 20,000-500,000 eggs; the amount of eggs released is directly proportional to the size of the female. Females are mature between 21-31cm while males are mature from 27-36cm. Spawning is a yearlong process but is most abundant from February to April and August to October, and only occurs at night. White grunts undergo four stages in their reproductive cycles which are: immature, maturing virgin, ripe, and spent. At the immature stage, the reproductive organs are not developed, while at the spent stage, the reproductive organs are loose and sagging, indicating that spawning has often occurred (Palazón-Fernández, 2007).

BEHAVIOUR. White grunts organize themselves in large groups in the daytime among reefs (Fig. 4). This strategy is an attempt to protect themselves by outnumbering their predators. Hiding in the crevices of reefs from predators is uncommon, but they gather there to shelter from strong coastal waves. They are social fish which are observed schooling and mingling with closely related species (Wormald, 2007).

APPLIED BIOLOGY. *Haemulon plumierii* is listed as Least Concern on the IUCN List. Although white grunts experience major threats including commercial and domestic fishing (Wormald, 2007) and climate change, it is not endangered. The fish is now protected through rules and regulations, implemented by major fishery departments, and found in marine protected areas both regional and international (IUCN, 2016).

REFERENCES

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- Tulevech, S.M. and Recksiek C.W. (2003). *Acoustic tracking of adult white grunt, Haemulon plumieri*, in Puerto Rico and Florida. *Fisheries Research*. **19**: 301-319.
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Fig. 2. Distribution of the white grunt.

[http://www.aquamaps.org/receive.php?type_of_map=regular#, downloaded 15 October 2016]

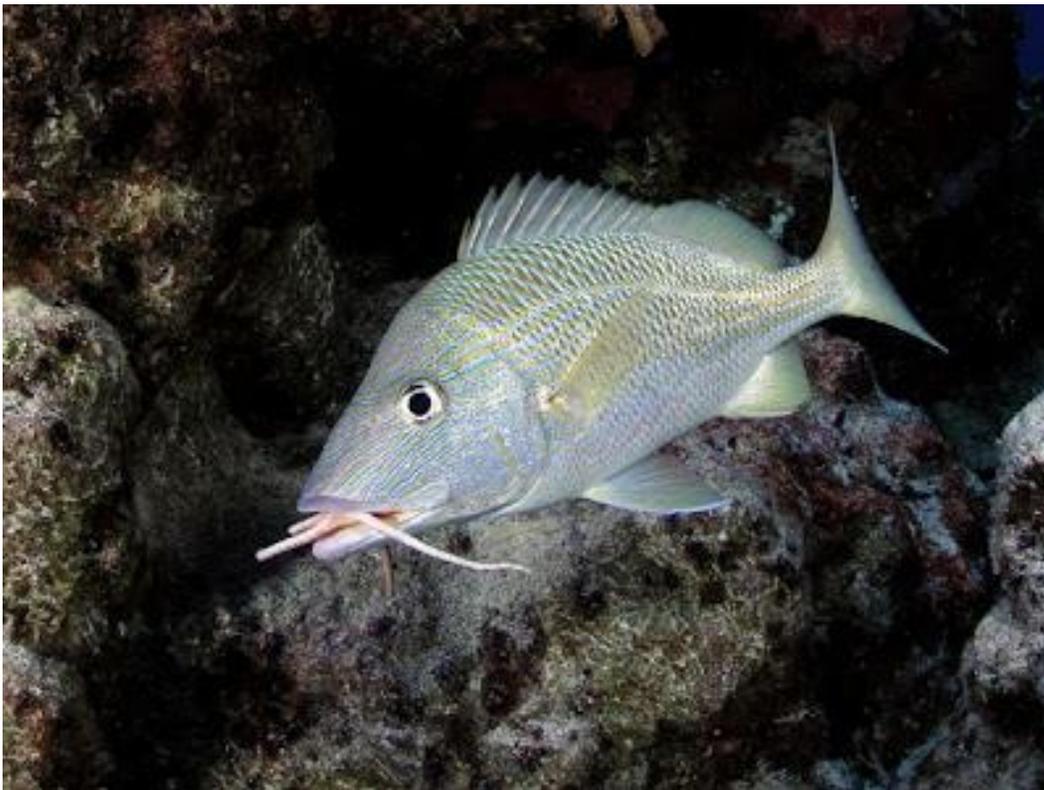


Fig. 3. White grunt feeding on an echinoderm (starfish).

[<http://fishindex.blogspot.com/2010/04/white-grunt-haemulon-plumieri.html>, downloaded 26 October 2016]



Fig. 4. School of white grunts.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/haemulon-plumieri/>, downloaded 16 October 2016]

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