

Mannophryne olmonae (Tobago Stream Frog)

Family: Aromobatidae (Stream Frogs)

Order: Anura (Frogs and Toads)

Class: Amphibia (Amphibians)



Fig. 1. – Tobago stream frog, *Mannophryne olmonae*.

[<http://www.trinidad-tobagoherps.org/Images/OlmonaeFemale.jpg>, downloaded 16 October 2016]

TRAITS. Compared to other frogs *Mannophryne olmonae* is quite small, they are approximately 26mm in body length (from snout to vent), and males and females are about the same size. The males and females can be differentiated based on the colour of their throats. Females have bright yellow chins with black collars (Fig. 1) while males have dark grey chins. The eyes have a greater diameter than the distance from the eye to the nostril. Although its other common name, the Bloody Bay poison frog, suggests that the frog has toxic characteristics, it is not poisonous.

DISTRIBUTION. The *Mannophryne olmonae* is endemic to the island of Tobago; it is found nowhere else in the world. As seen in the map (Fig. 2) it is commonly found in the forested regions of central and eastern Tobago from 30-490m above sea level.

HABITAT AND ECOLOGY. *Mannophryne olmonae* is a terrestrial diurnal amphibian they are found around the rivers and tributaries of Tobago's main ridge. They are usually found at the upper course of the river in gravelled streams. The area around the water course is usually well shaded. During heavy rain fall they usually stay in the leaf litter and cracks in the rocks along

the streams. Most of the population can be observed within 10m of the stream. They are most active during the daylight hours of 6-8a.m. and 3-6.30p.m. Adult *Mannophryne olmonae* are carnivorous, they usually feed on insects (beetles, large ants and mites). Their tadpoles are left to mature in shallow pools close to the streams where they feed on detritus as they develop.

REPRODUCTION. The females tend to lay a small number of eggs (11-19) when compared to other frogs. The eggs are laid on land; when the tadpoles are hatched, the males relocate them to shallow pools where they are safe from predators and have enough nutrients for them to mature. The tadpoles are ovoid, dark brown with a length of approximately 10.8mm. The tadpoles feed on detritus until they are juveniles where they move to the streams and lose their tails. At the stage of juveniles, all the Bloody Bay poison frogs have yellow collars until they grow to more than 18.5mm where they then show either of the adult colour patterns.

BEHAVIOUR. *Mannophryne olmonae* is a diurnal frog, most of the adults are found within 10m of the stream. During the mating season the males can be heard from farther distances. They are distinguished from *Mannophryne trinitatis* by their mating calls that consist of short notes that are repeated rapidly with only a single pulse per note. The males usually call together in groups no greater than four individuals. When calling the throat of the males change from dark grey to jet black. However, it returns to normal after the male stops calling. The males of this species are responsible for the protection of the eggs as well as the relocation of hatched tadpoles to shallow pools away from the river or stream (Fig. 3).

APPLIED BIOLOGY. *Mannophryne olmonae* is currently listed by the IUCN as Vulnerable. In 2004 the species was labelled as Critically Endangered because an 80% reduction in the adult population was perceived on the heels of the epidemic disease chytridiomycosis that has negatively affected much of the amphibian populations worldwide. However due to recent research the classification was moved from Critically Endangered to Vulnerable as the main ridge where most the population of frogs is distributed is currently a protected forest reserve. Even though the population of frogs can be found abundantly at some streams, the relatively low numbers of frogs recorded is cause for concern.

REFERENCES

- Mannophryne olmonae* Amphibiaweb. http://amphibiaweb.org/cgi/amphib_query?where-genus=Mannophryne&where-species=olmonae, viewed 1 October 2016.
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- Mannophryne olmonae*. The IUCN Red List of Threatened Species 2013: e. T55249A3026022. <http://dx.doi.org/10.2305/IUCN.UK.2013-1.RLTS.T55249A3026022.en>, downloaded 24 October 2016
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Fig. 2. Bloody Bay poison frog, *Mannophryne olmonae*, distribution.

[<http://maps.iucnredlist.org/map.html?id=55249> downloaded 23 October 2016]



Fig. 3. *Mannophryne olmonae* male carrying tadpoles.

[http://supersalamander.voices.wooster.edu/files/2011/08/cropped-DSC_0309.jpg downloaded 25 October 2016]

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