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GECKOS

Lined gecko

Gekko vittatus

Gekko vittatus is a fast, shy nocturnal climber from the rainforests of New Guinea and the surrounding islands, with a distinct white stripe down the back. The species name *vittatus* is Latin for "banded" and alludes to just that stripe. It is a handsome animal to look at in a well-planted enclosure, but it prefers not to be picked up, and most in the trade are wild-caught.

Family: Gekkonidae Former name: *Gecko vittatus; Platydactylus vittatus*

KEY FACTS

THE ANIMAL

Adult size	**18-25 cm** total length incl. tail
Lifespan	**10-20 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**45 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**25-28 °C**
Basking spot	**30-32 °C**
Temperature, night	**21-24 °C**
Humidity	**55-80%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and fruit**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Clutches per year	**3-6**
Incubation	**80-120 days** at 25-28 °C

PROTECTION AND PAPERWORK

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

About the species

Gekko vittatus has a white stripe that runs from the base of the tail up along the back. At the neck it divides in two and continues towards the eyes. The body is slender and greyish brown, light brown or olive green, and the tail has pale crossbands. The eyes are large, without eyelids, and dark orange to amber with a vertical pupil. Under the toes are fine adhesive lamellae, which enable the animal to run up glass.

The species was described by the Dutch naturalist Martinus Houttuyn in 1782. It belongs to the genus *Gekko*, which also includes *Gekko gecko*, and in more recent classifications it is placed in the subgenus *Lomatodactylus*. The original type locality, "Zekerlyk uit de Indië" ("most certainly from India"), is wrong: the animal is not found in India, but on and around New Guinea.

Adults grow to about 18-25 cm including the tail. They are fast and nervous and hide a lot, so one often sees only a glimpse of them when the light goes out. If frightened, they can make a sound, try to bite or drop the tail. The skin is thinner than in, for example, *Eublepharis macularius* and tears more easily. Sex differences are not obvious externally in the young, and whether the sexes can be told apart by colour or pattern is not documented.

Interest in the species rose markedly in 2025, and the supply is still dominated by imported, wild-caught animals. There are breeders, however, and captive-bred animals are clearly the best choice: they are used to food and enclosure and have fewer parasites.

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

Distribution and habitat

Gekko vittatus lives in the eastern part of Indonesia, on New Guinea and on the islands to the east. The species is known from Halmahera and Morotai in Indonesia, Papua New Guinea with the Admiralty Islands and the Bismarck Archipelago, the Solomon Islands (including Rennell and Bellona) and Palau in Micronesia. The recorded finds lie especially in Papua New Guinea, Indonesia, the Solomon Islands, Vanuatu and Palau.

The boundaries are somewhat unclear. The occurrence in Vanuatu is doubtful, the reports from Fiji are based on errors, and the species does not occur on Timor. The occurrence on Java is also disputed. The map therefore shows only the four countries where the species definitely belongs: Indonesia, Papua New Guinea, the Solomon Islands and Palau.

> **Native range:** Indonesia, Papua New Guinea, Palau and Solomon Islands.

HABITAT

Gekko vittatus is tied to trees and lives in tropical rainforest, where it is found both in the understorey and higher up in the canopy. It is also seen around houses in the villages.

The climate is uniform all year round, because the area lies near the equator. The humidity is 70-90 %, the temperature 30-32 °C by day and about 21 °C at night, and daylight lasts about 12 hours all year round. The figures are a combined description of the habitat and not measurements from a particular locality, so take them as a guideline. In the wild the animals live only 2-5 years, while in captivity they can live 10-20 years.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A single adult needs a tall enclosure of at least 45 × 45 × 60 cm (length × width × height), preferably taller, because *Gekko vittatus* is active and climbs a lot. An animal with too little space hides most of the time. More than one animal needs at least 60 × 60 × 60 cm, but they should preferably not be kept together, because fights and injuries can occur. If in doubt, keep them separately.

Glass is best, because the animals cling to every surface and quickly find gaps in mesh. Furnish with sturdy branches, bamboo, cork tubes and cork boards at several heights, and with large, solid plants such as pothos, philodendron and bromeliads. The plants must withstand a leaping animal landing on them. The hides must be wide enough for the animal to enter easily.

For substrate, use a moisture-retaining mix of coco fibre, unfertilised soil and leaf litter, at least 5 cm deep. A bioactive substrate with springtails and woodlice is popular. There must be ventilation, but too much draws the moisture out. Wipe the glass at regular intervals, because the animals like to leave their droppings on the glass, and limescale deposits can weaken their grip.

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

TEMPERATURE

During the day the temperature should be 25-28 °C in most of the enclosure, with a warm spot of 30-32 °C high up. At night it should fall to 21-24 °C. This roughly matches conditions in the wild.

The heat is best provided by a low halogen bulb or heat lamp above the mesh, controlled by a thermostat, so that a clear gradient forms from top to bottom. Keep the enclosure away from sunny windows, because the glass lets the heat in and traps it. Measure with a digital thermometer both at the top and at the bottom. If the animal is lethargic and hides all the time, or gapes with its mouth open, it may be too hot or too cold.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 55-65 % during the day and rise to 75-80 % after a thorough misting in the evening. Mist again in the morning if the air becomes too dry.

The animal drinks water droplets from leaves and glass. Also provide a shallow dish of fresh water, changed daily. An automatic mister at night can help, but must not create constantly wet conditions. When the animal is about to shed and turns pale, the humidity can be raised to nearly 90 % for a short period so that the skin comes off cleanly. After the shed, check the toes for remnants.

LIGHTING AND UVB

Gekko vittatus is active at night and at dusk and can survive without UVB, but should have it. Use a weak UVB tube for shade-dwelling animals (Ferguson zone 1), for example a 5-7 % T5 tube, over the mesh on one side of the enclosure, with a clear line down to the animal. Glass and plastic block UV, so the light must sit directly over the animal and not behind a pane. Replace the bulb according to the manufacturer's instructions, typically every 6-12 months.

The plants also need light, so a plant light tube is a good addition. Keep the light on for about 12 hours a day, preferably controlled by a timer. The day length can also be varied between 10 hours in winter and 14 hours in summer. At night it must be dark. Because the species is nocturnal, there must be plenty of shade and hides throughout the enclosure.

Read more: Lighting and UVB

FEEDING

Gekko vittatus feeds on live insects. Offer crickets, dubia roaches, black soldier fly larvae and, now and then, mealworms or waxworms. Feeder insects must not be larger than the distance between the animal's eyes. Avoid superworms, because they are hard to digest, and waxworms and butterworms should only be an occasional treat, because they are fatty.

Young animals are fed daily, adults every other day. Gut-load the feeder insects for 24-48 hours beforehand, and dust them with calcium at most feedings. If you use UVB, calcium without D3 is safest, and without UVB it should be calcium with D3. Also give a multivitamin about once a week, and do not dust calcium and multivitamin together.

Many animals also take prepared diet for *Correlophus ciliatus* or mashed ripe banana or papaya as an occasional treat. It is not the staple food. Remove uneaten insects after a day. A dish placed high up suits the species. Many animals learn to take food from tweezers.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Gekko vittatus is fast, shy and nervous and is not an animal to pick up for pleasure. It resembles *Gekko gecko*, but is less aggressive. It may try to bite, give a loud, barking sound and drop its tail. The tail grows back, but not as it was, and it costs the animal a lot of energy. Never grab the tail, therefore, and limit handling to what is necessary. Let new animals settle in peace for a couple of weeks.

The animals can be loud at night, so think about where the enclosure stands. They are also skilled escape artists: open the door only a little at a time, and be ready if the animal jumps. Males must not be kept together. Females in a breeding group can form a pecking order and guard the young, but keeping several animals together is risky. Always start with one animal, and a pair only if you have enough space and hides. Watch for bites and injuries.

Breeding

SEXUAL MATURITY AND SEXING

The sex can be seen on half-grown and adult animals. Males have a bulge on each side of the base of the tail and a row of pores in front of the vent. When the animals reach sexual maturity is not documented. As a rule of thumb for geckos in the genus, the female should only be bred once she is fully grown and in good condition, not before she is a couple of years old.

MATING

Gekko vittatus breeds in spring in the wild. Details on mating, winter rest and introducing the animals are not documented. Watch the animals the first few days, and separate them if the male is too rough with the female. Give the female plenty of insects and calcium throughout the season, so that she is not drained of calcium. Never use two males together.

EGG-LAYING AND CLUTCHES

The female lays one or two eggs at a time. Typically there are clutches of two eggs about every month and 6-12 eggs in all in a season, corresponding to three to six clutches. Females without a male can also lay eggs, but they are infertile. The eggs are glued to the surface, for example inside or outside cork tubes and cork bark, and should not be buried.

Give the female several suitable cork tubes or cork slabs to choose between. *Gekko vittatus* is easy to get to breed, and the females guard eggs and young. Nevertheless, take the young out when they hatch, because the adults may attack them. Keep an eye on the female's weight and condition, and stop breeding if she loses weight.

INCUBATION

The eggs stick fast and cannot be torn loose. Leave them where they are if they are safe from the other animals, or move the whole cork board or tube with the eggs into an incubator. The incubation period is 80-120 days. The best temperature is not documented for *Gekko vittatus*. Use 25-28 °C, the lower part of the 25-30 °C used for the close relative *Gekko gecko*, because it is close to the species' natural climate. Keep the humidity high by placing damp vermiculite or coco fibre nearby, but do not let the eggs get wet.

Read more: Incubating eggs

REARING THE YOUNG

Very little documented knowledge exists on rearing the young. As a starting point they should have the same temperature and humidity as the adults in a small, tall enclosure with many hides and daily misting. The young leave the female when they are nearly fully grown. Give small feeder insects, no wider than the distance between the young one's eyes, for example fruit flies and small crickets, daily and dusted with calcium. Weigh them regularly, and separate them if any are bitten or fall behind.

Health and common mistakes

Gekko vittatus is a sensitive animal, especially when wild-caught. The typical problems are:

- Parasites and emaciation in wild-caught animals. Have a reptile vet examine a faecal sample, and preferably buy captive-bred animals.
- Mouth rot and respiratory infections. Mucus at the mouth and nose is a warning sign.
- Shed skin stuck on the toes after shedding. It can constrict a toe and must be gently loosened with moisture.
- Thin skin that tears easily. Remove sharp edges and check regularly for wounds, which can become inflamed.
- Calcium deficiency in breeding females and young animals, which causes soft bones and tremors. Dust the food and provide weak UVB.
- Stress and a dropped tail from too much handling or too few hides.

See a vet experienced with reptiles if the animal loses weight, does not eat for several weeks, is lethargic or has problems shedding.

Read more: Common diseases and signs of illness

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.