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FROGS

Blue-legged Mantella

Mantella expectata

Mantella expectata is a small, diurnal frog from the dry rocky gorges of the Isalo massif in south-western Madagascar: lemon-yellow on the back, with sky-blue legs and black flanks. It grows to 2-3 cm, feeds on ants and other small arthropods and is short-lived: in the wild it lives for three years at most. It must be kept drier and slightly warmer than most other species in the genus.

Family: Mantellidae

KEY FACTS

THE ANIMAL

Adult size	**2-3 cm** snout-vent length
Lifespan	**3-5 years**
Active	**By day**
Lifestyle	**Terrestrial**
Habitat	**Semi-desert and rocky terrain**
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	**45 × 45 × 30 cm** L × W × H for 4 adults
Temperature, day	**20-26 °C**
Temperature, night	**16-20 °C**
Humidity	**50-70%**
Water	**Water dish**
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**
Hatching	**3-12 days**
Larval period	**42-56 days** from hatching to metamorphosis
Larval diet	**Algae/plants and complete diet**
Parental care	**None**

PROTECTION AND PAPERWORK

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

About the species

Mantella expectata is a small frog with one of the most striking colour patterns in the genus. The back and top of the head are yellow, the legs are blue, and the sides of the body and head are black. The underside is black with blue spots. The colours are a warning to predators: the skin contains toxins (alkaloids), which the frog takes up in the wild from the small arthropods it eats. The species was described in 1992 by Busse and Böhme.

The frog reaches 2-3 cm from snout to vent. The females are clearly larger than the males, and the males have a horseshoe-shaped blue patch on the underside of the lower jaw and a call that only they produce. There is great variation between individuals and localities: some have darker, greyer legs, and in the northernmost part of the range some have a reddish lower back that contrasts with the yellow upper back and head. In the south many have a touch of brown on the legs, so that they

resemble *Mantella betsileo*, and some animals are genetically somewhere between the two species. The systematic position of these animals has not been resolved. Animals with a reddish back and grey legs are sometimes sold as a colour variant of the species, but their status is unclear; they may also belong to a closely related, still undescribed species from the dry regions of southern and western Madagascar. The colours are brightest when the animals are kept cool and dry, and they become duller, steel blue and mustard yellow in an artificial rainy season.

The species lives unusually briefly for a frog of this size. In the wild it lives for three years at most, and the animals become sexually mature in the first active season after metamorphosis. Lifespan in captivity is not documented; 3-5 years in captivity is an estimate based on the wild lifespan.

Read more: Rearing tadpoles

Distribution and habitat

Mantella expectata is found only in Madagascar, in the Isalo massif and the areas south of it in the south-western part of the island. The range is small. The species shares its range with the brightly coloured *Scaphiophryne gottlebei*, and in some places it lives alongside *Mantella betsileo*, with which it can hybridise.

Both species are locally common, but threatened by habitat loss and collection for the pet trade. *Mantella expectata* is listed as Endangered (EN) on the IUCN Red List and is on CITES Appendix II together with the rest of the genus.

> **Native range:** Madagascar.

HABITAT

The frog lives in dry, open, sunlit country: in rocky gorges and along temporary, stony streams. It keeps to crevices, rocks and shade and is active during the day. This makes it a different type from most other species in the genus, which live in humid forest.

The breeding season runs from September to December, when the males call. The eggs are attached to the gorge walls, for example on top of grass tussocks growing out of the limestone walls above small pools, or they are laid under rocks. The rain floods them, and the tadpoles develop in temporary pools. The rest of the year is dry, and the animals are less visible then. The enclosure must take this into account: it should be drier than for a rainforest species, and the dry season should also be the coolest.

Care

THE ENCLOSURE

Only limited knowledge exists on the care of *Mantella expectata*. The species is only occasionally bred in captivity. It is kept drier than the other species in the genus, but otherwise like its closest relatives *Mantella betsileo* and *Mantella viridis*, which also come from dry regions, and the figures for enclosure, clutch and larval period are borrowed from them.

Four adults need an enclosure of at least 45 × 45 × 30 cm, and more animals require more floor area. The frog lives on the ground, so floor area is more important than height. The males defend small territories, and the females may fight in the breeding season, so choose a larger rather than a smaller enclosure with many visual barriers. Keep animals of the same locality form together.

Fit out the enclosure to resemble the dry rocky gorge: a base of sphagnum or a thin damp soil mix with a drainage layer at the bottom, flat pieces of cork bark and stones that form crevices and hides, and a few plants. The substrate can be mostly dry, but under the hides there must always be damp spots so that the animals do not dry out. Do not use garden soil with fertiliser. The lid should be partly mesh so the air does not stand still.

Read more: Terrarium construction and bioactive substrate

TEMPERATURE

During the day the temperature should be 20-26 °C, and at night 16-20 °C. The frog tolerates more heat than most other species in the genus, and a day at 28 °C does no harm. In the artificial rainy season the daytime temperature may rise to nearly 30 °C. Let the driest period coincide with the coolest and the wettest with the warmest, as in the wild. The night temperature is borrowed from *Mantella betsileo*.

Most living rooms are suitable all year round, but a south-facing windowsill is not. Use light that does not give off heat, especially if there are live plants, and measure the temperature with a digital thermometer at the animals' level. A proper winter rest is not documented.

HUMIDITY AND MISTING

The species comes from a dry area and needs lower humidity than the rainforest species. Keep it at 50-70 % day to day. Mist only sparingly with decalcified water, far less often than for the other species in the genus, but make sure there are always damp spots under the hides. Feel free to put glass or plastic over a small part of the mesh lid, but let the air move.

An artificial rainy season with heavy daily misting and a higher temperature triggers breeding behaviour, but it also makes the colours fade. Keep the rainy season short, therefore, and return to dry conditions afterwards. The shallow water bowl ensures that the frogs do not dry out.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

Place a shallow water bowl in the enclosure, and keep it full at all times. Mantella frogs are poor swimmers, so the bowl must be so shallow that they can easily get out, and it must not take up much of the floor. The depth is not documented for the species, but a couple of centimetres is plenty.

Amphibians absorb water and substances through the skin, so use only rainwater, reverse osmosis water with added minerals or tap water treated against chlorine, chloramine and heavy metals. Change the water every day or every other day, and scrub the bowl clean without using cleaning products.

LIGHTING AND UVB

No UVB requirement is documented for the species. It does, however, live in open, sunlit terrain, so a weak UVB light (Ferguson zone 1) is probably an advantage, provided there is shade and cover so the animals can choose. Light for the plants should not give off heat. Keep the light on for 10-12 hours a day, and keep it dark at night.

Read more: Lighting and UVB

FEEDING

The frog is an eager hunter. In the wild it feeds on ants, mites and other small arthropods. In the enclosure it takes prey up to crickets 2-3 weeks old and prefers them to fruit flies. Provide a varied selection: crickets of 3-6 mm, springtails, wingless fruit flies, small woodlice, aphids, small cockroach nymphs, termites and lesser mealworm larvae. Very small waxworms can be used for variety. Variety prevents deficiencies.

Give 5-15 feeder insects per frog every other day, and adjust according to the animals' body condition. In cool weather a small portion once a week is enough. Spread the food in several places, so that weak males are not chased away from the food. Dust the feeder insects with calcium and vitamin powder at every second or third feeding, and at every feeding for juveniles. The amounts are borrowed from *Mantella aurantiaca*.

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

BEHAVIOUR AND HANDLING

Mantella expectata is diurnal and keeps to crevices and shade during the day. The males call and defend small territories. Outside the breeding season the animals are largely peaceful towards each other. A small group with more males than females and many hides works best.

Frogs should as far as possible not be handled. The skin is delicate and absorbs substances from the hands. If a frog has to be moved, use a small, clean plastic container. Wild-caught animals are often emaciated and have parasites, so they must be quarantined for several weeks in a simple enclosure.

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

Breeding

SEXUAL MATURITY AND SEXING

The males are smaller and slimmer than the females and have a blue, horseshoe-shaped patch on the lower jaw. Both sexes become sexually mature in the first active season after metamorphosis, but the age in months is not documented. Keep a group of juveniles together and let them grow up, so that you get both sexes.

MATING

In the wild the species breeds from September to December. In captivity it is only occasionally bred. After a cool, dry period of 3-4 months with very little misting and halved feeding, the temperature is raised, and the animals are misted daily and fed generously. The males then begin to call after a few days. The dry period can be a strain on the animals, so keep an eye on their weight.

EGGS AND TADPOLES

In the wild the eggs are attached to the rock wall above a pool or laid under rocks, where the rain floods them. The number of eggs per clutch is not documented for the species; 25-30 in captivity is borrowed from *Mantella betsileo*. Often only some of the eggs are fertilised.

The eggs are taken up and placed on damp sphagnum in a closed container. When small, whitish-grey tadpoles can be seen wriggling in the jelly, water is poured on so that the tadpoles swim freely. They are then moved to an established aquarium with a sponge filter. There is no parental care. For the first few days the tadpoles live off the yolk, after which they are fed daily or every other day with algae such as spirulina and chlorella, fish flakes, bloodworms and daphnia. Rear them in large plastic containers with a clump of Java moss or a piece of pothos. The water should be 3-5 cm deep for the first few weeks, later up to about 10 cm, and 18-26 °C without large fluctuations. The water must be treated against chlorine and heavy metals. Do not overfeed, because the water then deteriorates.

METAMORPHOSIS

The tadpoles are ready to leave the egg about 3-12 days after laying. At about 23 °C they develop legs and leave the water after 6-8 weeks (42-56 days). Both figures are borrowed from relatives. Tadpoles from the same clutch develop at different rates.

When the front legs appear, the tadpole is moved to a container with at most 1 cm of water and a tight-fitting lid. When the tail is being absorbed, the little frog is moved to a land enclosure with damp kitchen paper and a hide.

REARING THE YOUNG

The newly metamorphosed frogs are very small and need plenty of small arthropods. For the first few weeks they live on newly hatched springtails, later they take fruit flies and crickets of 3 mm. Dust the food with calcium and vitamins at every feeding. Keep them singly or in small groups in small containers, and move them to a larger enclosure when they are 2-3 months old. They are then cared for like the adults. Sizes and times are borrowed from *Mantella aurantiaca*.

Health and common mistakes

In captivity *Mantella expectata* is sensitive to wrong climate and food, and there is little experience to build on. The typical mistakes are:

- Persistent heat above 28 °C outside the rainy season, which causes stress and poor appetite.
- Conditions that are too damp and too warm at the same time, which cause bacteria and fungus and make the colours fade.
- Air that is too dry or misting that is too infrequent, which dries out the skin.
- Lack of calcium and vitamins because the feeders are not dusted. This causes poor growth and crooked legs.
- Weak animals that are chased away from the food. Feed in several places.
- Wild-caught animals, which often arrive emaciated and with parasites. Quarantine and a vet are necessary.

A healthy animal has clear eyes and a plump body and is active by day. See a vet with amphibian expertise if the animal loses weight, does not eat for several weeks, or has sores or swellings.

Read more: Quarantine and hygiene

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.

The full guide with map and updates: herpy.org/en/frogs/mantella-expectata