

## *Anablepsoides hartii* (Jumping Guabine)

Family: Rivulidae (Killifish)

Order: Cyprinodontiformes (tooth carps)

Class: Actinopterygii (ray finned fish)



**Fig. 1.** Jumping guabine, *Anablepsoides hartii*.

[<http://synergy.st-andrews.ac.uk/biotime/blog-2/>, downloaded 30 March 2015]

**TRAITS.** The jumping guabine, previously known scientifically as *Rivulus hartii*, is a small fish. It has a typical length of 2-11cm. Its body is cylindrical, stretched out, streamlined, and has cycloid (rounded) scales. The head of the fish is flattened, and the mouth is upturned with unicuspid (simple) teeth. Its fins have no spines but the first rays maybe unbranched. The dorsal fins are set far back on the body with 8-11 soft rays. The anal fin is further forward and usually has 10-17 soft rays, and its caudal (tail) fin is rounded with 13-16 soft rays. It has a variety of body patterns but they are often dappled with spots and stripes (Ghedotti and Wiley, n.d.). The jumping guabine may also have vivid horizontal coloured stripes stretching along their bodies (Deacon, 2014). The sexes of the jumping guabine are separate. The males have larger anal fins (Ghedotti and Wiley, n.d.), and tend to be brighter with pale orange edges to the tail (Fig. 1, upper), while the female's tail has a darkened tip (Fig. 1, lower) (Deacon, 2014). The body of the female is usually brown while the male's body is brown to green with hints of blue (Ghedotti and Wiley, n.d.).

**DISTRIBUTION.** *Anablepsoides hartii* are native to Trinidad and Tobago, Grenada, Margarita, Colombia and Venezuela (Ghedotti and Wiley, n.d.; Alkins-Koo et al., 1993; Fuller, 2013; Cohen et al., 2007). They are more readily found in quite tiny streams and pools (Ghedotti and Wiley, n.d.).

**HABITAT AND ACTIVITY.** The jumping guabine is found in densely lush, forested, muddy areas in mountain streams, shallow rain pools, estuaries, lowland swamps and rivers. They are usually found widely distributed in their respective habitat (Cohen et al., 2007). They are found mostly in fresh water but can be found in brackish water (Capuli and Luna, n.d.). They are found in places inaccessible to other fish because they are able to bypass waterfalls and go to steep rocky mountain streams because it is able to jump out of the water and survive on land for short periods using atmospheric air which it is able to breathe through capillaries on its tail (Deacon, 2014). They can travel substantial distances across damp leaf litter to nearby pools (Cohen et al., 2007; Deacon, 2014). They are diurnal fish and function best in waters with temperatures of between 22-26°C (Capuli and Luna, n.d.; Appleton et al., 2012). They are found widely distributed in their respective habitat.

**FOOD AND FEEDING.** The jumping guabine is omnivorous (Gilliam et al., 2013). It feeds on algal remains (largest constituent of its diet), diatoms, plant fragments and mineral particles making it part of the second trophic level (Appleton et al., 2012; Deacon, 2014). However it is a ravenous predator of small aquatic invertebrates, small fish (young *Poecilia*), tadpoles and insect larva, making it part of the third trophic level also (Alkins-Koo et al., 1993; Deacon, 2014). *Anablepsoides hartii* often times jump as high as 14cm to catch prey from vegetation and sometimes the fishes shoal to catch prey (Deacon, 2014; Appleton et al., 2012).

**POPULATION ECOLOGY.** Jumping guabine don't shoal for protection, but use a rapid escape response to predators like birds, bigger fish and even spiders (Deacon, 2014; Appleton et al., 2012). They are very abundant throughout the Caribbean, Venezuela and Margarita (Cohen et al., 2007). Jumping guabine can survive in captivity for up to 3 years (Boulenger, 1890). However there is not documented information about the age or longevity of jumping guabine in the wild as this depends on the environment in which they are in i.e. one with or without predators and food stress (Bassar et al., 2011).

**REPRODUCTION.** Jumping guabine lay eggs which are sticky. The female deposits the eggs on various substrates including living or dead vegetation and gravel (Gilliam et al., 2013). There is no care of young jumping guabine by parents (Bassar et al., 2011). The maximum number of eggs produced in the wild was discovered to be 28 (Fraser and Gilliam, 1992). While in captivity the number of eggs is usually 5-15 eggs (Boulenger, 1890). Because *Anablepsoides hartii* are found in tropical regions and conditions for its reproduction are always ideal, it does not have a particular season of reproduction but rather can reproduce anytime.

**BEHAVIOUR.** Juvenile behaviour: Very little is known about juvenile Jumping guabine. Juvenile males have less developed tails than adults and it is harder to tell the sex between male and female at this stage because they are not fully developed (Bassar, et al. 2011). They are found on living or dead vegetation and gravel in shallow environments as opposed to adults which are found in the pools or streams (Gilliam et al., 2013; Ghedotti and Wiley, n.d.).

Antipredator behaviour: *Anablepsoides hartii* avoids its predators by darting for cover on sensing the approach of a predator with amazing speed. The jumping guabine itself is a predatory fish therefore it does not have many predators as an adult. Its main predators are birds, bigger fish and some spiders (Fig. 3) (Deacon, 2014).

**APPLIED ECOLOGY.** The jumping guabine is not listed by the IUCN. It has no commercial importance but rather serves as a pet placed in aquariums (Boulenger, 1890). These are now always captive-bred, not caught in the wild (Ghedotti and Wiley, n.d.). The jumping guabine cause no known threat to humans and are not considered as a pest (Capuli and Luna, n.d.).

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**Fig. 2.** Jumping guabine, jumping over land.

[<http://synergy.st-andrews.ac.uk/biotime/blog-2/>, downloaded 30 March2015]



**Fig. 3.** Jumping guabine being attacked by a spider.

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