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CHAMELEONS

Lesser Chameleon

Furcifer minor

Furcifer minor is a small chameleon from the central highlands of Madagascar. The male is beige and brown with two nose horns, while the female is the colourful one, especially when gravid. The species reaches 16-23 cm in total length, is threatened in the wild and is rare in captivity. It needs a keeper with chameleon experience, not least because females easily develop egg-laying problems.

Family: Chamaeleonidae Former name: *Chamaeleo minor*

KEY FACTS

THE ANIMAL

Adult size	**16-23 cm** total length incl. tail
Lifespan	**2-4 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Savanna, dry forest and montane forest**
Difficulty	**Experienced**

CARE

Min. enclosure	**45 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**21-26 °C**
Basking spot	**32-38 °C**
Temperature, night	**15-20 °C**
Humidity	**60-100%**
UVB	**Essential** Ferguson zone 3
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**5-9 months**
Clutch size	**4-18 eggs**
Clutches per year	**1-3**
Incubation	**190-270 days** at 22-24 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Endangered (EN)**

About the species

Furcifer minor is a small to medium-sized chameleon of 16-23 cm in total length, roughly half of which is tail. The male reaches up to 23 cm, the female about 16 cm. The name comes from the Latin *minor*, smaller, and refers to the species being smaller than *Furcifer bifidus*, to which it was once considered closely related.

The male is beige, gold or brown with darker bands and three slanting, pale stripes towards the rear. On the snout sit two prominent, side-by-side nose horns with a serrated crest. When displaying, the male can become highly contrasting in black, orange and yellow. In this species it is the female that is the more colourful. At rest she is emerald green with red on the head, red and blue spots on the flanks and a few yellow bands. When gravid or rejecting a male she shows her strongest colours: yellow bands on an almost black background with violet spots. The female has only small nubs on the snout.

The young are green, and the male's nose horns appear about two weeks after hatching. Captive-bred animals are fairly robust, but the species has a reputation for being delicate.

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

Distribution and habitat

Furcifer minor is native to Madagascar and occurs in the cooler parts of the central highlands, from the area around Ambositra to Ivato and Itremo, about 230 km south of the capital. The species lives at 1,000-1,650 m elevation.

The population is fragmented by large expanses of grassland, which the species does not use. It is rare and hard to spot.

> **Native range:** Madagascar.

HABITAT

The species lives hidden in scrub and small, gnarled trees in remnants of dry forest in a savanna-like landscape, in tapia forest with the tree *Uapaca bojeri* and in humid montane forest. It is also found on coffee, cocoa and papaya plantations, where it can be more numerous than in the original forest. It is not seen in open grassland.

In the area, rain falls almost every day in the wet season and at least every other day in the dry part of the year. The monthly mean lies at 14-22 °C. In the wet season the day reaches about 25 °C and, in the sun, briefly almost 30 °C, and at night the temperature falls to about 15 °C. The dry season is cooler, with nights down to 10 °C and lower. The species is diurnal and sun-loving and often leads a secretive life.

Care

THE ENCLOSURE

An adult needs an enclosure of at least 45 × 45 × 60 cm (length × width × height). The species is small and does not require a large enclosure, but some animals are more restless and do better with more space. Height is important because the animal uses the bushes from bottom to top.

A glass enclosure with ventilation at the front retains heat and humidity well and needs less frequent misting than a pure mesh enclosure. A mesh enclosure with solid sides and back and mesh at the front and in the lid is a good compromise. A pure mesh enclosure retains heat and humidity poorly and needs stronger lamps and longer misting. Provide drainage so that excess water can escape.

Furnish it densely planted: a live plant such as *Schefflera arboricola* or *Ficus benjamina* fills about half of the space. Add branches of many thicknesses and angles, horizontal, slanting and vertical, so the animal can move between warm and cool. Avoid fine mesh, which can injure the toes.

Read more: Humidity, misting and ventilation

TEMPERATURE

The daytime temperature should be 21-26 °C. Provide a basking spot of 32-38 °C, measured as surface temperature with an IR thermometer, and keep the floor cooler. Temperatures should vary with the season, as in the wild, where winter is markedly cooler.

The night temperature is 15-20 °C. The drop is achieved by switching off all lamps, and no extra heat is needed at night at normal room temperature. Use a halogen bulb for the basking spot and a thermostat, and connect all lamps to a timer.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-100 %. The species comes from an area with high humidity, but the enclosure must dry out during the day to avoid standing water and disease.

The animal drinks water droplets from the leaves and sides, not from a bowl. Mist several times a day, preferably with an automatic system, but take care not to waterlog the substrate. A cold-mist humidifier running at night and early in the morning keeps the animal well hydrated. Then let the enclosure dry out during the day.

LIGHTING AND UVB

The species is diurnal and sun-loving and needs strong light. Use a T5 tube of 6500 K for light and a UVB tube that gives Ferguson zone 3 at the basking spot; the zone is borrowed from *Furcifer pardalis*. Strong light is an advantage, and extra 6500 K LED lighting can be added.

Replace UVB tubes according to the manufacturer's instructions, because output declines with age. Day length follows the season. Ordinary LED lamps do not provide usable UVB.

Read more: Lighting and UVB

FEEDING

F. minor is a pure insectivore. Offer a varied selection: crickets, cockroaches, mealworm beetles and fruit flies. Small insects are often overlooked by adults at first, but chameleons naturally eat many small insects through the day. The insects should themselves be fed a rich diet of greens and vegetables.

Young animals are fed every day, as much as they will eat. Adults are fed every other day. Males can regulate the amount themselves, but females should be given less, because they easily become overweight, and obesity causes serious problems with egg laying. Young animals and males get calcium with vitamins at every feeding, females only at every other one, because they more easily get too much, which shows as oedema in the throat. A healthy chameleon has no visible tail bones and has full, not sunken, eyes.

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

BEHAVIOUR AND HANDLING

The species is kept singly, and two animals are put together only for mating. The animals are aggressive towards conspecifics, including the young, and can seriously injure one another. Towards the keeper the species is calmer and rarely bites.

The species is sensitive to handling, and it should be kept to a minimum. An animal can be taken out for a couple of minutes to be examined, but should walk onto the hand by itself and must not be grabbed.

Breeding

SEXUAL MATURITY AND SEXING

The male has two distinct nose horns, while the female has only small nubs. The males' horns appear about two weeks after hatching. Both sexes are sexually mature after 5-9 months. A receptive female develops red and blue dots on the flanks and red on the head.

MATING

Bring the female to the male's enclosure. A receptive female has muted colours, moves very little and hardly reacts to the male, who nods his head, and mating begins quickly. A female that is not ready puffs herself up with her mouth open and may attack. Remove her immediately and try again after a few days.

Mating lasts 5-30 minutes. Some females accept only one mating, others mate on several days in a row. Separate the animals when they are not supervised, because the species can be aggressive and the animals can seriously injure one another.

EGG-LAYING AND CLUTCHES

The female lays eggs 14-35 days after mating. The clutch is 4-18 eggs. Normally one clutch is laid per year, but up to three are possible in captivity. Egg laying is the hardest part of breeding, because females with retained eggs (dystocia) can die. A slim but well-fed female has fewer problems than an overweight one.

One or two days before laying, the female stops eating. Place her in a laying container: a dark plastic bucket of about 55 litres with a heat bulb of 20-40 W at the top and 15-20 cm of a mixture of sand and soil, which must be very moist but without standing water. If the soil is too dry she will not dig. She stays in the bucket all day while the light is on and returns to the enclosure at night. Eggs lying loose can be saved if found quickly, before they dry out.

INCUBATION

The eggs are placed in a closed box of vermiculite, moistened with equal parts water and vermiculite by weight. The eggs tolerate temperature drops to 15 °C and lower, and a cool period in the middle of incubation mimics the winter of the highlands. Incubate them for 45-70 days at 22 °C, then 45-70 days at 14-16 °C and then at 22-24 °C until hatching. This requires an incubator that can both heat and cool.

The incubation period is long: 190-270 days, on average about nine months. At a constant 23 °C it takes 8-9 months.

Read more: Incubating eggs

REARING THE YOUNG

The young are green and must be kept apart from the start, because they are aggressive towards one another. Care is the same as for the adults, only on a smaller scale and in smaller enclosures. Offer fruit flies, mealworm beetles and small crickets, and feed daily.

The young grow quickly and can be close to adult size after about six months.

Health and common mistakes

Typical problems and husbandry errors:

- Dystocia in females, especially if they are overweight or if there is no suitable laying site. The condition is life-threatening.
- Obesity in females, which causes complications at egg laying.
- Dehydration, if misting is too infrequent or the animal does not get high humidity at night.
- Oedema in the throat from excessive supplementation.
- Metabolic bone disease (MBD) from too little UVB or calcium.
- Injuries to the toes from fine mesh.
- Stress from handling and from being kept together with conspecifics.

Longevity in captivity is not documented; 2-4 years is an estimate based on other small *Furcifer* species. Contact a vet with reptile experience if the animal stops eating, turns dark and listless or breathes with its mouth open.

Read more: Common diseases and signs of illness

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.