

Awaous banana (River Goby)

Family: Gobiidae (Gobies)

Order: Perciformes (Perch and Allied Fish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. River goby, *Awaous banana*.

[<http://biogeodb.stri.si.edu/caribbean/en/thefishes/species/4479>, downloaded 11 March 2015]

TRAITS. The river goby is a freshwater gobiid fish, which possesses dorsal and anal spines and soft rays. The body shape is long and narrow. Males may grow to a length of 30cm, while the females may grow to a maximum length of 24cm. The head is broad and depressed with a blunt snout (Fig. 1). The eyes are close together and are medium size, it also has a terminal mouth, which appears to be larger in males. The head and body are flattened at the bottom. Two or three elongated papillae (fleshy tabs) are found on the shoulder girdle below the gill cover. Melanophores are found on the head; these are a type of pigment-containing cell found in the

skin of fish, they are mostly black and are regulated hormonally. Melanophores are also found on the ventral side of the body near the anal fin, and others may be found within the body, overlying the posterior swim bladder and extending down to the vent.

DISTRIBUTION. The river goby is widely distributed throughout the western hemisphere, from South Carolina and Florida in the USA, the islands of the Greater and Lesser Antilles to Trinidad and Tobago, and from Mexico to Brazil (Debrot, 2003) (Fig. 2).

HABITAT AND ACTIVITY. Typically found in clear streams and rivers over sand and gravel, but may also be found in turbid waters with muddy or murky bottoms. Many show a general preference towards, clear, well-oxygenated streams. They have been found to inhabit, rivers, brackish water and marine environments. In islands such as Curacao, where there are numerous channelised streams, species such as *Awaous banana* are provided with a suitable habitat (Hulsman et al., 2008). River gobies are fully amphidromous, marine to freshwater, meaning that spawning takes place in freshwater and eggs drift downstream to brackish or salt water, where they hatch. The larvae then migrate back into streams. It is believed that most larvae enter the parental stream, however water currents may cause their dispersal into the oceans before returning to freshwater. Juveniles exhibit a higher tolerance to highly saline conditions than adult gobies. The egg type of *Awaous banana* may be described as benthic, as they are found on the bottom. River gobies also have pelagic (open-water) larvae (Smithsonian Tropical Research Institute, 2015).

FOOD AND FEEDING. Members of this species are primarily herbivorous and feeds mainly on plant fragments and filamentous algae, but may consume animal matter, including aquatic insects if algae becomes unavailable. The river goby has also been known to ingest foraminifera and sand along with detrital matter commonly associated with the sand. Feeding habit typically involves browsing on the substrate in search of food.

BEHAVIOUR. *Awaous banana* tends to migrate in mixed groups, one such case is seen in the case of the “tismiche”, in which large numbers of juvenile and larval gobies, palaemonid shrimps and other groups migrate upstream together. Migration is disrupted by the presence of natural or man-made structures such as dams. *A. banana* has been known to hide by digging holes in the sandy or muddy bottoms of the river or stream they inhabit. Gobies have also been known to exploit cracks or fissures formed by the rocky bottom as a place of hiding if they feel threatened, which occurs relatively easily as they are sensitive to movement and light. If disturbed, they will return within 5 minutes. *A. banana*, is very territorial and may chase other gobies away, but will leave other organisms alone (Zapalac, 2006).

APPLIED ECOLOGY. *A. banana*, plays a unique role in the ecosystem in which it inhabits, being the only fish that feeds on chironomid larvae and other insects which it filters from the sand.

REFERENCES

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Author: Shane Superville

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Fig. 2. Distribution of the river goby around the Caribbean.

[<http://biogeodb.stri.si.edu/caribbean/resources/img/images/automaps/smap4479.png>, downloaded 11 March 2015]

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