

Opistognathus aurifrons (Yellow-headed Jawfish)

Family: Opistognathidae (Jawfish)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Yellow-headed jawfish, *Opistognathus aurifrons*.

[http://rockncritters.co.uk/index.php?main_page=index&cPath=17_21_85, downloaded 22 October 2016]

TRAITS. The yellow-headed jawfish has a blue or blue-green coloured body and a characteristic bright yellow head (Fig. 1). Some individuals have black markings on their heads. *Opistognathus aurifrons* is a small fish that grows to 10-12cm in length. It has a big mouth (particularly in males), elongate pelvic fins, and a slim body. With the exception of the head, the body is covered with cycloid scales (which have smooth edges and texture). There is some geographical variation in this species (Pruett and Lin, 2012).

DISTRIBUTION. *Opistognathus aurifrons* is usually found on or close to coral reefs of tropical waters, in the western Atlantic, Gulf of Mexico, Florida Keys, the Bahamas, and throughout the Caribbean Sea (Pruett and Lin, 2012) (Fig. 2).

HABITAT AND ECOLOGY. The yellow-headed jawfish is a sand-dwelling species of fish (Fig. 3), found at depths of up to 60m. It is known to burrow in the sand and cover the entrance

to the burrow with pebbles. The species is observed to be constantly working on its burrow, as it uses its wide mouth and jaws to remove excess sand and reinforce its burrow. *Opistognathus aurifrons* spends most of its time hidden inside its burrow and usually only protrudes its yellow head out of the opening of the burrow. It is known to only fully emerge from the burrow to feed, when predators are not in close proximity (Colin, 1973). This jawfish is carnivorous and consumes small invertebrates.

REPRODUCTION. After courtship and external fertilization, the male *Opistognathus aurifrons* collects the eggs into his wide mouth (Fig. 4), for protection of the eggs, and carries them until they hatch. During this period the male cannot feed and becomes underweight; after the eggs have hatched, the male will spend a time solely for feeding and recuperating. The male yellow-headed jawfish occasionally spits the eggs out to ensure they are properly aerated. The eggs hatch between 7-9 days after fertilization. Directly after hatching, the new fry are expected to live on their own, with little to no dependence on the parent (Contreras, 2012).

BEHAVIOUR. They are mainly seen in pairs (Fig. 5), however they have also been seen in larger schools; it is known that if schools become too large, some members may be excluded and left alone. *Opistognathus aurifrons* is not known to swim great distances away from its burrow as they are territorial fish and they spend most time inside the burrow. Natural enemies of *Opistognathus aurifrons* are moray eels, lionfish, frogfish, scorpion fish and triggerfish. The species uses its burrow as protection from these predators, which is why the fish is never spotted far away from its burrow. When startled, the yellow-headed jawfish is seen to swim quickly into its burrow, in a manner that can be described as a jumping or dancing motion (Graaf, 2015).

APPLIED BIOLOGY. According to the IUCN Red List, it is listed as Least Concern and so is not endangered. However, the invasive predatorial lionfish as well as death of coral reefs are listed threats to the yellow-headed jawfish population (IUCN, 2016).

REFERENCES

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Posted online: 2016



Fig. 2. Distribution map of yellow-headed jawfish, by country.

[http://www.discoverlife.org/nh/maps/Vertebrata/Fish/Opistognathidae/Opistognathus/map_of_Opistognathus_aurifrons.jpg, downloaded 22 October 2016]



Fig. 3. Yellow-headed jawfish inside its burrow, with its head sticking out.

[<http://www.scubadiver.cc/forums/showthread.php?598-Jawfish>, downloaded 22 October 2016]



Fig. 4. Male yellow-headed jawfish holding fertilized eggs in its mouth.

[http://i.dailymail.co.uk/i/pix/2013/04/24/article-2313928-1974F26F000005DC-532_634x799.jpg, downloaded 22 October 2016]



Fig. 5. A pair of yellow-headed jawfish swimming together.

[<http://www.oceanwideimages.com/species.asp?s=Yellowhead+Jawfish>, downloaded 22 October 2016]

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