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GECKOS

Lesser rough-snouted gecko

Rhacodactylus trachycephalus

Rhacodactylus trachycephalus is a rare, nocturnal climber from the Isle of Pines and the small island of Môrô in New Caledonia, and it gives birth to live young. The species is critically endangered in the wild and rare in captivity. Its care resembles that of the other *Rhacodactylus* species, but the animals are expensive, grow slowly and have at most two young a year.

Family: Diplodactylidae Former name: *Chameleonurus trachycephalus; Rhacodactylus trachyrhynchus trachycephalus*
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KEY FACTS

THE ANIMAL

Adult size	**10-14 cm** snout-vent length
Lifespan	**15-20 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**45 × 45 × 90 cm** L × W × H for 4 adults
Temperature, day	**22-26 °C**
Temperature, night	**18-21 °C**
Humidity	**65-70%**
Water	**Water dish**
UVB	**Optional**
Diet	**Insects and complete diet**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Live-bearing**
Sexually mature	**36-60 months**
Litter size	**1-2 young**
Clutches per year	**1**
Gestation	**180 days**

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Critically Endangered (CR)**

About the species

Rhacodactylus trachycephalus is a medium-sized gecko with a broad head, a rough snout and a prehensile tail about as long as the body. The snout-vent length reaches at most 14 cm. The scientific name comes from Greek *trachys* (rough) and *kephale* (head) and refers to the coarse scales on the snout. The eyes are large, and the toes are relatively broad. The scales form a mosaic pattern of white, brown, grey and green in various shades.

The species was described in 1878 by Boulenger as *Chameleonurus trachycephalus*. It has since been treated as a subspecies of *Rhacodactylus trachyrhynchus*, but it is now regarded as a separate species. It is distinguished from *R. trachyrhynchus* by being smaller (at most 14 cm against 19 cm in snout-vent length), by proportionally larger eyes, fewer scale rows at midbody (at most 111 against at least 119) and by the rostral scale not touching the nostril. The scales at the snout are smaller and less rough.

The colours range from green, yellow and cinnamon-brown shades to grey, black, white and chocolate brown, and some animals have dalmatian spots. The pattern can be blotched, cross-banded or entirely uniform. With regular handling the animals become tame and easy to pick up.

The species is one of the few geckos that give birth to live young, and it has only one or two young a year. This is one of the reasons it is so rare in captivity. The animals reach sexual maturity only after three to five years, and the price often starts in four figures, if you can find an animal at all. Lifespan is not documented; 15-20 years is an estimate based on related species.

Distribution and habitat

The species is found only in New Caledonia in the south-western Pacific. The type locality is the Isle of Pines south of the main island of Grande Terre, and the species is also known from the small island of Môrô. The reports do not entirely agree: some state that it lives on both islands, while others mention only Môrô. Records on Grande Terre itself are not documented.

The range is extremely small. The population on the small island can be wiped out by a single catastrophe, and both populations are very vulnerable. The species is therefore listed as critically endangered. The threats are fragmentation and loss of forest, illegal trade and introduced species: the little fire ant, cats and rats, which eat both young and adults.

> **Native range:** New Caledonia.

HABITAT

Rhacodactylus trachycephalus lives in humid forest. It is nocturnal and stays in the lower layers of the forest, where it climbs on trunks and branches. Where it lives together with *Rhacodactylus leachianus*, there is a vertical division of labour: *R. trachycephalus* uses the lower storeys, while *R. leachianus* is most often found higher up in the canopy.

In the closely related *Rhacodactylus trachyrhynchus* the animals rest by day in tree hollows, and several animals can lie close together in the same hide, which retains both heat and moisture. Whether *R. trachycephalus* does the same is not documented. There are no detailed measurements of temperature and humidity at the species' habitats, and the altitude range is not documented. The climate of New Caledonia is subtropical and humid, and the enclosure's rhythm with a humid, mild and dark night is based on experience with related *Rhacodactylus* species.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

The species thrives best in a vertical enclosure of at least 45 × 45 × 90 cm (length × width × height). It holds one to four animals, and a larger enclosure is always an advantage. Place a large, hollow cork tube vertically in the enclosure, so the animals have a basking spot at the top under the light. Outside the hide the animals rest on the side of the cork tube with the head up or down. This is especially important for pregnant females, who can thereby regulate the temperature for the young in their bodies themselves.

Use several hollow cork tubes for resting during the day and as a place where the females can give birth. The tubes must be closed at one end, for example by standing firmly against the floor or a side wall. Preferably give each animal its own small tube, so it can withdraw. Pregnant females retreat entirely by themselves before giving birth and may growl and chirp to show that they do not want to be disturbed. A live plant provides cover and keeps the humidity up.

With several animals, new animals must be introduced on neutral ground, preferably in a new enclosure where none of the species has lived before. Males can live peacefully together if they were raised together from small. Adult males placed together can kill each other. Females can be kept together in larger groups but must be introduced carefully if they have not known each other since they were young.

Juveniles can be kept in a small plastic box of about 30 × 20 × 20 cm with ventilation grilles in the lid, about 4 cm of sterilised soil as substrate, a couple of branches, a piece of cork bark as a hide, a handful of sphagnum and a very small water dish.

Read more: Heat and temperature

TEMPERATURE

No precise temperatures have been measured for *Rhacodactylus trachycephalus* in the wild, so the figures are based on experience with the species in captivity and with related *Rhacodactylus* species. The whole range lies between 18 and 29 °C. The daytime temperature should be about 22-26 °C, and at night it may fall to 18-21 °C.

Keep the summer temperature below 26 °C both day and night if you can. In winter the animals can have a cool period in which they eat and move less. Let it follow the seasons, but never let the temperature fall below 18 °C at night and 23 °C by day.

The temperature should never exceed 29 °C, and it is wise to keep the enclosure away from the sun and south-facing windows. Use a digital thermometer and a thermostat if you use extra heat. A 60 W lamp over the cork tube gives a warmer spot, but no particular hotspot temperature has been documented for the species.

HUMIDITY AND WATER

The humidity should be about 65-70 %. It can be maintained with a live plant, damp sphagnum in a hide and regular misting. For related, larger *Rhacodactylus* species 50-75 % and misting three to four times a week are given, and the figures can be used as a guide. The enclosure must be damp, but not wet, and the ventilation must be good.

Provide a large, shallow dish of fresh water in the enclosure. A dish of about 20 cm in diameter and a few cm deep gives room for the animals to sit and lie in the water if they wish. Juveniles get a very small dish, at most about 5 cm wide and 2-3 cm deep. Put a couple of floating plastic balls from an aquarium filter in the dish, so the feeder insects can climb out and do not drown.

LIGHTING AND UVB

The species is entirely nocturnal and comes out only when it is dark. It has not been shown that UVB is necessary. The species has, however, been bred with good success under UVB fluorescent tubes and a 60 W heat lamp, on for 12 hours and off for 12 hours, because all *Rhacodactylus* species probably bask a little in the wild. A weak UVB light with good shade can therefore be an advantage. Related, nocturnal *Rhacodactylus* species manage without fluorescent tubes but must never stand in direct sun.

Use a timer. It must be completely dark at night, and coloured night light is not necessary.

Read more: Lighting and UVB

FEEDING

The diet consists of live insects and a dry pollen and nectar food for day geckos, which is available at all times. Give four adult crickets per adult animal once a week. The insects must be well fed and dusted with calcium with vitamin D3 every time. Feed in the evening when the light is off, because the animals come out only in full darkness.

For related *Rhacodactylus* species a ready-made food for fruit-eating geckos, mixed to a thick paste, is also used two to three times a week. Leftovers are removed after 24-36 hours. Newborn mice are not taken by this species, but are taken by *Rhacodactylus trachyrhynchus*.

Juveniles get their first feeder insects after about a week: two-week-old crickets, no wider than the juvenile's head, dusted with calcium with D3. Also put out a small dish of dry food for day geckos. Do not give fruit puree as the only food, because it easily causes metabolic problems.

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

BEHAVIOUR AND HANDLING

The species is calm, and with regular handling the animals become tame and just as easy to pick up as *Correlophus ciliatus*. The animals are active at night, so handle them in the evening. The gecko can bite if it feels threatened, and a bite from larger related species hurts.

The species is social and can be kept in pairs or groups if the enclosure has many hides and if the animals have known each other since small or are introduced with care. Give each animal its own hide. Females about to give birth withdraw and may growl or chirp. Watch for restlessness, bites and missing tails, and separate the animals if necessary.

Breeding

SEXUAL MATURITY AND SEXING

The species reaches sexual maturity only after three to five years, so it takes a long time to get animals that can be bred. How to sex young animals most reliably is not documented for this species. In geckos of the family the males are normally recognised by a bulge at the base of the tail and pores in front of the vent, when they are large enough. Do not breed young, slight females.

MATING

Mating typically takes place between January and April, peaking around March. It takes place at night and is very rarely seen. Breeding groups are kept together all year, so you avoid problems with reintroducing the animals.

The animals go through a cool period in winter in which they eat and move less. It follows the natural shift of the seasons. Do not let the temperature fall below 18 °C at night and 23 °C by day, and do not let it exceed 26 °C in summer.

EGG-LAYING AND CLUTCHES

Rhacodactylus trachycephalus does not lay eggs but gives birth to live, fully formed young. Gestation lasts about six months, and the female normally has twins. There is only one litter a year, usually in autumn, and never more than two young.

The pregnant female retreats to one of the closed cork tubes and may growl or chirp to show that she does not want to be disturbed. Birth takes place at night. Sexually mature females must have plenty of calcium and insects throughout the pregnancy.

INCUBATION

Since the species gives birth to live young, there is no incubation. The same applies to egg-laying and lay boxes. Instead, the gestation of about six months is the time the female needs. During pregnancy the female regulates the temperature herself by placing herself in the resting place at the top of the enclosure, where it is warmest. There must therefore always be a vertical cork tube under the light. Keep the enclosure stable, and disturb the female as little as possible in the last weeks.

Read more: Incubating eggs

REARING THE YOUNG

Young are fully formed at birth. They should be taken out of the breeding enclosure as soon as they are discovered, because newborn young can be eaten by other animals in the enclosure. In *R. trachyrhynchus* the males are fed newborn mice up to a birth, so they take no interest in the young. This species does not take mice, so here the most important thing is to remove the young quickly.

Furnish the young's box as described under enclosure. Give the first feeder insects after about a week. Guidance on weight and growth is not documented for the species, and it takes three to five years before the animals are adult.

Health and common mistakes

There is almost no documented experience of diseases in *Rhacodactylus trachycephalus*, and much of the following is based on related *Rhacodactylus* species. The typical problems are:

- Fights between adult males that have not grown up together. They can end in death.
- Cannibalism: newborn young can be eaten by other animals in the enclosure.
- Loss of the tail in fights or if you grab it.
- Metabolic problems if the young are given only fruit puree. Provide calcium and D3 and a varied diet.
- Skin infections if hides and substrate are constantly wet. Keep the hide damp, but not wet.
- Stress and temperatures that are too high.

See a vet with reptile experience if the animal loses weight, does not eat or is limp.

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.