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SNAKES

Amur Ratsnake

Elaphe schrenckii

Elaphe schrenckii is a powerful, diurnal ratsnake from north-eastern Asia. Adults are black or dark brown with pale crossbands and yellow markings around the mouth, grow to 120-160 cm and readily climb. The species thrives at room temperature, is inquisitive and calm, and is easy to keep.

Family: Colubridae Former name: *Orthriophis schrenckii*

KEY FACTS

THE ANIMAL

Adult size	**120-160 cm** total length incl. tail
Lifespan	**15-20 years**
Active	**By day**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Wetland and temperate woodland and meadow**
Difficulty	**Beginner**

CARE

Min. enclosure	**120 × 60 × 90 cm** L × W × H for 1 adult
Temperature, day	**22-26 °C**
Basking spot	**27-28 °C**
Temperature, night	**20-22 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Optional**
Winter rest	**8-12 °C** 8-13 weeks
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**36-60 months**
Clutch size	**6-19 eggs**
Incubation	**40-60 days** at 26-28 °C

PROTECTION AND PAPERWORK

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

About the species

Elaphe schrenckii is one of the most heavily built snakes in the genus *Elaphe*. It typically reaches 120-160 cm including the tail, and a few animals approach 2 m. Juveniles are brown or greyish with pale crossbands and look rather nondescript. With age the ground colour turns black or dark brown, and the bands become yellow to cream, often with pale yellow markings on the upper and lower lips. Colour varies: there are completely black animals and animals with bright yellow or dirty grey bands, and in captivity animals with clean, yellow bands have been bred.

The species was formerly called *Orthriophis schrenckii* and is named after the zoologist Leopold von Schrenck. *Elaphe anomala* from Korea and China was formerly regarded as a subspecies but is now a species in its own right. It is greyish to yellowish brown and far shyer and more nocturnal.

E. schrenckii is diurnal, inquisitive and calm. It would rather flee than bite, and most animals get used to handling and will readily climb onto a hand. It can hybridise with *Elaphe climacophora* and *Zamenis longissimus*, so breeding animals are kept apart from close relatives.

Distribution and habitat

The species is found in north-eastern Asia: in Russia in the Amur region and Primorsky, in northern and central China, in Korea and in eastern Mongolia. To the east it reaches Khabarovsk, to the west the Chingan Mountains, and to the south the range extends into north-eastern China (Manchuria). Only a small part of the range lies in Russia.

An introduced population, descended from released animals, lives near Groningen in the Netherlands. It is not part of the species' native range and is not shown on the map.

> **Native range:** Russia, China, South Korea, North Korea and Mongolia.

HABITAT

The species lives in humid to moderately humid habitats: forest clearings and forest edges, scrub, fields, river banks, marshes and rocky slopes. It hides in tree hollows, under stumps and in piles of stones and timber, climbs high into trees and escapes up a tree when threatened. It swims well and is found up to about 2,000 m above sea level.

The climate is cool with long, cold winters. The snakes are active from about May to September and spend the rest of the year in brumation. The short season suits a species that grows quickly, has a high metabolism and spends much of the day foraging and basking.

Read more: Brumation and the seasons

Care

THE ENCLOSURE

A single adult snake needs an enclosure of at least 120 × 60 × 90 cm (length × width × height), and a pair at least 150 × 60 × 90 cm. Height is important because the species climbs a great deal and uses all the space it is given. Juveniles are kept in small boxes because they are shy, and an enclosure that is too large stresses them. They are moved to larger ones as they grow.

Furnish with strong branches and shelves that can carry a heavy snake, and at least two hides at each end of the enclosure, for example boxes, cork tubes or hollow logs. The snake often rests on top of a hide rather than inside it. Aspen shavings or coconut fibre, which the snake can dig into a little, are suitable as substrate. The coconut fibre can be kept slightly damp at the surface. Juveniles are kept on kitchen paper so that it is easy to monitor their health.

The species is strong and investigates every gap, so the lid must lock and close tightly.

TEMPERATURE

During the day the enclosure should be 22-26 °C, with a warm zone of 27-28 °C at one end so that the snake can digest its food, and 21-22 °C at the cool end. At night ordinary room temperature, around 20-22 °C, is suitable. The species is used to a cool climate: adults do well at room temperature throughout the enclosure, but above 30 °C they become sluggish and lie in the water bowl for long periods.

Heat is provided by a heat mat under one end or a spotlight with a bulb guard, both controlled by a thermostat. The snakes like to lie under the light, especially before shedding, and will readily climb onto a hot bulb, so the guard is essential.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be moderate, around 40-60%. The humidity of the room and a large water bowl are enough, and misting the whole enclosure every few days helps if shedding is a problem.

The species swims well and likes to lie in the water. The water bowl should therefore be large enough for the whole snake to lie in, and the water is changed often. The bowl is also all that is needed for a good shed.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal and likes to bask. A full-spectrum fluorescent tube benefits the snake, which often lies under it. UVB is optional, and no specific UV index has been documented. If UVB is used, there must be shade and hides in the rest of the enclosure so that the snake can choose for itself.

The light is on for about 12 hours a day in spring and summer. In autumn the photoperiod is reduced before brumation, and after brumation it is increased gradually over a couple of months to 12-14 hours.

Read more: Lighting and UVB

FEEDING

Elaphe schrenckii is fed frozen and thawed rodents as its staple diet. In the wild it also eats birds, bird eggs and fish. Quail eggs and fish without thiaminase can be given for variety no more than once a month.

The species has a fast metabolism and a strong feeding response. Many animals prefer several small prey items to one large one, and some will not take adult rats at all.

- Juveniles: every 3-4 days, one small prey item at a time (newborn mice after the first shed, later fuzzy mice).
- Subadults: every 3-7 days.
- Adults: every 1-2 weeks, for example one half-grown rat or two adult mice, or up to three small prey items at a time.

The prey must not be much wider than the snake's body. Thaw it in the fridge and warm it to room temperature in a sealed bag. Do not give live prey: the species handles live animals clumsily and often seizes them by the side or the tail, so the prey has time to bite. Towards the end of summer many animals take only small prey, and in autumn and the winter months they often stop eating altogether because in the wild they would be brumating. Keep an eye on weight, as the species easily becomes overweight. Do not feed for 2-3 weeks before brumation.

BEHAVIOUR AND HANDLING

The species is inquisitive and calm and one of the most easily handled large ratsnakes. It is active all day, follows everything that happens outside the enclosure and would rather flee than bite. Juveniles and young animals can be shy and jumpy, but they settle with time. Adults often climb onto a hand of their own accord when the enclosure is being tended. Because the species is hardy at room temperature, it can be handled for longer at a time than tropical snakes. Always support the whole body.

The snakes are best kept singly. Females can be kept together in large enclosures, but this requires space, several hides and supervision. Never keep animals of very different sizes together.

Breeding

SEXUAL MATURITY AND SEXING

Males become sexually mature earlier than females, which are ready after three to five years and must be large and in good condition before they are bred. The male can be recognised by a longer, thicker tail base than the female's. Reliable sexing requires probing, which is carried out by an experienced keeper or a vet. Only fresh adult animals in good condition are sent into brumation.

MATING

The species does not mate successfully without brumation. The animals are fasted for 2-3 weeks before cooling, and the temperature is lowered gradually over a few weeks to 8-12 °C. Brumation lasts 8-13 weeks. The snakes are slow but still active at the low temperature. Keep them in boxes with damp moss, leaves or another moisture-retaining substrate, and check on them every few days. If the air becomes too dry, they are lightly misted with water. Males and females are kept apart during brumation.

After brumation the heat is turned on again, the light is increased gradually, and the snakes are fed. The male is introduced to the female in March and April, and mating takes place over a few weeks.

EGG-LAYING AND CLUTCHES

The female typically lays 6-12 eggs, large females up to about 19, in April or May, about 10 days after the pre-laying shed. Put in a laying box with damp sphagnum, coconut fibre or wood shavings after the shed so that she can bury the eggs. Give her plenty of food before and after laying. Egg binding can occur if conditions are not right, and it requires prompt veterinary help.

Read more: Common diseases and signs of illness

INCUBATION

The eggs are placed half-buried in damp perlite or vermiculite in a plastic box with small air holes, so that part of each egg is clear of the substrate. The eggs are not turned. At 26-28 °C and high humidity they hatch after 40-60 days.

REARING THE YOUNG

The young shed for the first time about 9 days after hatching and then take newborn mice. They are kept singly in small boxes with kitchen paper, a heating cable, two hides and a water bowl. They grow quickly and are on fuzzy mice at about one year of age. The boxes are exchanged for larger enclosures as they grow. The young do not brumate in their first year, but often take a feeding break of 4-6 weeks in the middle of winter on their own.

Health and common mistakes

Elaphe schrenckii is hardy, and most problems are caused by husbandry. The typical faults are:

- Mites, which are the most common problem. Examine the snake at shedding, and treat the whole enclosure.
- Obesity. The species has a strong feeding response, and adults easily become too fat. Weigh regularly, and hold back on feeding.
- Egg binding in females, especially if conditions are not right. This is an emergency.
- Respiratory infection, especially after brumation, as well as mouth rot and scale rot caused by a substrate that is too wet, temperatures that are too low and a lack of cleaning.
- Intestinal worms in wild-caught animals, which must always be wormed.

A healthy animal has clear eyes and smooth skin and is eager to eat. Consult a vet with experience in reptiles if the snake loses weight, does not eat outside brumation or has breathing problems.

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.