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GECKOS

African whole-toed gecko

Holodactylus africanus

A small, nocturnal ground gecko from the dry regions of eastern Africa with large eyes and movable eyelids, long claws on the toes and a thick, short tail in which it stores fat. It digs its own hiding places and feeds mainly on termites. The species is rare in vivaria, and there are few published accounts of its care.

Family: Eublepharidae Former name: *Holodactylus aculeatus*

KEY FACTS

THE ANIMAL

Adult size	**6-11 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**At night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Semi-desert and savanna**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 40 × 30 cm** L × W × H for 1 adult
Temperature, day	**27-30 °C**
Basking spot	**33-35 °C**
Temperature, night	**18-20 °C**
Humidity	**30-40%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 1
Diet	**Insects**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**45-60 days** at 26-28 °C

PROTECTION AND PAPERWORK

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

About the species

Holodactylus africanus is a small gecko with a large, round head, a slender body and a short, thick tail. Like other species in the family Eublepharidae, it has movable eyelids, so it does not need to lick its eyes clean, as many other geckos do. The toes are long and slender and lack the expanded adhesive lamellae of climbing geckos, but they bear long, strong claws. The genus name is formed from the Greek holos, whole, and daktylos, toe.

The base colour is light brown to beige with dark brown cross bands that may have violet tones, and the eyelids are yellow. A faint, whitish stripe may run along the back, and the belly is white to pale yellow. Adults typically reach 6-8 cm, and a few reach 11 cm. Males lack pores in front of the vent.

The species was described in 1893 by Oskar Boettger from animals from Somalia. It has also been listed as *Hoplodactylus africanus* and *Holodactylus aculeatus*, but the valid name is *Holodactylus africanus*.

It has a reputation for biting hard, and in parts of Somalia people fear it because the bite is said to be poisonous and make the skin dissolve. That is not true. The animal is not venomous, but it can bite and hold on.

Little has been written about the species in captivity. The care in this guide is based on the few descriptions that exist, supplemented with experience from related species in the same family.

Distribution and habitat

The species is found in eastern Africa: in Ethiopia, Somalia, Kenya and north-eastern Tanzania. The type locality is Abdulla in Somalia. It may also reach Djibouti, but this has not been confirmed.

Records are scattered over a large, sparsely populated area, so figures for how numerous the species is are uncertain. It is, however, considered common and adaptable in the areas where it lives.

> **Native range:** Ethiopia, Kenya, Somalia and Tanzania.

HABITAT

Holodactylus africanus lives in dry areas: semi-desert, dry scrubland and bushy savanna, in hilly terrain and on mountain slopes between about 200 and 1,200 metres above sea level. In Tanzania it has also been found on grassland, where it lives alongside grazing animals. It disappears from areas where the grass is cut.

The gecko is nocturnal and ground-dwelling. By day it rests in burrows that it digs itself in the ground, and at night it hunts termites and other small arthropods. In the thick tail it stores fat, which it can live on during the dry season. The climate is hot and dry, and the air inside the burrows is normally more humid and cooler than outside. It is this combination of hot, dry surfaces and a more humid hide that the enclosure should imitate.

Care

THE ENCLOSURE

One adult needs a low enclosure of at least 60 × 40 × 30 cm (length × width × height), and larger is better. A small breeding group of one male and two females needs at least 90 cm in length and more floor area. Floor area is the most important, because the gecko lives on the ground and does not climb.

Use sand or a mix of sand and soil as substrate, at least 8-10 cm deep, so that the animal can dig its own tunnels. Put out stones and cork bark as hides, and place at least two hides at different ends, one on the warm side and one on the cool side. Also provide a humid hide with damp coconut fibre or moss, changed weekly so that it does not go mouldy. It helps with shedding and is also used for egg laying.

Never keep males together. One male can be kept with two females if there is enough space and hides. The enclosure must have ventilation, but the substrate must not become wet.

TEMPERATURE

By day the enclosure should be 27-30 °C with a warm spot of around 33-35 °C under a low heat lamp at one end. The other end should be cooler, so that the animal can choose for itself.

At night the temperature should fall to 18-20 °C. A drop at night is healthier than constant heat. Do not use coloured night lamps. Measure the temperature both on the surface and in the hides with a digital thermometer or an infrared thermometer, and control the heat source with a thermostat. If the animal does not eat, or keeps burrowing and disappearing for several days, the temperature may be wrong.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity in the enclosure itself should be low, about 30-40 % by day, so that the surface of the substrate is dry. The moisture instead comes from the humid hide, where the animal can rest and shed. During shedding and egg laying, a little local misting is fine, but do not mist the whole enclosure, because a constantly wet substrate causes fungus and skin problems.

Put a small, shallow dish of fresh water at the cold end, and change the water daily. In the wild the species probably gets part of its fluid from its food and from the more humid burrows. Make sure that shedding is completed fully.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is nocturnal and hides for most of the day. A fixed daily rhythm with around 12-14 hours of light in summer and 10-12 hours in winter is a good framework.

A weak UVB light is recommended, even for this nocturnal species, because it supports calcium metabolism. Use a weak tube for shade-dwelling animals (Ferguson zone 1) over the warm end, and provide plenty of shade and hides, so that the animal is not forced to lie in the light. If UVB is not used, the food must be dusted with calcium containing vitamin D3.

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

FEEDING

In the wild, *Holodactylus africanus* lives mainly on termites, supplemented with beetles, spiders and other small arthropods. Termites are hard to obtain, so the substitute food is small, soft insects of suitable size: small crickets, dubia roaches and mealworms. The insects should be smaller than the distance between the animal's eyes, and they should be fed a nutritious diet before being offered.

Young animals are fed daily and adults every second or third day in the evening, as much as they eat in about 15 minutes. Keep an eye on the tail: it should be thick, but not thicker than the neck, and a tail that becomes thinner is a warning sign. Dust the insects with calcium at most feedings and with a multivitamin now and then. Do not leave live feeder insects in the enclosure overnight, because they can gnaw at the animal while it sleeps.

Waxworms and other fatty insects are used only as an occasional treat. Do not catch insects in the garden for food.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

It is a calm but bite-prone species that prefers to be left in peace. The bite can be strong, and the animal can hold on. It is not dangerous, but it hurts, and the wound should be washed. Handle it only when necessary, and in short sessions. The species is more an animal to watch than to take in the hand.

Give new animals two weeks of peace before you touch them. Always support the body and tail, and never grab the tail, because it can be dropped. Keep the animal close to the ground, because if it jumps, it easily falls. Males must not be kept together, whereas one male with two females can live in a spacious enclosure with many hiding places. If the animal is kept alone, there is no risk of fighting.

Breeding

SEXUAL MATURITY AND SEXING

Sexing is not described for the species in captivity. Males lack pores in front of the vent, so the method used for many other geckos does not work. Males of related species have a distinct bulge with hemipenal pouches at the base of the tail, and that is what to look for. Age and weight for breeding are not documented. Let the female become fully grown and in good body condition before she is put to breeding.

MATING

The species has been bred in captivity, but no mating season or rest period is documented. The female looks for a place to lay eggs a few weeks after mating. In the wild, most species from dry regions follow the rainy season, so a cooler and drier period in winter, followed by more food and slightly more moisture, may be one way of starting the season. Put the male in with the female, and take him out again if there is unrest. Keep the female in good condition, and give her calcium throughout the season.

EGG-LAYING AND CLUTCHES

The female normally lays two eggs at a time and buries them in damp, loose sand. The eggshell is thin and soft, so the eggs must be handled carefully. How many clutches a year there are is not documented. Put a lay box or a humid hide with damp sand or coconut fibre in the enclosure. Make sure that the female does not lose weight, and give her calcium and plenty of insects throughout the period. Avoid breeding the same female too much.

INCUBATION

There is little information on incubation. At 26-28 °C and about 60 % humidity, the eggs typically hatch after 45-60 days. Carefully dig up the eggs together with a little of the surrounding sand, and lay them, without turning them, in a closed box with air holes and slightly damp vermiculite or perlite. Keep the temperature even. Whether temperature determines sex is

not documented.

Read more: Incubating eggs

REARING THE YOUNG

The hatchlings are very small, but hunt on their own shortly after hatching. They are housed singly in a small box with kitchen roll or damp substrate, a hide and a humid hide. They are given fruit flies and newly hatched crickets dusted with calcium every day, and the prey is made larger as they grow. Weigh them regularly, and move them to a larger enclosure as they grow.

Health and common mistakes

There is no species-specific information on diseases. The typical problems in related, nocturnal ground geckos are:

- Too little calcium and vitamin D3, which causes soft bones, bent limbs and tremors. Dust the insects, and give weak UVB.
- Stuck skin remnants on toes and tail tip if there is no humid hide. Loosen them gently with lukewarm water.
- A constantly wet substrate and poor ventilation, which cause fungus and skin problems.
- Obesity if the animal is fed too often, and emaciation if it does not eat. The tail should be thick, but not thicker than the neck.
- Dropped tail after handling or fighting.

A healthy animal has clear eyes, a plump tail and a good grip. See a vet experienced with reptiles if the animal loses weight, does not eat for several weeks or looks 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.