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GECKOS

Tokay gecko

Gekko gecko

South-east Asia's large, loud-voiced climber with a blue-grey body, orange spots and a call that sounds like to-keh. *Gekko gecko* is impressive and intelligent, but also defensive and quick to bite, and it is not an animal for anyone who wants to hold their reptile in the hand.

Family: Gekkonidae Former name: *Lacerta gecko*

KEY FACTS

THE ANIMAL

Adult size	**25-35 cm** total length incl. tail
Lifespan	**10-20 years**
Active	**At night**
Lifestyle	**Arboreal and rock-dwelling**
Habitat	**Rainforest and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 60 × 120 cm** L × W × H for 1 adult
Temperature, day	**26-29 °C**
Basking spot	**30-35 °C**
Temperature, night	**23-26 °C**
Humidity	**60-80%**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects and vertebrates**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**12-36 months**
Clutch size	**2 eggs**
Clutches per year	**4-8**
Incubation	**60-180 days** at 25-30 °C

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Least Concern (LC)**

About the species

Gekko gecko is one of the largest geckos in the world. Adults typically reach 25-35 cm including the tail, and males are larger than females, with a broader head and heavier jaws. The body is blue-grey, often with a turquoise sheen, and densely covered with orange or rust-red spots. The eyes are large and golden with a vertical pupil. Under the toes are lamellae with millions of microscopic hairs that cling to almost anything, even vertical glass.

The species was described by Linnaeus in 1758, and the scientific name imitates the male's call, a loud, repeated to-keh, which he uses at night to mark his territory. Two subspecies are recognised, *Gekko gecko gecko* and *Gekko gecko azhari*, but where the boundary lies, and whether more species are hiding under the name, is still debated.

The species is one of the most defensive geckos in the trade. It hisses, gapes and bites, and the bite hurts and can draw blood. It holds on with its jaws, so you should not tear it loose, but wait until it lets go. Many animals grow calmer with time, but seldom truly tame. It is an animal you watch and look after with respect.

Many animals in the trade are caught in the wild and often arrive dehydrated, emaciated and full of parasites, so always buy captive-bred animals. Colour and pattern vary greatly, and colour forms have been bred with, for example, more black or more red in the spots.

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

Distribution and habitat

Gekko gecko occurs naturally across large parts of South and South-East Asia: from Bangladesh, north-eastern India, Nepal and Bhutan through Myanmar, Thailand, Cambodia, Laos and Vietnam to Malaysia, southern China (including Yunnan, Guangxi and Hong Kong) and Taiwan. To the south and east it is found on the Indonesian islands, in the Philippines and in Timor-Leste. The type locality for the subspecies *gecko* is Java, and for *azhari* it is Barkal in the Chittagong Hill Tracts in Bangladesh.

The species has also been introduced and has formed populations in, among other places, Florida, Hawaii, Martinique and Mexico. These are not part of the natural range and are not shown on the map.

> **Native range:** Bangladesh, India, Nepal, Bhutan, Myanmar (Burma), Thailand, Cambodia, Laos, Vietnam, Malaysia, China, Taiwan, Philippines, Indonesia and Timor-Leste.

HABITAT

Gekko gecko is tied to trees and rocks in tropical forest, but it is very adaptable. It is found in rainforest, at forest edges, in plantations and in farmland close to people, where it lives in hollow trees, rock crevices and under the roofs of houses. In many places it is a welcome guest, because it eats cockroaches and other pests.

The climate is warm and humid all year round with a distinct rainy season. By day the temperature is often 25-32 °C and a couple of degrees lower at night. The gecko is nocturnal and spends the day in a crevice, often close to its partner. The breeding season roughly stretches from autumn to early summer, and rainy weather seems to set egg-laying going.

Care

THE ENCLOSURE

An adult needs a tall enclosure of at least 60 × 60 × 120 cm (length × width × height), and a particularly large male should have 90 × 60 × 120 cm. A pair can live in the same enclosure, but then there must be room to keep out of each other's way and several hiding places at different heights. *Gekko gecko* is territorial and is best kept alone, and two males must never be put together. Young of equal size can live together for a time but must be separated by six months of age at the latest.

Choose an enclosure of glass, PVC or wood with doors at the front, which holds heat and humidity, and ensure good ventilation. Furnish with sturdy branches, cork tubes and cork slabs, so the animal can squeeze into narrow crevices. The hiding places should be possible to look into and so roomy that you can get a hand in if it becomes necessary. Live plants such as pothos or artificial plants provide cover.

As substrate, coconut fibre or a bioactive mix with isopods and springtails is a good choice. The substrate should be moist but not wet. Remove droppings from the corners, and keep the doors locked, because the gecko is lightning fast and slips out easily.

Read more: Humidity, misting and ventilation Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

Gekko gecko likes it warm. By day the enclosure should be 26-29 °C with a warm spot under a lamp of 30-35 °C. Around 32 °C at the warm spot suits most animals. At night the temperature may fall to 23-26 °C, and in most homes this requires a weak heat source without light, for example a ceramic heat emitter.

Always provide a temperature difference, so that the animal can choose between warm and cooler zones. Measure with a digital thermometer both at the top and at the bottom, and control all heat with a thermostat. Strong heat and low humidity dry the animal out. A gecko that sits with its mouth open or constantly hides in the coolest end is too hot.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity should be 60-80 %, measured in the middle of the enclosure. Mist thoroughly in the evening and lightly in the morning, so that the humidity rises at night and falls again during the day. Too low humidity causes stuck shed, while constantly wet conditions cause mould and skin problems, so the ventilation must be in order.

Gekko gecko drinks droplets from leaves and glass, but also put in a shallow bowl of fresh water, and change the water every day. A hygrometer shows whether the rhythm is holding.

LIGHTING AND UVB

The species is nocturnal and can live without UVB when it receives D3 as a supplement, but a weak UVB light is recommended today, and it is especially valuable for breeding females. Use a UVB tube suited to shade-dwelling species (Ferguson zone 1), for example a 5-7 % T5 or T8 tube, over the mesh lid on one side, so that the UV index is at most 1-2 at the uppermost branches. The rest of the enclosure should be shaded. Replace the tube every 12 months.

Keep the light on for 12 hours a day, ideally controlled by a timer. At night it should be dark.

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

FEEDING

Gekko gecko is an insectivore. The staple diet is crickets and dubia roaches, supplemented with locusts and now and then waxworms, hornworms or morio worms for variety. The feeder animals should be smaller than the gecko's head and should have been fed well for a couple of days before being offered. Dust them with calcium, and give a multivitamin regularly.

Young animals are fed every day, adults every second to third day, with as much as they eat in about five minutes. A newborn mouse can be given as a treat, at most a couple of times a month. Males in particular easily become too fat, so keep an eye on weight and body shape.

Breeding females have a great need for calcium and D3. Give them extra, and follow their weight.

BEHAVIOUR AND HANDLING

Gekko gecko is fast, strong and defensive. It hisses, gapes and lunges when it feels threatened, and a bite can break the skin. Do not reach for it, and do not count on it becoming tame. Many animals learn with patience to take food from tweezers, and some settle down with time, but it is an animal to watch, not to hold in the hand.

The male's to-keh can be heard far away, especially at night, and that is worth bearing in mind if the enclosure is to stand in the bedroom. Two males must never be kept together, and females can also fight. A pair only works if the animals suit each other. A good sign is that they sleep in the same hide, and otherwise they should be separated.

New animals should have a couple of weeks' peace to settle in, and cleaning and feeding should be done calmly and without sudden movements.

Breeding

SEXUAL MATURITY AND SEXING

The males have a larger head, stronger jaws and a distinct, V-shaped row of pores in front of the vent, as well as a bulge at the base of the tail. In the females the pores are small or indistinct, so the sex is most reliably seen in subadult and adult animals. The animals become sexually mature at 12-36 months, but it is size and condition that count. Females should be put to breeding only when they are fully grown and in good body condition, and preferably not before 18 months of age.

MATING

Put a healthy male together with a female when both are in good condition. Not all pairs suit each other, so keep an eye on them the first days, and separate them if one becomes aggressive. Never use two males, and remember that another female may eat the eggs.

In the wild the species breeds roughly from autumn to early summer, but in captivity it can breed all year round. The first clutch comes about a month after mating. It is a good idea to give the female a break after three to four clutches, so that she does not become worn out.

EGG-LAYING AND CLUTCHES

The female lays two hard-shelled eggs at a time and sticks them to a vertical surface, often in a narrow crevice or between two panels. About a month passes between clutches, and this typically amounts to four to eight clutches in the season.

Give the female suitable places to lay, for example two flat pieces of cork bark or slate with 2-5 cm between them. The eggs are glued in place and should not be buried. Keep an eye on the female's weight and calcium reserves, and give plenty of calcium and insects throughout the season. Wild-caught females in particular can collapse from calcium deficiency.

INCUBATION

The eggs stick so firmly that they cannot be peeled off without breaking. Leave them in place if temperature and humidity are in order, and protect them from the adults, or move the whole panel or hiding place with the eggs to an incubator. Keep them at 25-30 °C with high humidity, for example with moist vermiculite or coconut fibre nearby, but without the eggs becoming wet. Below 24 °C and above 32 °C the embryos die more readily.

The incubation period varies greatly, from about 60 to 180 days, and is typically 90-120 days. The warmer, the shorter. It is unresolved whether temperature affects sex, so do not count on being able to control it.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are 5-8 cm long at hatching and eat their own skin at the first shed. *Gekko gecko* guards its eggs, and the parents often tolerate the young for the first couple of months, so they can stay together that long, but the hatchlings can also be moved at once. By about six months of age at the latest they should each have their own enclosure, because otherwise they begin to fight.

Give small insects, no wider than the distance between the hatchling's eyes, for example small crickets and fruit flies, every day and dusted with calcium with D3. Keep the same temperature and humidity as for the adults, mist daily, and weigh the hatchlings regularly.

Health and common mistakes

Gekko gecko is hardy when kept properly. The typical problems are:

- Wild-caught animals are often dehydrated, emaciated and full of parasites. Buy captive-bred animals. If you have a wild-caught animal, make sure it drinks and eats before it is treated for parasites, and have a reptile vet examine a faecal sample.
- Too little calcium and D3, especially in breeding females, causes soft bones and cramps. Dust the food, and provide weak UVB.
- Too low humidity causes stuck shed on toes and tail, which can constrict and cut off a toe. Moisten and loosen it gently.
- Too wet conditions without ventilation cause mould, fungus and skin infections.
- Obesity, especially in males. Keep an eye on weight, and limit the fatty feeder animals.
- Bites and injuries after fights if the animals are not separated or there are too few hides.

See a vet experienced with reptiles if the animal loses weight, does not eat for several weeks, constantly sits with its mouth open or has difficulty shedding.

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.