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CHAMELEONS

Elliot's Chameleon

Trioceros ellioti

Trioceros ellioti is a small, live-bearing chameleon from montane forest, scrub and savanna in central and eastern Africa. Colours vary widely between populations: males often show blue and yellow tones, females are brown, grey or green, and both have a pale stripe along the flank. The species needs a cool enclosure with a clear night-time drop, high night humidity and solitary housing.

Family: Chamaeleonidae Former name: *Chamaeleo ellioti; Chamaeleo bequaerti*

KEY FACTS

THE ANIMAL

Adult size	**15-22 cm** total length incl. tail
Lifespan	**2-4 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Savanna and montane forest**
Difficulty	**Experienced**

CARE

Min. enclosure	**45 × 45 × 90 cm** L × W × H for 1 adult
Temperature, day	**20-24 °C**
Basking spot	**27-30 °C**
Temperature, night	**10-15 °C**
Humidity	**30-100%**
UVB	**Essential** Ferguson zone 3
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Sexually mature	**6-9 months**
Litter size	**2-18 young**
Clutches per year	**1-4**
Gestation	**90-160 days**

PROTECTION AND PAPERWORK

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

About the species

Trioceros ellioti is a small, arboreal chameleon. Females grow to 22 cm in total length, including the tail, males to no more than 17 cm. Males are recognised by a thick tail base. The casque is weakly developed and without lobes, and low, evenly serrated crests run along the back, belly and throat. The remaining scalation is irregular. A pale or brown stripe along the whole flank, together with two to three black lengthwise stripes in the skin of the throat, separates *T. ellioti* from the closely related *T. bitaeniatus*.

Colour varies strongly, because the species occurs over a large area and at many altitudes. Male colours range across blue, yellow, green and orange, while females are mostly brown, grey or green. Even females from the same litter can differ in colour. A stressed animal turns darker.

The species is live-bearing: the female carries the eggs inside her body and gives birth to fully developed live young, which free themselves from a thin, transparent membrane within a few minutes. The scientific name honours the British botanist George Francis Scott Elliot.

The species has been bred in captivity, but the animals tolerate heat poorly and readily develop infections of the mouth and sinuses, so it calls for an experienced keeper. In the wild the animals live only 1-2 years, in captivity up to 4 years.

Distribution and habitat

Trioceros ellioti occurs in Uganda, Rwanda, Burundi, eastern and north-eastern Congo, western Kenya, north-western Tanzania and South Sudan. The species most often lives between 1,200 and 1,800 m above sea level, but has also been found both lower and higher. The type locality is Bugoye at the foot of the Rwenzori Mountains in Uganda.

The populations are numerous and separate, and the local forms differ in colour and pattern. The species is common across most of its range.

> **Native range:** Uganda, Rwanda, Burundi, Congo - Kinshasa, Kenya, South Sudan and Tanzania.

HABITAT

The species is highly adaptable. It lives in forest edges, montane forest, scrub, savanna with low bushes and tall grass, and in farmland such as plantations, gardens and fields. The animals sit in bushes and low trees and bask in the morning sun.

Temperatures in the habitat are 25-27 °C by day, and nights are cool: 16-18 °C at lower altitudes and down towards 10 °C higher up. Humidity is 60-80 %, and rainfall is about 1,000 mm a year. Nights are humid, and dew forms.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A single adult needs an enclosure of at least 45 × 45 × 90 cm (length × width × height). The species is small and does not need much space, but a small enclosure is harder to keep in balance, because light and heat quickly become too strong. A larger enclosure, for example 60 × 60 × 120 cm, makes it easier to build an even temperature gradient.

Screen, hybrid and glass enclosures can all be used; the more sides are closed, the easier it is to keep night humidity up. If the sides are closed, a small fan must keep the air moving, because stagnant air causes respiratory infections.

Furnish the enclosure with live plants, thin branches at several heights and an open basking spot near the top, so the animal can both warm up and withdraw into foliage. The animals are kept singly.

Read more: Heat and temperature

TEMPERATURE

By day the temperature should be 20-24 °C, preferably with a basking spot of 27-30 °C. The daytime temperature in the rest of the enclosure must not stay above 29 °C for long. Mount the heat lamp above the enclosure and at a good distance, so the heat is gentle and without risk of burns: chameleons do not sense when they are getting too hot and can burn themselves. Hold your hand where the animal's head sits and check that the warmth is comfortable.

At night the temperature must fall to 10-15 °C. A clear night-time drop is a prerequisite for a healthy animal, because the animal sleeps poorly at higher temperatures, and the lack of sleep weakens the immune system over time.

HUMIDITY AND WATER

Night is the humid time: 75-100 % at night, while humidity falls to 30-50 % by day. Run an ultrasonic fogger in the second half of the night, for example 30 minutes on and 30 minutes off between 1.30 and 6 a.m., and mist for a couple of minutes just before the lights come on, so the animal wakes to dew on the leaves. A drip system in the late afternoon is an extra safeguard. The species drinks droplets, not from a bowl. If the animal ignores the drip system, that is a good sign: it is getting enough water from the night fog and dew. If it drinks from it often, that is a warning that it is getting too little.

Two things matter more than the figures: the air must move when it is humid, and all surfaces must be dry during the day. Branches that are constantly wet cause sores on the feet, mould and bacteria.

LIGHTING AND UVB

The species is diurnal and needs strong light. Four T5 HO tubes of 6500 K across the width of the enclosure light a 120 cm tall enclosure well. Give 12 hours of light and 12 hours of darkness all year; the species lives close to the equator, so day length does not vary. The enclosure must be completely dark at night.

UVB is essential. Aim for a UV index of 2-3 at the basking spot and no more than 6, with a T5 HO UVB tube in a single reflector. The animal must be able to find shade. A UV meter is a great help, because the index depends on distance and mesh.

Sunlight through a window can quickly overheat a small animal and provides no UVB. Outdoor housing in a densely planted screen cage is fine in cool weather under constant supervision.

Read more: Lighting and UVB

FEEDING

T. ellioti is insectivorous and takes the usual feeder insects: crickets, grasshoppers, flies, cockroaches and silkworms. Flying insects are a favourite. The species prefers smaller prey than most chameleons, and even adults readily take fruit flies, so try different sizes and let the animal show what it prefers. Fruit and vegetables are not needed.

Adults are fed every other day with small insects, so they stay lean; young are fed daily. The insects themselves must have a rich diet of greens, fruit and grain.

Dust the insects with plain calcium without D3 at every feeding, preferably mixed with a pollen-based supplement, and give a vitamin supplement once a month. D3 is produced by the animal itself under UVB light, and the species is presumed to be sensitive to overdosing, like other montane chameleons.

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

BEHAVIOUR AND HANDLING

The species is kept singly. It is milder than many chameleons, but reacts suddenly and violently when two animals meet, and can seriously injure an animal in the same enclosure. Females raised together can be kept together for a time, but this is not safe, and the young should be separated as early as possible, because they grow quickly.

The species is a display animal, not a pet. Handling must be brief and rare. Dark colour is a sign of stress, cold or illness, but is normal in the morning while the animal warms up.

Breeding

SEXUAL MATURITY AND SEXING

Males are recognised by the thick tail base and are often more strongly coloured. Females can give birth as early as 6-9 months of age. A wild-caught female, or a female that has been with a male, can give birth without warning, even long after she was last with a male.

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

MATING

The female is put in with the male for mating. If she is receptive, she lets him mount her. If she is not, she gapes, sways threateningly and shows mottled colours. Separate them straight away in that case. The animals should only meet for mating, and mating must be watched closely. The female can store sperm and have several litters after a single mating, and she is receptive again about 14 days after giving birth.

EGG-LAYING AND CLUTCHES

The species is live-bearing, so no eggs are laid and no egg-laying box is needed. The female gives birth to 2-18 young per litter, depending on size and age, up to four times a year. Births most often take place in the morning. Gravid females benefit from sunshine, preferably outdoors in cool weather, and need plenty of food and extra calcium.

INCUBATION

There is no incubation. Gestation lasts 3-5 months (90-160 days). Throughout gestation the female must have the night-time drop and the fog. If she does not give birth on time, or turns dark, limp and stops eating, she must see a vet experienced with reptiles.

Read more: Incubating eggs

REARING THE YOUNG

Newborn young are about 3 cm long and very delicate. Feed them fruit flies, newly hatched crickets and springtails. Mist them gently with lukewarm water in a fine fog, so the eyes are not damaged and they do not inhale water. The young seem calm towards each other, but should be separated as early as possible. They become sexually mature after 6-9 months.

Health and common mistakes

Typical problems and mistakes in husbandry:

- Infections of the mouth and sinuses. Signs are mucus, gaping and swollen jaws. The species is particularly prone, so check for symptoms every day.
- Heat stress and burns from a basking spot that is too hot or sits close to the lamp. Burns show as grey areas or melted dorsal spines.
- Respiratory infections from stagnant air or surfaces that are too wet. Signs are open-mouth breathing and mucus.
- Metabolic bone disease (MBD) from too little UVB or calcium: soft jaws and crooked limbs.
- Sores and mould on the feet from branches that are wet all the time.
- Poor sleep and a weakened immune system when nights are too warm or too bright.

Contact a vet experienced with reptiles if the animal stops eating, turns dark, becomes limp or has difficulty breathing.

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.