

Lutjanus jocu (Dog Snapper or Dogteeth Pargue)

Family: Lutjanidae (Snappers)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Dog snapper, *Lutjanus jocu*.

[<http://www.richard-seaman.com/Underwater/Belize/2009/Highlights/>, downloaded 24 October 2016]

TRAITS. Dog snappers (*Lutjanus jocu*) were given this name due to their distinctive canine teeth on their upper jaw (Fig. 1) seen even when their jaw is closed (Murray, 2015). Their average length is 60cm, but some have been found to be 80cm (Chaves et al., 2011) and adults weigh a maximum of 9.1kg. Its dorsal region is olive green in colour, some individuals also exhibit vertical pale stripes across its dorsal region as well as a pronounced white triangular marking beneath the eyes. Its ventral region is a coppery colour. They have long pectoral, rounded anal, double pelvic and weakly forked caudal fins. Juvenile dog snappers have a distinctive blue line that runs beneath their eyes and horizontally across their operculum (Fig. 2); this line becomes a row of spots in adults (Murray, 2015).

DISTRIBUTION. *Lutjanus jocu* are found between Massachusetts USA to Brazil in the western Atlantic Ocean (Lindeman et al., 2016) and also in the southern Atlantic region (Fig. 3) (Chaves et al., 2011). Lindeman et al. (2016) mentioned that dog snappers are indeed native to Trinidad and Tobago.

HABITAT AND ECOLOGY. *Lutjanus jocu* is abundant around the region. Adults are found at depths of 100m or more, whereas juveniles are located closer to estuaries and within rivers. Their longevity is dependent on location; in Cuba it is 9-16 years whereas in Brazil it is 20-29 years (Lindeman et al., 2016). Dog snappers are the only species within their family (Lutjanidae) to use a freshwater environment. These nocturnal hunters consume smaller fish and benthic invertebrates such as crabs, shrimps, gastropods and cephalopods. As the dog snappers consume increasing amounts of fish that feed on sources that contain dinoflagellates (that releases the toxin called ciguatera). The toxin accumulates in their liver making *Lutjanus jocu* ciguatoxic; higher levels of this toxin are seen in adults (Murray, 2015).

REPRODUCTION. Dog snappers form spawning aggregations (Fig. 4) around March in Jamaica and the northern Caribbean. The eggs and sperm are released in water currents, the fertilised eggs are unsupervised by parents and eventually give rise to larvae that are often picked off by many other organisms as they are exposed and defenceless until they grow into juveniles and seek a sheltered habitat (Murray, 2015).

BEHAVIOUR. According to Murray (2015) the dog snapper prefers a solitary life. Larger fish such as sharks and groupers prey on them, however juveniles counteract predators by finding residence alongside shores and estuaries (National Geographic, 2016).

APPLIED BIOLOGY. This species is greatly used in northeastern Brazil in artisanal and commercial fisheries, to the extent that the populations of dog snappers were being overexploited. Due to their ciguatoxic nature they were not harvested in many regions, this led to the decision made by the US Atlantic Amendment to remove *Lutjanus jocu* from the Snapper-Grouper Fishery Management Plan. The habitat of juvenile dog snappers is close to densely populated human settlements, and coastal areas are often removed to facilitate development. These two reasons have led to the decreasing population of dog snappers making them a concern on the IUCN Red List, where they are categorised as Data Deficient (Lindeman et al., 2016).

REFERENCES

- Chaves, E. M., Francini-Filho, R. B., Lindeman, K. C., Minte-Veta, C. V., Moura, R. L. (2011). Use of riverine through reef habitat systems by dog snapper (*Lutjanus jocus*) in eastern Brazil, Estuarine, Coastal and Shelf Science, **95**, 274-278.
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- Murray, R. (2015). Dog Snapper. <https://www.flmnh.ufl.edu/fish/discover/species-profiles/lutjanus-jocu/>
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Fig. 2. Juvenile dog snapper (*Lutjanus jocu*).

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/lutjanus-jocu/>, downloaded 23 October 2016]

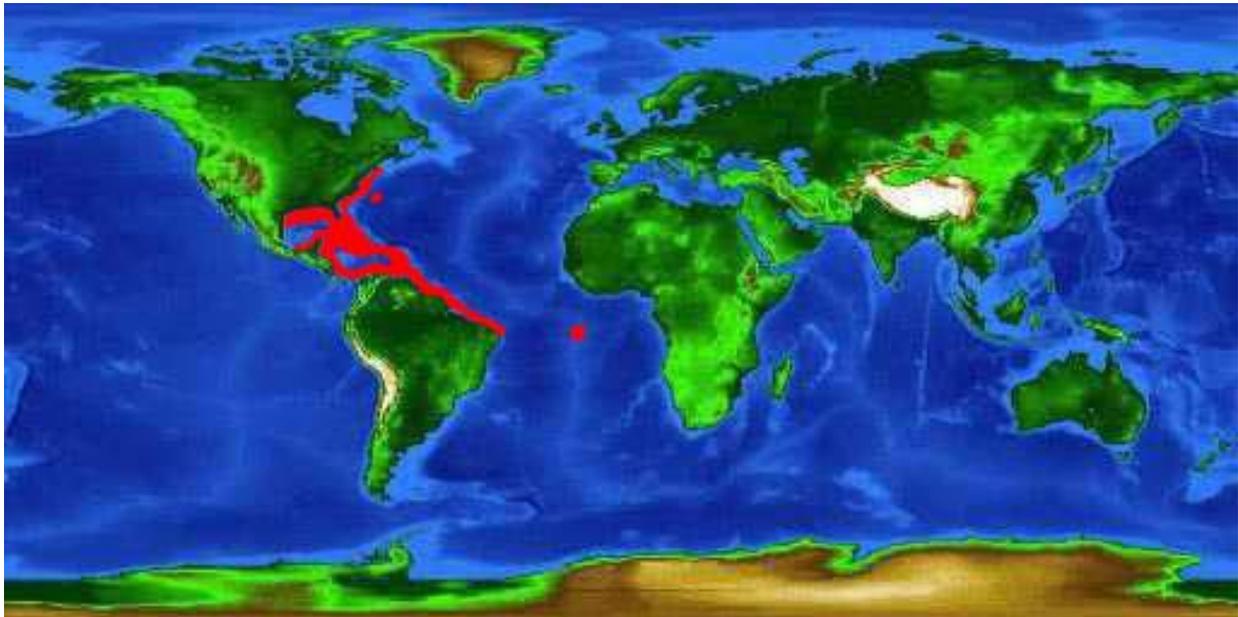


Fig. 3. Dog snapper (*Lutjanus jocu*) geographic distribution.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/lutjanus-jocu/>, downloaded 23 October 2016]



Fig. 4. Dog snappers (*Lutjanus jocu*) in their spawning aggregation.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/lutjanus-jocu/>, downloaded 23 October 2016]

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