

Antennatus bermudensis (Island Frogfish)

Family: Antennariidae (Frogfish)

Order: Lophiiformes (Anglerfish and Frogfish)

Class: Actinopterygii (Ray-finned Fish)



Fig. 1. Island frogfish, *Antennatus bermudensis*.

[<http://www.frogfish.ch/species-arten/Antennatus-bermudensis.html>, downloaded 27 January 2016]

TRAITS. Formerly known as *Antennarius bermudensis*, the island frogfish can be up to 7.7cm long (McEarchran et al., 2015). These frogfish in particular are coloured brown, red and yellow (Zubi, 2014a) and, as with other frogfish, they have loose prickly skin (Ng and Wee, 2015) (Fig. 1). At the top of its head, an island frogfish has three dorsal spines (Fig. 2), one of which is modified for luring and capturing prey (Zubi, 2014b). As shown in Figures 2 and 3, the modified spine is made up of a rod called the illicium and a fleshy bait referred to as the esca. The pectoral fins of frogfish are adapted, with elbow-like joints (Fig. 4), to function as legs (Ng and Wee, 2015). Gill openings resembling tubes are found beneath these pectoral fins (Pietsch, 1984) (Fig. 2), masking the exhalation (breathing out) of the fish and thus helping it to be unnoticed (Ng and Wee, 2015). The mouth (Fig. 5) is upward-directed (Zubi, 2014b), and expands largely and quickly to engulf prey (Ng and Wee, 2015).

DISTRIBUTION. The island frogfish is native to the coast of South America, the Caribbean and the western Atlantic (McEarchran et al., 2015) (Fig. 6), including Trinidad and Tobago.

HABITAT AND ACTIVITY. Island frogfish reside in tropical marine (saltwater) environments, more specifically in coral reefs, with water depth ranging from 4-30m (McEarchran et al., 2015). Frogfish have the ability to conceal themselves among rocks, sponges or corals for protection from predators and capture of prey because of their loose prickly skin and various. They move slowly on their adapted pectoral fins, using them to walk on the sea floor (Ng and Wee, 2015).

FOOD AND FEEDING. Frogfish feed on crustaceans, other fish and, on rare occasions, other frogfish (Ng and Wee, 2015). They do not move around too much, and if they do, they move rather slowly. Island frogfish prefer to wait in camouflage until their prey passes by, then the modified dorsal spine comes into use. The illicium extends and the esca – which resembles a small animal – attracts and lures the prey. When the prey gets close, the frogfish's mouth quickly expands (Pietsch, 1984), to a volume about 12 times larger than usual, and sucks in both water and prey in one gulp.

POPULATION ECOLOGY. These fish are solitary except during the mating season. Their life span in the wild is up to about 20 years (Pietsch, 1984). They are also widely distributed and abundant (McEarchran et al., 2015).

REPRODUCTION. *Antennatus bermudensis* is dioecious (male and female organs are found on different individuals; rather than on the same individual), and external fertilization occurs (Luna, 2011). Island frogfish are also oviparous which means that eggs are produced instead of living young. Luna (2011) also states that the reproductive guild that island frogfish belong to are the egg scatterers. Lende (2016) describes this group of fish as those that lay eggs in the water which mix with released sperm causing fertilization and these fertilized eggs are left to float away. With egg scatterers, parental care is absent (Luna, 2011; Lende, 2016) and so more than 10,000 eggs are produced (McEarchran et al., 2015) and float off in what is called an egg raft (Ng and Wee, 2015).

APPLIED ECOLOGY. Island frogfish are seen in the aquarium trade (McEarchran et al., 2015). The IUCN has this species listed as 'least concern' – this means that it does not meet the requirements of being vulnerable, near threatened critically endangered or endangered. Major threats to this species are not known, but they have negatively affected by hurricanes, prey loss and pollution (McEarchran et al., 2015). They also play no threat to humans (Baily, 2016).

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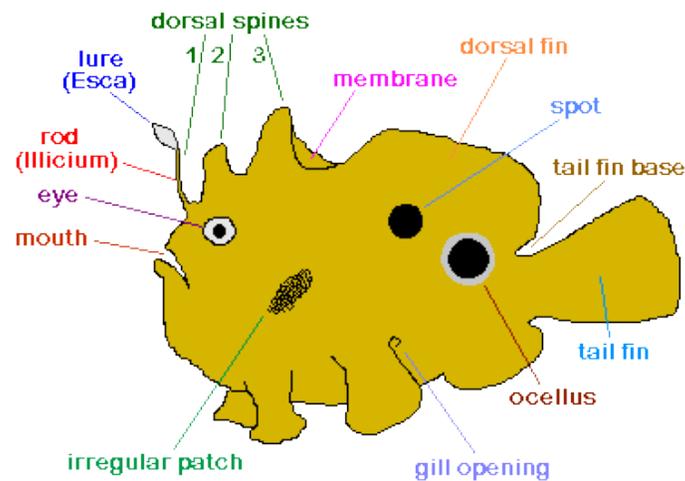


Fig. 2. Parts of a frogfish.

[<http://www.frogfish.ch/frogfish-behavior.html>, downloaded 27 January 2016]



Fig. 3. Details of the illicium and esca of the island frogfish.

[<http://www.frogfish.ch/species-arten/Antennatus-bermudensis.html>, downloaded 31 January 2016]



Fig. 4. Elbow-joint of the pectoral fin of a frogfish.

[<http://www.wildsingapore.com/wildfacts/vertebrates/fish/antennariidae/antennariidae.htm>, downloaded 31 January 2016]



Fig. 5. Opened mouth of a frogfish.

[<http://www.wildsingapore.com/wildfacts/vertebrates/fish/antennariidae/antennariidae.htm>, downloaded 2 February 2016]



Fig. 6. Distribution of the island frogfish.

[<http://www.fishbase.org/Country/CountryList.php?ID=16680&GenusName=Antennatus&SpeciesName=bermudensis>, downloaded 2 February 2016]

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