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SKINKS

Burrowing Sand Skink

Scincus scincus

A small, smooth, golden-brown skink that swims through loose desert sand with undulating movements. *Scincus scincus* spends most of its life a few centimetres below the surface of the sand, finds its prey by vibrations and needs a deep layer of clean sand, heat and dry conditions.

Family: Scincidae Former name: *Scincus officinalis*

KEY FACTS

THE ANIMAL

Adult size	**15-20 cm** total length incl. tail
Lifespan	**10-18 years**
Active	**By day**
Lifestyle	**Burrowing**
Habitat	**Desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**80 × 50 × 30 cm** L × W × H for 2 adults
Temperature, day	**28-35 °C**
Basking spot	**38-42 °C**
Temperature, night	**20-24 °C**
Humidity	**20-40%**
UVB	**Recommended** Ferguson zone 3
Diet	**Insects**
Kept	**Singly or in pairs**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**2-10 eggs**
Clutches per year	**1**
Incubation	**50-70 days** at 27-30 °C

PROTECTION AND PAPERWORK

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

About the species

Scincus scincus is a compact, tapered skink of about 15-20 cm including the short tail. The body from snout to vent is typically about 10 cm and at most 15 cm, and adults weigh about 20 g. The body is covered in smooth, glossy scales with deep seams between them, so that sand grains cannot get in and friction against the sand is reduced. The skin withstands wear unusually well. The snout is wedge-shaped and flat like a shovel, and the lower jaw is countersunk beneath the upper jaw. The eyes and nostrils can be closed, and the small ear openings face downwards and are covered by overlapping scale flaps. The legs are short and sturdy, and the toes have flat scaly fringes that give grip in loose sand.

The colour is reddish yellow to brownish yellow with dark brown crossbands on the back and tail, excellent camouflage in the sand. The sexes look alike. The animal is very fast: at the slightest disturbance it dives into the sand and is gone in a moment.

Subspecies are recognised, among them *S. s. cucullatus* in northern Algeria, Tunisia, north-western Libya and northern Nigeria and *S. s. meccensis* in western Saudi Arabia, Jordan and south-eastern Syria. Several forms formerly regarded as subspecies are now regarded as species in their own right. The name *Scincus* is the Greek and Latin word for skink. The species was

formerly called *Scincus officinalis*, and the name refers to its use as a medicine: from antiquity right up into the 1800s the animal was dried, powdered and sold in apothecaries for a range of ailments and as an aphrodisiac. In ancient Egypt it was embalmed and placed in tombs.

Distribution and habitat

Scincus scincus occurs in a broad desert belt from the Sahara eastwards through North Africa to the Arabian Peninsula and Iran. The range includes Tunisia, Algeria, south-eastern Libya, Egypt with Sinai, Israel, Jordan, south-eastern Syria, Yemen, Saudi Arabia, Kuwait, Bahrain, Iraq and Iran, as well as the Sahel zone in Senegal, Mali, Niger and Nigeria and central Sudan. Its occurrence in Western Sahara and Mauritania is unresolved, and the species does not occur in Morocco.

The range was compiled before several forms were separated as species in their own right, so the outer limits, especially in West Africa, are not finally settled.

> **Native range:** Tunisia, Algeria, Libya, Egypt, Israel, Jordan, Syria, Yemen, Bahrain, Kuwait, Iraq, Iran, Senegal, Mali, Niger, Nigeria, Saudi Arabia and Sudan.

HABITAT

The species is a sand specialist that lives in fine, loose, wind-blown desert sand: dunes, sandy plains and sandy riverbeds with no or very sparse vegetation and no water nearby. Daytime temperatures are high, and the difference between day and night is large. The animal spends most of its life 1-3 cm below the surface and comes up only to eat, defecate and mate. Beneath the sand the temperature is more even than on top of it, and the animal hides here from both heat and enemies. Active animals have a body temperature of about 35 °C.

The species is most active during the day but can also be out in the cooler hours. Its prey is insects such as beetles and grasshoppers and arachnids, which the animal lies in wait for under the surface. It can locate insects up to about 15 cm away from vibrations in the sand and occasionally pokes its head into the sand to sense them better. The breeding season falls after the rains, when food is most plentiful, from about May to July.

Care

THE ENCLOSURE

The sand is the most important part of the setup. The species digs and swims in the sand all day, so the substrate must be a deep layer of clean, fine, round-grained sand of 10-15 cm. Use dust-free sand without sharp edges, not gravel and not calcium-based sand, which clumps. The sand must be dry and sifted regularly for faeces and food remains.

A pair needs an enclosure of at least 80 × 50 × 30 cm (length × width × height); for a single animal 60 × 40 × 30 cm is enough. It is the floor area that counts, not the height. Shape the sand as a low mound under the lamp, so the animal can bask. Place a couple of flat stones and a root as basking spots, and put them directly on the bottom of the enclosure before the sand goes in, so the animal cannot dig them free and topple them. The enclosure needs a lid, because the animal is fast, and good ventilation without draughts.

Read more: Calcium, vitamins and supplements

TEMPERATURE

The daytime temperature in the enclosure should be 28-35 °C, and at night it may fall to 20-24 °C. The enclosure needs a distinct gradient with a warm basking spot under a spotlight and a cooler place at the other end. The sand surface at the basking spot should be 38-42 °C, measured with an infrared thermometer. The animal must always be able to dig down into cooler sand.

Use a thermostat on the heat source, and position the lamp so it heats only one end. Measure both the surface and the temperature down in the sand. An animal that keeps away from the lamp and stays down in the sand is too warm; an animal that lies close to the lamp all day is too cold. Switch off the lamps at night. If the room temperature falls below about 20 °C, a ceramic heater can provide heat without light.

Read more: Heat and temperature

HUMIDITY AND WATER

The species comes from the desert and must be kept dry, with a humidity of 20-40 %. The sand must not be damp, because moisture promotes fungus and skin problems, and good ventilation is important. The figure is borrowed from other desert skinks.

Provide water in a very shallow, stable bowl dug slightly into the sand, or mist a couple of drops on a stone the animal can lick. Change the water often, and wipe up spills so the sand does not become wet. Extra moisture is only necessary during shedding, if pieces of skin stay stuck.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species lives in bright sunshine, so the enclosure needs strong light for 10-12 hours a day. Provide UVB corresponding to Ferguson zone 3 with a UV index of about 3 at the basking spot, for example from a T5 tube over the basking spot. The zone is an estimate based on the open habitat.

UVB tubes decline with time and are replaced according to the manufacturer's instructions. There must be no glass or plastic between the tube and the animal. The animal gets no UVB when it lies under the sand, so the basking spot must be easy to reach. Let the light follow the day and switch it off at night.

Read more: Lighting and UVB

FEEDING

In the wild *Scincus scincus* eats mainly insects and arachnids, but plant matter is also part of the diet. Give e.g. crickets, grasshoppers, cockroaches and mealworms, and choose prey no larger than the animal's head. The animal reacts more strongly to moving insects such as crickets than to mealworms and finds them by their vibrations, so the food must be live.

Dust the insects with calcium, and give a vitamin supplement now and then; the insects themselves must be well fed. Young animals are fed every other day and adults 2-3 times a week. Remove insects that are not eaten, so they do not bother the animal when it lies in the sand. Preferably give the food on a flat stone, so the animal does not swallow more sand than necessary.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is an animal to watch, not to handle. It is fast and shy, and touch stresses it. If an animal has to be moved, it can be carefully sifted up out of the sand or lured into a small container of sand. Once the animal has become used to the enclosure, it comes out to eat.

Keep one animal or a pair with plenty of space and plenty of sand. Do not keep several males together, and separate the animals at signs of stress, such as bites, injuries or animals that do not come out. It is normal for the animal to lie buried and not be seen for long periods, especially when the temperature changes.

Breeding

SEXUAL MATURITY AND SEXING

The sexes look very alike, and the difference in head proportions is not distinct. No reliable external characteristics are known, so sexing should be left to a vet with experience in reptiles. Age and size at sexual maturity are not documented.

MATING

In the wild the animals mate from May to July after rain, when they have put on weight. The male settles on the female's back and bites hold of her neck, pushes her tail up with his own and brings his cloaca towards hers. Mating takes place on the move and lasts from a few seconds to three minutes. A winter rest is not documented for the species, but a slightly cooler period with shorter days imitates the seasons. Put the female in with the male, and take the male out again if he is too pushy.

EGG-LAYING AND CLUTCHES

The species lays eggs. The female lays 2-10 eggs in the sand a few weeks after mating. The sand must be deep and slightly damper down in one corner, so she can dig a nest, and she must have plenty of food and calcium before and after laying. She probably lays one clutch a year; multiple clutches are not documented.

INCUBATION

Move the eggs to an incubation box with damp vermiculite or perlite at 27-30 °C, and do not turn them. At 27-30 °C the eggs hatch after 50-70 days; the figures are an estimate based on other skinks. Check the eggs without touching them, and remove eggs that go mouldy.

Read more: Incubating eggs

REARING THE YOUNG

The young are barely 4 cm from snout to vent at hatching. They can be reared in a small enclosure of 40 × 25 × 20 cm with 8-10 cm of fine sand like the adults', and extra small hiding places. Give them small insects, for example small crickets, springtails and small mealworms, dusted with calcium, every second day, and give them UVB and a warm spot. Separate the young animals as they grow larger if they start fighting, and watch that they grow evenly. Growth and time to sexual maturity are not documented.

Health and common mistakes

The species is hardy in a dry, warm enclosure with deep sand, and problems typically arise from errors in care:

- Skin and fungal infections from sand that is too damp or poor hygiene.
- Irritated eyes and nostrils from dust or sharp sand; choose clean, rounded sand.
- Metabolic bone disease from too little UVB and a one-sided diet without calcium.
- Constipation if the animal swallows sand with its food; feed on a flat surface.
- Crushed toes and tail injuries if stones topple when the animal digs under them.

Quarantine new animals for at least a month. The animal hides illness well and often lies buried, so contact a vet with experience in reptiles in cases of weight loss, changed appetite, swellings or an animal that lies still on top of the sand.

Read more: Quarantine and hygiene 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.