

Caranx hippos (Common Jack)

Family: Carangidae (Jacks and Pompanos)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Common jack, *Caranx hippos*.

[<http://www.mexfish.com/mexico/crevalle-jack/>, downloaded 21 April 2016]

TRAITS. The common jack (*Caranx hippos*) is a perch-like fish that can also be known as the crevalle jack, or carangue in French (Fishbase, 2016). Adult common jacks possess a black blotch both beneath the pectoral fin, and on the upper operculum (gill cover) (Smith-Vaniz and Carpernter, 2007). The anal and caudal fins are bright yellow, and the rest of the body is silver (Fig. 1). Juveniles have a dark vertical bar through the eye, and others on the body (Fig. 2). *Caranx hippos* can reach a weight of 25kg, and are strong and fast swimmers.

DISTRIBUTION. Found in tropical and subtropical coastal areas in the western Atlantic from Canada to Argentina, including the Gulf of Mexico and the Caribbean, and in African equatorial waters in the eastern Atlantic (Fig. 3) (IUCN, 2015).

HABITAT AND ACTIVITY. The habitat of *Caranx hippos* is oceanic, estuarine or riverine locations, mostly along the continental shelf to approximately 100m in depth, in water of different salinity depending on their life stage (Florida Museum of Natural History, 2016). The adult common jack is known to live in marine environments with temperatures usually between 18-33.6°C whereas the larvae are found between 20.4-29.4°C and they live in fresh water (Florida Museum of Natural History, 2016).

FOOD AND FEEDING. Juvenile common jacks survive and receive food from the left overs of several other carnivores that are surface feeders, and become full predators as they become

adults (Berry, 1959). The common jack is a diurnal predator that feeds on fish and shrimp (Florida Museum of Natural History, 2016). According to Kwei (1978), adult *Caranx hippos* off the coast of Ghana feed primarily on sardines, *Engraulis guineensis* and *Sardinella eba*, while juveniles eat the smaller fish *Epiplatys sexfasciatus*, *Macrobrachium* prawns and caridian shrimps.

REPRODUCTION. The most productive times at which *Caranx hippos* has been known to release its sperm and eggs is between early March and early September, with the eggs being between 0.7-0.9mm in diameter, while the hatched larvae range from 1.6-1.8mm in length (Florida Museum of Natural History, 2016). A female *C. hippos* is mature between 5-6 years old, while the males mature between 4-5 years (FWRI, 2014).

BEHAVIOUR. According to DeBose et al. (2010), juvenile *C. hippos* have the ability to both detect and respond to elevated dimethylsulfoniopropionate (DMSP), a chemical which is a by-product made by marine algae and released during foraging by zooplankton. Juvenile *C. hippos* depend on this because it's used as a signal for predation, showing areas with high concentrations of plankton. Adults usually swim in schools, often with other *Caranx* species (Fig. 4).

APPLIED ECOLOGY. *Caranx hippos* is not listed by the IUCN as an endangered species so there is no species-specific conservation to be enforced (IUCN, 2015). They are popular game fish due to their size and strength (Fig. 5), but have a rather strong and distasteful flavour due to large amounts of red muscle (Smith-Vaniz and Carpenter 2007).

REFERENCES

- Berry, F. H. (1959). *Young jack crevalles (Caranx species) off the southeastern Atlantic coast of the United States*. United States Department of the Interior, Fish and Wildlife Service.
- DeBose, J. L., Nevitt, G. A., and Dittman, A. H. (2010). Rapid communication: experimental evidence that juvenile pelagic jacks (Carangidae) respond behaviorally to DMSP. *Journal of chemical ecology*, 36(3), 326-328.
- Fishbase. (2016). *Caranx hippos*. <http://www.fishbase.org/summary/71>, downloaded 22 February 2016.
- Florida Museum of Natural History, (2016). *Caranx hippos*, <https://www.flmnh.ufl.edu/fish/discover/species-profiles/caranx-hippos/>, downloaded 1 March 2016.
- FWRI, (2014). Florida Fish and Wildlife Conservation Community. <http://myfwc.com/media/194729/crevalle-jack.pdf>, downloaded 4 March 2016.
- IUCN, (2015). *Caranx hippos*. The IUCN Red List of Threatened Species. e.T190458A16643984. <http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T190458A16643984.en> downloaded 29 February 2016
- Kwei, E. A. (1978). Food and spawning activity of *Caranx hippos* (L.) off the coast of Ghana. *Journal of Natural History*, 12(2), 195-215.
- Smith-Vaniz, W. F., and Carpenter, K.E. (2007). Review of the crevalle jacks, *Caranx hippos* complex (Teleostei: Carangidae), with a description of a new species from West Africa. *Fishery Bulletin*, 105(2), 207.

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Fig. 2. Juvenile *Caranx hippos*.

[<http://www.fishbase.org/photos/UploadedBy.php?autoctr=464&win=uploaded>, downloaded 21 April 2016]

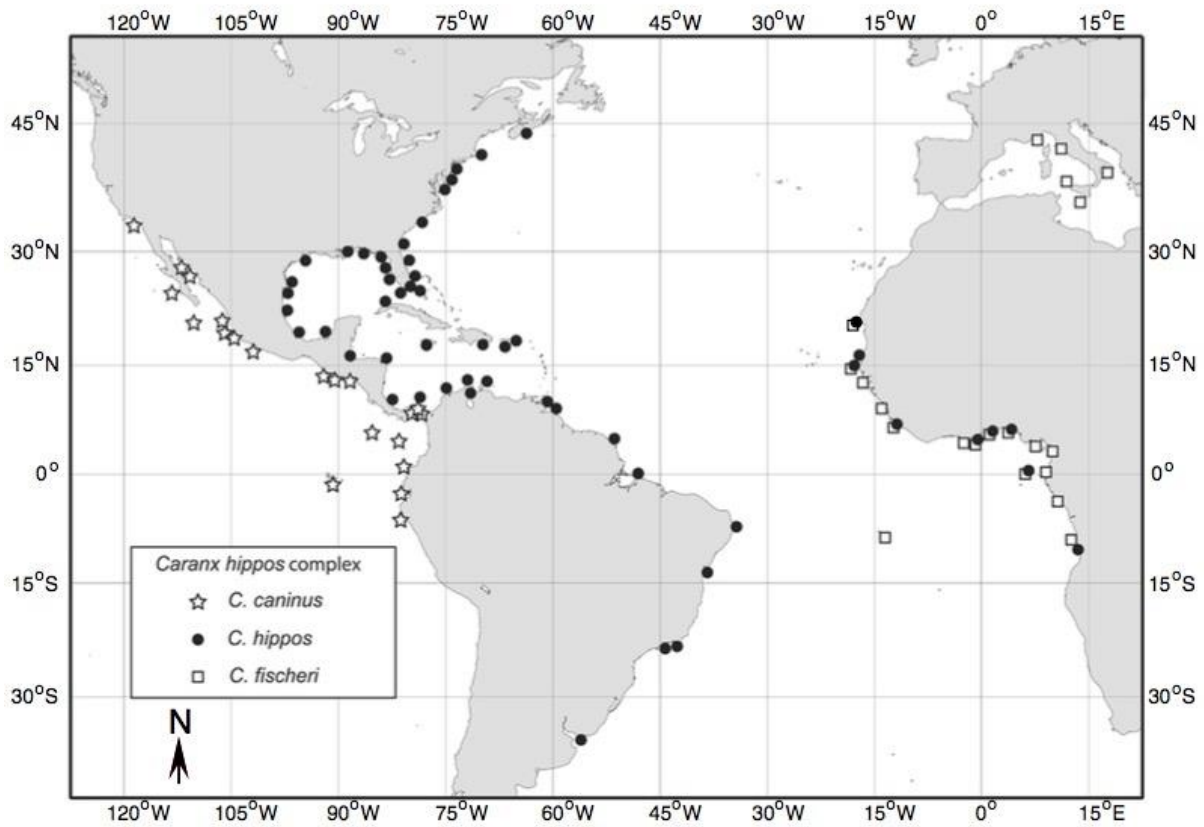


Fig. 3. Distribution of *Caranx hippos* and related species.

[<http://aquaticcommons.org/8893/>, downloaded 1 March 2016]



Fig. 4. Mixed school of *Caranx hippos* and *C. latus*.

[http://www.norbertwu.com/nwp/behaviors-themes/schools_web/detail.np/detail-40.html downloaded 5 March 2016]



Fig. 5. *Caranx hippos* as a game fish.

[<http://www.mexfish.com/mexico/crevalle-jack/>, downloaded 21 April 2016]

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