

Carangoides bartholomaei (Yellow Jack)

Family: Carangidae (Jacks and Pompanos)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Yellow jack, *Carangoides bartholomaei*.

[<http://reefguide.org/carib/yellowjack.html>, downloaded 10 March 2016]

TRAITS. A relatively large species of fish, maximum total length 100 cm, average total length 50cm, maximum weight 14kg. Males achieve sexual maturity at 30 cm, females at 32cm. Moderately curved head from snout to the nape, situated on an elongate deep body (Fig. 1). Two-part dorsal fin with 7 spines and 1 spine respectively; anal fin, pectoral fin and caudal fin present. Thin bands of villiform (brush-like) teeth increasing in size anteriorly on upper and lower jaws. Colour is light pale yellow to blue dorsally, silvery on ventral side. Older fish appear more yellow, juveniles possess vertical blotching of bands or dark bars.

DISTRIBUTION. Widespread over the western Atlantic Ocean, from the Massachusetts coast to Brazil. Also ranging within the Gulf of Mexico and the Caribbean inclusive of Trinidad and Tobago. Found in a subtropical climate, from 42°N - 25°S.

HABITAT AND ACTIVITY. The yellow jack is naturally found along shallow sandy shores and offshore reefs in the Caribbean; near the American continent it is rarely found in shallow waters but in open water on the continental shelf. Ideal habitat depths range from 5-70 m, and temperature range 10-27 °C. Infrequently found in large schools, it is mostly a solitary species. Juveniles are observed in seagrass beds, allied with floating sargassum and jellyfish. The yellow jack is predatory, with small fish being the main prey. It may opportunistically follow larger species, using the commotion caused by the large fish.

FOOD AND FEEDING. Small fishes make up the diet of the yellow jack, including the bluethroat pikeblenny (*Chaenopsis ocellata*), yellowtail snapper (*Ocyurus chrysurus*), clown wrasse (*Halichoeres manculipinna*). The yellow jack has been observed to opportunistically follow larger species including nurse sharks, stingrays and eels, using the disorder caused by the large fish. Scavenged scraps left by the larger fish also contribute to the diet. Maintaining a symbiotic relationship with spinner dolphins, the yellow jack also feeds on scraps left by the dolphin.

POPULATION ECOLOGY. The yellow jack is observed to be a solitary species but is sometimes found in small groups. These group formations are not common inshore, occurring mostly around outer reefs. Habitats possessing a low cover of benthic flora contributes to the forming of these small groups as predation efficiency results from the bare sand and reduced availability of protection for prey. Different geographical locations influences the sexual maturity of the species; sexual maturity is achieved at 30 cm FL (fork length) in males and 32 cm FL in females off Cuba. Concurrently 23 cm FL is the length in which sexual maturity is obtained in Jamaica (Florida Museum of Natural History, 2016). Small schools of the yellow jack are found at depths of approximately 40-45 m in Belize.

REPRODUCTION. The yellow jack possess dioecism; distinct reproductive organs on the male and female. Juvenile yellow jack are often found in association with jellyfish and *Sargassum* seaweed, indicating that spawning occurs in offshore waters. Fertilization takes place externally, from February to October. Large congregations of about 300 fish gather to breed (Fig. 1), spawning occurring before sunrise. Subgroups of about 5-8 fish detach from the congregation, ascending quickly to approximately 35m to deposit gametes and return to the school (Graham and Castellanos, 2005). Following the hatching of the fertilized eggs, juvenile yellow jacks live close to the ocean's surface among jellyfish or mats of sargassum weed for protection.

BEHAVIOUR. Juvenile behaviour: the yellow jack eggs are laid and hatched at a water depth around 35m deep. In order to facilitate survival and protection, the baby fishes tend to inhabit the surface waters among sargassum and jellyfish. Their coloration provides a means of camouflage. Carangids are vocal fish, producing sounds as a form of communication.

APPLIED ECOLOGY. Yellow jack is listed by the IUCN under the 'Least Concern' category. Being common and widely distributed justifies the low level of threat faced by the species. Although considered a minor commercial species, no data suggest that there is a declining population due to harvesting.

REFERENCES

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Posted online: 2016

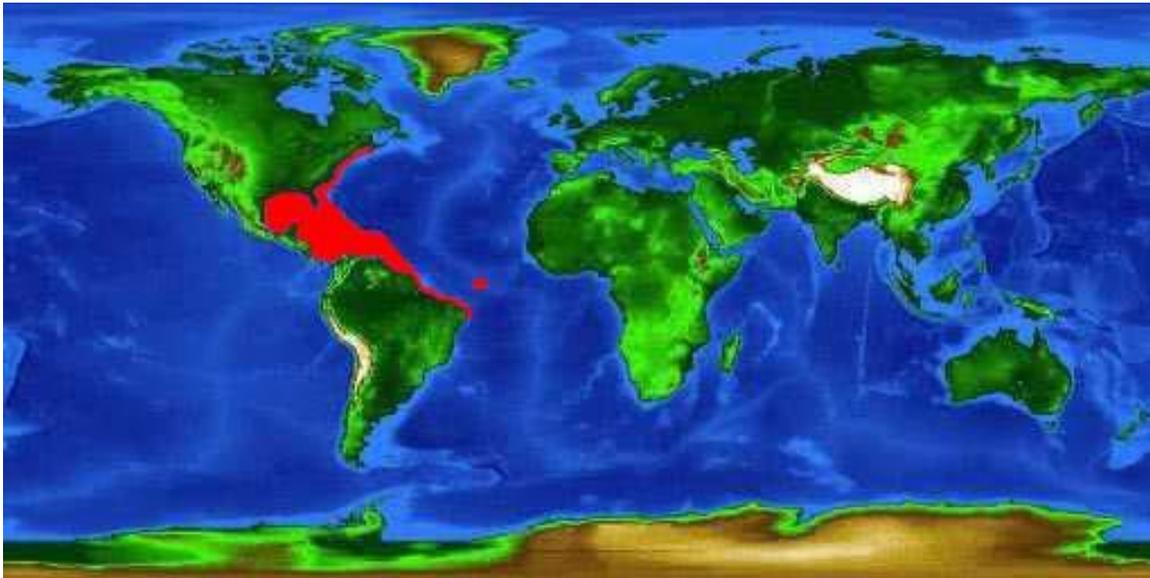


Fig. 2. World distribution map of *Carangoides batholomaei*.

[<https://www.flmnh.ufl.edu/fish/discover/species-profiles/carangoides-bartholomaei/>, downloaded 10 March 2016]

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