herpy

GECKOS

Peters' spotted gecko

Geckolepis maculata

A small, nocturnal tree dweller from north-western Madagascar with disproportionately large scales that come away when it is held firmly, so the animal can slip away from an enemy. It is hardy in the enclosure but fragile to handle and is best suited to being looked at.

Family: Gekkonidae

KEY FACTS

THE ANIMAL

Adult size	**8-13 cm** total length incl. tail
Lifespan	**7-10 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**30 × 30 × 45 cm** L × W × H for 1 adult
Temperature, day	**20-24 °C**
Basking spot	**27-29 °C**
Temperature, night	**17-21 °C**
Humidity	**60-80%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and complete diet**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**60-90 days** at 25-28 °C

PROTECTION AND PAPERWORK

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

About the species

Geckolepis maculata is a small, sturdily built gecko with a large head, large eyes with vertical pupils, strong limbs and adhesive lamellae under the toes. The ground colour is grey to beige with darker spots, bands or stripes, and the large scales have a distinct, iridescent sheen. The scientific species name comes from the Latin *macula*, meaning spot, and refers to the spotted pattern.

What sets it apart is the skin. If the animal is grabbed, the scales and a layer of the skin can come loose, so that the gecko slips out of the grip and leaves the predator with a mouthful of scales. This is a defence and not a disease. The scales grow back, and after some time the new ones cannot be told from the original ones, but the species is very fragile to handle.

The species was described in 1880 by Wilhelm Peters. The genus *Geckolepis* has difficult taxonomy, because the scale patterns vary and genetic studies have revealed several cryptic species. *G. humbloti* from the Comoros was reinstated as a separate species in 2016, and *G. megalepis* from the limestone pinnacles of Ankarana was described in 2017. The exact delimitation of *G. maculata* is still regarded as uncertain, so animals in the trade are not always reliably identified to species.

The total length is 8-13 cm including tail, and a few animals reach up to 18 cm. The weight is not documented, and the lifespan in captivity is 7-10 years.

Distribution and habitat

Geckolepis maculata is found in north-western Madagascar and on a number of small islands off the coast: Nosy Be, Nosy Komba, Nosy Sakatia, Nosy Mitsio and Nosy Fanihy. The type locality is Anfica in north-western Madagascar. The species is not present on Mayotte, where it is replaced by *G. humbloti*.

Because the delimitation of the species is uncertain, older records from other parts of Madagascar and from the Comoros may in reality cover other species in the genus.

> **Native range:** Madagascar.

HABITAT

The genus *Geckolepis* lives in primary and secondary forest and in degraded habitats, and *G. maculata* lives in the forests of north-western Madagascar and on the nearby islands. The animal is nocturnal and climbs in trees and bushes. By day it hides in crevices, behind bark and in hollows.

In the wild the species lives mostly on insects but also takes a little nectar and fruit. The climate is tropical and warm with high humidity, especially in the rainy season. Measurements of temperature and humidity in the species' habitats are not documented, so the recommendations in the care sections are based on experience from captivity and on the habitat of the genus.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

As an absolute minimum, a single adult needs an enclosure of 30 × 30 × 45 cm (length × width × height), and bigger is better. Height matters more than floor area, because *Geckolepis maculata* lives up in the branches. A mesh lid ensures good air exchange.

Furnish with branches, vines, cork tubes and ledges at several heights and with dense foliage, so the animal can hide by day. Live plants help to hold humidity and provide cover. Use a substrate of moisture-retaining, open soil or coconut fibre in a layer at least 5 cm deep, preferably with a layer of leaf litter on top, so that an animal that falls lands softly. Remove droppings daily, and replace the substrate completely every three to four months.

Open the enclosure as seldom and as calmly as possible. The furnishings must not have sharp edges or coarse bark, which can tear scales off the animal.

TEMPERATURE

By day it should be 20-24 °C in most of the enclosure, and a small warm area at the top may reach 27-29 °C. At night the temperature may fall to 17-21 °C. Heating at night is not necessary.

Use a small, weak heat bulb on one side, preferably controlled by a thermostat or a dimmer, and measure the temperature with a digital probe just under the bulb and at the cool end. Avoid ceramic heaters and coloured bulbs. If the temperature stays above 30 °C, the heat must be turned down.

Read more: Heat and temperature

HUMIDITY AND WATER

The species needs high humidity: 60-80 % on average. Mist the enclosure in the evening so that the leaves and furnishings are damp, and again in the morning if necessary. The animal drinks droplets from leaves and furnishings.

Also put in a small bowl of fresh water, preferably a little way up on a ledge, and change the water daily. The bowl should have a low rim, so that an animal that falls in can climb out. The substrate and the air must be able to dry out a little between sprayings, otherwise you risk mould and skin problems. Measure the humidity with a digital hygrometer in the middle of the enclosure. If it is hard to keep up at night, a mister controlled by a humidistat can help.

LIGHTING AND UVB

The species is nocturnal, and no need for UVB has been documented. Even so, a weak UVB light is recommended as a safeguard, because supplements of calcium and vitamins cannot entirely replace the light. Use a UVB tube or compact bulb for shade-dwelling species (Ferguson zone 1), mounted over the mesh lid on one side, so that there are always shaded areas to retreat to.

UV light does not pass through glass, so a window does not provide UVB but can make the enclosure too hot. Keep the light on for about 11 hours in winter and 13 hours in summer, controlled by a timer, and switch everything off at night. Replace the UVB bulb according to the manufacturer's instructions, typically every six months.

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

FEEDING

The bulk of the diet is live insects: crickets, grasshoppers, dubia cockroaches and the like. The insects should be a little smaller than the animal's head and lightly dusted with calcium. Young animals and juveniles get insects daily. Adults get insects twice a week. Give as many as the animal eats in 5-10 minutes, and remove leftovers.

Supplement with a prepared diet for fruit-eating geckos, mixed into a thick porridge and served in a small dish high up: once or twice a week for adults and twice a week for young. The prepared diet covers the animal's need for fruit and vitamins. Variety is important, so alternate between several kinds of insects. The prepared diet can be left out for two to three days if it is kept moist.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Geckolepis maculata is a shy, curious, nocturnal gecko that usually sits on branches or on the glass at night. It becomes fairly tame if it is allowed to get used to you, and willingly takes food from tweezers.

Handling is not recommended. The skin is so fragile that even a gentle grip can make scales come loose, and the animal can become stressed. If you have to move an animal, use a fine net or a small container that you let the animal crawl into, and never your fingers.

A pair or two females can live together, but more animals in the same enclosure easily lead to fights and injuries. Males must never be kept together. The safest course is to keep the animals singly and to put a pair together only for breeding, with close supervision and plenty of hiding places.

Breeding

SEXUAL MATURITY AND SEXING

The differences between the sexes have not been described in detail for *Geckolepis maculata*. As in most geckos, the male can be recognised by the bulge at the base of the tail where the hemipenes lie, once the animal is fully grown. Age and size at sexual maturity are not documented for the species. Wait until the animals are fully grown and in good condition before putting them together.

MATING

There is little information on mating in *G. maculata*. If a male and a female are kept together, they are expected to breed. Put them in an enclosure with many hiding places so that the female can get away from the male, and follow the first nights closely. Separate them if the male is aggressive or if the female loses scales or weight.

Whether the species needs a winter rest to come into breeding condition is not documented.

EGG-LAYING AND CLUTCHES

The species is egg-laying. The number of eggs per clutch, the interval and the egg-laying site are not documented for *G. maculata*; the figures in the fact box are estimates borrowed from geckos in general and must be taken with reservations. Many geckos glue their eggs to a surface, for example under bark, behind cork or on leaves.

Give the female a small lay box with damp coconut fibre or sphagnum and many horizontal surfaces in the enclosure, and check daily for eggs. Provide plenty of calcium and insects throughout the season, so that the female is not drained of calcium.

INCUBATION

Move eggs carefully and without turning them; if they are stuck to a surface, the whole surface can be moved. Put them in a small box with damp vermiculite or perlite and air holes in the lid, and keep them at about 25-28 °C.

The incubation time for the species is not documented. The values in the fact box, 60-90 days at 25-28 °C, are borrowed from geckos of a similar size and should be taken as an estimate. Leave the eggs until they hatch or are clearly dead.

Read more: Incubating eggs

REARING THE YOUNG

There is no documented experience of rearing young of *G. maculata*. As a starting point they are treated as small, tree-dwelling geckos: a small faunarium with a damp substrate, hiding places and climbing opportunities, daily misting and small insects dusted with calcium every day, supplemented with prepared diet.

Keep the young singly or in small groups of the same size, and separate them if there is biting. Handle them as little as possible, because the scales and skin are even more fragile in small animals.

Health and common mistakes

Geckolepis maculata is considered hardy, but no particular diseases have been documented for the species. The typical problems are the same as in other small geckos and are most often caused by husbandry:

- Loss of scales and skin after handling, pressure or sharp objects. Avoid grabbing the animal, and remove sharp furnishings.
- Too little calcium and vitamin D3, which causes soft bones, tremors and bent limbs. Use calcium on the insects, a good prepared diet and weak UVB light.
- A constantly wet substrate and poor ventilation, which cause mould, fungus and skin problems.
- Too high a temperature, which causes stress and loss of appetite.
- Shed skin that sticks, especially when humidity is too low.

See a vet experienced with reptiles if the animal loses weight, does not eat for several weeks, has large skin injuries or looks 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.