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GECKOS

Blue-tailed day gecko

Phelsuma cepediana

Phelsuma cepediana is a medium-sized, light green day gecko from Mauritius, where the male has a bright blue back and tail with dark red spots and streaks. It requires a tall, warm and humid enclosure with UVB light and is so territorial that it is best kept alone or as a closely monitored pair.

Family: Gekkonidae Former name: *Phelsuma cepedianum*

KEY FACTS

THE ANIMAL

Adult size	**10-14 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**By day**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 1 adult
Temperature, day	**24-27 °C**
Basking spot	**32 °C**
Temperature, night	**18-23 °C**
Humidity	**60-70%**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects, fruit, nectar and complete diet**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**12-14 months**
Clutch size	**1-2 eggs**
Incubation	**40-45 days** at 28 °C

PROTECTION AND PAPERWORK

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

About the species

Phelsuma cepediana is a medium-sized day gecko that grows to 10-14 cm including the tail as an adult. The female is usually slightly smaller than the male. The base colour is light green or bluish green, and there is always a stripe along the side of the back, though it may be broken. A red line runs from the nostril to the shoulder.

The male is the most conspicuous. The back is bright blue and covered with dark red spots and streaks, the tail is deep blue, and the blue colour can also be seen in the face. The female lacks the bright blue colour. She has a green back with rust-coloured spots. Males are recognised by the pores between the hind legs, which females lack.

The species was described in the early 1800s and has had several scientific names over time, including *Phelsuma cepedianum*. It is counted in the same group as *Phelsuma modesta*. Like the other geckos in the family, it has no movable eyelids.

It is the temperament that makes the species a challenge. *P. cepediana* is aggressive towards both conspecifics and other day geckos. In captivity, where the female cannot flee, the male can injure her seriously. The animals are therefore best kept singly, and pairs must be monitored. Males are sought after because of their colours, and all animals in the trade should be captive bred.

Distribution and habitat

Phelsuma cepediana is native to Mauritius in the Indian Ocean and is widespread on the island. The type locality is given as Mauritius.

The species has been introduced to Rodrigues, and from Madagascar there are a few unconfirmed records, including at Ivoloina, where it has probably been brought in from Mauritius. Records outside Mauritius on the map are therefore not part of the species' original range.

> **Native range:** Mauritius.

HABITAT

Phelsuma cepediana lives in warm and humid surroundings and moves about on trees and bushes, especially those that bear fruit or flowers, for example coconut palms, bananas and papaya. It is diurnal and forages in the foliage during the daytime. To hide from predators it often retreats into dense clumps of screw pines (*Pandanus*).

It can also live in suburban gardens if they are heavily watered and planted and lie near trees with fruit or flowers all year round. Farmland, on the other hand, it does not appear able to occupy.

P. cepediana feeds on insects and other invertebrates, but also licks ripe, sweet fruit pulp, pollen and nectar. The flowers of the liana *Roussea simplex*, which grows only in the mountains of Mauritius and is now critically endangered, are pollinated exclusively by this gecko, which also spreads the plant's seeds with its droppings. The altitude and the seasonal variation in temperature and rainfall are not documented for the species.

Care

THE ENCLOSURE

A single *Phelsuma cepediana* can be kept in a glass enclosure of 30 × 30 × 45 cm (length × width × height). A pair can live and breed in the same size, but will have more peace in a larger enclosure. Height matters more than floor area, because the species lives up in the vegetation.

A bioactive setup with live plants, springtails and isopods is strongly recommended. Use a substrate that can hold moisture and support the plants. Provide plenty to climb on with cork bark, branches and bamboo at several heights and in several directions, so the animal can get away from its conspecific. Plants with large leaves provide cover and higher humidity.

The enclosure must be damp, but well ventilated, otherwise the air becomes stagnant and mould appears. Seal all gaps where a small animal can get stuck. The enclosure must be dark at night, because artificial light makes the animals change behaviour and become active in the dark.

Read more: Humidity, misting and ventilation Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

For *Phelsuma cepediana* the temperature in the enclosure should be 24-27 °C during the day, and a hot spot right under a spotlight of about 32 °C lets the animal bask. At night it should be 18-23 °C. Measure with a digital thermometer, both at the hot spot and below.

Make sure the animal can retreat from the heat and down into a cooler area. Heat lamps should not warm up the whole enclosure. A thermostat or dimmer on the lamp gives a more even climate and reduces the risk of a small enclosure becoming too hot.

Experience with the species in captivity is limited, so watch the animal: an animal sitting close to the heat source with its mouth open is too hot, and an animal sitting hunched and passive may be too cold.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity should be 60-70 % for *Phelsuma cepediana*, ideally with variation over the day, so plants and substrate can dry out a little. Mist the enclosure every day, so dew forms on the glass, leaves and furnishings, because the animal drinks the droplets. A digital hygrometer shows whether the level holds.

A water bowl is not necessary when the enclosure is misted regularly, but it can be there as an extra offer. The bowl does not replace daily misting. Keep it shallow, so juveniles and insects do not drown.

Live plants help keep the humidity stable and create humid microclimates. Constantly wet conditions, on the other hand, easily cause mould and skin problems, so good ventilation is important.

LIGHTING AND UVB

Phelsuma cepediana is diurnal and benefits from high-quality light. Use a UVB tube of strength 5.0, for example a T5 tube, mounted over one side of the enclosure, so the animal can choose between light and shade (Ferguson zone 2 is a reasonable estimate). A daylight tube and a small halogen spot as a basking spot give natural light in which the colours come into their own.

Related day geckos are also kept without UVB and instead get extra calcium and vitamin D3 in their food, but for such a diurnal species a UVB tube is the safe solution.

Keep the light on for about 14 hours in summer and about 10 hours in winter, ideally controlled by a timer, and do not use a night light. The day length is borrowed from *Phelsuma laticauda*.

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

FEEDING

Phelsuma cepediana eats both insects and fruit. In captivity it does well on a mixture of prepared diet for day geckos and live feeder insects. The prepared diet is mixed into a thick paste and served in a small dish, which is mounted high up, because the animal is arboreal. Fruit purée without added sugar can be mixed in.

Give live insects several times a week. Juveniles can have small crickets (about 3 mm) or fruit flies, until they are big enough for slightly larger crickets (about 6 mm). Larger animals can have roaches and black soldier fly larvae, which must be served in a dish so they do not get away. Waxworm larvae, butterworms and small hornworms are treats that should only be given now and then. Honey in very small amounts can also be used as a treat.

Dust the insects with calcium and a multivitamin. The feeder insects must themselves have been fed a good diet before the gecko gets them. Do not give more supplement than it says on the packet, because overdosing is a problem in small reptiles. Females that lay eggs must have plenty of calcium and food, so the young get enough nourishment in the egg.

BEHAVIOUR AND HANDLING

Phelsuma cepediana is territorial and can be aggressive, both towards its own species and towards other day geckos. Keep it alone or as a carefully matched pair. Never keep two males together. Groups have not been tried and cannot be recommended.

Put a pair together in a clean enclosure that neither of them has lived in, so it is neutral territory. Good signs are head bobbing and nodding, and the female letting the male bite her on the neck during mating. Chasing, rejection and attacks are signs of aggression. In the worst case the male can injure the female seriously, so separate the animals at once if there is unrest. Not all pairs can be kept together.

The species is suited to being watched, not to being handled. Give newly purchased animals time to settle in, and check them for parasites and injuries.

Breeding

SEXUAL MATURITY AND SEXING

In *Phelsuma cepediana*, males are recognised by the pores between the hind legs, which females lack. Males are also more brightly coloured, with a blue back and deep blue tail, while the female has a green back with rust-coloured spots. The female is normally slightly smaller than the male.

For the species, the age at sexual maturity is not documented. The figures here are borrowed from *Phelsuma laticauda*, which becomes sexually mature after about 9 months, but should only be put to breeding when it is 12-14 months old. The same is a sensible rule of thumb for *P. cepediana*.

MATING

Breeding has not been described in detail for *Phelsuma cepediana*, so much of what follows is borrowed from *P. laticauda* and other day geckos. Put the male and female together in a clean, neutral enclosure and watch them closely. Nodding and head bobbing are a good sign, but chasing and attacks mean they must be separated.

A rest period in winter can help the female gather strength. Lower the temperature by a few degrees, and cut the day length from about 14 to 10 hours. When the days become longer and warmer again, the animals begin to breed. If the female is underweight or ill, mating must be postponed.

EGG-LAYING AND CLUTCHES

A female *Phelsuma cepediana* usually lays two eggs at a time and may lay a new clutch every third to fourth week during the breeding season. The eggs are usually loose and not glued fast. She chooses a place she considers safe, and may also lay in a bamboo laying tube, which the species readily uses.

While she is laying eggs, she needs a good diet with plenty of calcium and peace when she lays. The eggs can be moved to an incubator, but remember to keep their original orientation. Adults may eat newly hatched young, so it is best to move the eggs.

Read more: Incubating eggs

INCUBATION

The eggs of *Phelsuma cepediana* are laid in a small container with air holes and a damp, but not wet, substrate of vermiculite, perlite or sphagnum. The humidity in the container should be about 60 %. The eggs must not roll, and the container is placed in an incubator where the temperature is kept stable.

At 28 °C the eggs hatch after 40-45 days. A higher temperature gives faster development, and a lower one makes it slower. The figures for temperature-dependent sex ratio come from *P. laticauda*: 28 °C and above gives mostly males, 27 °C and below mostly females, and in between both sexes occur. All species in the genus have temperature-dependent sex determination, so a stable incubator is important. The limits for *P. cepediana* are not known.

REARING THE YOUNG

The young of *Phelsuma cepediana* are about 4 cm long at hatching. They go into a small enclosure with plants, branches and high humidity. You can keep two young together at first, but they must be separated within the first month, before the unrest begins.

The young live on newly hatched crickets, fruit flies and fruit purée. Nutrition is crucial, so the feeder insects must themselves be well fed, and all food is dusted with calcium and vitamins. Give food every day for the first three months, as recommended for *P. laticauda*. Many young die in the first few days if the mother has not had enough nourishment for the egg.

Health and common mistakes

There is only limited documented experience with *Phelsuma cepediana* in captivity, so the list is based on experience with day geckos in general:

- Aggression between animals. Females and males can bite each other seriously. Separate the animals as soon as there is unrest.
- Lack of calcium and vitamin D3, which causes soft bones and tremors. Dust the insects, and provide UVB.
- Too low humidity, which causes dehydration and skin problems, or too wet conditions without ventilation, which cause mould.
- Eye injuries if the UVB lamp sits too close to the animal.
- Getting stuck in gaps in the background and furnishings. Close small holes.

See a vet experienced with reptiles if the animal loses weight, stops eating or sits dull and 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.