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GECKOS

Vietnamese leopard gecko

Goniurosaurus araneus

A slender, long-legged tiger gecko from the karst mountains on the border between northern Vietnam and southern China, with four broad orange bands on a rusty brown ground colour. The species name *araneus* comes from the Latin word for spider. The gecko thrives at room temperature and high humidity, and is threatened in the wild, so it requires both paperwork and a keeper with some experience.

Family: Eublepharidae

KEY FACTS

THE ANIMAL

Adult size	**19-22 cm** total length incl. tail
Lifespan	**10-20 years**
Active	**At dusk and at night**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Rainforest and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 45 × 60 cm** L × W × H for 1 adult
Temperature, day	**22-26 °C**
Temperature, night	**19-22 °C**
Humidity	**60-90%**
UVB	**Optional** Ferguson zone 1
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Clutches per year	**1-4**
Incubation	**45-80 days** at 24-27 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Endangered (EN)**

About the species

Goniurosaurus araneus is one of the tiger geckos, a genus of eyelid geckos from East Asia with red or orange eyes. It is slender and long-legged with a triangular head, and the species name comes from the Latin aranea, spider, because the body and long legs look slight and spider-like.

The ground colour is rusty brown with a bluish-grey sheen, and the legs are more violet. Behind the nuchal band follow four very broad, clean orange bands with black edges, and the tail is black to dark brown with five white bands. The head and body have only a few dark spots, though some animals are more speckled than others. The iris is orange-brown. Juveniles have white bands that turn orange with age. It can be told from the closely related *Goniurosaurus luii* by its much broader bands and almost spotless ground colour.

The species was described in 1999 by Grismer, Viets and Boyle from animals found around Cao Bang in northern Vietnam. Adults measure 115-124 mm from snout to vent and 19-22 cm with the original tail. The weight is not known. Males have a distinct bulge at the base of the tail and 23-29 pores in front of the vent, which females lack.

Like the other eyelid geckos it can blink and has no adhesive lamellae under the toes. Instead it climbs with curved claws and cannot walk up smooth glass. The tail can be shed and grows back, but the new tail lacks the transverse rows of scale knobs that the original has.

Little is known about the care and breeding of this particular species, so many figures in this guide are borrowed from its closest relatives in the luii group, especially *Goniurosaurus huuliensis* and *Goniurosaurus luii*.

In the terrarium the species is shy but fond of climbing, and it is mostly an animal to watch after dark. It tolerates neither heat nor dryness and suits a keeper with some experience.

Distribution and habitat

The species is known only from a small area on both sides of the border between Vietnam and China. The type locality is given as roughly 40 km south-east of the town of Cao Bang in northern Vietnam. In China the species lives in Nonggang Reserve near Chongzuo in south-western Guangxi.

In Nonggang the species lives south-west of the Zuojiang river, while *Goniurosaurus luii* lives on the other side, so the two close relatives are separated by the river even though they live close together. In Cao Bang the species has not been found again. The cause may be heavy collecting for the pet trade and traditional medicine, but the original locality record may also be wrong. The true range may therefore be both larger and smaller than the map shows.

> **Native range:** Vietnam and China.

HABITAT

The gecko lives in karst landscape, where the limestone mountains are covered with dense tropical forest. In Nonggang it lives at an elevation of 150-170 metres. The species is most active on rock faces and only occasionally on the forest floor, and it prefers to sit on north-facing slopes, where *Goniurosaurus luii* prefers the south-facing ones. Tiger geckos hide by day in rock crevices and cave mouths.

The reserve lies 100-600 metres above sea level and has an annual mean temperature of 22 °C and about 1,350 mm of rainfall a year, so a humid and mild climate without great heat. Winter climate and humidity inside the retreats themselves are not known. The related *Goniurosaurus huuliensis* lives in densely vegetated karst mountains with high humidity and relatively stable temperature, most of them near large caves. That matches well what the species needs in the terrarium: cool hides with damp areas close by.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An adult needs an enclosure of at least 60 × 45 × 60 cm (length × width × height), and a pair or a trio of one male and two females needs about 90 cm in length. That length suits the whole luii group, and *Goniurosaurus araneus* spends almost all of its active time on the back wall and hunts from above. Provide both floor space and height, and cover the back wall with cork or a rock-like background.

Furnish with a network of hides: cork tubes and cork bark at several heights, a damp hide with sphagnum and dry hides next to it, low, sturdy branches and plants such as pothos or philodendron. Anything that could topple must be fixed firmly, so that nothing falls onto the animal. A mixture of fertiliser-free soil and coco fibre with a drainage layer at the bottom and a layer of leaves on top suits as substrate. Springtails and small woodlice help keep it clean. Avoid pure sand. A shallow water bowl and good ventilation are part of the set-up, because damp and coolness otherwise easily give musty air.

Juveniles can grow up in a small plastic box of about 30 × 20 × 20 cm and be moved later to an enclosure of 40 × 40 × 35 cm or larger.

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

TEMPERATURE

The species is a cool-climate gecko that rarely needs extra heat in an ordinary living room. During the day 22-26 °C suits, and at night the temperature may fall to 19-22 °C. The ideal is 24-26 °C during the day and about 22 °C at night.

Heat is the greatest danger, and the temperature must not exceed 27-28 °C for long. The species does not need a heat source. Keep the enclosure away from sunny windows, and always measure with a digital thermometer.

In winter the temperature is lowered by about 4 °C to 19-22 °C during the day and 14-16 °C at night, and the days are made shorter.

HUMIDITY AND WATER

Humidity should be 60-90 %: highest at night after misting and slightly lower during the day. During the day it may fall to around 60 %, when the evening misting lifts it to 90 % again. The geckos lick droplets from leaves, cork and glass, and a layer of fallen leaves holds the moisture. If the air stays dry for a long time, shedding goes wrong.

Always keep at least one moist hide with sphagnum, and check it for mould. Also provide a shallow dish of fresh water, even though many animals mostly drink droplets. A hygrometer in the middle of the enclosure shows whether the rhythm holds. In winter, mist a little less.

LIGHTING AND UVB

The species is active at dusk and at night and sits hidden through the day, so it does not use the light to warm itself. A fixed daily rhythm is enough, for example T5 tubes for 11.5-12 hours a day in summer and 8-10.5 hours in winter. At night it must be completely dark.

UVB is not necessary when the insects are dusted with calcium and vitamin D3, and tiger geckos are often kept entirely without it. A weak UVB light may, however, benefit calcium metabolism in tiger geckos. If you want to provide it, choose a tube for shade-dwelling animals (Ferguson zone 1), so that the UV index is at most around 1-2 on the uppermost surfaces and lower in the hides. If there are live plants, an LED plant light can cover the rest.

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

FEEDING

The species is an insectivore and takes almost anything small enough. Offer crickets, dubia roaches, locusts and silkworms, and vary between several kinds. The prey must not be larger than the distance between the animal's eyes. It also takes moths, spiders and small beetles. Waxworms are fatty and only a treat.

Adults get two meals a week and up to three in the breeding season, juveniles every other day. Dust the insects with calcium and vitamin D3 and once a week with a multivitamin, and give the feeder insects good food for a couple of days before they are used. A small dish of calcium that the animal can lick from itself must be changed often, because the powder clumps and goes mouldy. If the room is colder than about 21 °C, appetite may fall, and that is not dangerous.

BEHAVIOUR AND HANDLING

The species is shy and fast and disappears into hiding when startled. It is not suited to handling, so only pick it up when the substrate is changed or it needs to be weighed. Give new animals at least two weeks of peace. If you need to lift a gecko, hold it low, let it walk from hand to hand, and never grab the tail.

Males must never be kept together, because they fight. One male can be kept with one or two females, and by day the animals often lie together in the best hide. Have a spare enclosure ready in case unrest arises. The geckos usually use a fixed toilet spot. After dark they hunt on the back wall and the low branches. A stressed animal stays hidden, loses weight or stops eating.

Breeding

SEXUAL MATURITY AND SEXING

The sex can be seen from about six months of age. Males have a distinct bulge at the base of the tail and 23-29 pores in front of the vent, which females lack. The age at sexual maturity is not known for *Goniurosaurus araneus*; around two years, as in *Goniurosaurus huuliensis*, is a good rule of thumb. There is no known weight threshold either, so the female must be fully grown and in good condition before being put to breed.

MATING

The mating season begins in spring, when temperature and humidity rise. Beforehand the animals should have two to three cool months in winter with shorter days and less food, as described under temperature. Put the male in with the female, and keep an eye on them the first nights. If the female is chased without pause, or gets scratches, they must be separated again.

The species can also be kept permanently as a trio of one male and two females. Remove the male if a female becomes stressed or thin, and give her a rest.

EGG-LAYING AND CLUTCHES

The female normally lays two soft-shelled eggs, more rarely only one. She lays 1-3 clutches a year, at most 4, and most eggs are laid between June and September. The figures are borrowed from *Goniurosaurus huuliensis*.

Place a laying box with at least 5 cm of moist vermiculite, sphagnum or coco fibre in a cool, humid spot in the enclosure. Otherwise the female buries the eggs in the substrate. The eggs demand a lot of calcium, so give plenty of calcium, vitamin D3 and insects throughout the season. Calcium deficiency causes rickets and lost eggs. If she loses weight or seems limp, she must be given a rest.

INCUBATION

Place the eggs in a closed plastic box with small air holes, buried about a third of the way into slightly moist vermiculite. Mark the top side, and do not turn them. The eggs can lie at enclosure temperature, 23.5-26 °C, or in an incubator at 24-27 °C, and they hatch after 45-80 days, fastest at the high temperature. The figures are borrowed from *Goniurosaurus huuliensis* and *Goniurosaurus luii*.

Whether temperature determines the sex is unknown, so keep it stable, and do not go above 27 °C. Hatching can take several hours, and the young shed shortly afterwards. Eggs that collapse and turn slimy or mouldy are usually dead, but leave them until you are sure.

Read more: Incubating eggs

REARING THE YOUNG

Once the first shed is over, move the hatchlings to small plastic boxes of about 30 × 20 × 20 cm with kitchen paper or coco fibre, a damp corner with sphagnum, pieces of cork and a shallow water bowl. Kitchen paper makes it easy to follow food intake and droppings in the first weeks. Mist daily. For the first weeks two or three hatchlings can live together.

The first meal is small crickets about three days after hatching, and flightless fruit flies can also be used. Dust everything with calcium and vitamin D3. Feed the juveniles three times a week for the first months, or daily with a gradual tapering off. Separate them if one lags behind, and separate the males before they become sexually mature. The white bands gradually change to orange, and it takes about two years before the animals are fully grown.

Health and common mistakes

Tiger geckos are hardy as long as temperature and humidity are right. The typical problems are:

- Too much heat, for example in an enclosure near a sunny window. It causes stress, loss of appetite and in the worst case death.
- An environment that is too dry, which causes retained shed on the toes and tail tip. Provide a damp hide, and loosen the remains with lukewarm water.
- Too little calcium and vitamin D3, especially in breeding females. It causes a soft jaw, bent limbs and lost eggs.
- Parasites, especially coccidia, which many tiger geckos carry. Have a faecal sample examined by a vet, and quarantine new animals.
- A constantly wet substrate and poor ventilation, which cause mould and bacteria.
- Obesity, if many waxworms are given.
- Loss of the tail. It grows back, but looks different.

It is normal for the gecko to lick its eyes and mouth clean with its tongue. See a vet experienced with reptiles if it loses weight, does not eat for several weeks or seems limp.

Read more: Quarantine and hygiene

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.