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CAECILIANS

## Central American Caecilian

# *Gymnopis multiplicata*

*Gymnopis multiplicata* is a limbless, burrowing caecilian from Central America that lives shallowly in damp soil and leaf litter from Honduras to Panama. The female gives birth to live, fully developed young, and the animals come to the surface at dusk and dawn, especially in light rain. The species has hardly been studied in captivity, so the care advice is based on experience with terrestrial caecilians.

Family: Dermophiidae  Former name: *Siphonops proximus; Siphonops simus*

KEY FACTS

### THE ANIMAL

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|---|---|
| Adult size | **25-40 cm**<br>total length incl. tail |
| Lifespan | **5-10 years** |
| Active | **At dusk and at night** |
| Lifestyle | **Burrowing** |
| Habitat | **Dry forest, rainforest and montane forest** |
| Skin toxins | **None known** |
| Difficulty | **Experienced** |

### CARE

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|---|---|
| Min. enclosure | **60 × 40 × 40 cm**<br>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

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|---|---|
| Reproduction | **Live-bearing** |
| Development | **Live-bearing** |
| Litter size | **1-16 young** |
| Parental care | **None** |

### PROTECTION AND PAPERWORK

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

## About the species

*Gymnopis multiplicata* is an elongated, limbless amphibian with no external ears. The eyes are small and sit in sockets covered by bone, so the animal sees almost nothing. Prey is found instead with two small tentacles between the nostril and the eye. The body is ringed by transverse skin folds, like an earthworm.

The species belongs to the family Dermophiidae and is closely related to *Dermophis mexicanus*, which it resembles in way of life: both are live-bearing and burrow shallowly in the soil. Adult size is not documented; the 25-40 cm in the specification box is an estimate based on close relatives. The young are 10-13 cm long at birth. Weight, lifespan and reliable external differences between the sexes are not documented, and the lifespan in the 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

*Gymnopis multiplicata* occurs in Honduras, Nicaragua, Costa Rica and Panama. Occurrence in Guatemala is possible but unconfirmed, and the country is not shown on the map. By far the most records are from Costa Rica. The species is not considered threatened.

> **Native range:** Costa Rica, Nicaragua, Honduras and Panama.

### HABITAT

*G. multiplicata* lives in damp, loose soil and under leaf litter and plant debris. It occurs in dry and humid lowland forest and in montane forest, but also in farmland: pastures, plantations, rural gardens and built-up areas. The animals burrow shallowly in the soil and come to the surface at dusk and dawn to feed, especially when there is light rain. The diet has not been studied in the species itself; closely related caecilians take earthworms, termites and other small soil animals. Soil temperature and moisture have not been measured for the species, but the climate in its range is tropical, and the soil is warm and constantly damp.

## Care

### THE ENCLOSURE

The care advice is based on experience with terrestrial caecilians, especially *Dermophis mexicanus*, because *G. multiplicata* has not been studied systematically in captivity. 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 25-30 cm of loose, damp substrate to dig in. The size is an estimate.

The substrate should be loose, hold moisture and not clump: unbleached paper fibre (paper-based bedding) is well proven, and sterilised topsoil, preferably mixed with leaves, 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 without digging. Small ventilation holes in the sides, covered with fine mesh, give airflow and keep the feeder worms in; the lid should have no holes. Replace the substrate every 4-5 months and check the animal at the same time.

### TEMPERATURE

The species is kept stably warm: 22-25 °C by day and 21-23 °C at night. 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 create a gradient, with the soil warmer and drier above the mat and cooler and damper at the other end. The animal can then choose for itself. 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. There is no fixed ratio between water and substrate: 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, on the contrary, 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 for terrestrial caecilians, and the box is kept dark so the animal can burrow undisturbed. The box must not stand in direct sunlight. Plants are not necessary.

Read more: Lighting and UVB

### FEEDING

Earthworms are the staple food and are taken by almost all terrestrial caecilians. Small to medium earthworms are suitable, and an adult is given 10-15 worms every other week. The worms can live in a damp 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. Crickets can be offered for variety; what *G. multiplicata* itself prefers 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 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 searched every 3-4 days.

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

### BEHAVIOUR AND HANDLING

*G. multiplicata* spends almost all its time underground; a healthy animal lies buried about 95 % of the time. The species is usually kept singly, so that condition and growth are easy to follow. Several animals of the same species can be kept together with regular checks for bites, and this gives a better chance of breeding. 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 *G. multiplicata*, and the sexes cannot be reliably told apart externally. Captive breeding is not documented.

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 and plentiful food are the most important things.

### EGGS AND LARVAE

The species does not lay eggs. The female is live-bearing: the foetuses develop in the oviducts and hatch inside her when they are about 25-30 mm long. They then presumably feed on a nutritious secretion from the wall of the oviduct, as in *Dermophis mexicanus*, until they are born. Litter size and the length of gestation are not documented; the 1-16 young in the box are borrowed from *Dermophis mexicanus*. There is no parental care after birth.

### METAMORPHOSIS

There is no hatching outside the female and no larvae. The young are born fully developed and are 10-13 cm long. The length of gestation is not documented, and the field in the box is therefore empty. A pregnant female needs plentiful food and peace throughout the period.

### REARING THE YOUNG

Newborn young need a box with deep, damp substrate like the adults and are moved from the female's box so they are not disturbed. Small earthworms or worm pieces are the first food. Growth and the time for moving to a larger box are not documented.

## Health and common mistakes

The health information is 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 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. Even a small opening is enough.
- Skin infection is the most common known cause of death in captive caecilians, 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 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.