herpy

GECKOS

Small-scaled Wonder Gecko

Teratoscincus microlepis

A small, nocturnal sand gecko with large, frog-like eyes and fine, slightly overlapping scales on the back. It lives in loose sandy soils in south-eastern Iran, southern Afghanistan and western Pakistan. It is rarely kept, and the care is based on the closely related desert species in the genus.

Family: Sphaerodactylidae English name: Small-scaled wonder gecko

KEY FACTS

THE ANIMAL

Adult size	**10-11 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Desert and semi-desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**80 × 40 × 40 cm** L × W × H for 2 adults
Temperature, day	**25-28 °C**
Basking spot	**32-35 °C**
Temperature, night	**18-22 °C**
Humidity	**30-50%**
UVB	**Optional**
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**1-2 eggs**
Incubation	**60-110 days** at 28-29 °C

PROTECTION AND PAPERWORK

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

About the species

Teratoscincus microlepis is a small, compact desert gecko with a broad head and large eyes without eyelids. The toes have no adhesive pads, but ridges of small scales, which give a foothold in loose sand. The species name means "the small-scaled one" and fits the back, where the scales are round and only slightly overlapping and extend no further forward than the shoulders. Around the middle of the body there are about 100 scales all the way round. In the genus's other species the large scales lie like roof tiles over most of the body, and this makes *T. microlepis* easy to tell from them.

The species was described by Alexander Nikolsky in 1900 from an animal collected in eastern Iran in 1898. Like the rest of *Teratoscincus* it belongs to the family Sphaerodactylidae.

The body reaches up to 7 cm from snout to vent and the tail about 4 cm, so the whole animal measures about 11 cm. This makes the species one of the smallest in the genus. Weight and lifespan are not documented; closely related species live about ten years or more.

It is rarely kept and is shy. It is suited to being observed, not handled: the skin is thin, and the tail is easily dropped.

Distribution and habitat

The species is found in south-eastern Iran, southern Afghanistan and western Pakistan. In Iran it occurs in the provinces of Kerman and Sistan and Baluchestan, where the type locality Duz-Abad lies. In Pakistan it lives in Balochistan, and from Afghanistan there are only a few records.

The exact range has not been delineated, because the region is sparsely populated and poorly studied. Worldwide the species is not threatened.

> **Native range:** Iran, Afghanistan and Pakistan.

HABITAT

The gecko is tied to loose, sandy soil. It has also been found on saline soil with a crust of salt. By day it stays hidden in a burrow, and at night it comes out onto the ground to hunt.

The habitat is hot and dry with large differences between day and night. Down in the burrow it is cooler and slightly more humid than at the surface. This is what the terrarium should imitate: a dry surface, deep diggable sand and a slightly damp hide.

Care

THE ENCLOSURE

Little is known about keeping *Teratoscincus microlepis*, and the species is rarely kept. The recommendations are based on the habitat and on the closely related sand geckos *Teratoscincus roborowskii* and *Teratoscincus scincus*, which have the same way of life and are better known in captivity. The figures are borrowed from them.

A single animal or a pair needs a terrarium of at least 80 × 40 × 40 cm (length × width × height). Larger is always better, because the gecko walks around a great deal at night. Floor area is far more important than height, because it does not climb. The lid must close tightly.

Use a deep layer of washed play sand mixed with clay or desert soil, at least 10 cm, so that the animal can dig a burrow that holds. Avoid calcium sand, coloured sand and specialty sand, which the animal can swallow. Make at least two hides from, for example, cork tubes and flat stones, one at the warm end and one at the cool end, and make one of them a damp hide, dug half into slightly damp sand. Place hides and stones directly on the floor before the sand is filled in, so that they do not collapse when the animal digs.

Read more: Calcium, vitamins and supplements

TEMPERATURE

The species needs a clear temperature gradient. By day the cool end should be 25-28 °C, and a warm area should reach 32-35 °C at the sand surface, for example under a heat bulb or a ceramic heater controlled by a thermostat. Measure the surface temperature with a digital or infrared thermometer, not the air.

At night the temperature should fall to 18-22 °C, and extra heat is rarely needed when the room is heated. The species digs down and chooses for itself where it is most comfortable, so there must be both a warm and a cool place to go to. Healthy, well-fed adults can be given a cool period of about two months at 15 °C in winter (see Breeding).

Read more: Heat and temperature

HUMIDITY AND WATER

The species is a desert species, and the terrarium must be dry with a humidity of 30-50 %. Do not mist the whole terrarium. Instead, dampen the sand in one hide lightly a couple of times a week, so that the animal has somewhere to go when it is about to shed.

The skin is shed in pieces, and remnants can stay stuck on the toes and tail tip if the air is too dry. If so, make the hide slightly more humid. Place a shallow bowl of fresh water at the cool end, and change the water often. Good ventilation keeps the substrate dry.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

As a nocturnal animal the gecko does not make great demands on light, and it manages without UVB when the food is dusted with vitamin D3. If you want to provide UVB anyway, use a weak tube for shade-dwelling animals (Ferguson zone 1-2), for example a T5 tube of 5-7 %, so that the UV index reaches at most 1-2 where the animal can go. There must always be shade and hiding places in the rest of the terrarium.

Keep a fixed daily rhythm with about 12 hours of light in summer and 10 hours in winter. The night must be dark.

Read more: Lighting and UVB

FEEDING

The gecko is an insectivore. Offer varied live food such as crickets, grasshoppers, dubia cockroaches and very small mealworms. The insects must be smaller than the distance between the animal's eyes. Adults are fed 2-3 times a week, and juveniles every other day.

Dust the insects with calcium at most meals and with a vitamin powder with D3 once a week. Feed in the evening, and remove insects that are not eaten. The genus puts on weight quickly, and desert geckos easily become too fat in captivity, so watch the weight and body condition, and cut back if the tail becomes thick.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

Teratoscincus microlepis is shy and quickly retreats into its burrow when the light is switched on. The thin skin can be torn if you grip too hard, and the tail is easily dropped, so the species must be handled as little as possible and never by the tail. A threatened animal rises on stretched legs, arches its back and swings its tail, so that the large scales on the tail rattle, and it can squeak and bite. It is mostly bluff.

Males must never be kept together, because they fight. A pair can usually live together, but watch whether the animals tolerate each other, and have an extra terrarium ready. Males can attack and kill females if there is not enough space and cover. The animals sleep in the burrow by day, so you see them mostly in the evening.

Breeding

SEXUAL MATURITY AND SEXING

Males are recognised by the two bulges at the base of the tail, where the hemipenes sit, and by a row of pores in front of the vent. The age at sexual maturity is not documented. Females should be fully grown, in good condition and have a stable weight before they are put into breeding, because young females are easily drained of calcium.

MATING

Breeding of the species has been only sparsely described. As in *Teratoscincus roborowskii* and *Teratoscincus scincus*, breeding is triggered by a cool period of about two months at 15 °C. When the temperature has been raised again and the animals are eating normally, the male is put with the female in her terrarium. Separate them if the female is chased without respite or gets bite wounds. The genus is known to be hard to get to breed, and the conditioning in the weeks beforehand is decisive.

EGG-LAYING AND CLUTCHES

The female lays one to two hard-shelled but fragile eggs at a time. The number of clutches per year is not documented for the species; in *Teratoscincus roborowskii* the female lays up to four clutches. Give the female a laying site with deep, loose, dry sand, for example 15 cm of sand at one end, where the eggs can drop freely, so that they are not crushed. A weak heat mat under part of the sand provides a warm spot at the bottom in the summer half of the year. Check regularly for new eggs, and give the female plenty of calcium and food.

INCUBATION

The eggs must lie dry. Too much moisture kills the embryos. Carefully move them, without turning them, to a closed box with dry sand or another dry substrate and a small water bowl that does not touch the eggs. Incubate at 28-29 °C. Hatching takes 60-110 days in the closely related species, in *Teratoscincus roborowskii* about 90 days.

REARING THE YOUNG

Keep the young singly in a small box or a terrarium of 20-40 litres with sand, a dry and a damp hide, and dampen a small part of the floor lightly. Adults can attack young. Give small live insects dusted with calcium every other day, and weigh the young regularly. Growth and weight of the young are not documented.

Health and common mistakes

Diseases in *Teratoscincus microlepis* have not been described. The typical problems in the closely related desert geckos are:

- A damp substrate and poor ventilation, which cause fungus, skin problems and respiratory infections. Keep the terrarium dry with only one small damp hide.
- Shed skin remnants on the toes and tail tip if the air is too dry.
- Injuries to the thin skin after rough handling, and dropped tails.
- Constipation after swallowing calcium sand or other unsuitable substrate.
- A lack of calcium and vitamin D3, especially in juveniles and breeding females. Dust the food.
- Obesity from too generous feeding.

See a vet with experience in reptiles if the animal loses weight, does not eat for several weeks, has swollen eyes, wheezing breathing or is 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.