herpy

FROGS

Ebenau's Golden Frog

Mantella ebenaui

Mantella ebenaui is a small, diurnal frog from northern Madagascar. It is light brown to copper-coloured on the back, often with a pale X-shaped pattern, and black on the sides, and it reaches 20-26 mm. The species has one of the largest ranges in the genus, tolerates heat well and lays its eggs on land near water. Little is known about the care of this particular species.

Family: Mantellidae

KEY FACTS

THE ANIMAL

Adult size	**20-26 mm** snout-vent length
Lifespan	**4-8 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Dry forest and rainforest**
Skin toxins in the wild	**Mild**
Skin toxins in captivity	**None** Captive-bred animals. Wild-caught animals can keep their toxins for a long time
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 4 adults
Temperature, day	**22-26 °C**
Temperature, night	**18-21 °C**
Humidity	**70-100%**
Water	**Water dish** depth 1-2 cm
UVB	**Optional** Ferguson zone 1
Diet	**Small invertebrates (springtails, fruit flies)**
Kept	**In groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles in water**
Egg-laying site	**On the ground**
Eggs per clutch	**25-30**
Larval period	**56-70 days** from hatching to metamorphosis
Larval diet	**Algae/plants and complete diet**
Parental care	**None**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
IUCN	**Least Concern (LC)**

About the species

Mantella ebenaui is a small to medium-sized frog in the genus *Mantella* and reaches about 20-26 mm from snout to vent. The back is light brown, tan or copper-coloured, often with a paler X-shaped pattern. The sides are usually black, and the legs are grey, often lightly marbled with dark brown. Some populations differ in colour, and their taxonomic status has not yet been resolved.

Until 2006 the species was treated as *Mantella betsileo*, and animals in the trade are still often sold under that name. The true *M. betsileo* was undescribed at the time and was known in the literature as "Mantella sp. 1". The original description of *M. betsileo* comes from the Betsileo region, where this species does not occur, and the name *M. ebenaui* was therefore taken up

again. The two species are so similar that they cannot be told apart by appearance alone. Females are larger and rounder than males, which call.

As in the whole genus, toxic alkaloids in the skin serve as a warning to predators. The frogs do not produce them themselves but take up the building blocks from the arthropods they eat in the wild, and the toxicity fades when the animals are given farmed feeder insects. The toxin is not dangerous to humans, but the skin is sensitive, so the animals should be touched as little as possible. Lifespan, weight and sexual maturity are not documented for the species itself; the lifespan in the box is borrowed from other species in the genus.

Distribution and habitat

Mantella ebenaui occurs only on Madagascar and has one of the largest ranges in the genus. It lives in the lowlands and along the coasts in the northern part of the island, and also on the islands of Nosy Be and Nosy Boraha (Sainte-Marie). The species is adaptable, and unlike most species in the genus it is not confined to a few small habitats.

The species is considered Least Concern (LC) on the IUCN Red List. The whole genus is on CITES Appendix II. Wild-caught animals are often seen in the trade, while captive-bred animals appear only sporadically.

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

> **Native range:** Madagascar.

HABITAT

Mantella ebenaui lives in lowland rainforest and in dry forest, but is also common in disturbed forest, plantations and open country. It occurs everywhere from pristine rainforest to muddy ditches by grazing land. On the forest floor it stays in the leaf litter and under cover.

The climate in the range is hot, with a distinct rainy season and a cooler, drier period. The species in the genus are most active in the wettest time, from December to February, when males call to defend territories and females eat ants, mites and other small arthropods. In the dry season the animals are less visible and live hidden in the leaf litter.

Care

THE ENCLOSURE

Little is known about the care of *Mantella ebenaui*, and the species has received little attention in the hobby. The advice here is based on the species' habitat and on experience with closely related species, especially *Mantella betsileo*, *Mantella viridis* and *Mantella baroni*. The figures are therefore borrowed from the genus where nothing else is stated.

The minimum size for a small group of four adults is 60 × 30 × 30 cm (length × width × height). The species lives on the ground, so floor area matters most. Build the substrate with a drainage layer and a layer of moist soil or long-fibre sphagnum covered with leaf litter and moss. Provide at least as many hides as animals, for example curved pieces of cork bark, roots and leaves, so that the animals can get out of sight of one another. Males are territorial, so there must be enough space and hides for each male to have his own area.

The lid must be tight, because the animals escape through every gap, but part of it should be mesh so that the air does not stand still. Do not use garden soil with fertiliser, and rinse plants thoroughly for pesticide residues. If breeding is the aim, keep the set-up simple so that the eggs are easy to find. The species should not be kept with other species.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

Because the species lives in the lowlands, it tolerates heat better than many others in the genus. Use 22-26 °C by day and 18-21 °C at night; the figures are borrowed from the genus and adapted to the species' lowland climate. Daytime temperatures above 27-28 °C for a long time are a risk, because heat stress kills quickly in the species of the genus. Keep the enclosure away from sun and radiators, use a light source that does not give off heat, and measure the temperature at the animals' level.

For breeding, the genus uses a cool, dry period that imitates the dry season and is followed by more warmth, more misting and plenty of food. Whether this works for this particular species is not documented. A fixed brumation is not documented.

Read more: Brumation and the seasons

HUMIDITY AND MISTING

Keep the humidity at 70-100 %. High humidity makes the animals show themselves more. Mist with rainwater, reverse-osmosis water or dechlorinated tap water every day in the active period, so that the substrate and the leaf litter are damp but never waterlogged. In a cool, dry period used for breeding, mist less often and let the enclosure dry out more. Stagnant air and constantly wet surfaces cause bacteria and fungus, and air that is too dry dries out the skin.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

Place a shallow water bowl in the enclosure and keep it always full. The depth is 1-2 cm, so that the animals can easily get in and out. Use rainwater, reverse-osmosis water or dechlorinated tap water, and change the water regularly. Amphibians absorb substances through the skin, so avoid soap, cleaning agents and chlorine.

LIGHTING AND UVB

The light must suit the plants, but must not heat the enclosure. Provide a 10-12 hour day and darkness at night. There is no evidence that the species needs UVB. The species is diurnal, so a weak UVB lamp (Ferguson zone 1) is optional if there is shade and cover.

Read more: Lighting and UVB

FEEDING

The species is a micro-feeder and eats small arthropods. The main foods are fruit flies, springtails, small isopods and newly hatched crickets. Vary the food with aphids, cockroach nymphs, termites and small waxworms, so that deficiencies do not develop. Juveniles get springtails and the smallest fruit flies.

Feed every second or third day, and give enough that the animals have eaten up after a couple of hours. In cool periods you can feed less often and less. Dust the food with vitamin and mineral powder every few feeds and at every feed for juveniles. Feed in several places in the enclosure, so that weak animals are not kept away from the food.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is shy in captivity and hides a great deal, but comes out more at high humidity and suitable warmth. Males are territorial and defend places where they call, while females are more withdrawn. Outside the breeding season the animals live in groups without major conflicts. Provide many hides and visual barriers, so that the weaker animals can get away.

The frogs should be handled as little as possible, as the skin is sensitive and the toxin can irritate mucous membranes. If an animal has to be moved, catch it with a plastic box, and wash hands afterwards.

Breeding

SEXUAL MATURITY AND SEXING

Females are larger and rounder-bodied than males, which are slimmer and call. Females do not call, so a frog that calls is a male. The age at sexual maturity is not documented. For breeding, a group with more males than females is recommended in the genus, but pairs and trios can also work.

MATING

Captive breeding is rare for the species, and no reliable method is documented. In the genus the breeding season is triggered when a cool, dry period is followed by warmth, daily misting and plentiful, varied food. The males begin to call, and the females become round with eggs. Keep the set-up simple so that the eggs are easy to find. It is common for females to lay eggs that are not fertilised.

EGGS AND TADPOLES

The eggs are laid on land in moist hollows close to water, for example under cork bark, leaves or a water bowl. The number of eggs per laying is not documented for the species itself; the figure in the box is borrowed from *Mantella betsileo*, and clutches in the genus range from a few dozen to over a hundred. There is no parental care. Fertile eggs are clearly divided in the middle after a few days, while infertile ones become discoloured and misshapen.

Carefully dig the eggs up with a plastic spoon and place them in a tight, moist container with no more than 5 mm of water in the bottom. As the tadpoles break out, raise the water level gradually. In the wild, rain washes the hatched tadpoles into nearby pools. The tadpoles eat fish flakes, algae tablets, shrimp pellets, spirulina, daphnia and bloodworms. Feed daily and remove leftovers with a tube the next day. The water temperature is about 20 °C.

Read more: Rearing tadpoles

METAMORPHOSIS

Hatching time is not documented for the species itself; in the genus the tadpoles break out of the egg mass within about a week. The larval period is not documented for the species either; the figure in the box is borrowed from the genus, where the first tadpoles metamorphose after about two months at around 20 °C, and the rest follow over the next 4-6 weeks. When the forelegs appear, move the tadpole to a container with very shallow water and Java moss, so that it does not drown. When the tail is almost absorbed, move the froglet to a simple terrarium with damp paper or sphagnum.

REARING THE YOUNG

Newly metamorphosed froglets are under 13 mm and have a large appetite. Give them springtails, the smallest fruit flies and newly hatched crickets, and dust the food at every feed. Keep the humidity high and the enclosure simple. The young are duller in colour than the adults and acquire their final pattern during the following year. Growth and age at sexual maturity are not documented for the species.

Health and common mistakes

Captive-bred animals are rarely ill, and problems are usually caused by faults in husbandry. Wild-caught animals are more vulnerable:

- Heat stress: too high a temperature for a long time can quickly be fatal. Keep the enclosure cool and ventilated.
- Dehydration: air that is too dry or too little cover causes the skin to dry out, and the animals lose weight.
- Poor hygiene: a dirty substrate and water cause bacteria and fungus in the skin.
- One-sided diet: causes deficiencies and obesity. Vary the food and use vitamin and mineral powder.
- Wild-caught animals often arrive emaciated and with parasites and should be quarantined for several weeks before being moved to the final enclosure.

In the case of emaciation, lethargy, loose faeces or sores on the skin, contact a vet with expertise in amphibians.

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.