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GECKOS

Common flat-tail gecko

Uroplatus fimbriatus

The classic of the genus and one of the largest leaf-tailed geckos: a fringed, bark-coloured nocturnal animal from the rainforests of eastern Madagascar that blends into the tree trunk by day. It is impressive to look at, but needs cool temperatures, high humidity and a patient, experienced keeper.

Family: Gekkonidae Former name: *Stellio fimbriatus*

KEY FACTS

THE ANIMAL

Adult size	**25-33 cm** total length incl. tail
Lifespan	**7-10 years**
Active	**At dusk and at night**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 60 × 100 cm** L × W × H for 2 adults
Temperature, day	**22-25 °C**
Temperature, night	**17-21 °C**
Humidity	**65-95%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**100-230 days** at 18-26 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Least Concern (LC)**

About the species

Uroplatus fimbriatus is one of the largest geckos in the genus, and the species name means fringed. Along the body, the legs and the edge of the tail sit narrow skin flaps, which lie flat against the bark when the animal rests on a trunk. They erase the shadow of the body, so that the gecko no longer looks like an animal. The colours are grey, brown and greenish and often marbled like moss and lichen, and the broad, flat tail looks like a withered leaf.

Adults reach 25-33 cm including the tail. The weight is not documented. The eyes are large and lidless, with a vertical pupil, and so sensitive to light that the gecko can see colours at night. If disturbed, it raises its head and tail, opens its mouth wide and screams. It is a bluff, but it works.

The species was described as early as 1797 by the German naturalist Johann Gottlob Schneider under the name *Stellio fimbriatus* and is the type species of the genus. In 2006 the large leaf-tailed geckos from northern Madagascar, including Montagne d'Ambre, were split off as a separate species, *Uroplatus giganteus*, so older reports of very large animals from the north probably concern that species.

It is an animal for those who want to look and have patience, not for those who want a pet. A large share of the animals in trade have been wild-caught and arrived stressed, dehydrated and full of parasites, so choose a captive-bred animal if you can.

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

Distribution and habitat

The species is found only on Madagascar. It lives in the rainforests of the eastern part of the island, roughly from Antongil Bay in the north to the area around Vondrozo in the south, and also on the islands of Nosy Mangabe and Nosy Boraha (Île Sainte-Marie) off the coast.

The range is relatively large, and the IUCN does not regard the species as threatened. It is, however, completely dependent on the forest, and deforestation and collection for the pet trade are the greatest threats. The map shows only the natural range.

> **Native range:** Madagascar.

HABITAT

The gecko lives in humid tropical rainforest, especially in the lowlands and the lower montane forests. By day it sits head-down on trunks and thick branches, often quite low, with its body pressed against the bark. At night it hunts insects and other small animals on the trunks and in the undergrowth.

The climate in the eastern forests is warm and humid for most of the year, with a short, drier period. Humidity averages about 80 %, and the daytime temperature is typically in the low to mid 20s. Nights are cooler, especially in higher-lying forest. Mist, rain and dew give long periods of almost saturated air, and it is precisely high humidity at night and cool nights that you need to imitate in the enclosure.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

The species uses height, so the enclosure must be tall. A single adult can manage in 45 × 45 × 90 cm (length × width × height), but a pair should have at least 60 × 60 × 100 cm, the same minimum that is recommended for a pair of the somewhat smaller *Uroplatus henkeli*. A male with two females needs about 60 × 60 × 120 cm or more. Juveniles do well in a smaller enclosure of about 30 × 30 × 45 cm.

Glass walls hold the droplets from misting, and the animals drink from them. The front and top should have mesh, so that the air is exchanged. Furnish with vertical and sloping branches, cork bark and thick bamboo tubes at different heights, so that the gecko can sit head-down as in the wild. Plants with large leaves, live or artificial, provide cover and hold the humidity.

A damp mixture of coconut fibre and unfertilised soil, covered with dead leaves, works as a substrate. For newly hatched juveniles, kitchen paper is the safest, because they cannot swallow any of it. Remove droppings often, and change the substrate completely at regular intervals, because moisture and droppings quickly breed bacteria.

TEMPERATURE

The species tolerates heat poorly and must be kept cooler than many think. By day 22-25 °C is suitable, and at night the temperature should fall to 17-21 °C. The night-time drop is an important part of the daily rhythm. The temperature may exceed about 27 °C only briefly, and above 30 °C the risk of death rises quickly.

In an ordinary living room extra heat is usually unnecessary. The species does not need a warm spot. If you want to offer a small warm spot, keep it at no more than 27 °C, and make sure the animal can always seek a cooler place.

Measure with two digital thermometers, one high up and one low down, and place the enclosure away from sunny windows. A thermometer with an alarm quickly reveals a heatwave, and on warm summer days a fan above the mesh lid may be enough to keep the temperature down.

HUMIDITY AND WATER

High humidity is the most important part of care, because the species dries out easily. Keep humidity at 65-70 % by day and 80-95 % at night, and let the substrate dry out a little during the day. Mist thoroughly with lukewarm water at dusk, so that there are droplets on leaves, branches and glass. A rain system with a fine mist running a couple of times a day is a great help.

The gecko drinks droplets from leaves and glass and seldom uses a water bowl, but provide a shallow bowl of fresh water all the same. Good ventilation is just as important as humidity, because stagnant, humid air causes mould, respiratory infections and skin problems. A hygrometer shows whether the routine is holding.

LIGHTING AND UVB

The species is active at dusk and at night and belongs to Ferguson zone 1 together with other shade animals. A weak UVB light is recommended for the whole genus. Use e.g. a T5 tube for forest animals, so that the UV index is at most about 0.6-1.4 on the topmost branches, and place it to one side so that the rest of the enclosure lies in shade.

Keep the light on for 10-12 hours a day, controlled by a timer, and ensure darkness at night. Avoid strong spotlights and coloured night light. Strong light and heat together are the fastest way to a stressed gecko.

Read more: Lighting and UVB

FEEDING

The species eats insects and takes almost only live prey. Offer a mix of crickets, locusts, dubia roaches and large mealworms, and waxworms as a treat. Prey must be no wider than the distance between the gecko's eyes. Feed juveniles every day or every other day and adults 2-3 times a week, as much as they eat in 10-15 minutes. Weight should be kept stable.

Dust the insects lightly with calcium, and give vitamin D3 and a multivitamin a couple of times a month. Females in the breeding season need extra calcium. Feed the feeder insects well before they are served, and remove insects that are not eaten.

Small, captive-bred snails are worth trying, especially for females. In *Uroplatus henkeli* they are crucial for the females' calcium supply and egg-laying, and the same probably applies here. Large females can occasionally be given a newborn mouse, but it is not necessary and can make the animal fat.

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

BEHAVIOUR AND HANDLING

The gecko relies on camouflage rather than flight and is shy and sensitive to stress. Wild-caught animals jump and may bite when touched. Captive-bred animals are calmer, but they too are unsuited to frequent handling. Keep the species as an animal to watch, and pick it up only when necessary. Sit low, and let it walk from hand to hand rather than holding on.

Sexually mature males must be kept apart, because they gape at each other and fight. The species is thus less peaceful than *Uroplatus henkeli*. A pair or a male with two females can work in a large enclosure with many hiding places. Look for wounds, especially in the breeding season, and separate the animals if there is unrest. If the gecko screams when you approach, you have come too close.

Breeding

SEXUAL MATURITY AND SEXING

Males can be recognised by a distinct bulge at the base of the tail, where the hemipenes lie, and by small pores in front of the vent. Females are usually slightly larger and get a fuller body when ready to breed. The age at sexual maturity is not documented. Wait until the female is fully grown and in good condition before breeding her.

A female in good condition has distinct white calcium sacs on the neck, where she stores calcium for the eggs. Sex is determined by chromosomes: the whole genus probably has males with ZZ and females with ZW.

MATING

Mating takes place at night and can last several hours. The male waves his tail, climbs onto the female without biting her neck and brings his tail in under hers. The female can store sperm and lay several clutches after a single mating, so the male can be removed again after a few weeks.

Introduce the male to the female, and watch them for the first few nights. If you have several males, they must take turns being with the females and never be together. Give the female at least three months' rest from the male every year, preferably in the cooler period, so that she can rebuild calcium reserves and weight. Stable high humidity and regular misting are a prerequisite for getting the species to breed.

EGG-LAYING AND CLUTCHES

The female usually lays one or two eggs, often three to four weeks after mating. The number of clutches per year is not documented; in *Uroplatus henkeli* it is up to five in a season.

The eggs are round and hard-shelled. The female lays them on the ground under the leaves or slightly buried, and rolls them in soil while the shell hardens. Give her a quiet laying place, e.g. a tray or pot with slightly damp soil and a layer of leaves. Look for eggs every day when she seems restless, and never turn them when you pick them up.

INCUBATION

Place the eggs half buried in vermiculite (mixed 1:1 with water by weight) or damp sphagnum in a small box with a few air holes, without turning or covering them. Humidity in the box must be over 70 %, but the eggs themselves should stay dry.

At 24-26 °C the eggs hatch after 100-120 days. At a lower temperature, down to 18 °C and preferably with a nightly drop to 18-22 °C, it can take up to 230 days; these figures are borrowed from *Uroplatus henkeli*. Be patient before you give up on an egg. Whether temperature can influence the sex of the young has not been studied in the species.

REARING THE YOUNG

Newly hatched young are about 5-6 cm long and live on yolk remains for the first days. Move them to a small enclosure with kitchen paper, branches and a plant, and keep it damp. Young must be kept apart from the adults.

Give small crickets and fruit flies, dusted with calcium, every day or every other day, and make sure the prey is not too big. Keep the young at 23-25 °C by day and 19-21 °C at night. Weigh the young regularly. They grow fast in the first year, but there are no reliable figures for when they are fully grown.

Health and common mistakes

Wild-caught animals are often weakened, and this is the greatest risk with the species. Otherwise most problems are caused by wrong conditions in the enclosure. The typical mistakes are:

- Too high a temperature. A longer time above 27 °C stresses the animal, and above 30 °C it may die.
- Dehydration because of too low humidity. The gecko drinks droplets, so mist daily.
- Too little calcium and vitamin D3, especially in breeding females, which causes soft bones and eggs that become stuck.
- Parasites and infections in wild-caught animals. Have a faecal sample examined by a vet with reptile experience, preferably before the animal moves in with your other animals.
- Stagnant, humid air, which causes mould and respiratory infections.
- Stress from handling, strong light and disturbance, which can make the animal stop eating.

A healthy animal has clear eyes, a plump tail and a good grip. Seek a vet if the gecko loses weight, does not eat for a couple of weeks, breathes with difficulty or seems lethargic.

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.