

Caranx lugubris (Black Jack)

Family: Carangidae (Jacks and Pompanos)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)

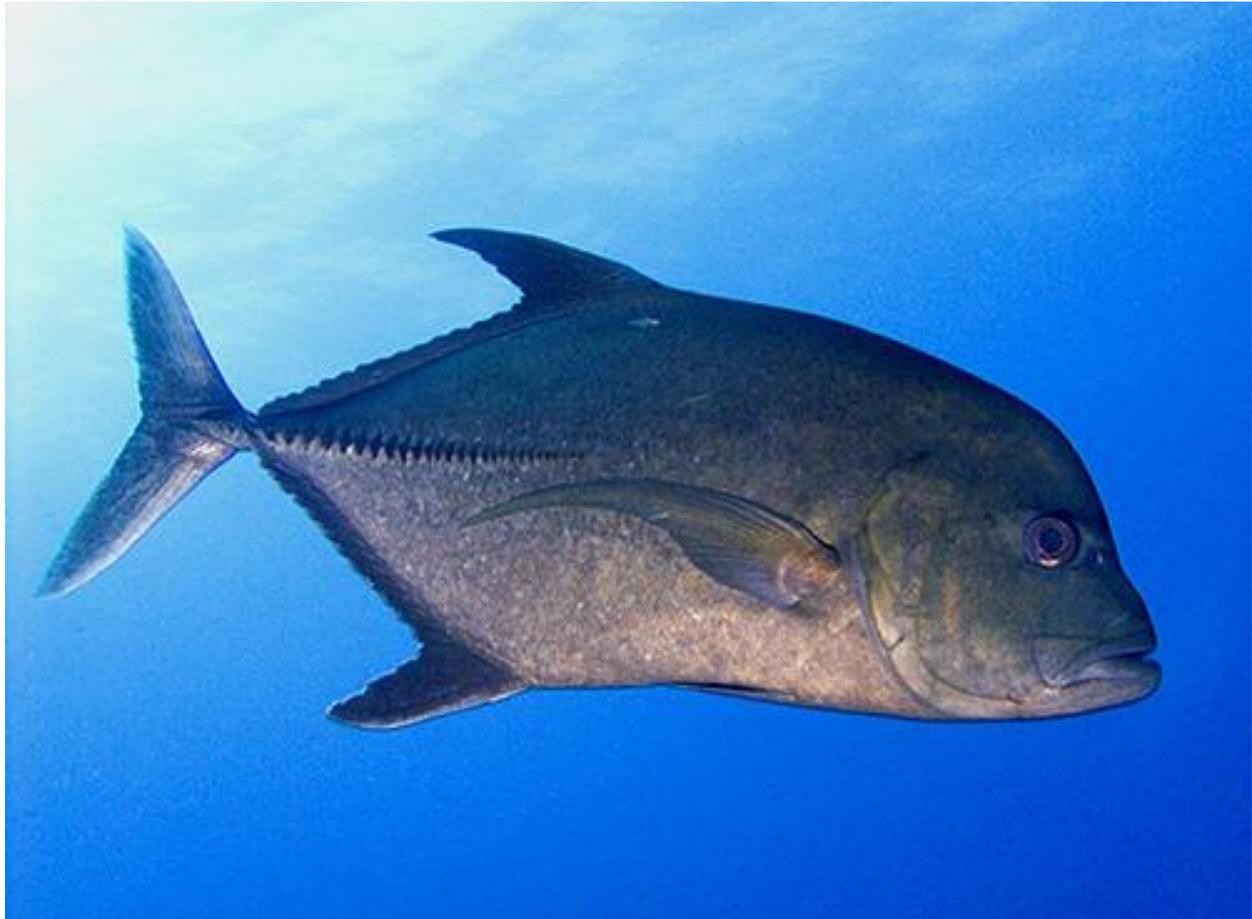


Fig. 1. Black jack, *Caranx lugubris*.

[<http://marinebio.org/upload/Caranx-lugubris/1.jpg>, downloaded 14 February 2016]

TRAITS. Being built for speed, *Caranx lugubris* have a steep sloping head with a body that tapers down to a very narrow tail (Lin and Shao, 1999). The colour of the body and head are almost uniformly greyish-brown to black, they have a deeply forked tail (Fig. 1), and the average body length is around 70cm (Humann, 1989). The teeth of the upper jaw include strong canines, and there are about 8 upper and 18-21 lower gill-rakers on the gill arches.

DISTRIBUTION. *Caranx lugubris* is widely distributed in tropical waters worldwide (Fig. 2), with a circumtropical distribution (Smith-Vaniz, 1986). This includes the waters of the Indian Ocean, Pacific, the Atlantic including the Gulf of Mexico and the Caribbean (Smith-Vaniz et al., 2015).

HABITAT AND ACTIVITY. This species of fish lives in offshore waters at depths of 10-350m (Lieske and Myers, 1994). This species is a benthopelagic marine fish that dwells in coral reefs, at the edges of reefs and rocks (Carpenter, 2002). They tend to form schools and primarily feed on other fish (Smith-Vaniz et al., 2015). They tend to live in solitude or in schools consisting of up to 30 individuals (Fig. 3). *Caranx lugubris* may coordinate their movements over coral reefs (Fig. 4) using the dimethylsulfoniopropionate chemical released by the marine algae on the reefs (DeBose and Nevitt, 2006).

FOOD AND FEEDING. *Caranx lugubris* are carnivores that feed mainly on fish and shellfish, stomatopods and isopods (Randall, 1995). They are also known as planktivores for the consumption of zooplankton as larvae (Briggs, 1960). *Caranx lugubris* is very fast, its speedy nature equips it to be a very good hunter that chases and catches other fish (its prey). Sometimes, this hunting is done in small groups (Quattrini et al., 2004).

REPRODUCTION. The reproduction and development in this species involves pelagic eggs and larvae at the early stages (Briggs, 1960). During reproduction, the females gather together at spawning sites, where each female releases thousands of eggs into the water, which are then fertilized by sperm released by the males, so fertilization is external. These fertilized eggs hatch into larvae in the open water, but only about one larva in every thousand survives and develops into a juvenile fish. This species becomes sexually mature when the females are around 35cm and the males are about 38cm long (Thompson and Munro, 1974).

BEHAVIOUR. The members of this species can be described as roving carnivores, as they always move from one place to another and are not restricted to one location. They sometimes associate with dolphins and feed on their faeces (Sazima et al., 2006).

APPLIED ECOLOGY. The major threat to *Caranx lugubris* is its use as a commercial fish, wherever it is distributed. They can be caught in artisanal fisheries and by using purse-seines, usually in inshore fisheries (Smith-Vaniz et al., 2015). This species is sold as (the locally well known) salt fish and dried fish for a good profit (Fischer et al., 1995), but may be the source of ciguatera poisoning in some consumers (Pottier et al., 2002). Ciguatera poisoning is a foodborne ailment specifically caused by sea food consumption. This disease can result in neurological, gastrointestinal and cardiovascular disturbances. For this illness, there is no immunity, in cases where the poisoning is severe, paralysis, coma and possibly death can occur (Lehane and Lewis, 2000). On a much lighter note, *Caranx lugubris* can be also used for recreational purposes (Fig. 5) as in the Bahamas for example, where it serves as an important game fish (Carpenter, 2002).

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Posted online: 2016

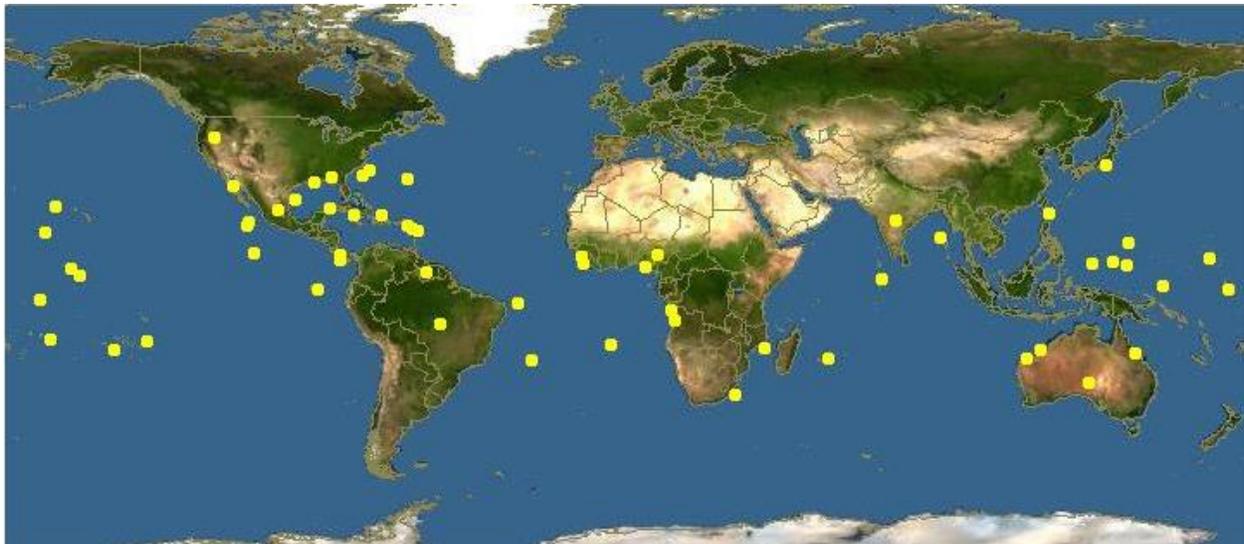


Fig. 2. Distribution map of *Caranx lugubris*.

[<http://www.discoverlife.org/mp/20m?map=Caranx+lugubris>, downloaded 20 February 2016]



Fig. 3. *Caranx lugubris* moving in a small school.

[http://matthewmeierphoto.photoshelter.com/image/I0000rNM_fYtRE3c, downloaded 5 March 2016]



Fig. 4. *Caranx lugubris* moving over the coral reef habitat.

[<http://www.alamy.com/stock-photo/rocky-shoal.html> downloaded 5 March 2016]



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

[<http://globalflyfisher.com/>, downloaded 5 March 2016]

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