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FROGS

Red Rain Frog

Scaphiophryne gottlebei

Scaphiophryne gottlebei is a small, round, brightly coloured frog from the sandstone canyons of Isalo in Madagascar. Its back has sharply delineated patches of white, red-orange, green and black. The frog grows to 3-4 cm, buries itself in sand by day and climbs rock walls at night. It is threatened in the wild, and little documented knowledge exists on its care.

Family: Microhylidae

KEY FACTS

THE ANIMAL

Adult size	**3-4 cm** snout-vent length
Lifespan	**2 years**
Active	**At night**
Lifestyle	**Rock-dwelling and burrowing**
Habitat	**Dry forest and rocky terrain**
Skin toxins	**None known**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 40 × 40 cm** L × W × H for 4 adults
Temperature, day	**20-25 °C**
Temperature, night	**17-20 °C**
Humidity	**65-85%**
Water	**Water dish** depth 1-2 cm
UVB	**Optional** Ferguson zone 1
Diet	**Insects**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles in water**
Egg-laying site	**In water**
Sexually mature	**12 months**
Eggs per clutch	**3-500**
Hatching	**3 days**
Larval period	**24-30 days** from hatching to metamorphosis
Larval diet	**Complete diet**
Parental care	**None**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
IUCN	**Endangered (EN)**

About the species

Scaphiophryne gottlebei is a rotund frog in the family Microhylidae. The back is smooth and has an unusual pattern of sharply delineated patches of white, red-orange, green and black, while the belly is grey and slightly rough. The shade and the markings vary from animal to animal. The snout is rounded, the eyes are prominent, and the eardrum is not visible. The limbs are short and sturdy, the hind feet are webbed, and the fingertips are expanded into adhesive discs. Under the hind feet are horny ridges that the frog digs with, and the forefeet have claws that it uses to hold on to vertical rock walls.

Females reach 3-4 cm from snout to vent, males 2-3 cm, and males are more slender. Newly metamorphosed young are one half to one third of the adult size. The species was described in 1992 by Klaus Busse and Wolfgang Böhme. It is short-lived and typically reaches only about 2 years of age; lifespan in captivity is not documented, and the figure in the specifications is the typical lifespan in the wild.

A toxic skin secretion has not been described in the species, but wash your hands before and after contact, and do not touch your eyes or mouth until your hands are clean.

Distribution and habitat

Scaphiophryne gottlebei occurs only in Madagascar, where it is confined to the Isalo massif in central southern Madagascar, at 700-1,000 metres above sea level. Its range includes Isalo National Park and areas to the south of it.

The range is small, and the population is declining. The species is locally common inside the canyons themselves but rare outside them. Madagascar no longer allows the export of wild-caught animals, so animals in trade come from captive breeding.

Read more: Buying animals: captive-bred, wild-caught and transport

> **Native range:** Madagascar.

HABITAT

Scaphiophryne gottlebei lives in narrow, dark and very humid sandstone canyons where almost no plants grow. The climate here is cool by tropical standards: typically 19-22 °C, but varying between about 13 and 35 °C over the year. Outside the canyons the species also occurs in open, rocky areas in dry forest. It shares its habitat with *Mantella expectata*, which keeps to the more open, sunlit places.

The frog buries itself in the sand along the streams or sits in holes and crevices in the rock walls. At night it climbs the walls, sometimes several metres up.

The species is an explosive breeder. It breeds in groups of a few dozen animals, usually with the most males, in November-December just after the first heavy rains. The males call from the rock walls or from the surface of temporary pools, and the eggs are laid in the water. They hatch after about three days. The tadpoles are black by day and brownish grey at night; by day they stand head down in the bottom sediment feeding on dead material, and at night they swim around filtering particles from the water. Many are swept away by the water masses of the rainy season and metamorphose elsewhere.

The species is listed as endangered (EN) on the IUCN Red List. It was critically endangered in 2004-2008 but was downgraded when it proved to be more widespread and locally common. The greatest threats are loss of habitat through firewood and timber extraction, fires, overgrazing and mining, as well as earlier collecting for trade.

Read more: Rearing tadpoles

Care

THE ENCLOSURE

Little documented knowledge exists on the care of *Scaphiophryne gottlebei*. The care advice is based on the habitat in Isalo and on the care of relatives such as *Scaphiophryne marmorata* and *Scaphiophryne madagascariensis*; the enclosure size is borrowed from the genus.

A pair or a small group of up to four adults can be kept in an enclosure measuring 60 × 40 × 40 cm (length × width × height). The frogs move very little, so the depth of the substrate matters more than the floor area. Fill the bottom with 8-10 cm of a loose, moist but not wet mixture of sand and loamy soil, optionally with sphagnum and a little chopped, sterile leaf litter. The frog digs and must be able to bury itself completely.

Place large pieces of cork bark, flat stones and driftwood on the substrate so that crevices and caves form, and put a water dish in one corner. In the wild the species climbs rock walls, so a back wall of cork or artificial sandstone with cracks and ledges gives the frogs something to clamber on at night. Plants should be few and robust, because the frogs dig them up. The frogs make little mess, so it is enough to replace the substrate every two to four weeks. A mesh lid over at least half of the roof provides ventilation. The sides of the enclosure must be sealed tightly, because the frogs are good at finding gaps.

Newly metamorphosed young are kept singly or in small groups in plastic boxes with moist kitchen paper on the bottom.

TEMPERATURE

By day the temperature should be 20-25 °C and at night 17-20 °C, matching the cooler canyons of the species' range. The species needs no heat source and thrives at normal room temperature. The temperature should not exceed 27 °C for any length of time. Measure the temperature down at the bottom, where the frogs stay, and place the enclosure out of direct sunlight.

A winter rest is not necessary. For breeding a dry period is used; see under mating.

HUMIDITY AND MISTING

Humidity should be 65-85 %, but the most important thing is that the substrate is moist all the way down, while the surface may dry a little between mistings. Mist the enclosure once or twice a day with rainwater, reverse-osmosis water or dechlorinated water, and make sure the substrate does not become permanently waterlogged.

Stagnant, humid air causes bacterial skin infections, so ventilation must not be sacrificed for humidity. If the substrate is completely dry, the frogs dry out and may die.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

The frogs must always have a shallow, clean water dish of 1-2 cm, so that they can easily climb out again. Change the water daily. Use rainwater, reverse-osmosis water or tap water that has been treated against chlorine and chloramine. Amphibians absorb water and substances through the skin, so never clean the dish with soap, and rinse it thoroughly. The species is a poor swimmer, so the dish needs an easy edge.

For breeding, a water section is used where the water stands 5-10 cm deep and is about 26 °C; see under mating.

LIGHTING AND UVB

Lighting should be subdued. The species is nocturnal and lives in dark canyons, and no need for UVB has been documented. A weak UVB light, corresponding to Ferguson zone 1, does no harm and can be used if the enclosure has live plants. Switch the light on and off with a timer so that the day length is about 12 hours, and make sure the frogs can always dig in or hide from the light.

Read more: Lighting and UVB

FEEDING

Scaphiophryne gottlebei eats all kinds of small insects and is greedy. Adults take crickets of about 6 mm, small dubia roaches, small mealworms, fly larvae and the like, and young get crickets of about 3 mm and springtails. Alternate between several kinds of food, because the frogs may refuse the same food if it is given all the time.

Adults are fed every third or fourth day with several feeder insects at a time, and young are fed every day. Dust the food with a vitamin and mineral supplement at every second feeding, alternating calcium with D3 and a multivitamin. Some frogs spit out dusted food at first but get used to it. Remove feeder insects that are left after a few hours.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Scaphiophryne gottlebei spends the day hidden in the substrate or in crevices between stones and cork. At night it comes out and climbs the rock wall. The species is not aggressive towards its own kind, so a pair or a small group of the same size works well if there are enough hiding places. The males' calls are heard especially in the breeding season.

Do not handle the frogs; they gain nothing from it. If a frog has to be moved, use a small plastic container or moist, clean hands. Do not mix the species with other amphibians.

Breeding

SEXUAL MATURITY AND SEXING

Females are larger and rounder than males, 3-4 cm against 2-3 cm, and males are more slender. Species in the genus become sexually mature after about a year; the figure is not documented for *Scaphiophryne gottlebei*. If the sex is unclear, a pair is secured by keeping several animals of the same age together.

MATING

In the wild the species breeds in groups after the first heavy rains in November-December. In captivity breeding is rare; the method is the same as for the *Dyscophus* species and other explosive breeders: let the enclosure dry out for about 6-8 weeks, with the substrate only lightly moistened, and feed the animals well. Then imitate a cloudburst: fill the breeding container with 5-10 cm of water at about 26 °C, and let it rain with a rain system or a mister. The animals mate in the water.

Breeding in captivity has not been described in detail for the species.

EGGS AND TADPOLES

The eggs are laid in the water, in temporary pools in the wild. The number per clutch is not documented for the species; the figure in the specifications applies to the genus and ranges from a few eggs to about 500. There is no parental care, so the adults are removed from the breeding water after laying.

The tadpoles grow quickly in constantly warm water, about 26 °C. They readily eat fish flakes and pellets, crushed finely. Change part of the water often so that water quality stays high, and divide large clutches between several containers.

METAMORPHOSIS

The eggs hatch after about three days. The larval period is not documented for the species; the figure in the specifications is borrowed from relatives that breed in temporary pools, and the tadpoles typically metamorphose after three to four weeks.

When the forelegs appear, the young must be able to get out of the water. Lower the water level, and add floating plants, stones or sloping bark so that they do not drown. Move the metamorphosed young to small rearing boxes with moist kitchen paper.

REARING THE YOUNG

The newly metamorphosed frogs are one half to one third of the adult size. Keep them singly or a few together in plastic boxes with moist kitchen paper and hiding places at 21-24 °C, and feed them daily with very small insects, dusted with supplements. The young grow quickly on a varied diet. Move them to an enclosure with loose substrate when they are big enough to dig.

Health and common mistakes

Scaphiophryne gottlebei is hardy when the environment is right. The typical mistakes are:

- Stagnant, humid air, which causes bacterial skin infections. Ensure good ventilation.
- Too high a temperature, especially combined with a dry substrate. Over 27 °C for any length of time should be avoided.
- A dry substrate or too little water, which dries the frog out.
- Lack of calcium and vitamins. Dust the food.
- Overfeeding. The species is greedy and easily becomes fat.
- Chlorine, chloramine or traces of soap in the water and on the hands.
- Animals with parasites, especially wild-caught ones. Buy captive-bred animals.

A healthy frog is round with clear eyes and buries itself by day. Isolate a sick frog in a clean enclosure with the right conditions, and seek a vet with knowledge of amphibians if it is lethargic, swollen or stops eating.

Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.