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CHAMELEONS

Carpet chameleon

Furcifer lateralis

Furcifer lateralis is a small, colourful chameleon from the forests, scrub and gardens of Madagascar. The female is especially strongly patterned, particularly when gravid. The species reaches only 17-25 cm, matures in a few months and lives only 2-3 years, and its modest size makes it a manageable chameleon for the experienced keeper.

Family: Chamaeleonidae English name: Carpet Chameleon Former name: *Chamaeleo lateralis; Chamaeleo lambertoni*

KEY FACTS

THE ANIMAL

Adult size	**17-25 cm** total length incl. tail
Lifespan	**2-3 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Savanna and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**45 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**24-29 °C**
Basking spot	**32-35 °C**
Temperature, night	**18-22 °C**
Humidity	**60-100%**
UVB	**Essential** Ferguson zone 3
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**3-6 months**
Clutch size	**6-23 eggs**
Clutches per year	**3-6**
Incubation	**150-400 days** at 20-25 °C

PROTECTION AND PAPERWORK

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

About the species

Furcifer lateralis is a small chameleon of 17-25 cm in total, about half of which is tail. The body is slender with a low casque, and the skin has a smooth, velvety surface. A ring of stripes radiates from the eye, and along the flank runs a white lateral stripe with three to four large, oval spots. The name refers to precisely this lateral stripe (Latin *latus*, side).

Males are mostly green and blue with pale and dark markings. Females are more heavily built and display an almost unrivalled range of colours: green, red, blue, yellow, white, black, orange and violet. Gravid and receptive females change to gentle pastel colours, while females that reject a male become almost black with strong red and blue colours. The sex can be seen from the male's swollen tail base, even in newly hatched juveniles.

Previously two populations were included in the species: the larger *F. major* in the south and the greener *F. viridis* in the west and north. They are now regarded as separate species, and in the trade the species can be confused. Wild-caught animals are stressed and often weakened, and they are difficult to keep alive. Captive-bred animals are hardy and are the only reasonable choice.

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

Distribution and habitat

Furcifer lateralis is native to Madagascar. The species occurs in the eastern and central part of the island, from about 100 m up to just under 2,000 m, and it is abundant in many places.

It is one of the most common chameleons on the island. Earlier reports also included the south, west and north, but there the two now separated species *F. major* and *F. viridis* live.

> **Native range:** Madagascar.

HABITAT

The species lives in humid and dry forest, in humid savannas, scrub, grassland and often in densely planted gardens and on cultivated land. It is found up to just under 2,000 m elevation and tolerates a certain degree of habitat disturbance.

The animal sits in bushes and low trees and is diurnal and sun-loving. In the morning the animal is dark, so that it warms up quickly in the sun. The differences between individual populations are large in size and colour. Blue-green animals are found in humid areas with heavy rainfall, and brown animals are found in dry areas.

Care

THE ENCLOSURE

An adult needs an enclosure of at least 45 × 45 × 60 cm (length × width × height). The species is small and manages in a smaller enclosure than the large chameleons, but height is important, because it uses the bushes from bottom to top.

A glass enclosure holds heat and humidity better than a pure mesh enclosure. The lid must be mesh, and at least one side must have ventilation openings so the air does not stand still. Mesh enclosures can also be used, but they require stronger heat and more frequent and longer spraying. The species likes to climb up the mesh, so never use fine mesh, which can injure toes and claws.

Furnish the enclosure densely planted: a live, bushy plant such as a rubber plant or *Schefflera* fills about half of the space and provides cover, climbing room and drinking water. Add thin branches in many thicknesses and angles, both at the top in light and heat and at the bottom in shade. As substrate, use a drainage layer of 3-5 cm of expanded clay pebbles or small stones, a fabric barrier, 8 cm of soil made of equal parts sand and peat and 3 cm of dead leaves.

Read more: Humidity, misting and ventilation Read more: Terrarium construction and bioactive substrate

TEMPERATURE

The daytime temperature should be 24-29 °C. Use a basking spot of 32-35 °C, measured as surface temperature with an IR thermometer, and let the upper part of the enclosure be at 27-29 °C and shaded spots and the bottom at 21-24 °C. The gradient is important, because the animal must be able to choose.

The night temperature is 18-22 °C. The drop is achieved by switching off all lamps. In winter all values are 3-5 °C lower.

A halogen bulb with a dimmer is a good heat source in small enclosures, because it gives precise control over the heat. Taller enclosures require a more powerful bulb. All lamps are connected to a timer.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 60-100 %. The enclosure may dry out during the day, as long as the air is relatively humid and the animal can drink daily. Ventilation is necessary, otherwise the soil becomes too wet, and mould and respiratory infections follow.

The animal drinks water droplets from the leaves and sides, not from a dish. Mist two to three times a day for 30-60 seconds, until the leaves are covered with droplets, and stop before the soil becomes saturated. Do not mist again until the droplets have evaporated and the top layer of soil has begun to dry. An automatic sprinkler system with a timer is a good investment, because the mist is fine and does not disturb the animal. A drip system or a humidifier also helps.

LIGHTING AND UVB

The species is diurnal and sun-loving, so it requires strong light and UVB. Use a 6500 K T5 HO tube for light and a UVB tube that gives Ferguson zone 3 at the basking spot. A mercury vapour bulb gives a lot of light and UV, but also a lot of heat, and can only be used in larger enclosures. Ordinary LED lamps do not give usable UVB.

Day length should follow the season: about 14 hours in summer, 12 hours in spring and autumn and 10 hours in winter. UVB tubes are replaced according to the manufacturer's instructions, because the output declines with age. The zone is an estimate based on the species' sun-loving way of life. The animal must be able to seek shade. Natural sunlight is good for the species, but through glass it can overheat the animal.

Read more: Lighting and UVB

FEEDING

F. lateralis is a pure insect-eater. The prey should be about as long as the distance between the eyes; mealworms may be longer. Vary the food: crickets, mealworms, superworms, cockroaches, fruit flies and bean beetles. The insects themselves should be given a rich diet of fresh fruit and vegetables. For young animals use fruit flies, bean beetles and small crickets.

The species is greedy. Young animals should have all the food they can eat every day, up to 12 insects. Adults are fed every other day, about six insects. Dust all feeder insects with a calcium powder with a little D3 and vitamins.

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

BEHAVIOUR AND HANDLING

The species is kept singly. Males are aggressive and territorial, and females stress easily. The animals can bite each other, so mating must be supervised, and the animals separated when mating is over. Juveniles do well kept in small groups until they are sexually mature, but they must then be separated and kept individually.

The species is not an animal for handling. Never pick the animal up without reason, and do not let it sit in your hand. Wild-caught animals are severely stressed by capture and transport and are fragile. Mortality is particularly high in gravid females.

Breeding

SEXUAL MATURITY AND SEXING

The male has a distinctly swollen tail base because of the hemipenes, and the difference can be seen even in juveniles just after hatching. Males are normally slightly slimmer and may be slightly larger, while females are more heavily built and usually more strongly coloured.

Both sexes are sexually mature after 3-6 months. Males seldom turn down a mating.

MATING

The species breeds all year. Bring the female to the male's enclosure. A receptive female becomes a gentle pastel colour and does not react to the male, who bobs his head and starts mating quickly. A female that is not ready becomes almost black with red and blue colours and puffs herself up with her mouth open. Take her out immediately and try again after a few days.

Mating lasts 10-30 minutes. Some females accept only one mating, others mate several days in a row. Both animals can become aggressive and bite, and pairs must therefore be supervised or separated.

EGG-LAYING AND CLUTCHES

The female lays eggs 2-5 weeks after mating. The clutch is 6-23 eggs. The female can lay 3-6 clutches a year. She can lay two or three clutches after a single mating, but a new mating after the second clutch gives better fertilisation.

A day or two before laying, the female stops eating and becomes restless. Put her in a laying box at that point: a dark plastic box of about 20 litres with a heat bulb of 20-40 W on one side and a 15-20 cm layer of a mix of sand and peat, which must be very moist but without standing water. The species often does not dig but scatters its eggs on the surface, especially when the soil is too dry. Eggs lying loose can be saved if they are found quickly, before they dry out.

INCUBATION

The eggs are placed in small tubs with lids without holes and vermiculite moistened with two thirds of its own weight in water. The temperature is 20-25 °C, and about 22 °C is a good starting point. The eggs can be incubated at a constant temperature or with a cool pause: 45 days at about 22 °C, then 45 days at about 16 °C and then 22 °C again until hatching. The pause can shorten the incubation period and make the eggs hatch closer together.

The incubation period varies greatly and is 5-13 months. During this time only a little moisture, or none at all, is added.

Read more: Incubating eggs

REARING THE YOUNG

The young weigh about 0.4 g, and care is the same as for the adults, just on a smaller scale. Give fruit flies, bean beetles and pinhead crickets. Spray the plants rather than the young, so water drops do not land on the snout.

The young grow quickly and are sexually mature after 3-6 months. They can be raised in small groups but do best singly. Differences in size may make it necessary to sort them. At the latest by sexual maturity they must be kept separately.

Health and common mistakes

Typical problems and husbandry errors:

- Infections of the airways and mouth, which are common in the species. Usually caused by poor ventilation or conditions that are too cold and wet.
- Injuries to toes and claws from fine mesh.
- Metabolic bone disease (MBD) from too little UVB or calcium.
- Stress, especially in wild-caught animals, in females and during mating.
- Overheating from too powerful a lamp or sun through glass.
- Dehydration if misting is too infrequent or the animal does not find droplets.
- Females that cannot lay their eggs, especially if there is no suitable laying site.

Contact a vet experienced in reptiles if the animal stops eating, becomes dark and limp 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.