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SALAMANDERS AND NEWTS

Northern Banded Newt

Ommatotriton ophryticus

Ommatotriton ophryticus is a large, sturdy newt of 12-17 cm from the mountain forests around the south-eastern Black Sea. In the water the male develops a tall, serrated dorsal crest and a tail spotted in blue and green. The species is cool-loving and needs cool, humid conditions and peace; it is among the more difficult newts to keep in an enclosure.

Family: Salamandridae Former name: *Triton ophryticus; Triturus vittatus ophryticus; Triturus ophryticus*

Mild skin toxins

KEY FACTS

THE ANIMAL

Adult size	**12-17 cm** total length incl. tail
Lifespan	**8-15 years**
Active	**At dusk and at night**
Lifestyle	**Semi-aquatic**
Habitat	**Montane forest and temperate woodland and meadow**
Skin toxins	**Mild** Wash your hands after contact and keep your fingers away from your eyes and mouth
Difficulty	**Experienced**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 2 adults
Temperature, day	**10-18 °C**
Temperature, night	**5-12 °C**
Humidity	**80-100%**
Water	**Aquaterrarium** depth 10-20 cm
Water temperature	**8-18 °C**
UVB	**Not required**
Winter rest	**4-10 °C** 8-12 weeks
Diet	**Insects, small invertebrates (springtails, fruit flies) and worms/snails**
Kept	**In pairs or in groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Larvae in water**
Egg-laying site	**In water**
Sexually mature	**36-48 months**
Eggs per season	**100-200**
Larval period	**60-120 days** from hatching to metamorphosis
Larval diet	**Small aquatic invertebrates (daphnia, mosquito larvae)**
Parental care	**None**

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Near Threatened (NT)**

About the species

Ommatotriton ophryticus is a large, sturdy newt with long legs and toes, especially in the male, and a tail about as long as the body and head together. Adults typically reach 12-17 cm. The skin is almost smooth to slightly granular. In the terrestrial phase the back is reddish. In the aquatic phase the back and sides are bronze-olive to olive-brown, with small dark dots on the

back and a pale band along the flanks bordered by dark stripes. The belly is unspotted yellow to orange. In spring the male develops a very tall, serrated crest along the back and tail, and the colours turn yellowish or brownish with dark vertical stripes. The tail has dark spots on top and blue and green spots on the sides.

O. ophryticus was formerly regarded as a subspecies of *Ommatotriton vittatus* but was raised to a full species in 2005. At the same time a form was described that is now regarded as the species *Ommatotriton nesterovi*. The two species look alike and meet in a very narrow hybrid zone in northern Turkey.

As in other newts, the skin has poison glands; the toxin has not been studied in *O. ophryticus*. The secretion can irritate mucous membranes. Wash your hands after handling, and do not touch your eyes or mouth. When disturbed, the animal flees with a powerful leap, and it does best when left in peace.

Distribution and habitat

Ommatotriton ophryticus lives in north-eastern Turkey and the Caucasus: along the southern shore of the Black Sea from around Ünye eastwards, in Georgia, Armenia and southern Russia. To the west it is replaced by the closely related *O. nesterovi*. The species has been introduced to Spain, where it has interbred with *O. nesterovi* to form a population of hybrids.

The distribution is patchy, and the species is only locally common. It is vulnerable to forest clearance, dams, drainage of wetlands, overgrazing, urban development, pollution and introduced raccoons, and it is listed as near threatened. Collection for the pet trade is also a threat.

> **Native range:** Turkey, Georgia, Russia and Armenia.

HABITAT

Ommatotriton ophryticus is found mostly above 1,200 m and lives in coniferous, mixed and deciduous forest up to subalpine meadows. On land the animals stay hidden in damp leaf litter, under logs and stones and in holes. The terrestrial habitat can be relatively dry.

For breeding the species uses many kinds of water body, from temporary ponds to lakes. The animals usually hibernate on land, but males in breeding colours have been found in the water as early as January.

The animals are active at night and at dusk, especially on cool, damp nights.

Care

THE ENCLOSURE

Little is known about the care of *Ommatotriton ophryticus*. The recommendations are based on the limited experience with the species and on the closely related *Ommatotriton vittatus* and the other European newts. The species can be kept in a terrestrial enclosure, an aquaterrarium or alternately in both, as long as it is cool and quiet.

An enclosure of 60 × 30 × 30 cm suits two adults, and larger is better. The land section is made of a deep, damp base of unfertilised soil with a thick layer of moss, leaf litter, bark and cork as hides. The base must drain so it does not become boggy: the species comes from well-drained slopes, and a stagnant, wet base is a problem. The water section is 10-20 cm deep with a floating platform or stones so the animals can move between water and land themselves. The species does well in a well-secured, shaded outdoor enclosure with drainage, tight mesh and frost-free hides.

The animals climb and squeeze through small openings, so the enclosure needs a tight-fitting lid with fine mesh. Animals that are disturbed often become stressed and lose condition, so the hides are lifted rarely.

TEMPERATURE

Ommatotriton ophryticus is cool-loving. The daytime temperature should be 10-18 °C and the night-time temperature 5-12 °C. Adults eat best at 10-15 °C and hardly eat in warm weather, so the temperature must not exceed 20 °C for any length of time. A male in full crest may have difficulty sinking to the bottom; move him to land in that case. Keep the enclosure cool: a cellar, an unheated garage or a shaded spot outdoors, without sun and without heat sources.

Hibernation takes place at 4-10 °C and lasts 8-12 weeks. The animals rest on land in damp leaf litter and moss. The animals must not freeze, so an outdoor enclosure needs hides at a frost-free depth, for example in a thick layer of leaf litter and soil. After hibernation the animals are brought into breeding condition with rising temperature, more light and more food.

Read more: Brumation and the seasons

HUMIDITY AND MISTING

The land section must be kept damp, with a humidity of 80-100 %, but never waterlogged. Mist the moss with dechlorinated water when it starts to dry, and let the soil and moss hold the moisture. A thick layer of moss at one end and a drier floor with leaf litter at the other give the animals a choice. Good ventilation prevents stagnant air and mould. If it becomes too dry, the skin turns dull and the animals hide.

Read more: Humidity, misting and ventilation

WATER AND WATER QUALITY

The water section must be 10-20 cm deep and 8-18 °C. Use dechlorinated tap water or rainwater. The species is sensitive to pollution and needs clean water: change a third of the water weekly, and remove food remains daily. A small filter with a gentle flow helps. The bottom can be bare or of coarse sand or large stones, never fine gravel. Floating plants and a floating platform let the animals leave the water. Cleaning agents, soap and hand cream must never come near the water.

LIGHTING AND UVB

UVB is not necessary for the species, which is active at night and at dusk and avoids sun. Ordinary daylight or LED light for 10-12 hours a day is enough. The lamp must not heat the enclosure. Plants and hides must provide plenty of shade. Calcium and D3 in the food are important because the animals receive no UVB; indoors the species is prone to rickets.

Read more: Lighting and UVB Read more: Calcium, vitamins and supplements

FEEDING

Ommatotriton ophryticus eats any small animal it can overpower. On land, springtails, woodlice, white worms, fruit flies, small slugs and spiders are suitable, and for adults also crickets and earthworms. In the water the animals take daphnia, mosquito larvae and worms. Still food is almost never taken on land, so the food must be live. Crickets dusted with calcium and vitamins for amphibians make a good staple, but the diet must be varied.

Adults are fed once or twice a week in cool weather. The prey must be small enough for the animal to swallow easily.

Read more: Feeder animals: keeping and breeding

BEHAVIOUR AND HANDLING

The species is shy, and many animals become stressed when disturbed. It can be kept in pairs or in a small group with more females than males. In the breeding season the males pursue the females, so plenty of plants and hides give calm. Do not keep it with fish or other species that eat eggs and larvae, and do not keep animals of different sizes together.

The skin is delicate, so the animals should be handled only when necessary: wet your hands with dechlorinated water, or use a small net or a cup. Keep the lid closed: the animals jump and escape easily.

Breeding

SEXUAL MATURITY AND SEXING

In the breeding season the male is recognised by the tall, serrated crest and the blue and green spots on the tail. The female is more subdued and has no crest. The animals become sexually mature after at least three years. Outside the breeding season the sexes are harder to tell apart; the male has longer legs and toes and a larger cloaca.

MATING

The breeding season is triggered by rising temperature, more light and more food after hibernation. The animals are kept on land until they are to breed, and within a few days of being given access to water courtship begins. The male stands in front of the female, displays his crest and waves his tail, and she picks up his spermatophore from the bottom with her cloaca. Fertilisation is internal. The species breeds both after a winter outdoors and indoors with little seasonal difference.

EGGS AND LARVAE

The female lays the eggs singly in leaves of aquatic plants, which she folds around the egg with her hind legs. A single female can lay 100-200 eggs in a season, and she lays fertile eggs for several weeks, even after the males have lost their crests. Use soft plants such as Elodea or milfoil. Adults eat eggs and small larvae, so move the leaves with eggs to a tub of their own. At cool spring temperatures the eggs hatch after about five weeks, faster in warmer water.

At hatching the larvae are almost microscopic, with external gills and balancers. For the first few days they live off the yolk. After that they are predators and take only live food: first infusoria and newly hatched daphnia, later larger daphnia, white worms and mosquito larvae. Feed the larvae daily, keep them in clean, cool water below 20 °C with plenty of plants, and sort them by size so the large ones do not eat the small. The larvae grow slowly, and late larvae can overwinter in the water and metamorphose the following year.

METAMORPHOSIS

The larvae metamorphose after about 2-4 months, depending on temperature and food, at a length of 2-3 cm. The hind legs appear after the forelegs, and when all four legs have developed, the gills are resorbed and the colours change. Then lower the water level to a few centimetres, put out stones and floating plants so the metamorphosed animals can climb out of the water, and fit a tight-fitting lid. The newly metamorphosed young drown easily, so they must be moved to a terrestrial enclosure promptly.

REARING THE YOUNG

The newly metamorphosed young live on land in a damp, cool enclosure with moss, leaf litter and bark. The young are vulnerable and tolerate drought and heat poorly. Feed them often with the smallest live prey: springtails, wingless fruit flies, white worms and small woodlice, later larger woodlice and small slugs. Keep them apart from the adults, sorted by size, and give calcium and vitamins. The animals grow quickly in the first year and reach about 11 cm after one year and about 13 cm after two; they are sexually mature after at least three years.

Health and common mistakes

The main problems in care are:

- Heat: temperatures above 20 °C for any length of time stress the animals, cause poor appetite and can lead to illness and death. Keep the enclosure cool.
- Drying out: the skin is delicate and dries out quickly if the land section is not kept damp. At the same time the base must not be boggy.
- Calcium and D3 deficiency (rickets): seen with a one-sided diet without calcium and vitamins and without UVB. Dust the food with calcium and vitamins for amphibians.
- Skin infections: the species is sensitive to pollution and poor water quality. Use clean, dechlorinated water.
- Stress: animals that are constantly disturbed lose condition and eat poorly.
- Constipation: fine gravel and sand can be swallowed. Use a bare bottom, coarse sand or large stones.

The fungus *Batrachochytrium salamandrivorans* (Bsal) is deadly to many salamanders, and *O. ophryticus* has been found infected in captivity. Quarantine new animals before putting them with others, give each enclosure its own equipment, and clean hands and tools between enclosures. Animals, water and equipment must never come into contact with wild amphibians. Captive-bred animals carry diseases and parasites less often than wild-caught ones. See a vet with amphibian expertise if an animal becomes ill.

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

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.