



*Ashley Schultz

African Clawed Frogs (*Xenopus laevis*)

Flattened Frogs without a Voice

African clawed frogs belong to a genus of air breathing aquatic species of frogs that live the entirety of their lives underwater. They are small, unusual, dorso-ventrally flattened frogs ranging in color from grayish, grayish brown, to olive brown with dark spots and mottling. Unlike the African dwarf frogs (with which they may be confused with), these frogs do not have webbed fore and hind limbs, eyes located on the tops of their head rather than on the sides, and less pointed snouts. These unusual frogs are found over much of sub-Saharan Africa, depending on the species. More specifically, species within this genus occur in Benin, Burkina Faso, Cameroon, the Ivory Coast, Equatorial Guinea, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo, and possibly Mali, as well as into South Africa

They are also unique among frogs and toads in that they are tongue-less, toothless, and lack the ability to vocalize, except perhaps making some clicking or raspy sounds. African clawed frogs are a popular and widely kept species of aquatic frog in the aquaria that can be easily maintained provided water and environmental conditions for their husbandry are correct. If provided the proper care, these frogs can attain longevity of up to 5 years or more. African clawed frogs are also extremely widely utilized as model research organisms in many different scientific and medical research.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Amphibia

Order: Anura

Suborder: Mesobatrachia

Family: Pipidae

Genus: *Xenopus*

Species: *Xenopus laevis** or otherwise *Xenopus spp.**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, African clawed frogs can attain longevity of 10 to 15 years or more in captivity.

Distribution and Habitat

African clawed frogs are a very unique genus of primarily aquatic frogs, with species generally indigenous to much of sub-Saharan Africa, depending on the species. More specifically, species within this genus occur in Benin, Burkina Faso, Cameroon, the Ivory Coast, Equatorial Guinea, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo, and possibly Mali, as well as into South Africa. Within this broad range, these frogs occupy a variety of aquatic habitats and environments, including subtropical to tropical, moist and humid lowland forests, moist grasslands and savannahs, slow moving to stagnant streams and rivers, ditches, freshwater lakes and ponds, marshes and swamplands, canals, and agricultural and aquaculture ponds and bodies of water. There are also numerous introduced and established populations of these frogs elsewhere in the world as well, including in North and South America, Europe, Asia, and likely other locations.

Origin/History

Xenopus laevis Daudin 1802.

African clawed frogs have long existed in the pet trade since the early 1950's. In addition to the pet trade, these frogs have also long had many widespread uses and applications for the biological laboratory and research industries since possibly at least the 1940's and 1950's, where they have become the research vertebrate species most widely used for developmental, cell and molecular biology. These frogs were intentionally released from laboratories around the world when new technologies for pregnancy diagnosis were developed in the late 1950's.

These unusual frogs would be introduced into many different areas of the world through several modes of introduction, including the intentional releases of unwanted pets and pet escapes from aquariums. With the ongoing use of the African clawed frog in cell and molecular biology research, laboratory escapes or releases would become another introduction pathway for these frogs.

Experience Level Required

Novice/Beginner.

Size

African clawed frogs typically reach up to 4 to 5 ½ inches.

Housing and Enclosure

Enclosure System: Aquatic. Housing must be sealed and escape proof with a secured lid or aquarium hood. These frogs are fully aquatic and never use dry land. However, although they are aquatic, clawed frogs can climb or jump out of an unsecured aquarium if provided the opportunity to do so. Clawed frogs can be housed communally, but require a minimum of a 10 gallon amount of space per frog. Use a quality canister filter and conditioner to help maintain cleanliness inside the aquarium but use an outlet. Clawed frogs do not tolerate distinct water flow as many fish do. Allow aquarium to cycle for at least 2 to 3 weeks prior to introduction of clawed frogs. Live or artificial plants can be for added security and hiding opportunities, but ensure they are sturdy and cannot easily be shredded or uprooted by the frog(s). Provide ample hiding areas inside and around the tank using backdrops, log or cave hides, driftwood, rocks, or other furnishings. Substrate is not required, but larger pebbles that cannot be swallowed, or aquarium

sand can be used safely with African clawed frogs. If keeping multiple clawed frogs within a single tank, provide adequate space and food to prevent them from nipping one another. Do not keep fish with or other aquatic animals with clawed frogs for these above reasons.

Temperature, Lighting, and Humidity

African clawed frogs have simple and undemanding heating and lighting requirements in captivity, and do not require additional UVA/UVB lighting, although providing it in moderated amounts can be greatly beneficial for their health, immune system, and overall wellness. For any supplemental heating that may be needed, use a low wattage incandescent or UVA/UVB bulb, radiant or ceramic heat emitter, or UTH (under tank heating element). Maintain these frogs within a temperature range of 70 to 75 degrees F. Do not exceed 75 degrees F. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well. Humidity is not as applicable, as these frogs are aquatic.

Feeding, Diet, and Nutrition

Primarily Carnivorous; African clawed frogs in the wild are ambush predators that are primarily carnivorous to scavengers, feeding on a variety of dead or dying small fish, aquatic insects and other invertebrates, and other forms of carrion (dead or decaying animal matter).

In captivity, these frogs should be fed a varied diet including formulated pellet foods, frozen and/or freeze dried foods such as bloodworms, krill, and beef, live foods such as roaches, crickets, earthworms, waxworms, mealworms, and nightcrawlers, and other pelleted fish foods. Feed young frogs daily, and adults every two to three days. They are known to exhibit cannibalism, and housing clawed of differing sizes together in the same enclosure is not recommended for this reason. African clawed frogs require additional calcium and vitamin D3 supplementation to their diets as well. Ensure that any foods given consist of these nutrients. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Handling

Clawed frogs are delicate, soft bodied amphibians and should not be allowed to dry out. As with all amphibians, their skin is soft and permeable; Wash hands thoroughly and avoid any lotions, creams, or oils before handling any amphibian. Handling these frogs should be minimal whenever possible and only when absolutely necessary. Use a fine mesh net to move capture and move these frogs to best avoid injuring them whenever necessary. Clawed frogs are species that are better suited for viewing rather than handling overall.

****Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens****

Contact

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