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CAECILIANS

Aqua Ize Caecilian

Schistometopum thomense

Schistometopum thomense is a legless, burrowing caecilian that lives only on São Tomé and the small neighbouring island of Ilhéu das Rolas in the Gulf of Guinea. It is often bright yellow, gives birth to live, fully developed young and is one of the few caecilians that have been bred in captivity. Its care is all about deep, damp soil free of fertiliser and pesticides.

Family: Dermophiidae

Mild skin toxins

KEY FACTS

THE ANIMAL

Adult size	**20-34 cm** total length incl. tail
Lifespan	**5-10 years**
Active	**By day and at night**
Lifestyle	**Burrowing**
Habitat	**Rainforest**
Skin toxins	**Mild** Wash your hands after contact and keep your fingers away from your eyes and mouth
Difficulty	**Experienced**

CARE

Min. enclosure	**50 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**21-24 °C**
Temperature, night	**20-22 °C**
Humidity	**85-100%**
Water	**No water dish**
UVB	**Not required**
Diet	**Insects and worms/snails**
Kept	**Singly or in groups**

BREEDING

Reproduction	**Live-bearing**
Development	**Live-bearing**
Sexually mature	**24 months**
Litter size	**1-16 young**
Parental care	**None**

PROTECTION AND PAPERWORK

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

About the species

Schistometopum thomense is an elongated, legless amphibian with transverse skin folds, small eyes beneath the skin and a wedge-shaped head that forces its way through the soil. The colour is often bright yellow, but some animals have brown spots, and a few young animals are beige or pink. Animals from the highlands are larger than animals from the coast: over a rise of 1,000 m in altitude, the animals become almost one and a half times as long and twice as heavy. The largest measure about 34 cm, and the 20-34 cm in the box is an estimate for adults. Males have a larger head than females, but the body is the same size in both sexes.

The species belongs to the family Dermophiidae. The island's caecilians consist of two genetically distinct lineages that mix in the middle of the island, and since 2021 one of them has been regarded as a separate species, *Schistometopum ephele*. Older information on *S. thomense* may therefore cover it as well. Lifespan in captivity is not documented, and the figure in the box is an estimate.

Skin toxicity: the skin secretion has not been studied, but the species is suspected of having an active skin toxin. The yellow colour may be a warning colour, and legless lizards kept together with the species die within a few days without external injuries. Keep the species on its own, wash your hands before and after handling, and do not touch your eyes or mucous membranes afterwards.

Distribution and habitat

Schistometopum thomense is found only on São Tomé and the small neighbouring island of Ilhéu das Rolas in the Gulf of Guinea. On São Tomé it lives from sea level to about 1,400 m above sea level and is absent only from the driest parts of the north. No caecilians have been found on the neighbouring island of Príncipe. The species is common, especially in the mountains, where it can be the island's most abundant vertebrate, but pesticides used in agriculture may have made it rarer in some places.

> **Native range:** São Tomé & Príncipe.

HABITAT

The species lives in loose, damp soil and in rotting wood: in rainforest, old coffee and cocoa plantations, coconut plantations and gardens. In the highlands it is found especially at the bottom of old, soft tree stumps, where several animals lie together; at 900 m above sea level the soil is about 21 °C while the air is 26 °C. The climate is tropical and humid, with about 750 mm of rain a year in the north-east and over 2,400 mm in the south. The diet is mainly earthworms and other soil-dwelling small animals. The species tolerates a dry surface better than many other caecilians.

Care

THE ENCLOSURE

The species is terrestrial and burrows, so its care is all about the soil. It is kept and bred in small numbers, and the care is based on the species itself and on other terrestrial caecilians. An adult needs at least 50 × 30 × 30 cm with 15-20 cm of loose, damp soil. A box of thick, solid plastic with a tight-fitting lid and a weight on top works well, because caecilians find every gap, and at first the species likes to climb up sticks to inspect the lid. Cover ventilation holes with fine mesh so that the feeder worms stay inside.

The substrate must be loose and free of fertiliser and pesticides. Forest soil with rotting wood is suitable; ordinary garden soil from the shop often contains fertiliser and pesticides and should be avoided. Coconut fibre alone can pack together in the gut. The soil should be damp, but not so wet that you can squeeze water out of a handful, and there must be no standing water at the bottom. A flat piece of bark or wood on the surface gives a hide just under the surface. The soil is replaced every 4-5 months, and the animals are checked at the same time.

TEMPERATURE

The daytime temperature is 21-24 °C and the night temperature 20-22 °C, which corresponds to the soil in the species' mountain forests. Heating is usually not necessary in a room with a stable temperature. Swings of more than about 3 °C and rapid changes are poorly tolerated. If you choose bottom heat, place a heat mat under one end of the box so that a gradient is created. An animal that keeps lying on the surface after the first few weeks is too warm, too cold, too wet or too dry. Brumation is not necessary.

Read more: Heat and temperature Read more: Brumation and the seasons

HUMIDITY AND MISTING

Air humidity in the box is 85-100 %, because the soil is damp. Moisture is maintained by misting the soil and occasionally turning over the top few centimetres. The species retreats into the soil immediately when hit by water, so mist the soil and not the animal. It tolerates a dry surface better than other caecilians, but the soil beneath must be damp. Use bottled water, rainwater or dechlorinated tap water.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

The species does not need a water bowl or an aquatic area. Moisture comes from the soil, and condensation on the walls of the box is enough to drink from. It swims very clumsily, and deep water is a drowning hazard. Avoid soap, cleaning products and hand cream on hands and equipment, because amphibians absorb substances through the skin.

LIGHTING AND UVB

The species is active both day and night and at first often shows itself on the surface; after a few weeks of acclimatisation it is seen less often. A particular lighting schedule is not necessary, and the room's ordinary daily rhythm with 10-14 hours of light is enough. UVB is not necessary. Plants are not necessary.

Read more: Lighting and UVB

FEEDING

Earthworms are the staple, and waxworms are also taken. An adult is given 10-15 small earthworms every other week. Dig through the soil regularly: many worms left over mean overfeeding or an animal that is not eating. Young animals take small worms and tubifex worms, but some of the very smallest refuse food. A new animal is kept for the first month in a small, simple box where the worms can be counted. The worms can be gut-loaded with calcium and vitamin powder in their soil a few days before feeding.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

S. thomense digs extensive tunnel systems. In the wild several animals lie together in the same tree stump. The species can stick its head out of the soil and stay like that for up to 20 minutes without reacting to movement nearby. It can crawl both forwards and backwards and is quickly gone when hit by water. The species is kept singly or in a group in a large box with regular checks. Do not keep several males with one female: the males exhaust themselves in the breeding season and can die of it. Never keep other animal species in the same box. Handling should be avoided: the skin is moist and delicate.

Breeding

SEXUAL MATURITY AND SEXING

Captive-bred animals are sexually mature after about 2 years. The sexes are hard to tell apart from the outside, but males have a larger head. Animals in the trade are most often wild-caught.

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

MATING

Fertilisation is internal. In the weeks before mating the animals show themselves more often on the surface, and mating takes place on the soil surface, also at night. Males lose condition during the breeding season, stop eating and can die from rivalry, so keep only one male with the females.

EGGS AND LARVAE

The species does not lay eggs. The female is live-bearing: the foetuses develop in the oviducts. The young are born fully developed without gills and gill slits, and there is no parental care after birth. Litter size is not documented; the 1-16 young in the box are borrowed from *Dermophis mexicanus* in the same family.

METAMORPHOSIS

There is no hatching outside the female and no larvae. The young are 11-12 cm long at birth and look like the adults apart from their size and a pink belly. The length of gestation is not documented, and the field in the box is therefore empty. A pregnant female needs plenty of food, peace and a stable temperature.

REARING THE YOUNG

Newborn young are kept in small boxes with damp, loose soil and are given small earthworms, worm pieces and tubifex worms. Some of the very smallest refuse food at first. The colour can be yellow, beige or pink. Growth and the time for moving to a larger box are not documented.

Health and common mistakes

The health picture is based on the species itself and on other terrestrial caecilians. The most common problems are:

- The animal lies on the surface and does not burrow: the soil is too wet, too dry, too warm, too cold or chemically unsuitable. Replace the soil and check the temperature.
- Fertiliser and pesticides in the soil: use only soil that is free of both.
- Constipation: coconut fibre can pack together into a plug in the gut. Use loose soil.
- Escapes: the lid must fit tightly and have a weight on top.
- Emaciation and death in males that compete over a female.
- Skin inflammation is the most common known cause of death in caecilians in captivity. Look at the skin at every check.
- Chytrid fungus (Bd) has been detected in caecilians. New animals are quarantined, and hands and equipment are washed between boxes.

See a vet with expertise in amphibians if the animal does not eat for several weeks, loses weight or develops sores on the skin.

Read more: Quarantine and hygiene

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.