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SALAMANDERS AND NEWTS

Wenxian Knobby Newt

Tylototriton wenxianensis

Tylototriton wenxianensis is a medium-sized, almost entirely black crocodile newt with orange toe tips and tail edge. It lives hidden in forest and scrub in the mountains of central China and enters the water only to breed; the eggs are laid on land. Little is known about its care, so this guide is based on close relatives.

Family: Salamandridae

Mild skin toxins

KEY FACTS

THE ANIMAL

Adult size	**13-16 cm** total length incl. tail
Lifespan	**10-20 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial and semi-aquatic**
Habitat	**Montane forest and wetland**
Skin toxins	**Mild** Wash your hands after contact and keep your fingers away from your eyes and mouth
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 40 × 40 cm** L × W × H for 3 adults
Temperature, day	**18-24 °C**
Temperature, night	**15-20 °C**
Humidity	**70-90%**
Water	**Water section** depth 3-5 cm
UVB	**Not required**
Diet	**Insects and worms/snails**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Larvae in water**
Egg-laying site	**On the ground**
Eggs per season	**30-80**
Hatching	**20-36 days** at 22-24 °C
Larval period	**80-130 days** from hatching to metamorphosis
Larval diet	**Other larvae and small aquatic invertebrates (daphnia, mosquito larvae)**
Parental care	**None**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Vulnerable (VU)**

About the species

Tylototriton wenxianensis is a medium-sized crocodile newt with rough skin. The back is entirely black and the belly brownish black, and only the toe tips and the lower edge of the tail are orange. The head is flat and oval, and the tail is laterally compressed and shorter than the body. The total length is not documented for the species; the 13-16 cm in the specification box is borrowed from the closely related *Tylototriton ziegleri*. Lifespan is not documented either; 10-20 years is borrowed from *Tylototriton verrucosus*.

The species was described in 1984 and belongs to the group of almost black crocodile newts centred on *Tylototriton asperrimus* (the subgenus *Yaotriton*), which lay their eggs on land. It resembles *T. asperrimus* and *Tylototriton hainanensis* so closely that animals in the trade have been difficult to identify. *T. wenxianensis* in the old circumscription has proved to be a species complex: the populations in the Dabie Mountains in Anhui, near Libo in Guizhou and near Wufeng in Hubei have been described as *T. anhuiensis*, *T. maolanensis* and *T. wufengensis*, and in 2026 the population in the Xuefeng Mountains in Hunan was described as *T. sheni*.

The skin glands secrete a substance that can harm or kill a predator. In *T. verrucosus* the toxin consists mostly of proteins; for *T. wenxianensis* it has not been studied. For humans the secretion is not dangerous through ordinary skin contact, but it irritates the mucous membranes of the eyes and mouth. Wash your hands before and after any contact, and do not handle the animals more than necessary.

Distribution and habitat

Tylototriton wenxianensis occurs only in China. The type locality is Wen County in southern Gansu, after which the species is named. It also occurs in northern Sichuan, including the Tangjiahe nature reserve, and in north-eastern Chongqing (Yunyang and Fengjie counties). Older finds from Guizhou, Hunan, Hubei and Anhui belong wholly or partly to the newer species split off from *T. wenxianensis* (see the description), and the map shows only the core area.

> **Native range:** China.

HABITAT

Adults live on land in dense undergrowth in forest and scrub near streams and pools, hidden under stones, and also overwinter on land. The species lives at 900-1,400 m elevation, and the vegetation includes species of *Miscanthus*, *Juncus* and *Imperata*. In the breeding season the animals seek out marshy wetlands and still ponds. The eggs are laid on land or at the transition between land and water, and the larvae develop in the water. The distance to water is decisive for where the species can live.

The habitats are highly fragmented, and the population has fallen by over 30 % in ten years, mainly because of collection for traditional medicine and habitat degradation from agriculture, pesticides and fertiliser.

Care

THE ENCLOSURE

Little is known about the care of *Tylototriton wenxianensis*. The species belongs to the same subgenus as *Tylototriton ziegleri* and *Tylototriton asperrimus*, which also live hidden on land and lay their eggs on land, and its care follows theirs; the figures are borrowed from *T. ziegleri*, which is well known in captivity.

Three adults can be kept in an enclosure of 60 × 40 × 40 cm with good ventilation in the lid. A water section of a fifth to a quarter of the floor is screened off, for example with a low glass strip, or the floor is made to slope down into the water. The water is at most about 5 cm deep, and the animals must be able to climb out easily over stones or a flat bank of clay or gravel; crocodile newts are clumsy, and drowning is a real risk.

The substrate is 8-15 cm deep, for example a drainage layer of clay pebbles under a piece of landscape fabric and broadleaf forest soil above it, with both dry and damp areas. Provide hiding places in both the damp and the dry part: cork bark, clay dishes, halved bamboo tubes, moss pads and a layer of dry leaves. The enclosure can be planted, and springtails, earthworms and woodlice in the substrate keep it clean and are also food.

Read more: Terrarium construction and bioactive substrate Read more: Feeder animals: keeping and breeding

TEMPERATURE

In summer the enclosure is kept at 22-24 °C by day, in winter at around 18 °C, and at night it may fall to 15-20 °C. Brief spells of lower temperatures do no harm. *T. wenxianensis* lives further north than *T. ziegleri* and overwinters on land, so a cooler winter is probably natural, but how cold and how long has not been documented. Keep the species below about 26 °C and always provide cooler places to retreat to. The animals do not need a basking spot.

Read more: Heat and temperature

HUMIDITY AND MISTING

In summer the enclosure is misted daily so that the moss and substrate stay moist and the humidity is 70-90 %. In winter the enclosure is kept drier: mist only a little and only in a few places, e.g. on the moss cushions, and lower the water level. The dry winter and the wet summer imitate the seasons and are essential for breeding.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

The water is soft and slightly acidic, pH 6.4-6.8, and at most about 5 cm deep. Outside the breeding season the animals hardly use the water section; in winter it can be almost dried out, leaving only a little water for humidity. Remove droppings and uneaten food regularly.

Amphibians have very permeable skin, so avoid soap, cleaning agents and hand cream near the water.

LIGHTING AND UVB

UVB is not necessary. The species lives hidden and does not like strong light; the lighting is first and foremost for the plants. Provide about 12 hours of light in summer and 10-11 hours in winter. Avoid direct sun, which heats the enclosure and the water.

Read more: Lighting and UVB

FEEDING

The diet is not documented for the species. The genus takes ordinary newt food: earthworms, crickets, woodlice and waxworms. Adults are fed about twice a week, and in winter they eat irregularly and much less. The feeder animals must themselves be well fed, and crickets are dusted with a vitamin and mineral supplement. Make sure that all animals eat.

BEHAVIOUR AND HANDLING

The animals live very secretively and can be kept alone, in pairs or in small groups. Keep the species on its own, without other amphibians. Handle the animals only when necessary, with clean, wet hands or powder-free gloves.

Breeding

SEXUAL MATURITY AND SEXING

Sex and sexual maturity are not documented for the species. In *T. ziegleri* females are larger and stockier, and when the vent lips are gently spread the female has a small, point-shaped opening and the male a larger, slit-shaped one. The male of *T. wenxianensis* has small, frayed papillae inside the vent in the breeding season.

MATING

Mating is not documented for the species in captivity. In *T. ziegleri* breeding is triggered by a cool, dry winter with little food followed by a simulated rainy season: the enclosure is misted heavily several times a day, the water level is raised, and the temperature rises. The males enter the water first and wait for the females, who stay in the water for only a day or two. The pair dance in circles, and the male deposits several spermatophores, which the female picks up with her vent.

EGGS AND LARVAE

The eggs are laid on land or at the transition between land and water. The number is not documented for the species; the 30-80 eggs in the specification box is borrowed from *T. ziegleri*, where the female lays them together in a damp, sheltered spot near the water, often under moss, leaves or bark, the day after mating. The eggs are removed and placed on damp kitchen paper on a grid over a little water in a closed box, which is aired once or twice a day; dead eggs are removed. The adults may eat eggs and larvae.

The larvae are predators and eat from hatching. The first food is brine shrimp, very small daphnia and copepods, several times a day; from 25 mm pieces of tubifex are given and from about 35 mm small pieces of earthworm, white worms and bloodworms. The larvae are aggressive towards each other and eat each other, so they are reared singly or at most five together in 10 litres with many hiding places and sorted by size. Use aged, soft water and change at most 15 % at a time so that the larvae do not get gas in the belly.

METAMORPHOSIS

The incubation time is not documented for the species; in *T. ziegleri* the eggs hatch after 20-36 days at 22-24 °C by day and 20-22 °C by night. The larvae jump into the water themselves, and when the first have hatched, the water level in the box is raised so that the rest follow. The larval period is not documented either; the 80-130 days from egg-laying to metamorphosis in the specification box is borrowed from *T. ziegleri*. At metamorphosis the young must be able to leave the water at any time, via a sloping gravel bank or cork.

Read more: Incubating eggs Read more: Rearing tadpoles

REARING THE YOUNG

The newly metamorphosed young live on land in a box with sloping gravel, a small puddle, moss, leaves and bark, or on damp kitchen paper, which is changed daily. They have a large appetite and are fed daily with small crickets, small earthworms, fruit flies, bloodworms and tubifex, gradually less often. A slightly cooler temperature of 19-21 °C suits the young well. In *T. ziegleri* the young are sensitive just after metamorphosis, and good hygiene is important.

Health and common mistakes

Health problems are not documented for the species; the following applies to the genus:

- Drowning. The water section must be shallow and have an easy way up onto land.
- Underfeeding, especially of shy animals and larvae.
- Larvae kept without food for even one day do poorly, and too much fresh water at a time causes gas in the belly.
- Uneaten food and dead woodlice in the water, which pollute it.
- Bsal (*Batrachochytrium salamandrivorans*) is a skin fungus that kills many European salamanders. Many East Asian salamanders tolerate the infection and can carry it, but *T. wenxianensis* does not: the species is susceptible and can die of the disease. New animals are therefore quarantined for several weeks, kept apart from other salamanders and amphibians, especially East Asian species, with their own equipment and good hand hygiene.

Sick animals must be taken to a vet with amphibian expertise.

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.