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GECKOS

Gold dust day gecko

Phelsuma laticauda

A small, shiny green day gecko from northern Madagascar and the Comoros with a sprinkling of gold dust over the neck and back and red streaks on the head and back. It is beautiful, quick and inquisitive, but delicate, and is best as an animal to watch, not to hold in the hand.

Family: Gekkonidae Former name: *Pachydactylus laticauda*

KEY FACTS

THE ANIMAL

Adult size	**10-15 cm** total length incl. tail
Lifespan	**6-10 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	**26-30 °C**
Basking spot	**31-33 °C**
Temperature, night	**20-23 °C**
Humidity	**60-75%**
UVB	**Recommended** Ferguson zone 2
Diet	**Insects, fruit, nectar and complete diet**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**10-14 months**
Clutch size	**1-2 eggs**
Incubation	**40-85 days** at 26-29 °C

PROTECTION AND PAPERWORK

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

About the species

Phelsuma laticauda has small golden spots that lie like dust over the nape and the front part of the back on an otherwise bright green body. Most animals also have red crossbars on the snout, blue tints around the eyes and red spots or streaks down the back. The toes have broad adhesive pads, and the tail is flat and broad, which is just what the scientific name *laticauda*, broad-tailed, tells us.

The species was described by Oskar Boettger in 1880 under the name *Pachydactylus laticauda*, with Nosy Be off the north-west coast of Madagascar as the type locality. Two subspecies are recognised: the nominate form *Phelsuma laticauda laticauda* and the slightly smaller *P. l. angularis* from north-western Madagascar, which has a distinct, angular reddish marking on the back. Care is largely the same.

An adult gecko grows to 10-15 cm including the tail. Most animals reach about 12-13 cm, and the nominate form is the largest. There are no reliable figures for weight.

The males are strongly territorial and do not tolerate other males, and in a small enclosure they can also be rough on a female that cannot get away. The skin is thin and the tail is easily shed, so the species is poorly suited to handling. On the other hand, it is active all day and a delightful animal to watch in a lushly planted enclosure.

Distribution and habitat

The species lives in northern Madagascar, including the islands of Nosy Be, Nosy Komba and Nosy Mitsio and on the mainland in the north-west, where the subspecies *angularis* is known from, among other places, Antsohihy and Maromandia. It is also found in the Comoros and Mayotte. It is uncertain, however, whether all populations there are native or were brought there by people, and records from the Seychelles are undocumented.

The gecko has been introduced in many places. There are established populations in Hawaii, where it has spread to several islands, on Moorea in French Polynesia and on Réunion, where it competes with the island's own threatened day geckos. Records from there and from Florida come from released or escaped animals and are not part of the natural range.

> **Native range:** Madagascar, Comoros and Mayotte.

HABITAT

The gecko lives in the trees of tropical forest and scrub and often close to people, in palms, banana plants and gardens and on house walls. It is almost exclusively arboreal and lives on trunks and large leaves, where it basks and hunts. Several animals may gather at the same flowering plant or ripe fruit to lick nectar, pollen and sap.

The climate is tropical with warm, sunny days, slightly cooler nights and a distinct rainy season. The humid rainy season and the drier period for the rest of the year form the seasonal rhythm that can be imitated in the enclosure. Only a few measurements from the species' habitats exist, so the enclosure values are based on experience in captivity and the region's climate.

Care

THE ENCLOSURE

A single animal can live in a tall enclosure of at least 30 × 30 × 45 cm (length × width × height), but bigger is always better. A pair needs at least 45 × 45 × 60 cm, so that the female can get away from the male. The enclosure should be taller than it is wide, because the gecko climbs and basks high up under the lamp. An enclosure with front-opening doors is easier to look after than one that opens from the top, and the animal does not get startled as easily.

Furnish with diagonal and vertical branches, bamboo canes, cork bark and plants with large leaves, for example sansevieria, pothos and bromeliads. The gecko sleeps and lays eggs in the plants and bamboo canes. The subspecies *angularis* does best in a slightly smaller, densely planted enclosure with many hides.

A mixture of fertiliser-free soil and orchid bark works as a substrate, preferably as a bioactive substrate with springtails and a layer of dead leaves and sphagnum. Do not use sand or gravel, which the animal can swallow and become constipated from. Provide good ventilation and tight-fitting doors, because the gecko is fast and slips out at the first opportunity.

Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

By day there should be 26-30 °C in the enclosure and a basking spot of 31-33 °C on a branch under the lamp. Leave the lower part of the enclosure cooler, about 23-25 °C, so that the animal can choose for itself. It is important that the whole enclosure does not become overheated.

At night the temperature may drop to 20-23 °C, and slightly cooler during the winter rest is healthy for breeding animals (see mating). A heat mat under the floor is of almost no use, because the animal lives up in the branches. Use instead a small halogen spot or heat bulb at one side, controlled by a thermostat and timer. Measure with a digital thermometer at the top and the bottom, and check the basking spot with an infrared thermometer.

Read more: Heat and temperature

HUMIDITY AND WATER

Keep humidity at 60-75 %. Mist thoroughly morning and evening, so that humidity briefly rises to 80 % or more, and let it fall again before the next misting. It is the daily drying out that keeps the substrate and plants healthy. Constantly wet conditions cause mould and respiratory infections, especially if it is also too cold.

The gecko drinks droplets from leaves and panes, so misting is important. Also provide a small, flat dish of fresh water, and change the water daily. Juveniles can drown in deeper water.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal and used to strong sunlight, so the enclosure must be bright and have a heat lamp for the basking spot. The species can be bred without UVB if it gets calcium with D3 instead, but UVB is recommended, corresponding to Ferguson zone 2, e.g. a T5 tube of 5-7%, placed so that the uppermost branches get a UV index of about 2-3, while the rest of the enclosure is in shade. This gives more active animals and safer calcium metabolism.

Keep the light on for 12-14 hours a day in summer and about 10 hours in winter, preferably on a timer. It must be dark at night.

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

FEEDING

The staple is small, well-fed insects such as crickets, dubia roaches, soldier fly larvae and now and then waxworms. The insects must be smaller than the distance between the animal's eyes and must have been given nutritious food for at least a day. Give adults insects a couple of times a week, and dust them with calcium with D3 at every second feeding and with a multivitamin once a week. Egg-laying females need calcium at every feeding.

Once or twice a week give a small dish of prepared food for fruit-eating geckos, for example Pangea or Repashy, mixed with water, or a little fruit purée. A drop of nectar or a little bee pollen can be a treat. The sweet part should make up only a small portion of the diet, otherwise the animal becomes too fat. Keep an eye on body shape, and adjust the quantities accordingly.

Juveniles must be fed every day for the first three months, see rearing.

BEHAVIOUR AND HANDLING

The gecko is quick, watchful and a little nervous, and does best when it is left in peace. The skin is thin and easily damaged, and the tail is dropped under stress or rough treatment. It grows back, but never regains its original appearance. Enjoy the animal through the glass, therefore, and work calmly in the enclosure without grabbing it.

A male and a female can be kept as a pair, but the female must have space and many hides, and you must be ready to separate them if the male chases or bites her. Even pairs that have lived peacefully together can suddenly become incompatible. Two males must never be kept together. The species can also be kept singly and does very well like that. Stress shows as dark, dull colour, the animal hiding, and loss of appetite.

Breeding

SEXUAL MATURITY AND SEXING

Sexually mature males have distinct pores on the underside of the thighs and in front of the vent and a bulge at the base of the tail, and they are often slightly larger and more colourful than the females. The sex can be determined reliably only when the young are a few months old. The geckos are sexually mature at about 10-12 months of age, but wait to breed until they are 12-14 months and in good condition. Females bred too early are drained of calcium.

MATING

Put the animals together in a clean enclosure that neither of them has lived in before, so that neither has home advantage. Signs of acceptance are nodding and head bobbing, the male showing the female his back, and her letting him bite her on the neck during mating. Chasing, rejection and attacks are signs of aggression, and then the animals must be separated at once.

The animals often get a winter rest from about October to January. The daytime temperature is lowered gradually from about 29-30 °C to 27-28 °C, the night temperature by a couple of degrees, and the day length falls from 14 to 10 hours. The pause stops breeding and gives the female in particular time to rebuild her reserves. When the days become longer and warmer again, the animals begin to mate.

EGG-LAYING AND CLUTCHES

Three to four weeks after mating the female usually lays two eggs that stick together, and now and then only one. She lays them in leaf axils of, for example, sansevieria or in bamboo canes, but the eggs are not glued to the surface. If food and conditions are right, she can lay a new clutch every three to six weeks in the season. How many clutches there are per year varies.

The female wants to be left in peace while she lays. Afterwards remove the eggs carefully without turning them, because adults may eat the newly hatched young. Give the female calcium at every feeding, and take her out of breeding if she loses weight.

INCUBATION

Place the eggs in a small box with slightly damp vermiculite or perlite and a few small air holes in the lid, and keep the humidity at about 60%. At about 28 °C the eggs hatch after 40-45 days. At lower temperatures it takes longer, up to about 85 days. The young often hatch in the morning.

In day geckos, temperature affects the sex of the young. At 28.5 °C and above most of the young become males, at 26.5 °C and below most become females, and in between both sexes occur. The figures are based on few breedings, so use them as a guide. Use a reliable incubator with a thermostat, and check the temperature with a separate thermometer, because a few degrees make a difference.

Read more: Incubating eggs

REARING THE YOUNG

The young are about 5 cm long when they hatch. Move them to a small, ventilated box or a small enclosure with thin branches, leaves and a very shallow water dish, and mist daily. Preferably keep them separately, because siblings quickly become aggressive towards each other and must in any case be separated within the first month.

Feed daily for the first three months with fruit flies, very small crickets and fruit purée, and dust the insects with calcium and vitamins. The survival of the young depends mostly on diet and on the female's condition when she laid the eggs. Weigh them regularly, and look for even growth. They are adult after about a year.

Health and common mistakes

The gecko is sensitive to husbandry mistakes. The typical problems are:

- Too little calcium, D3 or UVB, which causes metabolic bone disease with soft jaws, bent limbs and kinks in the tail. Use calcium with D3, UVB and a good prepared food.
- Problems with shedding if the air is too dry. Loosen skin remnants on the toes and tail tip carefully with lukewarm water.
- Respiratory infection if it is cold and wet at the same time. Signs are lethargy, an open mouth and mucus or bubbles at the nose.
- Constipation or intestinal blockage if the animal swallows sand or gravel.
- Intestinal worms and other parasites, especially in imported animals. A faecal sample at the vet will reveal them.
- Dropped tail after stress or handling.

Buy only captive-bred animals. A healthy animal is bright green, has clear eyes and a plump tail. See a vet with reptile experience if the gecko loses its appetite, loses weight, is lethargic or has bent limbs.

Read more: Common diseases and signs of illness Read more: Buying animals: captive-bred, wild-caught and transport

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.