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GECKOS

Reticulate Banded Gecko

Coleonyx reticulatus

Coleonyx reticulatus is a rare, pale yellow-brown and densely spotted desert gecko with a net-like pattern, which lives only in the Big Bend area of western Texas and adjoining parts of Coahuila in Mexico. It is nocturnal and has movable eyelids. The species is hardly kept in captivity, and there is little knowledge about its husbandry.

Family: Eublepharidae English name: Reticulate banded gecko

KEY FACTS

THE ANIMAL

Adult size	**14-17 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**At dusk and at night**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Desert, semi-desert and rocky terrain**
Difficulty	**Experienced**

CARE

Min. enclosure	**75 × 40 × 30 cm** L × W × H for 2 adults
Temperature, day	**22-29 °C**
Basking spot	**32-34 °C**
Temperature, night	**18-22 °C**
Humidity	**30-40%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**40-60 days** at 27-29 °C

PROTECTION AND PAPERWORK

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

About the species

Coleonyx reticulatus is a slender, fairly stout gecko with large eyes, a vertical pupil and long, thin toes. Like all species in the family Eublepharidae it has movable eyelids and no adhesive lamellae under the toes, and the claws protrude only with their tips from the scale sheath. This distinguishes it from most other geckos, but not from the other species in the genus *Coleonyx*.

The ground colour is pale yellow-brown to pinkish. Over the whole back lie dense small dark spots that run together into a net-like pattern; hence the species name, which means "net-like". Some animals have faint crossbands. The back is covered by 13 irregular longitudinal rows of enlarged tubercles, which distinguishes the species from the two smaller species *Coleonyx brevis* and *Coleonyx variegatus*, which lack tubercles. The species is larger than both: the body measures about 8 cm from snout to vent, and with the tail an adult is 14-17 cm. Weight and lifespan are not documented; the close relatives can live up to 15 years.

The species was described in 1958 by W. B. Davis and J. R. Dixon from an animal found at Black Gap in Brewster County, Texas. It lives partly in the same area as *Coleonyx brevis* but can be recognised by size and the dense pattern. It can give a faint squeaking sound when picked up.

The species is very rare in captivity. In the genus it is chiefly *Coleonyx brevis*, *Coleonyx variegatus*, *Coleonyx elegans* and *Coleonyx mitratus* that are kept.

Distribution and habitat

Coleonyx reticulatus has a small range in the Chihuahuan Desert. In the USA it is found only in the Trans-Pecos of south-western Texas, where it is known from two counties, including Big Bend National Park. The type locality, Black Gap, lies in Brewster County at about 760 m above sea level.

In Mexico the species occurs in the state of Coahuila along the other side of the Rio Grande. The species is not regarded as threatened worldwide, but its range is so narrow that it is rare and local. The habitat is remote and hard to reach, so the species is known mostly from a few records.

> **Native range:** United States and Mexico.

HABITAT

Coleonyx reticulatus lives in the dry, stony and hilly terrain of the Chihuahuan Desert in the Big Bend region. The climate is warm and dry with very little rainfall, large differences between day and night and cool winter nights. The animals are nocturnal and hide by day in crevices and under stones.

The species is tied to rocky terrain and lives on small arthropods.

Care

THE ENCLOSURE

There is little knowledge about the husbandry of *Coleonyx reticulatus*. The figures below are borrowed from the close relatives *Coleonyx brevis* and *Coleonyx variegatus*, which live in the same climate, and adjusted for the larger size.

A pair needs a terrarium of at least 75 × 40 × 30 cm (length × width × height), and a single animal can be kept in 60 × 40 × 30 cm. Larger is better. It is the floor area that counts, because the animal lives on the ground and in crevices.

A mixture of sand and fine gravel at a depth of 5-8 cm is used as substrate, so the gecko can dig. A solid floor such as slate tiles is also possible if part of the terrarium has a diggable layer. Build hides of flat, stable stones and cork bark. Heavy stones must stand directly on the bottom of the terrarium and not on top of the substrate, so they do not topple when the animal digs. There must be more hides than animals, both a warm and a cool one.

Avoid dried sphagnum and other long fibres in the substrate, because they can lodge in the mouth and cause constipation. Remove droppings daily.

TEMPERATURE

The species needs a temperature gradient. There must be a warm zone of 32-34 °C at a hide, while the rest of the terrarium is kept at 22-29 °C. At night the temperature may fall to 18-22 °C.

Heat is best provided by a heat mat under a third of the floor or by a low-output heat bulb, in both cases controlled by a thermostat with the probes in the warm hide. Measure with digital probe thermometers. The heat source is switched off at night. In winter healthy, well-nourished animals can have a rest period of about eight weeks at 17-19 °C without heat and without feeding, as in the related desert species.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from a dry climate, and the general humidity in the terrarium is kept at 30-40 %. Always provide a humid hide at the cool end, filled with damp coconut fibre, where the animal can shed and where humidity is high. Keep it damp but not wet, and replace the filling regularly.

Mist a single corner zone of the terrarium 1-2 times a week, so there are droplets to drink, and let it dry out again. In addition, put a shallow bowl of fresh water at the cool end, changed daily. The bowl is washed once a week.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Coleonyx reticulatus is nocturnal and does not need strong light. A weak UVB light over the warm side, with shade and hides in the rest of the terrarium, is nevertheless recommended, because it gives a clear day and night and supports the D3 supply. Use a weak tube for shade-dwelling animals (Ferguson zone 1), and make sure the animal can always withdraw completely from the light.

Give 12-14 hours of light in summer and 8-10 hours in winter. Glass and plastic stop UVB, so a window gives no UV but can make the terrarium dangerously warm. Replace the UVB light every 6-12 months according to the manufacturer's instructions.

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

FEEDING

Coleonyx reticulatus eats live arthropods, and like all geckos in the genus it takes most things it can overpower. The best feeders are mealworms, crickets and cockroaches (for example dubia), and the young take small crickets and larvae of darkling beetles. Feeders must not be larger than the distance between the animal's eyes.

Young animals are fed every day and adults two to three times a week. Give what the animal eats in about 15 minutes, and remove the remains, so the feeders do not stress the gecko. Dust the feeders lightly with calcium, and use a calcium and vitamin supplement with D3 every second to third feeding. Many geckos in the genus eat calcium powder from a small dish, so put a dish of pure calcium in the terrarium. Species in the genus can get a thick tail when well nourished; the tail is the animal's fat store.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Males are incompatible, and females can stress each other, so *Coleonyx reticulatus* is best kept singly or as a male and a female. Never keep two males together.

The species is shy, fast and fragile. Keep handling to a minimum, and never grab the tail, because it is easily shed and grows back only slowly. When disturbed the animal may squeak faintly. Feeding with soft tongs is a good way to make contact without picking the animal up. The day is spent hidden, and activity comes after the light goes out.

Breeding

SEXUAL MATURITY AND SEXING

Males are recognised by the bulges at the tail base and by differences in the pores in front of the vent, but the sexes can be hard to tell apart in young animals. In the close relatives sex is determined by sex chromosomes and not by temperature during incubation; for *C. reticulatus* this has not been studied. Age and weight at first mating are not documented for *Coleonyx reticulatus*. Wait until the animals are fully grown and in good condition.

Read more: Incubating eggs

MATING

Breeding of the species is not documented. As in the related desert species, the season probably follows the longer days and higher temperatures of spring after a cool winter rest. Put the male in with the female, and take him out again if the female is clearly stressed or he bites. Give the female extra food and calcium throughout the season.

EGG-LAYING AND CLUTCHES

The female lays 1-2 eggs per clutch. The number of clutches per year is not documented, but the related species lay several clutches in succession in the season. Provide a laying box with damp coconut fibre or vermiculite in a hide. The female spends a lot of energy on the eggs, so she must have plenty of food and calcium, and breeding is stopped if she loses weight.

INCUBATION

The eggs are carefully moved to a small box with damp vermiculite without being turned. Incubate at a stable 27-29 °C as in the related desert species. Fluctuating and high temperatures above 30 °C cause high mortality in the embryos. The incubation period is not documented for the species; in *Coleonyx brevis* and *Coleonyx variegatus* the eggs hatch after 40-60 days.

REARING THE YOUNG

The young are small and fragile and resemble the adults. Raise them in small boxes with kitchen paper or sand, a hide, a humid hide and a small water bowl at the same temperature as the adults. Give small feeders, dusted with calcium, every day. Young animals are best kept separately to avoid stress and unintended mating.

Health and common mistakes

Coleonyx reticulatus probably has the same weak points as the close relatives. The typical problems are:

- Too little calcium and D3, which causes soft bones and tremors. Dust the feeders and use a weak UVB light.
- Overheating of the warm hide. Always use a thermostat and a probe in the hide.
- Constipation from the substrate, if the animal swallows it. Avoid long, dry fibres and feed from tongs.
- Skin remnants on toes and tail tip in air that is too dry without a humid hide.
- Stress from handling or lack of hides, which causes loss of appetite and lost tails.
- Sudden weight loss, where the whole group stops eating. This may be due to an infectious disease, so sick animals are separated from the others.

A healthy animal has clear eyes, a plump tail and moves lively. See a vet with reptile experience if the gecko loses weight, does not eat for several weeks or seems 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.