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CAECILIANS

Atlantic Slender Caecilian

Dermophis parviceps

Dermophis parviceps is a slender, limbless, burrowing caecilian from the rainforest and montane forest of Costa Rica and Panama. Adults are 20-27 cm long. It lives deep in moist soil and is probably live-bearing like the rest of the genus. The species has hardly been studied in captivity, so the care described here is based on experience with terrestrial caecilians.

Family: Dermophiidae Former name: *Gymnopis parviceps; Siphonops parviceps*

KEY FACTS

THE ANIMAL

Adult size	**20-27 cm** total length incl. tail
Lifespan	**5-10 years**
Active	**At night**
Lifestyle	**Burrowing**
Habitat	**Rainforest and montane forest**
Skin toxins	**None known**
Difficulty	**Experienced**

CARE

Min. enclosure	**50 × 30 × 35 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	**Live-bearing**
Development	**Live-bearing**
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

Dermophis parviceps is a slender, limbless amphibian that looks like a small earthworm. The body is purplish grey, and the head is pink and distinctly paler than the body. The eyes can be seen through the skin. The grooves between the skin folds lack the dark colour seen in *Dermophis mexicanus*. Adults are 20-27 cm long.

The species belongs to the family Dermophiidae and is smaller and slimmer than *D. mexicanus*. Weight, lifespan and reliable external differences between the sexes are not documented; the lifespan in the specification box is an estimate.

Skin toxicity: no toxic effect has been documented in 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 handle the animal as little as possible.

Distribution and habitat

Dermophis parviceps is found in Costa Rica and Panama. Colombia is sometimes included, but the occurrence there is uncertain, and the country is not shown on the map. Most known records are from Costa Rica, including the Caribbean side. The species can be locally common and occurs in many protected areas. It is not regarded as threatened.

Native range: Costa Rica and Panama.

HABITAT

D. parviceps lives in moist forest, both in the lowlands and in montane forest. It is subterranean and digs deep, but is also found under fallen logs and in the leaf litter. In premontane rainforest at about 500 m above sea level it lies singly in small, spherical cavities in dense clay soil 50-65 cm below the surface, with the walls lined with fine, smooth clay. Whether the cavities are used for brooding is not known. The diet has not been studied in the species; caecilians in the same family take earthworms, termites and other small soil animals.

Care

THE ENCLOSURE

The care described here is based on experience with terrestrial caecilians, especially *Dermophis mexicanus*, because *D. parviceps* has not been studied systematically in captivity. The animal is terrestrial and burrowing, so care is all about the soil. A box of thick, tight plastic with a tight-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 50 × 30 × 35 cm with 20-25 cm of loose, moist substrate.

The substrate must be loose, hold moisture and not clump: unbleached paper fibre (paper-based bedding) is well proven, and sterilised topsoil, preferably mixed with leaf litter, is also used. Coconut fibre alone can compact in the gut and should be avoided. The substrate must be moist, 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 under the surface and makes it easy to check on the animal. Small ventilation holes in the sides, covered with fine mesh, provide ventilation and keep the feeder worms in; the lid must have no holes. The substrate is replaced every 4-5 months, and the animal is checked at the same time.

TEMPERATURE

The species is kept stable and warm: 22-25 °C by day and 21-23 °C at night. The soil temperature has not been measured in the wild. Fluctuations of more than about 3 °C and rapid changes are poorly tolerated. The box can stand in a room with a stable temperature without extra heat, or a heat mat under one end can provide a gradient, so that the animal can choose between warmer, drier soil and cooler, moister soil. An animal that lies on the surface instead of burrowing is too warm, too cold, too wet or too dry. No brumation is needed.

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 moist. The moisture is maintained by misting the soil and turning over the top few centimetres now and then. Check by feel, 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 a water area. The 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 specific lighting programme is not necessary. The ordinary day-night rhythm of the room with 10-14 hours of light is enough. UVB is not needed, and the box is kept dark so that the animal can dig undisturbed. Plants are not necessary.

Read more: Lighting and UVB

FEEDING

Earthworms are the staple food and are taken by almost all terrestrial caecilians. For the small, slender *D. parviceps*, small earthworms or pieces of worm are suitable, and an adult is fed 5-10 small worms every other week. The worms can live in a moist paper substrate for a long time without dying and rotting. Dig through the substrate at least every other week: many

worms left over mean overfeeding or an animal that is not eating. What the species itself takes in the wild is not documented.

The worms can be gut-loaded with calcium and vitamin powder in their soil 4-6 days before feeding, but how much of it reaches the animal is unknown. 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 checked every 3-4 days.

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

BEHAVIOUR AND HANDLING

D. parviceps spends almost its whole life underground and is rarely seen on the surface; a healthy animal lies buried most of the time. In the wild the animals lie singly, and the species is kept singly, so that condition and growth are easy to follow. Handling should be avoided: the skin is moist and delicate. Move the animal only when necessary, with clean, moist hands free of cream.

Breeding

SEXUAL MATURITY AND SEXING

Sexual maturity is not documented in *D. parviceps*, and the sexes cannot be told apart reliably from the outside. Breeding in captivity is not documented.

MATING

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

EGGS AND LARVAE

Reproduction has not been described in *D. parviceps*, but the species is probably live-bearing and independent of water, like the genus *Dermophis*. In *Dermophis mexicanus*, the foetuses develop in the female's oviducts and feed first on the yolk and then on a nutritious secretion from the wall of the oviduct. Litter size and the length of gestation are not documented; in *D. mexicanus* the litter is 1-16 young. There is no parental care after birth.

METAMORPHOSIS

If the species is live-bearing like its relatives, there is no hatching outside the female and no larvae, but birth of fully developed young. The length of gestation is not documented. A pregnant female needs plenty of food and peace throughout the period.

REARING THE YOUNG

Newborn young need a box with a deep, moist substrate like the adults and are moved away from the female's box so that they are not disturbed. Small pieces of worm are the first food. Size at birth and growth are not documented.

Health and common mistakes

The health notes are based on experience with other terrestrial caecilians. The most common problems 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 compact into a plug in the gut. Use paper fibre or sterile soil.
- Escapes: the lid must close tightly and have a weight on top. Even a small opening is enough, and the species is slender.
- Skin infection is the most common known cause of death in caecilians in captivity, especially in the aquatic species. Keep the substrate clean, and 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 experience of 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.