herpy

GECKOS

African fat-tailed gecko

Hemitheconyx caudicinctus

A quiet, ground-dwelling gecko from the savannas of West Africa with a thick, cone-shaped tail that works as a packed lunch. It is related to *Eublepharis macularius* and looks very like it, but wants it a little more humid. It is easy to keep and a good first choice for anyone who wants a calm gecko that lives down on the floor.

Family: Eublepharidae Former name: *Stenodactylus caudi-cinctus; Psilodactylus caudicinctus*

KEY FACTS

THE ANIMAL

Adult size	**18-23 cm** total length incl. tail
Weight	**40-75 g**
Lifespan	**15-20 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Savanna and dry forest**
Difficulty	**Beginner**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**25-28 °C**
Basking spot	**30-32 °C**
Temperature, night	**20-24 °C**
Humidity	**40-70%**
UVB	**Optional** Ferguson zone 1
Diet	**Insects**
Kept	**Singly or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**8-12 months**
Clutch size	**1-2 eggs**
Clutches per year	**3-5**
Incubation	**43-70 days** at 28-32 °C

PROTECTION AND PAPERWORK

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

About the species

Hemitheconyx caudicinctus belongs to the eyelid geckos, the family Eublepharidae, which have movable eyelids and vertical pupils. *Eublepharis macularius* is a close relative, and the two resemble each other in both build and way of life. The toes are short and strong with claws, but without adhesive lamellae, so the gecko cannot walk up glass and lives entirely on the ground.

The most striking feature of the animal is the tail. It is thick and cone-shaped, narrow at the base and pointed towards the end, and it holds the fat reserves the animal lives on when food is scarce in the dry season. A plump tail is therefore the best sign that the gecko is doing well. The skin is covered with small, granular scales with larger knobs between them. The natural pattern is broad brown and pale bands on the back and pale rings around the tail, and breeders have developed many varieties, for example animals with a pale dorsal stripe, albinos and almost completely white animals.

The species was described by André Duméril in 1851 as *Stenodactylus caudi-cinctus* and later moved to the genus *Hemitheconyx*, where it is the type species. It reaches about 18-23 cm including the tail and typically weighs 40-75 g as an adult. Males are slightly larger than females and are recognised by a row of pores in front of the vent and a bulge at the base of the tail.

The temperament is calm, and most animals accept gentle handling well. The tail can be shed in danger and grows back, but the new tail is smoother and rounder than the original.

Distribution and habitat

Hemitheconyx caudicinctus lives in the savanna and dry forest of West Africa, from Senegal and Gambia in the west through Guinea, Mali, Burkina Faso, Ivory Coast, Ghana, Togo and Benin to Niger, Nigeria and northern Cameroon in the east. The type locality is in Senegal. Older records from Liberia and Sierra Leone are uncertain.

The species occurs in a broad belt across the Sahel and the Sudanian and Guinean savanna. Records outside this area on the map come from captive animals or misidentifications.

> **Native range:** Senegal, Gambia, Guinea, Mali, Burkina Faso, Côte d'Ivoire, Ghana, Togo, Benin, Niger, Nigeria and Cameroon.

HABITAT

The gecko lives in open savanna, dry deciduous forest, on rocky slopes and along rivers, typically up to about 1,000 metres elevation. By day it hides in burrows in the ground and under stones, where it is cooler and more humid than on the surface. At night, especially after rain, it comes out to hunt insects and other small animals.

The year has a distinct dry season and rainy season. The dry season is hot and very dry, and the gecko then lives off the fat in its tail. The rainy season brings humidity and plentiful food, and that is when most animals breed. The days are warm, and the nights cool to around 20 °C. This pattern of warm, dry surfaces and damp hides is what you should imitate in the terrarium.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

A single adult gecko needs an enclosure of at least 60 × 30 × 30 cm (length × width × height), and larger is always better. It is the floor area that counts, because the species lives on the ground. A male with one or two females, or a pair of females, can live together if the enclosure is at least 90 × 45 cm and has several hides. Never keep two males together, because they fight and can seriously injure each other.

Furnish with at least three hides: one at the warm end, one at the cool end and a damp hide. The damp hide is a box with an entrance hole, filled with slightly damp sphagnum or vermiculite. It helps the gecko with shedding and gives it a place with high humidity. Add stones, cork bark and a few flat pieces of wood that the animal can climb onto and hide under, and make sure all stones sit firmly.

A layer of 2-3 cm of fertiliser-free soil mixed with coco humus, or peat and vermiculite in equal parts, works as substrate. Avoid sand, which the animal can swallow and suffer intestinal impaction from. Ventilation must be good. Remove droppings every day, and clean the enclosure thoroughly a couple of times a year.

TEMPERATURE

Give the gecko a clear temperature gradient from one end to the other. The cool end should hold 25-28 °C, and the warm spot 30-32 °C measured on the surface. At night the temperature may fall to 20-24 °C. The right level is the one at which the animal itself uses the whole enclosure.

Heat one end with a heat mat, a heat bulb or a ceramic heater, always controlled by a thermostat. A heat mat alone may be too weak in a cold room. Measure with a digital thermometer at both ends, and ideally use an infrared thermometer to measure the surface at the warm spot. If the gecko stays only in the warm end, the rest of the enclosure is too cool. If it lies in the cool end all the time, the warm spot is too hot. Below 20 °C it becomes sluggish and eats poorly.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from dry regions, but should not be kept completely dry. Keep humidity in the enclosure at 40-60 %, and let it rise towards 70 % for periods, while the damp hide is always damp. Do not mist the whole enclosure daily. Combined with poor ventilation, it easily causes respiratory infections. The simplest approach is to keep most of the enclosure dry and only the damp hide damp.

Place a shallow bowl of fresh water at the cool end, and change the water every day. The gecko drinks from the bowl. A hygrometer shows whether humidity is in order. If the animal has difficulty getting its skin off during a shed, dampen the damp hide extra.

LIGHTING AND UVB

The gecko is active at dusk and at night and manages without UVB when it gets vitamin D3 through supplements. A weak UVB light can nevertheless be an advantage, because it imitates nature and can strengthen calcium metabolism. In that case choose a UVB tube for shade-dwelling animals (Ferguson zone 1), for example 5 %, and mount it over one half of the enclosure, so there is always a dark place to retreat to. Keep the light on 10-12 hours a day, ideally controlled by a timer.

Do not use strong spotlights as the only heat source, because they dry out the air. At night it must be dark, so a heater without light is better than a glowing bulb.

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

FEEDING

Hemitheconyx caudicinctus lives on insects. The staple diet is crickets, dubia roaches and the like, which have been fed well for a couple of days before being passed on. Mealworms have a poor calcium-to-phosphorus balance, and waxworms are very fatty, so give them only as a treat.

Juveniles under four months are fed every day, and adults about three times a week with as many insects as they will eat. The insects must be at most as wide as the gecko's head. Dust them with calcium at every feeding and with a vitamin supplement with D3 about once a week. The tail is the best guide: if it is thin, the animal needs more food, and if it is bulging fat, cut back.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Hemitheconyx caudicinctus is calm and easy to hold. It sleeps by day in a hide, so handle it in the evening, and give it a week or two to settle in before you pick it up. Lift it from the side or from below, and hold it low so that a fall does no harm. Never grab the tail, which can be shed. Short sessions of a few minutes are enough.

The species does fine alone. A male can be kept with one or two females, and females can usually be kept together if there is space and many hides. Males must always be kept separately. Watch for bites, scratches and animals that become thinner than the others. It is entirely normal for the gecko to eat its old skin after shedding.

Breeding

SEXUAL MATURITY AND SEXING

The male is recognised by a distinct row of pores in front of the vent and a bulge at the base of the tail, where the hemipenal pouches sit. The female lacks the pores, and the bulge is small or absent. The sex can usually be seen when the animal weighs 10-15 g. The species becomes sexually mature after eight to twelve months. The male should weigh at least 40 g and the female at least 45 g before being put to breed, and the most productive females weigh 45-55 g and are one to three years old. Never breed a female that is too thin, because egg-laying drains her of calcium.

MATING

Hemitheconyx caudicinctus breeds in winter, also in captivity. Females lay eggs from October to May with a peak from November to March. A cool period stimulates the urge to mate, but is not necessary, and often the natural temperature drop of a couple of degrees in autumn is enough.

If you want to cool the animals down, begin in mid-autumn. Lower the temperature a couple of degrees a day until the warm spot is around 28 °C and the cool end 21-24 °C, and feel free to switch off the heat at night. Keep the animals on a dry substrate with fresh water, and stop feeding, because metabolism slows. The cooling typically lasts four to six weeks. Then

warm up slowly again, and start with a few insects.

Put the male in with the females when temperature and feeding are back to normal. Mating takes place shortly afterwards, and the male bites the female on the neck, so keep an eye on them for the first nights. The female can store sperm and lay several clutches after a single mating.

EGG-LAYING AND CLUTCHES

The female usually lays two eggs at a time, small females occasionally only one. The eggs are white, leathery and 3-4 cm long. There are typically 3-5 clutches a year at intervals of a few weeks. A female that lays many eggs one year often lays fewer the next.

Place a laying box in the enclosure, for example a plastic box of 35 × 20 × 10 cm with a 4 cm hole in the lid, half filled with damp sphagnum or peat and vermiculite. The substrate should clump when you squeeze it, but no water must drip out. Place the box away from the heat, so it does not dry out. The female occasionally lays outside the box, so check the enclosure when she is close to laying. Give her as much food as she wants, and calcium at every feeding throughout the season.

INCUBATION

Carefully move the eggs to a small box with damp vermiculite, or peat and vermiculite, without turning them. Place them halfway into the substrate, and give the box a couple of small air holes. The substrate should be damp but not wet, because the eggs tolerate too much water poorly.

Sex depends on temperature. At 28-29 °C the hatchlings are mainly females, and the eggs hatch after 55-70 days. At 31 °C they are mainly males and hatch after 43-48 days. Above 32 °C mostly females result again, but they often become aggressive and poor breeding animals. Below 28 °C and above 34 °C the embryos easily die. Use an incubator with a thermostat, and measure the temperature at the eggs.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are 6-8 cm long and weigh about 4 g at hatching. Keep them singly or in small groups of two to four in a plastic box with kitchen paper as substrate, a damp hide and a shallow water bowl, at the same temperatures as the adults. They begin to eat a couple of days after hatching. Give small crickets, dusted with calcium, every day, and weigh the hatchlings regularly.

Separate the hatchlings if some are bitten or lag behind in growth. At around 15 g they can move to an ordinary enclosure. They are fully grown after about a year.

Health and common mistakes

Hemitheconyx caudicinctus is hardy, but slightly more sensitive than *Eublepharis macularius*. The typical problems are:

- Retained shed stuck on the toes and tail tip when the air is too dry. A damp hide prevents it. Remains on the toes can cut off the blood supply, so loosen them gently with lukewarm water.
- Intestinal impaction after swallowing sand or grit. Do not use sand as substrate.
- Calcium deficiency (metabolic bone disease) with soft jaws, bent limbs and tremors, especially in juveniles and breeding females. Dust the insects, and give D3 regularly.
- Respiratory infection in cold, damp and poorly ventilated conditions. The signs are wheezing breathing, mucus and an open mouth.
- Cryptosporidiosis, a contagious intestinal disease that causes weight loss despite appetite and can be fatal. Quarantine new animals, and keep the enclosure clean.
- Roundworms and other parasites, especially in wild-caught animals. Have a faecal sample examined if the animal loses weight.

A healthy animal has clear eyes, a plump tail and calm breathing. See a vet experienced with reptiles if the tail becomes thin, the animal does not eat for several weeks or has swellings or difficulty breathing.

Read more: Quarantine and hygiene Read more: Common diseases and signs of illness 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.