herpy

GECKOS

Central American banded gecko

Coleonyx mitratus

A slender, nocturnal ground gecko from the forest floor of Central America, with movable eyelids, small claws and dark and pale crossbands. It looks like a small version of *Eublepharis macularius*, reaches 10-18 cm and feeds on insects. It is calm and easy to keep, but dries out easily and needs a warm terrarium with a humid cave.

Family: Eublepharidae Former name: *Brachydactylus mitratus; Eublepharis dovii* Published 15 November 2026

KEY FACTS

THE ANIMAL

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

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**24-28 °C**
Basking spot	**30-32 °C**
Temperature, night	**18-22 °C**
Humidity	**40-60%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**70-80 days** at 27-29 °C

PROTECTION AND PAPERWORK

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

About the species

Coleonyx mitratus belongs to the eyelid geckos (Eublepharidae), the same family as *Eublepharis macularius*. It therefore has movable eyelids and no adhesive lamellae under the toes, and the skin is finely granular with scattered, larger tubercles. The species name is Latin and means wearing a headband, after the pale crossband at the back of the head.

The juveniles have broad, dark crossbands separated by narrow, pale bands, and the pattern changes as the animal grows. In adults the dark bands become irregular, and the sides become spotted. The tail is about as long as the body. The largest male measured in 1945 was 91 mm from snout to vent and the largest female 88 mm, so the total length reaches about 18 cm at most. Most adults reach 10-13 cm. The male is recognised by a bulge at the base of the tail and distinct pores between the hind legs.

The species was described by Wilhelm Peters in 1863 from an animal from Costa Rica. For a time it also went by the name *Eublepharis dovii*, which has since been merged with *Coleonyx mitratus*. It has been regarded as the most primitive of the *Coleonyx* species that have tubercles between the small scales of the skin.

In the terrarium it is a calm and curious little hunter that hides by day and comes out when it gets dark. It tolerates little handling, and the tail comes off easily.

Distribution and habitat

The species lives in Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. The type locality is given simply as Costa Rica. Older works also mention Panama, but that rests on a single animal, and more recent reviews do not include Panama.

There are records from several places in Honduras, including San Pedro and Lake Ticamaya, from El Salvador, from the central highlands of Costa Rica around San José and Turrialba and from the island of Chira in the Gulf of Nicoya. A more recent record is from El Paraíso in south-eastern Honduras. The map shows the natural range, and the dots are registered records.

> **Native range:** Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica.

HABITAT

The gecko is a nocturnal ground dweller, found especially on the forest floor. In Honduras, 17 animals were caught at night on the ground in 1923. Most were sitting in low, scrubby forest with cohune palms on a slope at 150-300 metres elevation, and at Lake Ticamaya they lay in dry leaves under large trees. In Costa Rica the species has been found in ant nests on the plateau at San José.

A more recent record from Honduras fits the picture: an animal was active at 19 hrs among fallen mango leaves in dry lowland, about 490 metres above sea level. The species thus lives both in humid forest and in semi-arid regions, but always in microclimates such as leaf litter, ant nests and burrows, which stay cooler and more humid than the surrounding air. There are no precise measurements of temperature and humidity from the habitats, so the care advice is based on keepers' experience.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A single adult can be kept in a terrarium of at least 60 × 30 × 30 cm (length × width × height), and for a male with a couple of females or a small group, about 90 × 45 × 45 cm is a good size. Floor area matters more than height, because the gecko walks on the ground. Pairs can be kept in smaller plastic boxes, but bigger is always better.

The substrate should be deep enough for the animal to dig, preferably 5 cm or more. Coconut fibre mixed with sand or fertiliser-free soil works well, and so does peat and vermiculite in a 1:1 ratio. Provide many hides: cork tubes, cork bark, flat stones and upturned flowerpot shards. Heavy stones should stand directly on the floor of the terrarium and not on the substrate, so they cannot topple when the gecko digs.

Provide at least one humid hide with damp coconut fibre. The lid must fit tightly, because the animals are fast. Avoid dried sphagnum as substrate or in hides: geckos of other *Coleonyx* species have died after swallowing moss fibres during shedding, and coconut fibre is gentler.

TEMPERATURE

Keep 24-28 °C in the terrarium by day with a warm area of 30-32 °C, and let the temperature fall to 18-22 °C at night. In experiments the species chose a body temperature of around 25 °C in the morning and 28 °C in the evening. You can also heat a third to a half of the floor, so the hides at the warm end reach 28-30 °C, and let the rest of the terrarium sit at around 21-23 °C. Figures range from 24-27 °C at the cool end and 30-32 °C at the heat to 20-28 °C depending on the season for several *Coleonyx* species.

It is better to heat with a heat mat or heat tape under part of the floor than with a lamp, because lamps dry out the terrarium. Control the heat with a thermostat, and measure at both ends. If the gecko lies at the heat constantly, it is too cold, and if it seeks only the coolest corner, it is too hot.

Read more: Heat and temperature

HUMIDITY AND WATER

Moisture is the most important point in the care. According to measurements from 2021, the species loses about five times as much water through the skin as *Coleonyx variegatus* and almost six times as much as *Eublepharis macularius*, and dehydration is one of the most frequent causes of the animals dying prematurely. The air in the room may be dry, but the substrate must

be damp at all times, preferably with a gradient from fairly damp at one end to barely damp at the other, so the animal can choose for itself.

Figures for humidity in the terrarium are 35-60 %, and the fact box is set to 40-60 %. Mist every day or every other day, so that part of the substrate and a little of the glass becomes damp, but avoid stagnant, wet air and mould. A humid hide with damp coconut fibre helps with shedding, and the female likes to use it for laying. Provide a shallow dish of fresh water, and change it daily. A small piece of cork in the dish gives feeder insects a way up if they fall in.

LIGHTING AND UVB

The species is nocturnal and does not need any special lighting. UVB is not necessary when the insects are dusted with calcium and vitamin D3, but a weak UVB light can be used. If you provide UVB, use a weak tube for shade-dwellers over part of the terrarium, switch to calcium without vitamin D3, and make sure the animal can always retreat into shade and hides.

Provide a fixed daily rhythm with 10-12 hours of light, preferably slightly shorter in winter. The light need not be strong, and it should be dark at night.

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

FEEDING

The gecko feeds exclusively on insects. Mealworms of a suitable size are a good staple, also for other *Coleonyx*, and crickets and dubia roaches provide variety. Wax moth larvae and butterworms are fatty and only an occasional treat. The insects must not be longer than the distance between the animal's eyes, i.e. about 3 mm for newly hatched juveniles and 6 mm for adults.

Juveniles are fed every day, adults every other day or 3-4 times a week. Give 6-10 small insects at a time and a few more if they are all eaten straight away. Remove uneaten crickets, so they do not gnaw at the gecko while it rests.

Feed the feeder insects a good diet a day or two before they are served. Dust all food with a complete calcium and vitamin supplement at every feeding, or use calcium at most feedings and a multivitamin once a week. Use calcium with vitamin D3, unless the animal receives UVB. Preferably put a small dish of calcium in the terrarium.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The gecko is calm, but not an animal for daily handling. It tolerates a little handling and sheds the tail if grabbed, so never take hold of the tail. Let it walk from hand to hand close over a soft surface, wash hands before and after, and give new animals a couple of weeks in peace.

Two males must not be kept together, because they fight. One male can be kept with one or more females, and the animals rarely fight and readily share hides. Females can, however, stress each other, both with and without a male, so the safest option is to keep the species singly or in pairs of known sex. Watch for bites and missing tails, and separate the animals if there is unrest.

By day the gecko lies in its hide and only comes out when it gets dark. Then it creeps around on the ground and stalks its prey, and both its movements and behaviour recall a small monitor lizard.

Breeding

SEXUAL MATURITY AND SEXING

The male has a bulge at the base of the tail and distinct pores between the hind legs, so the sex is easy to see in adult animals. The female is often slightly larger than the male. When the species becomes sexually mature is not documented, and the fact box therefore has no figure.

Only put a female to breeding when she is fully grown and in good condition. Females should not lay eggs too early, because they first need to build up body mass and reserves. Egg-laying draws on calcium, so give her plenty of calcium and insects throughout the season.

MATING

Breeding in the terrarium is only sparsely described. A winter break can get the animals to breed. In desert-dwelling *Coleonyx* species the heat is switched off for about eight weeks in winter, and the animals rest at 17-19 °C without food. This has not been tried with this species, so use it as a starting point, and keep the substrate damp throughout.

Put the male with the female in her terrarium, and watch whether he is too rough with her. Remove him if she seems stressed or is bitten. The female can store sperm for a long time and lay fertilised eggs at least a year after mating, so do not let the animals be together at random.

EGG-LAYING AND CLUTCHES

The female lays two eggs at a time, more rarely one, and the eggs have a soft shell. How many clutches she lays a year is not documented. Two clutches a year are sometimes given, but this has not been measured, so the field is empty in the fact box.

The female likes to lay in the humid hide or in damp substrate under cork. Fill the hide with damp coconut fibre, and check for eggs every morning. The eggs are carefully moved to a small incubation box. If the female loses weight, she should have a break from breeding.

Read more: Incubating eggs

INCUBATION

Place the eggs half buried in slightly damp vermiculite or perlite in a closed box with a few air holes, and do not turn them. Keep a stable temperature of 27-29 °C. The eggs hatch after 70-80 days at 29 °C. This is the only figure for the species, and it is uncertain: eggs of the smaller *Coleonyx variegatus* hatch after about six weeks at the same temperature.

A stable temperature is important. In *Coleonyx variegatus* many embryos died at fluctuating 24-32 °C, and only at a stable 27-29 °C did mortality fall and the sex ratio become even. Whether temperature affects the sex in this species has not been investigated.

REARING THE YOUNG

Rearing of the species has not been described in detail, so the advice is based on general practice for small eyelid geckos. The hatchlings are very small, and it can be difficult to find food small enough. Put them in a small box with kitchen paper as substrate, a hide, a damp corner and a shallow water dish. Make sure they do not dry out.

Give them the smallest crickets or fruit flies, dusted with calcium, and feed them every day. Separate the young if any are bitten or held down. Weigh them regularly, so you can follow growth.

Health and common mistakes

The species is hardy when the moisture is right. These problems are seen in small ground-dwelling geckos and can also affect it:

- Dehydration, if the substrate is dry and there is no humid hide. This is one of the most frequent causes of death in the species. Wrinkled skin and sunken eyes are warning signs.
- Stuck shed on the toes after shedding. Provide a humid hide, and gently loosen the remains with lukewarm water, because toes can be lost if the remains stay on.
- Constipation after swallowed substrate. Avoid coarse pieces and dried sphagnum, and preferably feed with tweezers.
- Too little calcium, especially in breeding females. Dust the food, and let the females rest.
- Wet, stagnant air and mould, which cause fungus and skin problems. A damp substrate must be combined with air exchange.
- Lost tails after handling or fights.
- Parasites in wild-caught animals. Preferably buy captive-bred animals.

In *Coleonyx variegatus* an entire stock has stopped eating and lost weight after a sick juvenile was introduced. Therefore keep new animals in quarantine for several weeks, and seek a vet with experience in reptiles if the gecko loses weight, does not eat or seems limp.

Read more: Quarantine and hygiene 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.

The full guide with map and updates: herpy.org/gekkoer/coleonyx-mitratus