



THE GOLIATH FROG (Conraua goliath, Boulenger, 1906)



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Introduction

Amphibians are tetrapod vertebrates comprising of three orders: Frogs (Anura), Salamanders (Caudata), and Caecilians (Gymnophiona), each distinguished by its general body type. The name Amphibian originates from the Greek “amphi” and “bios” meaning “of both or double kinds” and “life” or “living”, referring to the generalized life history trait of amphibians undergoing metamorphosis from an aquatic larval form into a terrestrial adult. Many frog and salamander species have a “double” life; relying on water for their aquatic stages (e.g., tadpoles, larva) and eventually metamorphosing into a fully terrestrial adult form (AmphibiaWeb, 2016).

Conraua goliath commonly known in English as the “Giant Slippery Frog, Goliath Frog” is an amphibian of the order Anura. As its name indicates, this frog species of the family conrauidae is the world’s largest frog, endangered and largely exploited for food and traded in Central Africa region where it occurs (IUCN, 2004).

The equatorial rain forest is habitat to this amphibian species, but has been undergoing destruction from logging and opening the forest for agriculture, hence, representing a great threat for the species. Additionally, goliath frogs are considered a delicacy and are collected by local people for food; and trade. Efforts are nevertheless on to discover new habitats, as well as outline the major threats and develop strategies for the conservation and sustainable utilization of this species for food security and economic development.

Description

Taxonomy of the Goliath frog (Boulenger, 1906),

Kingdom	Phylum	Class	Order	Family	Genus	Species
Animalia	Chordata	Amphibia	Anura	Conrauidae	Conraua	<i>Conraua goliath</i>

The massive goliath frog (*Conraua goliath*), as its name indicates, is the largest frog in the world with adult individuals weighing over three kilograms. The animal has a granular skin, greenish in colour with a yellowish-orange underside, and their feet and hands are webbed. The body length from snout to vent of an adult ranges between 17cm to 32cm and can weigh up to 3.5kg. Their eyes can be nearly 2.5 cm in diameter.



Goliath frog (*Conraua goliath*) (© printerest.com and globalwildlife.org)



Figure: Map showing the range of the Goliath Frog, *Conraua goliath*. (© www.amphibiaweb.org)

Geographical Distribution and Habitat

This frog species lives in tropical rainforest of western Africa within the South Western part of Cameroon and North of Equatorial Guinea (range in green on the map below). The goliath frog lives in or near fast-flowing rivers and streams in the rainforest. It is adapted to warmer, slower rivers flows. This frog species can survive in secondary habitats close to rivers, however not in very heavily degraded areas (farm bush).

Biology

Little is known about goliath frog mating systems. Unlike most other frogs and toads, the goliath frog does not have a vocal sac; therefore, courtship does not involve producing calls to attract a mate. The little research that has been conducted suggests that male goliath frogs perform the calling ritual differently from most other frogs. Instead of sucking in air into vocal sacs and blowing it out to make calls, goliath frogs hold the mouth open to make a long whistling noise. If a female hear the noise, she will then follow it to the male. Breeding occurs in streams and small rivers. Females lay large clutches of several hundred eggs onto vegetation at the bottom of a river or stream. Only a few eggs get hatched into small tadpoles, because many are preyed upon by a variety of predators (no information about the specific predators was found).



Tadpoles of the goliath frog (© courtesy of printerest.com)

The Adult goliath frog feeds on different types on insects, crustaceans and fish. Sometimes, it will consume small frogs, turtles, or very small

rodents and snakes. The tadpole of the Goliath frog is herbivorous and eats small aquatic plants. The metamorphosis from tadpole to adult frog will last about 85 to 95 days. If kept in captivity, the goliath frog can live for 19 to 20 years, while in the wild their life span is 15 years. These animals are nocturnal and only come out at night to look for food.

Importance and Conservation

The Goliath frog (*Conraua goliath*) is highly valued for food in Cameroon and Equatorial Guinea and is also an important export species; for consumption and pet trade. In addition, their tadpoles are harvested by the locals for consumption. *Conraua goliath* plays an important ecological role in the food web by regulating the population of certain animals and insects species; as well as being food for others.

The IUCN classifies goliath frogs as an endangered species; His population is said to have declined by 50% over the last three generations. The greatest threats to this frog include the fact that majority of the dense rainforest, habitat to the goliath frog has been degraded through logging for timber and opening the way for agriculture and human settlement. Construction of dams is also a major threat to their breeding ground and this species is particularly vulnerable to habitat alteration due to its highly restricted range. The goliath frog is considered a delicacy in Cameroon and Equatorial Guinea; hence is collected by local people for food and trade.



Goliath frog for trade and for food (© courtesy of inaturalist.org and gettyimages.com)

There is nevertheless and effort to protect and conserve this important species in both Cameroon and E. Guinea. Some of the goliath frogs' natural habitats have been declared protected areas including the Monte Alen National Park in Equatorial Guinea. Three wildlife sanctuaries in the Littoral Province of Cameroon have also been made as protected areas. The Equatorial Guinean government has set a limit of 300 frogs that may be exported from the country per year.

Given its importance for food and livelihood in the region and its current conservation status the goliath frog is likely to disappear if more efforts are not put in place for its conservation. The disappearance of this species will result in ecological imbalance; hence will have a negative impact that will affect its entire ecosystem as well as food and livelihood security in Cameroon and E. Guinea. Therefore, this call for more research in order to better understand its ecology and inform strategies like captive breeding programs. The population could be multiplied in captivity and be used to restock the wild population and also provide sustainable economic benefits to the locals. It is also important to develop a strategy to preserve its remaining habitat to allow the population to thrive.

References:

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