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CHAMELEONS

Plated Leaf Chameleon

Brookesia stumpffi

Brookesia stumpffi is a small, leaf-like chameleon from the forest floor of northern and north-western Madagascar. It reaches up to about 9 cm, has a row of spines along each side of the back and changes colour only slightly. It lays 2-5 eggs and can be kept in pairs. It requires high humidity, a thick layer of leaf litter and very small feeder insects for the young.

Family: Chamaeleonidae

KEY FACTS

THE ANIMAL

Adult size	**7-9 cm** total length incl. tail
Lifespan	**3-4 years**
Active	**By day**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**40 × 30 × 40 cm** L × W × H for 2 adults
Temperature, day	**22-25 °C**
Temperature, night	**18-20 °C**
Humidity	**70-100%**
Water	**No water dish**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**In pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**5 months**
Clutch size	**2-5 eggs**
Incubation	**45-70 days** at 18-23 °C

PROTECTION AND PAPERWORK

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

About the species

Brookesia stumpffi is one of the larger species in the genus and reaches up to about 9 cm including the tail, of which at most 57 mm is snout-to-vent length. The body is flattened and leaf-like, and the head bears a backward-pointing crest with spiny projections. Along each side of the back there are 9-10 spiny scales, and the row ends in a distinct pelvic shield. The tail is without spines. The canthal ridge above the eye is rounded and not particularly large, and the snout is slightly longer than in other stump-tailed chameleons.

The colour is beige, brown, grey, dull green or rusty red, occasionally orange, and there may be indistinct yellowish spots. Colour change is weakly developed, so the animal does not change colour like the large chameleons. Males are slimmer than females and have a distinct bulge at the base of the tail. At night the animals sleep on thin branches in the bushes, and then the colour is paler.

Stump-tailed chameleons are small, calm and shy. They are not animals to pick up, but animals to watch in a well furnished enclosure. The species can produce low vibrations that humans cannot hear, and that are presumably used to communicate through the substrate.

Distribution and habitat

Brookesia stumpffi lives in northern and north-western Madagascar: on the island of Nosy Be and the small neighbouring islands of Nosy Komba and Nosy Sakatia, and on the mainland among other places along the coast at Ankify, around Ambanja, in the dry forest of Ankarana and in the rainforest of Montagne d'Ambre. The species is common in its range. The type locality is Nosy Be.

> **Native range:** Madagascar.

HABITAT

The species lives on the forest floor in leaf litter and on rotting trunks and in low vegetation, seldom higher up. It is found in rainforest, in dry forest and in disturbed stands such as coffee and cocoa plantations, and it makes few demands on its habitat. On Nosy Be, Nosy Komba and at Ankify it often lives in stony terrain with dense understorey and a moss-covered floor. At night it sleeps vertically on thin branches at about knee height.

The climate on the coast is warm all year. The monthly mean temperature is 23-29 °C, and the average night temperature falls from 22-23 °C in the rainy season to 15-16 °C in the dry season from June to August. The rainy season lasts from October to April. In the leaf litter the fluctuations are dampened, and humidity stays high, often 70-100 %.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A pair needs an enclosure of at least 40 × 30 × 40 cm (length × width × height). The size is an estimate based on the animal's size, and a male with several females needs more space. Only one male may be kept in the enclosure, because the males are aggressive towards each other. One male can be kept with one or a few females.

The substrate should be a thick layer of leaf litter on top of a moist base of, for example, soil and coconut fibre, so that the animals have a layer of litter to walk in and burrow into. Add cork, bark and thin branches so that the animals can sleep above the floor, and plant densely with small plants. The enclosure must be closed enough to hold the humidity but have some ventilation so that the litter does not go mouldy. Everything that goes into the enclosure must be clean, because the eggs and the very smallest young are sensitive.

TEMPERATURE

The daytime temperature is 22-25 °C, and at night 18-20 °C is suitable. This corresponds to the climate in the leaf litter in the range. The species does not need a warm basking spot, and a weak heat source at one end is enough. Measure the temperature at the height of the leaf litter, because that is where the animal lives.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 70-100 %, so that it stays high in the leaf litter around the clock. Mist the enclosure 1-2 times a day so that the leaves and plants are damp, but so that the surfaces are dry again before the next misting. The animal drinks droplets from leaves and cork, and it should not have a water bowl.

LIGHTING AND UVB

The species is diurnal. A weak UVB light corresponding to Ferguson zone 1 is enough, and the animal must always be able to withdraw into shade. The zone is an estimate based on its way of life on the forest floor; how much UVB the species needs is not documented. The light is switched on for 10-12 hours and off at night. The lighting must also give enough light for the plants.

Read more: Lighting and UVB

FEEDING

Brookesia stumpffi eats small insects such as crickets, fruit flies, cockroaches, waxworms and small grasshoppers. The feeders must be small, and the young are fed springtails, fruit flies and newly hatched crickets.

Feeding frequency is not documented for the species. Adults get small portions every other day and young every day; this is an estimate that suits the small animals. Dust the food lightly with calcium and offer a vitamin supplement now and then. Remove feeders that are not eaten so that they do not bother the animals.

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

BEHAVIOUR AND HANDLING

B. stumpffi is calm and diurnal and walks slowly around in the leaves. When threatened it lets itself fall and lies still like a dead leaf. This is a natural defensive behaviour and not a sign of illness.

The males are aggressive towards each other, and two males must not live together. One male with one or a few females works. Separate the animals if a female is chased or does not eat. The animals should not be handled; they are small and fragile and easily stressed.

Breeding

SEXUAL MATURITY AND SEXING

Males are slimmer than females and have a bulge at the base of the tail. Females are more heavily built. Females can breed from about 5 months of age.

MATING

During mating the male may acquire a marbled, lichen-like appearance. Put the male in with the female, and watch that she is not chased. If she is not receptive, the animals are separated again.

EGG-LAYING AND CLUTCHES

The female lays 2-5 eggs about 40 days after mating. Give her an area with damp, loose substrate and leaves where she can lay them. The eggs can be left in the enclosure or moved to an incubation container.

Read more: Incubating eggs

INCUBATION

The eggs hatch after 45-70 days at 18-23 °C. At 20-21 °C it takes about 45-60 days and at 23 °C 60-70 days. Incubate the eggs in a closed container with damp vermiculite, and leave them half buried without turning them.

REARING THE YOUNG

The young measure only about 22 mm from snout to vent at hatching and need springtails, fruit flies and newly hatched crickets every day. Keep them damp and warm in the same way as the adults, and provide plenty of hiding places. Separate the young if aggression arises. The young need humidity at all times.

Health and common mistakes

Brookesia stumpffi has been bred for a number of years, but small chameleons hide illness, and few vets have experience with them.

- Dehydration from humidity that is too low and too few drips. Signs are sunken eyes and slack skin.
- Fungal and bacterial skin infections when the substrate and surfaces are constantly wet and dirty.
- Respiratory infections in still air and overly wet conditions.
- Intestinal parasites, especially in wild-caught animals.
- Bone loss from too little calcium and too weak light.
- Loss of appetite, which is often caused by stress, wrong temperature or an enclosure that is too small.

Contact a vet with experience in reptiles if the animal stops eating, loses weight or becomes lethargic. Lifespan is around 3-4 years, but is not reliably documented.

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

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.