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CAECILIANS

Congo Caecilian

Herpele squalostoma

Herpele squalostoma is a stout, burrowing caecilian from the rainforests, plantations and gardens of Central Africa, up to about 46 cm long. It lays eggs in the soil, and the female lies coiled around the eggs and young, which feed on her outer layer of skin. The species has proved hardy in captivity compared with other caecilians.

Family: Herpelidae Former name: *Caecilia squalostoma*

KEY FACTS

THE ANIMAL

Adult size	**24-46 cm** total length incl. tail
Lifespan	**5-10 years**
Active	**At night**
Lifestyle	**Burrowing**
Habitat	**Rainforest**
Skin toxins	**None known**
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 40 × 40 cm** L × W × H for 1 adult
Temperature, day	**22-25 °C**
Temperature, night	**21-23 °C**
Humidity	**90-100%**
Water	**No water dish**
UVB	**Not required**
Diet	**Insects and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Development	**Direct development (no larvae)**
Egg-laying site	**On the ground**
Eggs per season	**16**
Parental care	**Guards the eggs**

PROTECTION AND PAPERWORK

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

About the species

Herpele squalostoma is a stout, cylindrical caecilian with a distinctly protruding snout. The body is dark olive with small yellowish spots, and the eyes are covered by bone and cannot be seen from outside. Animals over 24 cm are considered adult. Females reach up to 46 cm and 41 g, males up to 42 cm and 30 g. The species belongs to the family Herpelidae.

Reliable external differences between the sexes are not documented. The lifespan is not known; animals live at least about five years in captivity, and the 5-10 years in the specification box is an estimate.

Skin toxicity: no toxic effect has been documented for the species, but caecilians have skin glands, so do not touch your eyes or mucous membranes after handling. Wash your hands before and after, and touch the animal as little as possible.

Distribution and habitat

Herpele squalostoma occurs in western Central Africa and the far edge of West Africa: south-eastern Nigeria, Cameroon, Equatorial Guinea including Bioko, Gabon, the Republic of the Congo, the western Democratic Republic of the Congo and the western part of the Central African Republic. Occurrence in Cabinda in Angola is possible but unconfirmed, and is not shown on the map. The species is not considered threatened and occurs in several national parks.

> **Native range:** Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo - Brazzaville, Congo - Kinshasa and Central African Republic.

HABITAT

H. squalostoma is terrestrial and burrows in loose, damp soil in lowland rainforest, but also occurs in plantations of fruit trees, cocoa and coffee, in village gardens and in secondary forest. In Cameroon the species has been found up to at least 800 m above sea level. It occurs in the top 10-15 cm of the soil, often close to small streams and springs that only flow in the rainy season. Adults eat mainly ground-dwelling, hard-shelled prey: mole crickets, cockroaches, beetles and crabs, but also ants, insect eggs and earthworms. The young take mostly earthworms and ants.

Read more: Feeder animals: keeping and breeding

Care

THE ENCLOSURE

H. squalostoma is kept in small numbers, and the care advice is based on the species itself and on other terrestrial caecilians. The animal is terrestrial and burrowing, so care is about the soil. A box of thick, tight plastic with a close-fitting lid and a weight on top works well: caecilians find every gap, and a poorly closed lid is the most common way out. An adult needs at least 60 × 40 × 40 cm with 20-30 cm of loose, damp substrate to dig in.

The substrate should be loose, hold moisture and not clump: unbleached paper fibre (paper-based bedding) is well proven, and sterilised topsoil is also used. Coconut fibre alone can pack together in the gut and should be avoided. The substrate should be damp, but not so wet that water can be squeezed out of a handful, and there must be no standing water at the bottom. A flat piece of bark or wood on the surface provides a hide just below the surface and makes it easy to check on the animal.

The species tolerates disturbance poorly: changing the substrate destroys the tunnel system, and the animals eat less for a long time afterwards. Change the substrate only when necessary, typically every 4-5 months, and rather remove dirt and dead feeder animals along the way. Small ventilation holes in the sides, covered with fine mesh, give airflow and keep the feeder animals in; the lid should have no holes.

TEMPERATURE

The species is kept stably warm: 22-25 °C by day and 21-23 °C at night. The average soil temperature affects how much the animals eat, so it must be kept even. Fluctuations of more than about 3 °C and rapid changes are poorly tolerated. The box can stand in a room with a stable temperature, or a heat mat under one end can create a gradient, so that the animal can choose between warmer, drier and cooler, damper soil. An animal lying on the surface instead of burrowing 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

The air in the box is almost saturated, 90-100 %, because the soil is damp. Moisture is maintained by misting the soil and occasionally turning over the top few centimetres. Feel it, and mist when the top layer feels dry. Use bottled water, rainwater or dechlorinated tap water. Even moisture at depth is more important than a particular percentage, and a slightly drier part of the substrate gives the animal a choice.

WATER AND WATER QUALITY

The species does not need a water bowl or an aquatic section. Moisture comes from the soil, and condensation on the walls of the box is enough to drink from. A water bowl can make the soil too wet. Never use tap water containing chlorine or chloramine to moisten the soil, and avoid soap, cleaning products and hand cream on hands and equipment, because amphibians absorb substances through the skin.

LIGHTING AND UVB

The species lives underground, and a particular lighting schedule is not necessary. The normal day-night rhythm of the room, with 10-14 hours of light, is enough. UVB is not necessary, and the box is kept dark so the animal can burrow undisturbed. Plants are not necessary.

Read more: Lighting and UVB

FEEDING

Earthworms are a well-proven staple: young animals can grow into large, sturdy adults on earthworms alone when the worms are gut-loaded with calcium and vitamins. Small to medium earthworms are suitable, and an adult is given 10-15 worms every other week. Because adults in the wild eat mainly hard-shelled prey, crickets and small shrimp are good for variety. Dig through the substrate at least every other week: many worms left over mean overfeeding or an animal that is not eating.

The worms are gut-loaded with calcium and vitamin powder in their soil 4-6 days before feeding. The animal is rarely seen eating. A new animal is therefore kept for the first month in a small box, where the worms are counted in and the substrate is searched every 3-4 days.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

H. squalostoma spends almost its entire life underground and is rarely seen on the surface. The species is usually kept singly, so that condition and growth are easy to follow; several animals can be kept together with regular checks. Disturbance, for example changing the substrate, makes the animals eat less, so the box needs peace. Avoid handling: the skin is moist and delicate. Move the animal only when necessary, with clean, damp hands free of cream.

Breeding

SEXUAL MATURITY AND SEXING

Sexual maturity is not documented in *H. squalostoma*; animals over 24 cm are considered adult. The sexes cannot be reliably told apart externally. Captive breeding is not documented, and animals in the trade are mostly wild-caught.

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

MATING

Fertilisation is internal. What triggers mating, and how the animals are brought to mate in captivity, is not documented. If the animals are to be kept together for breeding, stable conditions, deep soil, peace and plentiful food are the most important things.

EGGS AND LARVAE

The species lays eggs in damp soil, and the young hatch as small caecilians without an aquatic larval stage. The female lies tightly coiled around the eggs and the newly hatched young, so that the whole brood forms a compact lump. A clutch is about 16 young; the figure is based on few animals. The number of clutches per year is not documented.

METAMORPHOSIS

There are no larvae and no metamorphosis: the young hatch as small versions of the adults. The development time and temperature of the eggs are not documented.

The young have special teeth with several cusps, which they use to peel off and eat the mother's outer layer of skin, and they also get a large part of their skin and gut bacteria from her. Later they change to teeth like those of the adults. Young that feed on the mother's skin gain weight without any other food. The female needs complete peace: do not open the box while she is lying with eggs or young.

Read more: Rearing tadpoles

REARING THE YOUNG

The young eat skin remains until they are about 10-18 cm long, but also take earthworms and ants from about 10 cm. Leave them with the female until they eat small earthworms or worm pieces, and then move them to a box of their own with deep, damp substrate. Crickets can be added from about 18 cm. Growth and the time for moving to a larger box are not documented.

Health and common mistakes

Herpele squalostoma is one of the hardiest caecilians in captivity and does far better than the aquatic species. The most common problems in terrestrial caecilians are:

- The animal lies on the surface: the substrate is too wet, too dry, too warm, too cold or chemically unsuitable. Replace the substrate, check the temperature and try a different water source.
- Constipation: coconut fibre can pack together into a plug in the gut. Use paper fibre or sterile soil.
- Escapes: the lid must fit tightly and have a weight on top.
- Reduced appetite after disturbance and substrate changes.
- Skin infection is the most common known cause of death in captive caecilians. Keep the substrate clean and look at the skin at every check.
- Chytrid fungus (Bd) has been detected in the species. New animals are quarantined, and hands and equipment are washed between boxes.

See a vet experienced with amphibians if the animal does not eat for several weeks, loses weight or develops skin lesions.

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.