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GECKOS

Bibron's thick-toed gecko

Chondrodactylus bibronii

A robust, nocturnal rock gecko from the Karoo and the arid regions of southern Africa, with thick toes, knobbly skin and dark crossbands. It is hardy and easy to keep, but is often sold under the wrong name: many animals in the trade are in fact the closely related *Chondrodactylus turneri*.

Family: Gekkonidae Former name: *Pachydactylus bibronii; Pachydactylus bibroni; Tarentola bibronii*

KEY FACTS

THE ANIMAL

Adult size	**15-20 cm** total length incl. tail
Lifespan	**6-8 years**
Active	**At night**
Lifestyle	**Rock-dwelling**
Habitat	**Semi-desert and rocky terrain**
Difficulty	**Beginner**

CARE

Min. enclosure	**60 × 40 × 40 cm** L × W × H for 2 adults
Temperature, day	**24-28 °C**
Basking spot	**30-33 °C**
Temperature, night	**19-23 °C**
Humidity	**30-50%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Clutches per year	**2-6**
Incubation	**45-60 days** at 27-28 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Chondrodactylus bibronii is one of the largest geckos in southern Africa and more heavily built than most other geckos. The skin is covered with large, keeled tubercles, which give it a knobbly appearance. The base colour is light to medium brown or greyish, and dark brown crossbands run across the back, often with pale dots just behind the bands. In newly hatched juveniles the pattern is distinct and continuous, while in adults it is more broken. Males are slightly larger than females and can be recognised by a thickened tail base, where the hemipenal pouches sit.

As an adult the species reaches 15-20 cm including the tail, and the tail makes up about half. There are no reliable weight figures.

The species was described in 1846 by Andrew Smith as *Tarentola bibronii* and named after the French zoologist Gabriel Bibron. It has since been called *Pachydactylus bibronii*, and it was only in 2005 that it was moved to the genus *Chondrodactylus*, so both names are still used in the literature and the trade. The spelling *bibroni* is an error that is also often seen.

The species is easily confused with its close relatives. Formerly both *C. turneri* and *C. laevigatus* were included in *C. bibronii*, and most of what is called *bibronii* in old books is today one of the two. The true *C. bibronii* has a far smaller range and has rarely been exported, so the animals sold as *C. bibronii* are probably *C. turneri*, which looks almost identical. In the true *C. bibronii* the crossbands are regular and dark brown, while in the common terrarium form they are broken and irregular. If the species name matters to you, e.g. for breeding, ask the seller for the origin and photos of the parent animals, and bear in mind that an animal sold as *C. bibronii* may be *C. turneri*.

The temperament is not gentle. The species is territorial, the males are very aggressive towards each other, and it will readily bite in defence. It is a species to watch, not to handle.

Distribution and habitat

The species lives in southern Africa, first and foremost in South Africa, where it is found in the provinces of Western Cape, Eastern Cape, Northern Cape, Free State and North West. From there it only just reaches into the border regions of southern Namibia and Botswana. In South Africa it is common.

The range became much smaller when *Chondrodactylus turneri* and *C. laevigatus* were separated out as distinct species. Older records further north and east, including from Eswatini, date from before the split and probably refer to *C. turneri*, which lives from Tanzania and Zimbabwe down to north-eastern South Africa. Eswatini is therefore not marked on the map. The species has been introduced to Florida in the USA, where animals have been found in Manatee County. Records outside southern Africa on the map are from introduced or escaped animals and do not belong to the natural range.

> **Native range:** South Africa, Namibia and Botswana.

HABITAT

The gecko is a rock dweller and lives on rock outcrops and piles of stones in the Karoo and in the scrub of the semi-desert, where it hides in crevices between stones and under loose bark. It has also become a human commensal and is found around houses, where at night it hunts around the lamps and takes the insects the light attracts.

It is nocturnal and spends the day in hiding, often several animals together. Only about 39 % of wild animals live alone, and a group never contains more than one adult male. Solitary males are smaller than males in groups. Whether the groups are due to a lack of good hiding places or a genuine attraction between the animals is not known. Many wild animals are missing toes or pieces of skin after fights.

The habitats are dry. Their temperature and humidity are not known precisely, so the figures in the care section are based on terrarium keeping.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

One adult or a pair needs an enclosure of at least 60 × 40 × 40 cm (length × width × height), and bigger is better. A male with two or three females needs at least 80 × 40 × 40 cm and plenty of hides, so that nobody is pushed into a corner.

Furnish with stacked flat stones, cork bark and slanted pieces, so that many crevices appear at different heights. It is the hides that matter. Coarse sand or grit with layers of stone on top is a classic substrate. Juveniles can swallow fine sand together with their food, so for them wood chips or coarse grit without fine particles are a safer choice. Build the stones stably or glue them in place so that they cannot slip and crush the animal. A few sturdy plants or artificial plants give extra cover.

The enclosure should have ventilation at the top and preferably at the bottom, and the lid should fit tightly, because the gecko can squeeze through narrow gaps.

TEMPERATURE

The species copes with ordinary warmth as long as part of the enclosure is warmer than the rest. Keep 24-28 °C during the day with a warm corner of 30-33 °C, and let the temperature fall to 19-23 °C at night.

Use a heat bulb or a heat mat on the side, controlled by a thermostat, and measure both at the warm spot and at the cool end. The gecko must be able to choose its temperature. If it often sits under the lamp during the day, that is not a sign of illness, because many animals in captivity like to bask under a weak light and are out during the day. The species has no known winter rest.

Read more: Heat and temperature

HUMIDITY AND WATER

The species belongs in arid regions, and the terrarium should be dry and airy with a humidity of around 30-50 %. Mist daily with a little water, so the animal can lick the droplets off stones and glass, and let it dry out again during the day. A water bowl is not strictly necessary, but a shallow bowl of fresh water does no harm and is a good idea for breeding animals.

Keep the substrate dry, and make a small humid zone, e.g. a hide box with slightly damp sphagnum, for shedding. It can also be used as a laying site.

LIGHTING AND UVB

The species is nocturnal and does not need UVB when the insects are dusted with calcium and vitamin D3, but many animals in captivity like to bask under a weak light. A weak UVB tube for shade-dwellers (Ferguson zone 1) can therefore be used as an optional supplement, mounted so the animal can always retreat into the shade. Without UVB, calcium with D3 on the insects is all the more important.

Keep a fixed daily rhythm with 12 hours of light in summer and slightly shorter days in winter, controlled by a timer. It should be dark at night.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

The gecko is an insectivore and takes almost anything it can overpower. Crickets and mealworms are the classic staple, supplemented with locusts, dubia roaches and, once in a while, wax moth larvae. The insects should be smaller than the distance between the animal's eyes and preferably have been well fed before being offered. Dust them lightly with calcium, and give a multivitamin supplement with D3 about once a week.

Give juveniles insects every day or every other day and adults two to three times a week, and adjust according to the animal's condition, especially the fullness of the tail. Daily feeding of adults makes them fat easily. Breeding females need extra calcium, so the eggshells become hard. A newborn mouse can occasionally fatten up a female, but it is unnecessary and does not belong in the regular diet.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is territorial, and adult males fight, often losing toes or pieces of skin. Males must therefore never be kept together. One male can be kept with two or three females if the terrarium is large and has many hides. Watch for bites, and separate the animals if one is being chased or is injured. Keeping them singly is the safest way.

The gecko is best kept as an animal to observe. It will readily bite when it feels threatened, and should only be handled when necessary. Give new animals a couple of weeks in peace. By day the animals stay in hiding, and they are most active after nightfall. In the wild they readily share a crevice, but that does not mean they are gentle towards their own kind.

Breeding

SEXUAL MATURITY AND SEXING

The males are more heavily built and can be recognised by a clearly thickened tail base, where the hemipenal pouches sit. The species lacks the external features that many other geckos have, e.g. femoral pores, so the shape of the tail base is the best way to sex them. The males are also the most aggressive, and the females are generally slightly smaller.

Captive-bred animals can be breeding after about 18 months. Do not breed young, light females before they are fully grown, because egg production drains them of calcium.

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

MATING

No special preparation is needed for breeding, and for breeding a small colony with one male and two or three females is the best set-up. Mating takes place mostly at night and is rarely seen. Watch that the male does not chase the females too hard, and remove him if one of them is injured.

Whether the species needs a cool period in winter is not known. A seasonal rhythm with slightly lower temperatures and shorter days is unlikely to do harm and can be tried. Give the females plenty of calcium and insects throughout the season.

EGG-LAYING AND CLUTCHES

The female lays two hard-shelled, round eggs in each clutch, about 1 cm in diameter. Young females may lay only one egg. In the wild the female normally lays two clutches a year, while females in captivity can lay three to six clutches or more.

The eggs are laid under a stone or a piece of bark in a slightly damp spot. In the wild good sites are rare, so several females may use the same one. Give the females a couple of hide boxes with slightly damp sphagnum or damp sand, and check for eggs every day.

INCUBATION

The eggs can stay in the enclosure or be moved to an incubator. Incubate at about 27-28 °C, and they hatch after 45-60 days, most often after 55-60 days.

Hard-shelled gecko eggs must lie on a slightly damp, never wet substrate and must not be turned. The exact humidity is not known, and it is also not known whether temperature affects the sex of the young.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are about 5 cm long at hatching, have a more distinct pattern than the adults and are little eating machines that take almost any insect they can get into their mouths. They should grow up singly or in small groups, because they fight. If they are kept with the adults, there must be plenty of hides, but they may still end up as prey.

Use wood chips or coarse grit as substrate instead of fine sand, so they do not swallow too much of it. Give small insects dusted with calcium and D3, and keep the terrarium dry with a small humid zone for shedding. Weigh the young regularly so that you can follow their growth.

Health and common mistakes

The species is hardy, and most problems are due to husbandry and diet. The typical mistakes are:

- Too little calcium and D3, especially in young animals and breeding females. This causes soft jaws, bent limbs and tremors. Dust the insects with calcium, and give a multivitamin supplement once a week.
- A terrarium that is too damp, without ventilation, which causes mould and skin problems. The species comes from arid regions.
- Sand and fine particles in the substrate, which juveniles in particular can swallow and become constipated from.
- Fights and bites, in which toes, tail tips and skin are torn off. Separate the animals in good time.
- Overfeeding with fatty insects such as mealworms and wax moth larvae, which produces overweight animals.
- Stuck shed on the toes and tail tip after shedding. A humid zone prevents this.

The species has no known diseases of its own, so the general advice for geckos applies. Seek a vet with experience in reptiles if the animal loses weight, has sunken eyes, has difficulty shedding or does not eat for several weeks.

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.