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GECKOS

## White-headed dwarf gecko

# *Lygodactylus picturatus*

*Lygodactylus picturatus* is a small, diurnal climber from the coastal forests of East Africa, where the male has a bright yellow head on a blue-grey body. It grows to only 7-9 cm including the tail, but is curious and active and can be kept in pairs in a small, densely planted enclosure.

Family: Gekkonidae  Former name: *Hemidactylus picturatus; Lygodactylus luteopicturatus*

KEY FACTS

### THE ANIMAL

| | |
|---|---|
| Adult size | **7-9 cm**<br>total length incl. tail |
| Lifespan | **5-10 years** |
| Active | **By day** |
| Lifestyle | **Arboreal** |
| Habitat | **Rainforest** |
| Difficulty | **Intermediate** |

### CARE

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|---|---|
| Min. enclosure | **30 × 30 × 45 cm**<br>L × W × H for 2 adults |
| Temperature, day | **25-30 °C** |
| Basking spot | **30-35 °C** |
| Temperature, night | **20-22 °C** |
| Humidity | **50-75%** |
| Water | **No water dish** |
| UVB | **Recommended**<br>Ferguson zone 2 |
| Diet | **Insects, fruit, complete diet and small invertebrates (springtails, fruit flies)** |
| Kept | **In pairs or one male with several females** |

### BREEDING

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|---|---|
| Reproduction | **Egg-laying** |
| Sexually mature | **9-15 months** |
| Clutch size | **1-2 eggs** |
| Incubation | **60-120 days**<br>at 24-27 °C |

### PROTECTION AND PAPERWORK

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

## About the species

*Lygodactylus picturatus* is a dwarf gecko that differs from most other geckos in being active by day. The male is easy to recognise: the head is bright yellow, the body blue-grey with grey stripes from the shoulders down towards the tail, and the throat is dark and becomes darker with age. The female is more subdued, beige-brown with dark and light spots and stripes. She can, however, develop a yellow head for periods, especially when stressed or kept alone, so colour alone is not a reliable way to sex them.

The animal is small: from snout to vent it measures just under 4 cm, and with the tail it can reach 7-9 cm. The males grow slightly larger than the females. Under the toes there are fine adhesive lamellae, and the tail tip has a similar adhesive pad, which the animal uses as a fifth foot when climbing. The colours change with mood, and a frightened animal can turn completely dark brown.

The species was first described by Wilhelm Peters in 1868 under the name *Hemidactylus variegatus*, and the name *picturatus* is Latin for painted or variegated. The taxonomy is not entirely settled. *Lygodactylus luteopicturatus* from Kenya and Tanzania has been merged with *L. picturatus*, and several former subspecies have been raised to full species. Animals in the trade may therefore be listed under both names.

In the enclosure the species is lively and alert. It is not an animal to handle but one to watch: it often sits motionless on a branch like an ambush hunter and then darts off after a fly or a springtail.

## Distribution and habitat

*Lygodactylus picturatus* is native to East Africa. The secure core range is the coastal zone of southern Kenya (including around Mombasa), Tanzania, the islands of Zanzibar and Mafia, and Mozambique. Further inland and northwards the species is reported from Ethiopia, Somalia and South Sudan, and southwards from Zambia and Zimbabwe, as well as from Uganda and the south-eastern part of the DR Congo.

How far the range actually extends depends on which populations are counted as the species, because several former subspecies are now treated as separate species. The map shows only the core range, and the records on it may include closely related forms. The species is common within its range and is not assessed as threatened.

> **Native range:** Kenya, Tanzania and Mozambique.

### HABITAT

*Lygodactylus picturatus* lives on trees and bushes in humid coastal forest, open forest and dense scrub. It prefers large trunks and branches, often up to about 4 m above the ground, and hides in bark crevices and behind loose bark when disturbed.

The climate in the coastal areas is warm and humid with a distinct rainy season. The temperature seldom falls below 20 °C at night, and during the day sunlit trunks get far above that. Even though the forests are humid, the gecko often sits openly on trunks that dry out during the day, and it gets moisture from dew and raindrops. This is what the enclosure should imitate: a damp substrate and wet leaves in the morning, but dry branches the rest of the day.

## Care

### THE ENCLOSURE

A pair of *Lygodactylus picturatus* can be kept in an enclosure of at least 30 × 30 × 45 cm (length × width × height), and larger is better. A male and two females need at least 50 × 40 × 45 cm. Height counts for more than floor area, because the animal lives on trunks and branches.

The enclosure must be completely escape-proof for such small animals and their feeders. Use fine mesh in the lid and put ventilation grilles at the bottom and top, so the air changes without the animals being able to escape. The back and side walls must be sealed, so that no juveniles or small animals can squeeze in behind them. Make the base a drainage layer of expanded clay or similar, separated from the soil with a mat or fibre cloth, and put 3-4 cm of damp mix of coconut fibre, a little peat and a little sand on top, optionally covered with leaf litter.

Furnish with thick branches at varying angles, cork bark and bark for hiding, and plants with large, sturdy leaves such as bromeliads and sansevieria. They provide both sun and shade and retain moisture. Bamboo tubes of different thickness can serve as both hides and egg-laying sites.

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

### TEMPERATURE

*Lygodactylus picturatus* is a heat-loving day animal, and the enclosure must have a distinct temperature gradient. By day the background temperature should be 25-30 °C. Under a small spot or a halogen lamp there should be a basking spot at 30-35 °C, where the animals can warm up. The heat lamp does not need to be on all day: two to four periods of 30-45 minutes in summer and two in winter are enough. At night the temperature should fall to 20-22 °C, and in winter the daytime temperature can be slightly lower, about 23-28 °C, with nights at 18-20 °C.

The spot must suit the size of the enclosure. A powerful lamp in a small enclosure quickly raises the whole temperature and can cook the animals. Use a thermostat or a dimmer and measure with thermometers both high up and low down in the enclosure. Keep the enclosure away from sunny windows. Animals that sit motionless in the warmest spot with their mouths

open are too hot, and then the lamp must be dimmed or moved.

Read more: Heat and temperature

### HUMIDITY AND WATER

For *Lygodactylus picturatus*, keep the humidity at about 50-60 % by day and 60-75 % at night. Mist the enclosure lightly two or three times a day, so leaves and walls are covered with droplets, and wait with the next misting until the droplets have evaporated and the substrate has started to dry. The species tolerates drier conditions than many other dwarf geckos, and the biggest mistake is keeping it too wet. Standing water in the substrate and constantly wet branches cause mould and skin problems.

The animals drink droplets from leaves and walls, so a water bowl is not necessary and is also a risk for the smallest animals. Make sure they can get water daily, but they can cope with a single dry day. Think especially of summer heat and the placement of the enclosure, because small animals dry out quickly. A hygrometer shows whether the humidity fluctuates as it should.

Read more: Humidity, misting and ventilation

### LIGHTING AND UVB

*Lygodactylus picturatus* is diurnal and needs strong, even light. Use fluorescent tubes, preferably T5, and combine a UVB tube with a daylight tube, so the enclosure is bright and the animals show their colours and behaviour. Which UVB strength suits best is not documented for the species. A moderate UVB tube (Ferguson zone 2) over part of the enclosure is a cautious estimate. Leave shade and hiding places in the rest of the enclosure.

Keep the light on for 14-16 hours in summer and 12-14 hours in winter, controlled by a timer. A weak night light for up to four hours can be used, but the rest of the night must be dark.

Read more: Lighting and UVB

### FEEDING

*Lygodactylus picturatus* needs live small prey as its staple diet: small crickets, fruit flies, bean beetles, waxworm larvae, small grasshoppers, aphids, small roaches, small isopods and springtails. Size is the most important thing. The feeder insect must be smaller than the distance between the animal's eyes, especially for the young. For the smallest, springtails and fruit flies help.

A smaller part of the diet can be fruit paste or prepared diet for fruit-eating geckos, served in a shallow dish or a bottle cap high up on a branch. They readily take it, and it supplements the insects. Dust the feeder insects lightly with calcium with vitamin D3, and give breeding females a small dish of pure calcium that they can help themselves to. Change it before it becomes wet and hard. Feed every day or every other day, but avoid overfeeding, so the animals do not become fat.

Mealworms and other fatty larvae should only be a treat, because they are high in fat and too big for the smallest animals.

Read more: Calcium, vitamins and supplements

### BEHAVIOUR AND HANDLING

*Lygodactylus picturatus* is a small and fast species that is not suited to handling. It is fast and can easily get away or be injured, and the tail can be dropped. Open the doors only briefly when you feed or tend the enclosure, and watch out for gaps where the animals can escape.

The usual way of keeping them is one male and one or two females in an enclosure large enough for the females to get away from the male. Two males fight and must not be kept together. The species is territorial, and a weaker animal can be chased even when there is space. Watch for bite marks, bitten-off tails and animals that hide or lose weight, and separate them at once. It is also possible to keep a single animal, but females may in that situation get a yellow head. The animals are most active in the bright part of the day and rest in the shade in the middle of the day if the heat becomes too high.

## Breeding

### SEXUAL MATURITY AND SEXING

In *Lygodactylus picturatus*, the male is recognised by the bright yellow head, a dark throat that becomes darker with age, and a distinctly thickened tail base with two hemipenal pouches. There are also 6-10 preanal pores in front of the vent, and a secretion from them is often seen in the male. The female has a paler throat and a slimmer tail base, but both sexes can have a

yellow head, so use the colour of the throat and the shape of the tail base to determine the sex.

Most species in the genus become sexually mature after about 9-15 months. It is an advantage to wait to pair the animals until they are 14-18 months old, so the female has the strength for egg-laying.

### MATING

*Lygodactylus picturatus* can mate all year round, and the animals take breaks of their own. In captivity the breaks typically fall in July-September and December-February. A cool winter period with shorter days and a slightly lower temperature (see the temperature section) is a good idea if you want to breed, because it gives the female time to build up calcium.

Keep a pair or one male with one or two females together. Provide many hiding places, so the female can get away from the male. Watch the mating in the first few days, and move the male if he chases the female persistently.

### EGG-LAYING AND CLUTCHES

After a successful mating, the female *Lygodactylus picturatus* lays 1-2 eggs at a time at intervals of about 4-6 weeks. The eggs are white, hard-shelled and only 5-6 mm long, sometimes slightly larger. She prefers to hide them in cramped spaces: in film canisters, bamboo tubes, bromeliads, between pieces of cork bark or simply on the floor.

Therefore provide several suitable laying sites that can be removed from the enclosure, for example small tubes or canisters fixed high up. The eggs probably stick fast quickly, as in *Lygodactylus williamsi*, and the parents often eat the newly hatched juveniles. Therefore remove the eggs as soon as possible. Egg-laying is hard on the female, and she needs plenty of calcium and food.

### INCUBATION

The eggs of *Lygodactylus picturatus* are moved carefully, if necessary together with whatever they are stuck to, to a small box with a damp substrate, for example damp vermiculite, with small air holes in the lid. They must not be turned. There must be high humidity and good ventilation, so that condensation does not collect.

The temperature can be kept at around 24-27 °C by day with a slight drop at night. The eggs hatch after 60-120 days depending on temperature; the figure is borrowed from *L. williamsi*. Temperature does not appear to have much effect on the sex ratio.

### REARING THE YOUNG

The young of *Lygodactylus picturatus* are 13-14 mm long at hatching and look like the adult females. Place them in a small, completely escape-proof enclosure or a faunarium with a damp substrate, branches and plants, and mist daily. Give them the very smallest feeder insects: fruit flies, springtails and newly hatched small crickets, dusted with calcium and vitamin D3, as well as a little fruit paste or prepared diet.

Keep the young apart from the adults, and divide them by sex and size when they can be told apart, so they do not begin to fight. Make sure there is food at all times, because such small animals have almost no reserves. They become sexually mature after 9-15 months.

## Health and common mistakes

*Lygodactylus picturatus* is hardy when temperature, humidity and food are right. The typical problems are:

- Too little water and too dry an enclosure. Small animals dry out quickly, especially in summer heat or with a lamp that is too powerful. Mist daily.
- Too much heat in a small enclosure. Use a thermostat or dimmer and keep an eye out for animals sitting with their mouths open.
- Lack of calcium and vitamin D3, especially in females that lay eggs. Provide pure calcium in a dish and dust the feeder insects.
- Shedding problems with skin remnants stuck on the toes and tail tip, which can cut off the blood supply. Correct the humidity and gently loosen them with lukewarm water.
- Blood mites, which sit as small red or black dots on the skin, especially in skin folds. This requires treatment by a vet.
- Fights, especially between males, with bites and lost tails.
- Small animals that get squeezed or lost in gaps behind the back wall and furnishings. Seal cavities.

A healthy animal is lively, has clear eyes and a plump tail base. See a vet experienced with reptiles if the animal loses weight, sits sluggishly or stops eating.

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.