



*Photo Credit: Jeanni Kistler

Madagascar Burrowing Frogs *(Scaphiophryne spp.)*

Burrowing Gems of Madagascar!

Also known as the Madagascan rain frogs, the Madagascar burrowing frogs consist of a small genus of about six species of fossorial to semi-terrestrial microhylid frogs endemic to the island of Madagascar. Some can also even be semi-scansorial, or are capable of climbing into low shrubs or trees in search of food. These small, plump bodied frogs with flattened heads for burrowing can be quite variable in coloration and pattern depending on the species, with some being brightly or ornately colored, while others are more cryptic or inconspicuously patterned. Colors can range from green to grayish-green with scattered grayish to blackish blotches in the Green burrowing frog (*S. marmorata*), to much more ornately patterned with ivory whites, reds and oranges, yellows, greens, and black mottling in the Rainbow burrowing frog (*S. gottlebei*). These frogs also possess, powerful short hind limbs with hardened spades on their hind feet which they use for burrowing and excavating as well. These frogs currently face conservation concerns such as habitat loss and overcollection, although increased captive breeding of these species can lessen these concerns while making these unique frogs long lived and easily kept despite their fossorial nature.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Amphibia

Order: Anura

Family: Microhylidae

Subfamily: Scaphiophryninae

Genus: Scaphiophryne

Species: *Scaphiophryne spp.**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, Madagascar burrowing frogs can have the potential to attain longevity of 5 to 10 years, or more in captivity.

Species, Distribution, and Habitat:

As their names imply, all members of the Madagascar rain, or burrowing frogs are endemic only to the island of Madagascar, where the six or so species can all have slightly differing ranges and preferred habitats. A select breakdown of the species, and the specific habitats and ranges, if any, include, but are not limited to:

Marbled, or Green Burrowing Frog (*Scaphiophryne marmorata*): This species is perhaps the most commonly kept member of the genus in the pet industry, and occurs in the rainforests and tropical woodlands of eastern Madagascar, as well as drier portions of western Madagascar. It is found among the humid and moist forest floor leaf litter, rotting logs, and other debris, but also can climb into low shrubs and trees as well.

Red, Ornate, or Rainbow Burrowing Frog (*Scaphiophryne gottlebei*): This beautifully colored and patterned species occurs in the dry, hilly regions of Vallée des Singes, Isalo of south central Madagascar.

Brown Burrowing Frog (*Scaphiophryne brevis*): A widely ranging and adaptable species found over the dry, southern to southwestern portions of Madagascar, this species is found in the dry, tropical to sub-tropical forests and woodlands, to savannahs, lowland grasslands, seasonally flooded agricultural and urban areas, and intermittent freshwater wetlands.

Moquard's Burrowing Frog (*Scaphiophryne calcarata*): A fairly small species, this species of burrowing frog occurs from the entire western coastal area from northwest Madagascar (Andoany) to the south west tip in Tolagnaro.

Madagascan Burrowing Frog (*Scaphiophryne madagascariensis*): This is perhaps the least fossorial member of the genus, and is a mountain dweller of East Betsileo (central east & central Madagascar), where it occurs in both savannah-like environments and sometimes in humid forests.

Origin/History

Scaphiophryne spp. Boulenger, 1882. Other specific species would have other authors first describing them during other years.

Not much specific information is available on the history of these colorful burrowing frogs in the pet trade, although several species would become CITES Appendix II, and would have export quotas from Madagascar implemented for them.

Experience Level Required

Novice/Beginner to Intermediate/Moderate.

Size

Madagascar burrowing frogs can vary somewhat in size depending upon the exact species, and are also sexually dimorphic in size. Generally, however, they may range from about 34 to 36 millimeters, or about 1.3 to 1.4 inches in size.

Housing and Enclosure

Enclosure System: Primarily Moist-Terrestrial to Fossorial. Housing must be sealed and escape proof with a secured top or aquarium hood. A single adult frog can be comfortably housed in a 10 to 15 gallon terrarium, enclosure, or appropriately sized plastic container with a securely fitted lid or top. These frogs are also very seldom cannibalistic under most circumstances, and they can be housed communally in accordingly larger enclosures or setups. Madagascar burrowing frogs are also semi-fossorial, and will burrow as well. Provide several inches of a nontoxic particulate substrate that can help establish and maintain the necessary humidity levels that stays moist but not overly wet, and burrowing opportunities that can be used include coconut husk fibers, Eco earth, cypress mulch, live/sphagnum moss, play sand, and pesticide/fertilizer

free potting soil or mixtures of any of these substrates. Paper towels can also be used for a less attractive, yet utilitarian substrate for these frogs. These frogs will also benefit from daily misting as well. Other furnishings to provide can include live or artificial plants for added aesthetics, and hides such as upturned plastic or ceramic plant pots, log or rock hides, cork bark, or similar hides. Providing several, study branches in the enclosure for climbing opportunities can also benefit at least some species which tend to be semi-scansorial. Also provide a large, shallow water dish in the enclosure and change at least 2 to 3 times weekly. Spot clean daily and clean the enclosure at minimum every 2 to 4 weeks.

Temperature, Lighting, and Humidity

Madagascar burrowing 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). Humidity requirements can vary depending on the species, although providing a moderate to higher humidity at around 60 to 80% would work in most cases. Be sure to mist the enclosure at least once daily as well. Maintain these species of frogs at around 65 to 80 degrees F and provide a 12 to 14 hour light cycle if overhead lights are used. 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.

Feeding, Diet, and Nutrition

Insectivorous; In the wild, Madagascar burrowing frogs are insectivorous, and will eat insects, arachnids, and other invertebrates they can catch. In captivity, feed most species a variety of appropriately sized feeder insects such as crickets, roaches, mealworms, and waxworms. They can also be fed microfauna such as isopods, springtails, and fruit fly cultures as well if small enough. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. These frogs also require additional calcium and vitamin D3 supplementation 1 to 2 times weekly or as otherwise directed for optimal health and development. This is in order to prevent Metabolic Bone Disease (MBD) and other growth and nutritional deficiencies. They can also sometimes be large enough to be given small, pre-killed rodents, but sparingly, if at all. Their feeding frequency will depend on the age, size, and overall health of your animal. Use care as to not overfeed them, as obesity and other health related issues can become an issue. 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

Madagascar burrowing frogs are a shy, secretive, and fossorial species that will spend much of their time burrowed in their substrate and therefore do not make suitable display animals. They can be handled carefully for short period of time, and are not aggressive or prone to biting, but in general are not tolerant of frequent and/or prolonged handling. All amphibians breathe and respire through their skin, as well as absorb water through this means. It is therefore important to avoid wearing any chemicals or lotions on your hands, which can be potentially harmful or even fatal to amphibians. It is also important to wash or rinse hands thoroughly, and ensure they are adequately moistened before and after handling any amphibians in order to prevent them from drying out.

****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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Disclaimer: Note that the information provided in these, or any care sheets, are not intended to be all-exhaustive, and further research and care should always be sought and provided when it comes to any species one may prospectively be interested in. These care sheets are also not intended to serve as substitutes for professional veterinary medical care and husbandry should any animal require it. Always seek proper and professional veterinary care for any animal should the need arise, and be prepared ahead of time for any and all husbandry costs and expenses that may occur with any animal beyond the initial purchase. Any animal owned is ultimately a matter of personal/individual care and responsibility. We cannot make any claims or guarantees regarding any information in this care sheet therein. This care sheet may be reprinted or redistributed only in its entirety.

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