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GECKOS

Madagascar ground gecko

Paroedura picta

A small, compact ground gecko from the dry south-west of Madagascar with mottled markings, a large head and an alert gaze. It is robust, breeds readily and takes up so little space that it is a good choice for anyone starting out with geckos.

Family: Gekkonidae Former name: *Paroedura pictus; Diplodactylus pictus; Phyllodactylus pictus*

KEY FACTS

THE ANIMAL

Adult size	**12-18 cm** total length incl. tail
Lifespan	**8-10 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Dry forest**
Difficulty	**Beginner**

CARE

Min. enclosure	**40 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**24-28 °C**
Basking spot	**29-32 °C**
Temperature, night	**20-24 °C**
Humidity	**50-70%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**9-12 months**
Clutch size	**1-2 eggs**
Incubation	**40-65 days** at 26-29 °C

PROTECTION AND PAPERWORK

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

About the species

Paroedura picta is a sturdy little gecko with a large head, large eyes and a thick tail that serves as a fat store. The markings consist of spots and crossbands in brown, black and cream, and the species name picta means exactly painted. Juveniles have more contrast than adults, and the pattern becomes milder with age. Many morphs have gradually been developed, for example pale, yellow and almost uniformly coloured animals.

The species was described by Wilhelm Peters in 1854 with the type locality St. Augustin's Bay in south-western Madagascar. It has been called both *Diplodactylus pictus* and *Phyllodactylus pictus*, and many keepers still know it as *Paroedura pictus*. The genus *Paroedura* belongs to the family Gekkonidae and comprises about twenty species, almost all of them on Madagascar.

Most animals reach 12-15 cm including the tail, and a few up to 18 cm. Males are larger and heavier than females and have a broader head. The gecko lives on the ground, where it moves quickly around in the leaf litter, and it climbs only a little on rocks and roots.

It is a curious and fairly calm species that quickly gets used to its keeper. It chirps and clicks softly, and like many geckos it can drop its tail if it is grabbed. The tail grows back and often ends up resembling the original.

Distribution and habitat

The species is found only on Madagascar, where it lives in the southern and western parts of the island. The type locality is St. Augustin's Bay near Toliara (Tuléar) on the south-west coast, and the area around Toliara lies in the middle of the range.

The map shows a rough section of south-western and southern Madagascar together with registered records. Records outside Madagascar come from captive animals.

> **Native range:** Madagascar.

HABITAT

The gecko lives in the dry south-west of Madagascar, in spiny forest and scrub with a thick layer of leaf litter on sandy ground. By day it hides under fallen trunks, leaf litter and rocks and in holes in the ground, and at night it hunts insects on the ground surface.

The area around Toliara is one of the hottest and driest on the island. In the hottest months, December and January, the temperature is typically 25-30 °C, and in the coldest, July, 18-25 °C. The summer rainy season is the breeding season, and the rest of the year is dry. The gecko avoids the heat itself by retreating down into the leaf litter, where the air is cooler and more humid. This is the pattern you imitate in the enclosure: warmth by day, cooler nights and a humid hide that the animal can always retreat to.

Care

THE ENCLOSURE

A single animal needs an enclosure of at least 40 × 30 × 30 cm (length × width × height), and bigger is better. A male with two or three females needs at least 60 × 40 × 40 cm. Height does not matter much, because the animal lives near the ground. Low plastic boxes also work well, although they look less natural.

The substrate must retain moisture and be soft to dig in. A mixture of fertiliser-free soil, coconut coir and a little sand is good, preferably with a layer of dry leaves on top. Avoid pure, fine sand, which creates dust, and artificial grass mats, which are difficult to keep clean. Furnish with flat stones, cork tubes, cork bark and half coconut shells, so there are at least as many hides as animals. Provide at least one damp hide, e.g. a small plastic box with an entrance hole and damp sphagnum, preferably in both the warm and the cool end. Ventilation must be good, so the enclosure can dry out between mistings.

TEMPERATURE

By day there should be 24-28 °C in the enclosure and a warm spot on one side at 29-32 °C, so that the animal can choose for itself. The species does like to seek the cool side, however, so stay at the low end if in doubt, and make sure the gecko can always get away from the heat.

At night the temperature may drop to 20-24 °C. A low-output heat mat under part of the floor can retain warmth when the room is cold. Control all heating with a thermostat, and measure with digital thermometers in both the warm and the cool end. If you want the animals to breed, a cooler period from late autumn to early spring, with the temperature lowered by about 5 °C, helps.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be moderate, about 50-70 %. Mist lightly every day or every other day, so that part of the substrate is damp and the rest dry. Constantly wet conditions cause mould and respiratory infections, so keep an eye on the ventilation.

Provide a shallow dish of fresh water, and change the water regularly. The dish must be shallow enough that even small juveniles cannot drown. The most important thing, however, is the humid hide, which the gecko uses during shedding. If it is missing, remnants of skin easily stick to the toes.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is active at dusk and at night and manages without UVB when it is given vitamin D3 as a supplement. It is unclear whether it benefits from UVB, but a low-output UVB light over a small part of the enclosure can be provided to be on the safe side. If you choose this, use a low-output tube for shade-dwellers, and provide plenty of shade and hides.

Use a heat bulb for the warm spot, and switch it off at night if the temperature is otherwise high enough. Keep the light on for about 12 hours in summer and slightly less in winter, preferably controlled by a timer. At night it must be dark.

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

FEEDING

The gecko lives on insects. The staple is crickets and dubia roaches, and for variety you can offer locusts, mealworms and other small insects. The feeder insects should be smaller than the distance between the animal's eyes and should have been well fed before being passed on. Adults get 4-6 insects every other day, and juveniles are fed daily with smaller insects. Waxworms are fatty and should be given only as a treat.

Dust the insects with calcium at every second feeding for adults and at every feeding for juveniles and egg-laying females. The species is prone to metabolic bone disease, so calcium with D3 and a multivitamin now and then is important, especially if the animal gets no UVB. The tail is a good gauge of condition: a thin tail means the animal needs more or better food.

Read more: Feeder animals: keeping and breeding Read more: Common diseases and signs of illness

BEHAVIOUR AND HANDLING

Paroedura picta is calm and curious and gets used to being handled, but it is an animal to watch, not to pick up every day. It can run fast and jump, so hold it low, preferably sitting on the floor. Never grab the tail, because it can be dropped. Short spells a couple of times a week are enough.

Males are territorial and must never be kept together, because they can injure each other. One male can be kept with one or more females when there is enough space and hides. Females can usually be kept together, but watch for biting and large differences in size. Juveniles can live in small groups of four or five for a while, but must be separated when some outgrow the others. The gecko is most active at dusk and at night and chirps softly when it is uneasy.

Breeding

SEXUAL MATURITY AND SEXING

Males can be recognised from 3-6 months of age by the distinct bulges at the base of the tail, where the hemipenes sit, which females lack. Adult males also have a broader head and a sturdier build. The species grows quickly and becomes sexually mature after 9-12 months. Females should nevertheless be put to breed only when they are fully grown and in good condition, so that they are not drained of calcium.

MATING

The species breeds readily in captivity. One male with two or three females is a common setup, and the eggs often come quickly. No special preparation is required: put the male with the females, and keep an eye on them for the first few days. The male bites the female lightly on the neck during mating. Remove him if the female is chased or gets scratched.

A cooler period in winter, with temperatures about 5 °C lower and shorter days, gives the females a rest and triggers breeding again in spring. The females must have plenty of food and calcium throughout the season, and a female with a thin tail must take a break from breeding.

EGG-LAYING AND CLUTCHES

The female lays one or two small, round eggs at a time with a hard but very brittle shell. She lays a clutch every three to four weeks in the breeding season, and in the best period as often as every two weeks. How many clutches there are in a year varies greatly.

The female buries the eggs in damp but not wet soil. Provide a laying site with slightly damp soil or vermiculite, for example in the humid hide, and also make sure there are dry places in the enclosure, because if the whole floor is wet, she will not lay. The eggs break easily, so lift them carefully, preferably with a spoon.

INCUBATION

Place the eggs in a small box with damp vermiculite or perlite, without turning them, and give the box a couple of small air holes. Incubate the eggs at 26-29 °C, preferably 28-29 °C.

The eggs hatch after 40-65 days, at 28-29 °C typically after 51-65 days, and a lower temperature gives a longer incubation. Leave the eggs until you are sure they are dead. In this species the sex is genetically determined and not controlled by temperature, so you cannot choose the sex by adjusting the heat. Expect that a number of eggs will not hatch. Many are infertile, and even small cracks in the shell, which the female herself may cause, can kill the embryo.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are tiny and grow quickly. Keep them in a simple setup with kitchen paper as substrate, a humid hide, a very shallow water dish and a couple of hiding places. Mist at least twice a day, because small boxes dry out quickly and the young easily lose fluid.

Give them the smallest insects, for example newly hatched crickets, every day, and dust them with calcium at every feeding. The young shed often, and a poor shed can cost toes, so the humid hide is important. Keep them singly or in small groups, and separate them when they become different in size. They can be adult in under a year.

Health and common mistakes

Paroedura picta is hardy, but some husbandry mistakes recur:

- Too little calcium and D3, which causes metabolic bone disease with soft jaws, bent legs and tremors. Always dust the insects, and give extra to juveniles and egg-laying females.
- Poor sheds, where remnants stick to the toes and in the worst case make them fall off. Provide a humid hide.
- A substrate that is too wet and poor ventilation, which cause mould and respiratory infections.
- Egg-laying difficulties (dystocia), if there is no suitable laying site or the whole floor is too wet.
- Exhaustion in females that lay eggs without a break. A thin tail shows that the fat reserves are used up. Give more and better food, and keep the female out of breeding until she is back in condition.
- Reduced appetite or lethargy, which may be caused by parasites or too low a temperature.

See a vet with reptile experience if the animal loses weight, does not eat for several weeks or has swellings, breathing difficulties or soft bones.

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.