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GECKOS

Elegant gecko

Stenodactylus sthenodactylus

A small, nocturnal desert gecko from North Africa and the Middle East with sand-coloured, almost transparent skin and large eyes. It buries itself in the sand by day, chirps softly at night and lives on small insects. It is a species to watch, not to pick up.

Family: Gekkonidae Former name: *Ascalabotes sthenodactylus; Stenodactylus elegans; Stenodactylus guttatus* Published 15 November 2026

KEY FACTS

THE ANIMAL

Adult size	**7-10 cm** total length incl. tail
Lifespan	**6-10 years**
Active	**At night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Desert and semi-desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 4 adults
Temperature, day	**24-29 °C**
Basking spot	**32-35 °C**
Temperature, night	**19-24 °C**
Humidity	**20-40%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly, in pairs or one male with several females**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**60-80 days** at 27-30 °C

PROTECTION AND PAPERWORK

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

About the species

Stenodactylus sthenodactylus is a small, slender desert gecko. The back is beige and brown with irregular spots and stripes, the belly is white, and the skin is so thin that it looks almost transparent. The eyes are large with vertical pupils, the snout is short and slightly upturned, and the head is angular. This distinguishes it from *S. petrii*, which has a more rounded head, and from *S. doriae*, which has a longer snout.

The toes have no adhesive lamellae, so the gecko cannot climb smooth surfaces. Instead it runs and digs. The males chirp, and both sexes wave the tail when excited. The skin is fragile and can tear if the animal is grabbed, and that is the main reason not to handle it.

The species was described in 1823 by Hinrich Lichtenstein as *Ascalabotes sthenodactylus* from animals from Egypt and Nubia. The species name comes from the Greek sthenos, strength, and daktylos, finger, while the genus name *Stenodactylus* means narrow finger. The population in north-western Africa was long counted as a subspecies, but now has the status of a separate species, *Stenodactylus mauritanicus*. The genus has also been studied genetically, and the species boundaries may yet shift.

As an adult the gecko reaches about 7-10 cm including the tail, and reports range from 5 to 12 cm. Females are rounder and stockier than males, which are slimmer and have a bulge at the base of the tail. There are no reliable weight figures for adults.

The species is hardy and does not require much equipment. The animals in the trade have long been wild-caught, and captive-bred young are still rare. It suits anyone who likes to watch a small animal dig and lie in wait for prey in the dark.

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

Distribution and habitat

The species lives in a broad belt across North Africa and the Middle East: Egypt with Sinai, Libya, Tunisia, Algeria, Sudan, South Sudan, Eritrea, Ethiopia and northern Kenya, and Mali in the west. In the Middle East it is found in Israel, the West Bank, Jordan, Syria and north-western Saudi Arabia around Tabuk. It is also reported from Djibouti.

The boundary in the west is unresolved. Morocco, Western Sahara and Mauritania are often included, but the populations there are now assigned to *Stenodactylus mauritanicus*, and those countries are therefore not marked on the map. A few records outside the range may be due to confusion with related species or to animals in captivity.

> **Native range:** Egypt, Libya, Tunisia, Algeria, Sudan, South Sudan, Eritrea, Ethiopia, Djibouti, Kenya, Mali, Israel, Palestinian Territories, Jordan, Syria and Saudi Arabia.

HABITAT

The gecko lives in semi-arid to extremely arid regions with very little rainfall. It is widespread and common, but not numerous, and it is not tied to one particular type of landscape. In an Israeli study from the southern Arava Valley it was regarded as a generalist, in contrast to *Stenodactylus doriae*, which lives only in particular dune areas. It is therefore found on sandy flats, gravelly plains and in dry wadis.

The temperature of the desert fluctuates sharply between hot days and cool nights. The gecko spends the day in burrows or buried under stones and plant debris and comes out only after sunset. It does not hunt actively, but waits for small insects and other small animals to pass by. The air is dry, and it gets water from dew and occasional showers, which it licks from stones and plants. There are no good measurements of temperature and humidity from the habitats, so the figures in the care section are based on experience in captivity.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An enclosure of 60 × 30 × 30 cm (length × width × height) holds up to four adults, one male and three females, while 45 × 30 × 30 cm is enough for one animal or a pair. The dimensions are based on experience in captivity, and bigger is always better. The gecko does not climb, so it is the floor area and the sand layer that count, not the height.

Use 4-5 cm of fine sand as substrate, for example washed quartz sand or play sand. Calcium sand is sometimes used, but it has also been associated with impaction, so choose ordinary sand instead. Sift out droppings and urates once a week, and change the sand every few months.

The gecko buries itself under anything lying on the sand, so the hides must be light: flat cork bark, pottery shards, plant trays or half cardboard tubes. Heavy stones and slate slabs must stand directly on the bottom of the enclosure and not on top of the sand, otherwise they can topple onto a burrowing animal. Put hides in both the warm and the cool end. The animals can lie buried for a long time, so do not worry if you do not see them for a few days. The enclosure needs good ventilation and a tight-fitting lid, because the animals are small and fast.

Read more: Calcium, vitamins and supplements

TEMPERATURE

By day the enclosure should be 24-29 °C with a warm area at one end of 32-35 °C, measured on the sand, so the animal can choose for itself between warm and cool places. Recommendations for the warmest spot range from about 28 to 38 °C, and 32-35 °C lies in the middle of the field. At night the temperature may drop to 19-24 °C.

Heat with a heat mat under one end and, if wanted, a weak bulb of 10-25 W. Always use a thermostat and a digital thermometer, and avoid heat rocks. In winter the temperature can be lowered a couple of degrees for a few months to kick-start breeding, see the section on mating. If the animals become sluggish or stop eating, raise the temperature a little again.

Read more: Heat and temperature

HUMIDITY AND WATER

As a desert animal the species must be kept dry, with about 20-40% humidity and dry sand. Over 40-50% for any length of time is too much. The animals drink droplets, so lightly spray part of the enclosure once or twice a week in the evening, so there is water on stones and glass. It should all be dry again after a few hours. If mould appears, it is too damp.

Also provide a very shallow dish of fresh water, for example a jam-jar lid with a couple of pebbles in it, so the animal can easily climb out again. The water should stand only a few millimetres deep. Many animals do not use the dish, but it does no harm.

LIGHTING AND UVB

The species is nocturnal and needs no special lighting when the insects are dusted with calcium and vitamin D3. A weak UVB tube of 2-5% over part of the enclosure can be an advantage, but nothing shows that the species needs it, so UVB is optional. If you choose it, the animal must be able to dig away from the light.

Keep the light on for about 12 hours a day, controlled by a timer. At night it must be dark, because that is when the animals are active.

Read more: Lighting and UVB

FEEDING

The gecko is an insectivore. Use small crickets as the staple diet, and alternate with small dubia roaches, micro mealworms and flightless fruit flies. Waxworms are fatty and are given only as an occasional treat. The prey must not be longer than the distance between the animal's eyes.

Adults get a couple of small insects every second or third day, while young are fed daily, preferably twice during the evening. Do not give more than the animal eats up. Feed in the evening, and also put food in when an animal is lying buried, so it can find it when it comes out.

Dust the insects with calcium, preferably at every feed, and give a multivitamin supplement once a week. A small feeding dish that the insects cannot climb out of makes it easier to keep the enclosure free of loose insects.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The gecko is fast and shy and should not be picked up, because the thin skin tears easily. If you need to move an animal, let it run into a cupped hand or into a small box, and close it in so it does not jump. Transport it in a ventilated box with a tight lid. An animal that does not flee when disturbed may be ill.

The animals are active at night and chirp, especially the males, but no louder than a cricket. When they are uneasy, they wave the tail. Do not keep several males together. Males have sometimes been kept together without problems, but they can fight, and a dominant male can prevent the others from mating. A male can be kept with one or more females, and a pair works well. The species can also be kept alone. New animals should be quarantined for a month before being put together with others.

Breeding

SEXUAL MATURITY AND SEXING

Females are rounder and stockier than males, and adult males have a distinct bulge at the base of the tail, where the hemipenal pouches sit. When the animals become sexually mature is poorly documented, and there are no reliable weight figures for breeding animals either. Wait to breed a female until she is fully grown and in good condition, so that egg production does not drain her calcium reserves.

MATING

Breeding is only sparsely described. It is linked to a winter rest: the temperature is slowly lowered a couple of degrees and held low for a few months, after which it is gradually raised again. If the animals become very sluggish or stop eating along the way, raise the temperature a little. When the animals have warmed up again, a male can be put together with one or more females.

The males chirp around mating, and if several males are kept with the females, a dominant male can keep the others away. Give the females plenty of insects and calcium throughout the season.

EGG-LAYING AND CLUTCHES

Like other *Stenodactylus* species, the female lays 1-2 hard-shelled eggs at a time, and during the season new clutches come at intervals of a few weeks. Reports range from 2-3 to 4-6 weeks between clutches, and the interval has not been studied further. How many clutches there are in a year is not documented. The eggs are small and oval and are buried in the sand, often under a stone or a hide.

Preferably put a small dish of slightly damp vermiculite in the enclosure, but many females lay in the sand anyway. If a female does not find a suitable place, she may become egg-bound, and that can be fatal. If she is unusually round for a long time without laying, contact a vet with experience in reptiles.

INCUBATION

The eggs are fragile and must not be picked up with the fingers. Lift them with a teaspoon together with a little of the sand, and move them, without turning them, to a small box in an incubator. Incubate at 27-30 °C. The eggs hatch after about 60-80 days, and the time depends on the temperature.

Hard-shelled gecko eggs do not tolerate a wet substrate, so keep it only slightly damp and the air around the eggs not too humid. It is not known whether temperature affects the sex of the young. Leave all eggs until the incubation time has passed before discarding any of them.

Read more: Incubating eggs

REARING THE YOUNG

The young are tiny at hatching. They need a small, dry enclosure with sand, a hide and light misting, like the adults.

Feed them daily, preferably twice in the evening, with newly hatched crickets and flightless fruit flies dusted with calcium and vitamins. The food must not be longer than the distance between the young's eyes. The young can grow up together, but separate them if any are chased or fall behind, and separate the males if they become aggressive. There are no good figures for growth, so weigh them regularly, and watch that all of them eat.

Health and common mistakes

There is very little veterinary literature on the species, so the advice here is based on experience in captivity and general knowledge of reptiles. The typical problems are:

- Lack of calcium and vitamin D3, if the insects are not dusted. This causes soft bones and tremors.
- Impaction, if the animal swallows sand. The risk is greatest in sick animals and in animals kept too cold, which therefore digest poorly.
- Too high humidity and poor ventilation, which cause mould and skin problems.
- Tears in the skin when the animal is picked up. Never grab the tail.
- Stuck shed on the toes and tail. Provide a small humid hide during the shed, and loosen the remains with lukewarm water.
- Egg binding, when the female does not have a suitable place to lay.
- Crush injuries, when a heavy hide topples onto a burrowing animal.
- Intestinal worms and other parasites in wild-caught animals. Have a faecal sample examined before new animals are put together with others.

A healthy animal is alert and has a plump tail and clear eyes. Contact a vet with experience in reptiles if the animal loses weight, does not eat for several weeks, has swellings or cannot shed.

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.

The full guide with map and updates: herpy.org/gekkoer/stenodactylus-sthenodactylus