

Ocyurus chrysurus (Yellowtail Snapper)

Family: Lutjanidae (Snappers)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Yellowtail snapper, *Ocyurus chrysurus*.

[http://web.bryant.edu/~gcarter/scuba_photos/yellowtail_snapper_12-18-2009.jpg, downloaded 15 March 2015]

TRAITS. The yellowtail snapper *Ocyurus chrysurus* is a long and slender fish that can grow to a length of 86cm and weigh up to 4 kg, with the maximum age recorded being 14 years old (Allen, 1985). Its average length is 29-40cm. There is a mid-lateral yellow stripe along the sides which starts on the snout and thickens along the length of the fish then continues into the full caudal peduncle; yellow spots appear above the stripe on the upper body of the fish (Fig. 1). The caudal and dorsal fins are yellow. The blue-green colour of the dorsal surface fades into a white ventral surface (Allen, 1985). The remaining fins are pale yellow or clear and small ctenoid (toothed) scales exist with approximately 49 lateral line scale along the fish (Bortone and Williams, 1986). There are 10 spines on the dorsal fin and 12-14 dorsal soft rays; the dorsal fin is continuous and its spines are strong with the longest being the fifth spine (Allen, 1985). There are 3 anal spines and 8-9 soft rays, the upper lobe of the deeply forked caudal fin is longer than the lower lobe, and the long pectoral fins stretch to the anus (Bortone and Williams, 1986). The lower jaw projects further than the upper, and the mouth is smaller than that of most snappers. The maxillary bone appears to extend past the front of the orbit while villiform (brush-like) teeth

exist on both the upper jaw and vomer bone; 5-6 canine teeth can also be found on the upper jaw (Allen, 1985). The villiform teeth of the lower jaw are larger.

DISTRIBUTION. *Ocyurus chrysurus* is found from Massachusetts to Bermuda and southward to Brazil in the western Atlantic Ocean (Fig. 2), including the Gulf of Mexico and Caribbean Sea (Bester 2015).

HABITAT AND ACTIVITY. The adult yellowtail snapper can be found at depths ranging from 10-70m feet in reefs close to sandy patches as well as in deep and rocky reefs while younger adults reside over hard substrate areas and juveniles thrive close to the shore in sea grass beds which offer protection against predators (Bester, 2015). During adulthood, these semi-pelagic snappers tend to stay in the same area, but the shoal of snappers abandons an area in the presence of predators (Fish Key West, 2015). They are nocturnal feeders with exceptional eyesight. Sexual maturity is reached at 25-30cm and spawning occurs throughout the year with activity decreasing during the winter periods and peak periods varying based on location (Fish Key West, 2015). They are able to survive in water at temperatures of up to 33.5-34.0°C.

FOOD AND FEEDING. The yellowtail snapper along with the majority of snappers are euryphagic (broad-diet) carnivores however, the yellowtail differs from the other snappers in that it tends to feed above the substratum (Bortone and Williams 1986). The adult yellowtail are nocturnal feeders and their diet consists mainly of benthic organisms including crabs, shrimp, worms and smaller fish while the juvenile yellowtail has a diet of plankton (Fish Key West, 2015). It was reported by Randall (1967) that the adult yellowtail's diet included 23% crab, 16% shrimp and 16% fish while Piedra (1969) stated that the contents of the stomach of the snapper found off the coast of Cuba consisted of 82% fish and 17% shrimp. According to Allen (1985), the diet of the yellowtail snapper contained cephalopods, crustaceans, gastropods, marine worms and small fish.

POPULATION ECOLOGY. The adult yellowtail snapper has been observed to move in small groups or schools (Randall, 1967). The juvenile yellowtail snapper can be associated with the juveniles of the mutton snapper, lane snapper and the grey snapper as they also utilise the sea grass beds as nurseries (Allen, 1985). The yellowtail snapper also tends to hybridize with the lane snapper and the dog snapper (Rodriguez-Pino, 1961; Jordan and Evermann, 1898). Sharks, other snappers, barracudas and groupers are amongst the primary predators of the yellowtail snapper (Bortone and Williams, 1986; Fish Key West, 2015)

REPRODUCTION. The yellowtail snapper reproduce through spawning, that is they produce eggs (Bester, 2015). The peak spawning periods occur based on the location with spawning generally occurring through the year with a decrease in activity during the winter period. Off the coast of Jamaica, the peak spawning period was found to be between March and May while spawning activity was observed throughout the year in the offshore areas (Munro et al., 1973). The peak period for the snappers off the coast of Cuba was found to be March to August while those in the Florida Keys spawned between April and August (Piedra, 1969; Allen, 1985). The eggs are laid in a pelagic environment. These eggs are spherical in shape with a droplet of oil to provide buoyancy and are released in open waters (Bester, 2015). Fecundity is approximately 100,000-1.5 million eggs per female at a size of 292-382mm. Sparsely-pigmented larvae are

produced after 24 hours when the eggs hatch. At lengths of less than 10mm, the lutjanid larvae are planktonic and they then settle away from the plankton on substrate that provides protection from predators (Bester, 2015). Thompson and Munro (1974) stated that the growth rate of the yellowtail snapper was found to be 3.3mm/month. The males typically mature at approximately 26cm fork length and the females at 26-31cm (9 – 12 in), by age 3 years.

BEHAVIOUR. Adults usually inhabit coastal waters typically reefs whilst the juveniles prefer weed beds (McGinley, 2015). Feeding behaviour include activity at night, feeding mostly on plankton, fish, worms, gastropods and cephalopods (McGinley, 2015). They usually swim at a significant distance from the bottom and form schools. Their spawning behaviour is as follows: spawning occurs throughout the year as well as offshore during the new moon in the water column. When eggs finally hatch, the larvae continue in the pelagic stage until a fork length of 10mm after which they settle onto the reef (McGinley, 2015). They tend to settle in small schools at substratum level near reefs.

APPLIED ECOLOGY. The yellowtail snapper is not listed as endangered. The juveniles of the yellowtail snapper sometimes get caught up in the fishing gears of shrimp catchers thus leading to great mortality of the species where they occur together in soft bottom water areas (Bester, 2015). It is also popular amongst the sport and commercial catches in Florida. However, there have been a few cases where humans have been poisoned by the consumption of this fish. The very rare condition is called ciguatera poisoning and it is caused by dinoflagellates which inhabit the dead corals and macro-algae which herbivorous fish feed on. The yellowtail snapper may then feed on these fish while reef feeding. Symptoms of this poisoning include gastrointestinal problems as well as general weakness of the legs and arms (Bester, 2015). In south Florida, over 0.8 million kg of yellowtail snapper was caught per year, which brought in a total of 3.5 million dollars of revenue. A 10-fish bag as well as a 30cm fish limit has been implemented to stop overfishing (Hill, 2005).

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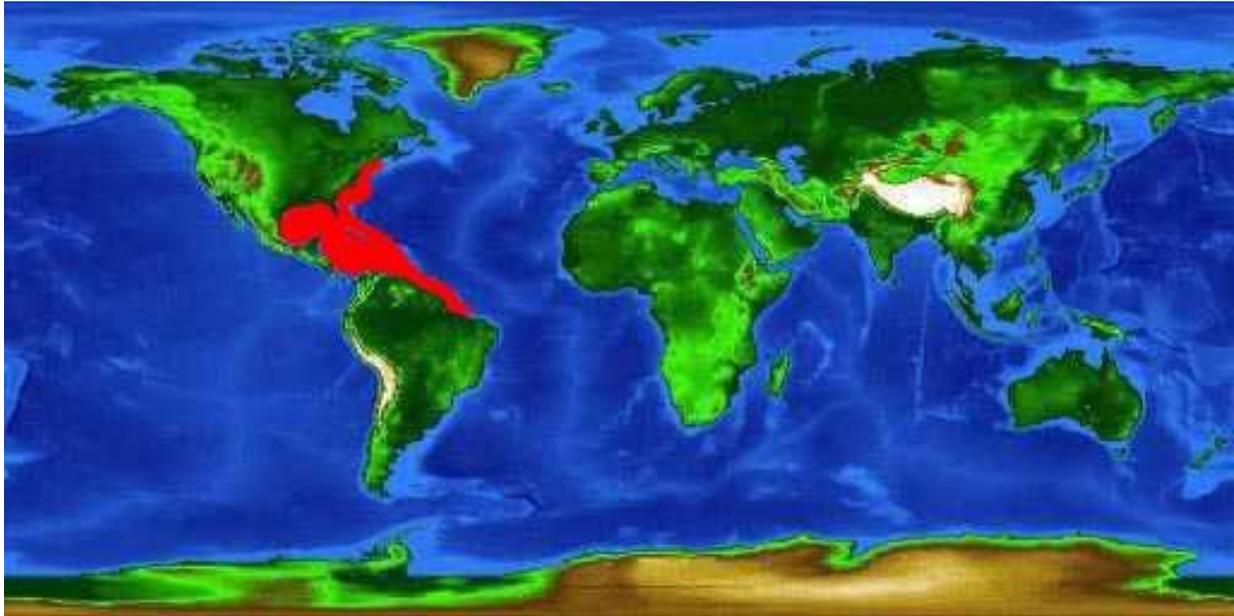


Fig. 2. Yellowtail snapper, *Ocyurus chrysurus*, geographic distribution.

[<http://www.flmnh.ufl.edu/fish/gallery/descript/yellowtailsnapper/512x256xyellowtailbasemap.JPG.pagespeed.ic.aCSc66BnnM.webp> , downloaded 18 March 2015]

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