herpy

GECKOS

Steudner's dwarf gecko

Tropiocolotes steudneri

One of the smallest geckos in the world, only 5-7 cm including the tail, from the eastern Sahara and the Sinai. It is active from dusk and at night, lives peacefully in groups and can be kept in an enclosure as small as 20 × 20 × 20 cm. Together with *Tropiocolotes tripolitanus* it is the most commonly kept species in the genus.

Family: Gekkonidae Former name: *Gymnodactylus steudneri; Stenodactylus petersii*

KEY FACTS

THE ANIMAL

Adult size	**5-7 cm** total length incl. tail
Lifespan	**5-10 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**20 × 20 × 20 cm** L × W × H for 2 adults
Temperature, day	**26-30 °C**
Basking spot	**35-45 °C**
Temperature, night	**20-24 °C**
Humidity	**30-50%**
Water	**Water dish**
UVB	**Optional**
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**Singly, in pairs, one male with several females or in groups**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**60-90 days** at 28-30 °C

PROTECTION AND PAPERWORK

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

About the species

Tropiocolotes steudneri is one of the smallest geckos of all. The species of the genus reach at most 29-40 mm from snout to vent, and including the tail the animals grow to about 5-7 cm. The body is slender and slightly elongated, the head oval, and the eyes have vertical pupils. The toes are free and without adhesive lamellae, and the back is covered with large, diamond-shaped scales that are only weakly keeled, so the animal looks smoother than *Tropiocolotes tripolitanus*. The colour is sandy brown, grey or yellowish with dark markings. Compared with *T. tripolitanus*, *T. steudneri* is more heavily built, with a shorter tail and larger spots.

The species was described by Wilhelm Peters in 1869 from animals from Sennar in Sudan and is named after the naturalist Hermann Steudner. In older literature it is confused with *Tropiocolotes nattereri*, and the records from Israel in fact belong to the latter. Animals from Niger and southern Algeria belong genetically to *Tropiocolotes nubicus*, so the range is narrower than older sources show. Animals in the trade often come from the western and central Sahara and may therefore belong to *T. nubicus* or other species; identification is not always certain.

The IUCN assesses the species as Least Concern (LC). Lifespan is not documented; 5-10 years is an estimate based on other small geckos.

Distribution and habitat

Tropiocolotes steudneri lives in the eastern Sahara: in south-eastern Libya, Egypt including the Sinai, northern Sudan and Ethiopia, and it has also been recorded in Jordan. A single record from Iran is doubtful and is not on the map. Genetically examined animals of the species all come from the area east of the Nile, which forms the boundary with *Tropiocolotes nubicus* to the west. Records in Israel belong to *Tropiocolotes nattereri*, and records in Niger and southern Algeria have been assigned to *T. nubicus*.

The range is not fully resolved. The map therefore gives only a rough picture, and the recorded finds may include misidentifications.

> **Native range:** Libya, Egypt, Sudan, Ethiopia and Jordan.

HABITAT

Tropiocolotes steudneri lives in desert and in dry, stony and sandy regions. The animals live on the ground and take shelter in holes in the ground, under stones and among the roots of date palms. They hide from the sun during the day and come out at dusk. The climate is very hot and dry with almost no rain, hot summers, mild winters and large differences between day and night. Temperature and humidity in the hiding places have not been measured.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Tropiocolotes steudneri and *Tropiocolotes tripolitanus* are cared for in the same way, and most of the knowledge about the care of the genus is based on these two species.

A pair can be kept in an enclosure of 20 × 20 × 20 cm (length × width × height). This is the minimum size, and larger is an advantage: the animals are very active, and more floor area gives room for more hiding places and a clear difference between the warm and the cool end. The species of the genus thrive best in a group, and up to six adults can be kept together in an enclosure 50 cm long. Floor area is more important than height, but a little height with rocks and bark gives variety.

A glass enclosure with mesh in the lid is fine, so that the heat from the lamp can escape and the floor stays cool. Clean sand mixed with a little soil or clay suits as a substrate, and one corner is kept slightly damp as a laying site. Put flat stones, slate or cork bark as hiding places in both the warm and the cool end. Heavy stones must stand directly on the floor of the enclosure and not on the sand, so that they do not shift when the animals dig under them. A hide with damp moss provides a place for shedding. The lid must close tightly, as the animals are small and fast.

TEMPERATURE

Keep 26-30 °C by day and a small hot spot of 35-45 °C at one end, measured on a flat stone under the lamp. The genus is very heat-loving: with a spot from above the animals are more active, eat more and lay better-calcified eggs than with a heat mat alone. In a small enclosure the spot must be weak, such as a small halogen bulb, and controlled by a thermostat, and the cool end must stay below 30 °C so that the animals can always move away from the heat. At night the heat is switched off, and the temperature may fall to 20-24 °C. Measure with a digital thermometer at both ends and with an infrared thermometer on the hot spot.

Read more: Heat and temperature

HUMIDITY AND WATER

The air must be dry, about 30-50 % and not above 60 %. Mist part of the enclosure two to three times a week in the evening or early in the morning: the animals lick the droplets from stones and hides, as they lick dew in the wild. Keep the moss in one hide and the substrate in one corner slightly damp, so that the animals can choose between damp and dry and shed without problems. Also provide a very shallow water dish or a bottle cap with fresh water.

LIGHTING AND UVB

Tropiocolotes steudneri is most active from dusk and at night, but gladly uses the hot spot, and a fixed daily rhythm is important. Use an LED or a fluorescent tube for 12-14 hours in summer and slightly shorter days in winter, and keep the enclosure dark at night. Position the light so that the hides lie in shade.

UVB is not necessary when the insects are dusted with calcium with D3. A weak UVB tube does no harm, however, and lets the animals produce some of the vitamin D3 themselves.

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

FEEDING

Tropiocolotes steudneri lives on very small insects and other arthropods and has a large appetite and fast metabolism. The staple is pinhead crickets and flightless fruit flies, and for variety you can give aphids, springtails, small cockroach nymphs and mini mealworms. The prey must not be longer than the gecko's head. Feed a little and often, preferably daily, with a few animals at a time, and remove insects that are not eaten.

Dust the food with calcium at most feedings and with calcium with D3 and a multivitamin once a week. Egg-laying females use a lot of calcium, so give them plenty throughout the season.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Tropiocolotes steudneri is small but very active and hunts eagerly, especially in the evening. Despite the many wild-caught animals, the species is often calm and confident, eats openly and comes out when the enclosure is opened. It is calmer and less shy than *Tropiocolotes tripolitanus*. Dominant animals stand high on stretched legs, while subordinate ones hold the body low and move slowly. The tail waves when an animal is nervous, often followed by a quick escape into hiding. The clear body language means that fights are rare.

The species of the genus are peaceful towards each other and are best kept in groups, preferably with several males. The animals in a group should be roughly the same size, and a single animal can also be kept alone. Watch whether individual animals are being pressured. Wild-caught animals are often dehydrated and emaciated on arrival; give them water, food and peace, and they usually recover well. Handle the animals as little as possible: they jump unpredictably, and the tail must never be grabbed.

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

Breeding

SEXUAL MATURITY AND SEXING

The males call at night with faint, whistling sounds, and this is the easiest way to recognise them. As in other geckos, adult males have two bulges at the base of the tail, and the females are only 2-3 mm longer than the males. In gravid females the egg can be seen through the belly. Age and weight at sexual maturity are not documented for *Tropiocolotes steudneri*.

MATING

Tropiocolotes steudneri does not need a winter rest, and the females lay without any particular cycle, mostly in the summer half of the year. Several males in the group give far more fertilised eggs than a single male with several females, and the males do not fight. Wild-caught females are often mated and gravid when bought, so eggs can appear within a few weeks.

EGG-LAYING AND CLUTCHES

The female usually lays one large, hard-shelled egg at a time; the species of the genus can also lay two. The egg is large relative to the female and can be seen through the belly before it is laid. She lays about every four weeks through the summer, up to six times a year. The eggs are laid fairly openly or buried lightly in the sand, preferably in the damp corner. Other females easily dig them up, so move the eggs to an incubator without turning them.

Read more: Incubating eggs

INCUBATION

Place the egg in a small closed box with a few air holes on dry or only slightly damp vermiculite or sand. Hard-shelled gecko eggs do not tolerate a wet substrate and do not absorb water. At 28-30 °C the eggs hatch after about 60 days; at the low end of the range it can take up to three months. Whether temperature affects the sex of the young is not known.

REARING THE YOUNG

The young are very small at hatching. They can grow up with their parents under exactly the same care, and this often produces the strongest young; young raised alone on a heat mat easily become weak. It requires plenty of food of the right size so that the young are not outcompeted. First food is springtails, aphids, flightless fruit flies and newly hatched crickets, dusted with calcium with D3.

The young can also be raised separately in a small box, set up like the adults' enclosure with heat from above, a damp hide and daily feeding. Check that all the young get food, and separate them if one is outcompeted.

Health and common mistakes

There are no documented special diseases in the genus. The typical problems are the same as in other small desert geckos:

- Dehydration in a set-up that is too hot and dry without a damp hide. Provide a damp hide, mist regularly, and always keep water available.
- Overheating in a small enclosure if the spot is not controlled by a thermostat or there is no cool end.
- Crushed eggs and squashed animals if heavy hides and stones stand on sand that the animals dig under. Place them directly on the floor.
- Too little calcium and vitamin D3, especially in egg-laying females. Well-supplied animals have clearly visible white calcium sacs on the neck; if they are missing, or the eggs become thin-shelled, more calcium is needed.
- Parasites, especially in wild-caught animals. Have a faecal sample examined.
- Stress in newly acquired animals. Give them peace, darkness and hiding places for the first period.
- Malnutrition in young that are outcompeted by larger animals.

A healthy animal is lively in the evening and at night and has a plump tail. Seek a vet experienced with reptiles if the gecko loses weight, does not eat for several weeks or seems 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.