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CHAMELEONS

Crested Chameleon

Trioceros cristatus

Trioceros cristatus is a medium-sized chameleon from the lowland forests of West and Central Africa. The male has a tall, fan-shaped sail crest on the back and tail, and the skin between the throat scales is bright red or orange. The species is difficult to keep and needs constantly high humidity, so it is only for the very experienced keeper.

Family: Chamaeleonidae Former name: *Chamaeleo cristatus*

KEY FACTS

THE ANIMAL

Adult size	**25-28 cm** total length incl. tail
Lifespan	**3-5 years**
Active	**By day**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Rainforest**
Difficulty	**Expert**

CARE

Min. enclosure	**60 × 60 × 90 cm** L × W × H for 1 adult
Temperature, day	**23-25 °C**
Temperature, night	**20-23 °C**
Humidity	**80-100%**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**11-37 eggs**
Clutches per year	**1-2**
Incubation	**240-300 days** at 19-22 °C

PROTECTION AND PAPERWORK

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

About the species

Trioceros cristatus is a medium-sized chameleon. The female is the larger and reaches about 28 cm in total, the male about 25 cm. The tail is relatively short in proportion to the body. The head is flat, and behind it rises a tall, pointed casque formed by the lateral crests. The central parietal crest is simple. The scales are smooth, with scattered, larger, flat scales among the ordinary ones. The species name *cristatus* means crested and refers to the crests on the back and tail, which were first described in this very species.

The male has a tall, fan-shaped sail crest on the back and tail, which is less developed in the female. The base colour is brown, green, khaki, reddish brown or grey, uniform over the body, with an irregular, net-like pattern. Females are greener, while males are mostly brown, khaki and grey. The skin of the throat between the scales is bright red or orange. The male has bright blue scales along the edge of the casque, which light up during territorial display.

Longevity is not documented; 3-5 years in the table is an estimate based on other medium-sized *Trioceros* species. Temperament differs between the sexes: males are usually shy, while females can be aggressive. The species was described as *Chamaeleon cristatus* in 1837, was long placed in the genus *Chamaeleo* and has belonged to *Trioceros* since 2009. In older literature it is called *Chamaeleo cristatus*.

Distribution and habitat

Trioceros cristatus lives in West and Central Africa: on the island of Bioko and in Equatorial Guinea (Mbini), Cameroon, the Central African Republic, Congo (Brazzaville), Gabon, Nigeria, Ghana and Togo. The type locality is Gabon. It is also reported from the Democratic Republic of the Congo, but the occurrence is uncertain, and the country is not included on the map.

The species has a very large range of more than 1,000,000 km². It is listed as Least Concern (LC) on the IUCN Red List. Habitat is being destroyed in many places, but the species tolerates disturbed areas to some extent. It is occasionally collected for the pet trade, and some local populations may have declined as a result.

> **Native range:** Equatorial Guinea, Cameroon, Central African Republic, Congo - Brazzaville, Gabon, Nigeria, Ghana and Togo.

HABITAT

The species occurs from sea level up to about 900 m and lives in forest, including secondary forest, in mosaics of forest and savanna and on farmland. It is thus a lowland animal and not a montane species like many of the other *Trioceros* species.

The climate is warm and very humid all year round. The species lives low in the vegetation and spends more time on the ground than most chameleons.

Care

THE ENCLOSURE

Little is known about the care of *Trioceros cristatus*, and the species is very difficult to keep, even for experienced keepers. An adult needs an enclosure of at least 60 × 60 × 90 cm (length × width × height). The size is borrowed from the related *Trioceros quadricornis* and *Trioceros montium*, which are of similar size. The species is kept alone.

A mesh or hybrid enclosure provides the ventilation chameleons need, even at high humidity, while glass sides act as mirrors, so the animal thinks there is a conspecific nearby. Furnish the enclosure densely with live plants and clean, dry branches of various thicknesses. The species spends more time on the ground than most chameleons, so provide both low and high perches and cover part of the floor with leaf litter and plants. Avoid toxic plants such as ivy and philodendron. Put up a thermometer and hygrometer from day one.

Read more: Humidity, misting and ventilation

TEMPERATURE

The temperature should be fairly constant: 23-25 °C by day and only a couple of degrees lower at night, 20-23 °C. The species rarely basks, so a strong hot spot is not needed. A small, low-wattage lamp is enough, and the enclosure must not become as warm as for heat-loving species such as *Chamaeleo calyptratus*. Watch whether the animal seeks out the lamp, as this can be a sign of illness or stress.

HUMIDITY AND WATER

The species requires an extremely humid, almost wet environment. An ultrasonic fogger that runs constantly and lays dew in the enclosure, and an even drip system during the day, cover the need. Humidity should be 80-100 % around the clock.

The animal drinks droplets from leaves and branches and not from a bowl. The air must at the same time be moving, so that plants and branches can dry off a little now and then, and so that bacterial and fungal growth does not develop. Sunken eyes and wrinkled skin are signs of dehydration.

LIGHTING AND UVB

The species is diurnal. It rarely basks, but benefits from plenty of UVB, and two UVB tubes over the enclosure can be used. Zone 2 is an estimate based on related forest chameleons such as *Trioceros deremensis*. This corresponds to a UV index of 1-3 at the spot where the animal comes closest to the light, and shade further down. Replace tubes according to the manufacturer's instructions. Day length is about 12 hours, because the species lives close to the equator. Ordinary window glass filters out UVB, so natural sunlight requires that the animal is outside without glass, and there must be plenty of shade so that it does not overheat.

Read more: Lighting and UVB

FEEDING

Trioceros cristatus is an insectivore. Most ordinary feeder insects are taken readily, but the species is not an aggressive hunter. It has a liking for caterpillars, for example waxworms and other caterpillar-like feeders, which should only be given sparingly because they are fatty. Otherwise offer as varied a diet as possible and let the feeders run freely in the enclosure.

Males in particular are sensitive to supplements. If the feeder insects are themselves well fed, for example on carrots and leafy greens, little or no vitamin supplement is used. Feeding frequency and quantities are not documented for the species.

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

BEHAVIOUR AND HANDLING

The species is kept individually. Temperament varies from shy (usually the males) to aggressive (usually the females). Several animals together cause stress, and handling is limited to what is necessary.

A healthy animal has plump, firm skin, not wrinkled, and large, round, alert eyes. Check the mouth for sores, tongue inflammation and a lot of saliva, and listen for wheezing or crackling when it breathes. Wild-caught animals should have a faecal sample examined by a vet familiar with chameleons.

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

Breeding

SEXUAL MATURITY AND SEXING

The male has the tall sail crest on the back and tail and bright blue scales along the casque. The female is the larger and greener. Age at sexual maturity is not documented.

MATING

Only a little information exists on the breeding of the species, and the course of mating is not documented. Gestation lasts 3.5-4 months, and the female can lay two clutches in a year.

EGG-LAYING AND CLUTCHES

The female usually lays 11-14 eggs, but clutches of up to 37 eggs occur. She needs a bucket or tub with at least 30 cm of moist potting soil to dig in; the depth is borrowed from *Trioceros quadricornis*. There must be no standing water at the bottom.

INCUBATION

The eggs develop very slowly and hatch after 8-10 months at about 22 °C by day and a few degrees lower at night. They are laid half-buried in moist vermiculite in a closed container, which stands in a place with a stable temperature.

REARING THE YOUNG

Rearing of the hatchlings is not documented for the species. Like other chameleons, newly hatched young dry out quickly, so they must be kept under the same humid conditions as the adults and be given small feeders. Keep them individually, or separate them early.

Health and common mistakes

Typical problems and care mistakes:

- Dehydration: sunken eyes, wrinkled skin and loss of appetite. Caused by humidity that is too low and too little drinking water.
- Respiratory infections: wheezing breathing, saliva and open-mouth yawning. Caused by stagnant air and stress.
- Overheating and heat stress: lethargy and dark colour.
- Overdosing of vitamin supplements, to which males in particular are sensitive.
- Egg-laying problems in females.
- Intestinal worms and other parasites in wild-caught animals.

Contact a vet experienced with reptiles if the animal stops eating, if sunken eyes do not recover, or if it has difficulty breathing.

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.