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ANGUIDS

Northern Alligator Lizard

Elgaria coerulea

Elgaria coerulea is a slender, long-tailed alligator lizard from the west coast and Rocky Mountains of North America, from southern British Columbia to the Sierra Nevada in California. It grows to 20-30 cm, is active by day and is adapted to cool, humid surroundings. It gives birth to live young and needs a cool enclosure with many hides and a cool winter rest.

Family: Anguidae Former name: *Gerrhonotus coeruleus*

KEY FACTS

THE ANIMAL

Adult size	**20-30 cm** total length incl. tail
Lifespan	**10-15 years**
Active	**By day**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Temperate woodland and meadow**
Difficulty	**Intermediate**

CARE

Min. enclosure	**80 × 40 × 50 cm** L × W × H for 1 adult
Temperature, day	**15-24 °C**
Basking spot	**28-30 °C**
Temperature, night	**8-14 °C**
Humidity	**50-80%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 1
Winter rest	**4-8 °C** 8-12 weeks
Diet	**Insects, vertebrates and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Litter size	**4-15 young**
Gestation	**60-120 days**

PROTECTION AND PAPERWORK

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

About the species

Elgaria coerulea is a medium-sized, relatively slender lizard with short legs, a large head and a long tail that can grow to twice the length of the head and body combined if it has never been lost. The body measures 7-14 cm from snout to vent, and with the tail an adult typically reaches 20-30 cm. The back, sides and legs are covered in large, keeled scales reinforced with bone, and along each side runs a fold of small, granular scales, so that the body can expand when the lizard has eaten a lot or when the female is carrying young.

The colour is grey, brown or olive, often with dark blotches that can merge into irregular bands, and the sides are darker and mottled. The underside is cream, white or pale grey, often with dark longitudinal stripes between the scale rows. The eyes are dark around the pupil, unlike the pale eyes of *Elgaria multicarinata*. The male has a broader, more triangular head than the female. Newborns are only about 10 cm long and have smooth, shiny skin and a plain beige, bronze or coppery back; they gradually develop the large scales and the strong crossbarring.

The species was described in 1828 by Arend Friedrich August Wiegmann as *Gerrhonotus coeruleus*. The species name means dark or dark blue. Three subspecies are recognised. The female gives birth to live young, and the mother transfers nutrients to the embryos during gestation.

The lizard is secretive and bites hard if grabbed. It empties its bowels and can drop its tail, which grows back, but shorter and with a different pattern.

Distribution and habitat

Elgaria coerulea lives on the west coast and in the Rocky Mountains of North America from southern British Columbia through Washington and Oregon to northern and central California, east to northern Idaho and western Montana and south along the Sierra Nevada to Kern County. There are also isolated populations in south-eastern Oregon, north-western Nevada and the Warner Mountains in California.

The species occurs from sea level up to about 3,200 m, but only the subspecies in the southern Sierra Nevada reaches the highest areas; the other subspecies live much lower. It is one of the two lizards that range furthest north in North America, and it therefore lives with long, cold winters in much of its range.

> **Native range:** Canada and United States.

HABITAT

The species lives in forest, open clearings, grassland and mountain scrub. It is most often found in the cooler and moister parts of the range and is more dependent on water than *Elgaria multicarinata*: in western Montana it lives almost only along watercourses, where it is colder and more humid than on the dry slopes. The animals stay close to cover under stones, logs, bark and boards and come out into sunny patches.

The lizard is active by day, often in the morning and evening. It prefers a lower body temperature than *Plestiodon skiltonianus*, which lives in the same area, and regulates it less precisely. At a body temperature of 28 °C and above the stress hormone rises, and high temperature costs it more energy than it does *Elgaria multicarinata*. It swims well, climbs in low scrub and moves on the ground in undulations like a snake.

In winter it brumates under stones, logs or in rodent burrows and is inactive until it warms up again. The enclosure should therefore give it a cool, moist everyday life and a distinct cool period in winter.

Care

THE ENCLOSURE

Elgaria coerulea is a hardy lizard that does well in captivity when the temperature is low enough. Little detailed knowledge exists about its care, so the recommendations are based on the climate of the range, the habitat and the size. *Elgaria multicarinata* and *Elgaria kingii* are closely related, but live in warmer and drier conditions.

An adult needs an enclosure of at least 80 × 40 × 50 cm (length × width × height). Larger is better. The enclosure should be longer than it is tall, because the species moves mostly on the ground.

The substrate is a deep layer, 8-10 cm, of unfertilised garden soil mixed with bark mulch and leaf litter, so that the lizard can dig and forage. Add a large, hollow piece of wood as a shelter, half-buried cork tubes, flat bark and stones, so that there are many smaller hides. Build a stable climbing structure of branches at low height. All hides must be stable.

The enclosure must be ventilated and have a lid that can be locked. The water bowl must sit firmly in a corner so that it cannot tip over, and be shallow enough that the animal cannot curl up in it with its head under water. The animal is kept alone.

TEMPERATURE

The daytime temperature is 15-24 °C with a basking spot of 28-30 °C measured on the surface. The species tolerates heat less well than cold, so the air in the enclosure must not exceed 28 °C for long, and the basking spot is switched on for only a few hours a day. At night the temperature drops to 8-14 °C. Use a small halogen spotlight over the basking spot controlled by a thermostat, and measure with thermometers at both ends and an infrared thermometer at the basking spot.

In winter the animal needs a cool period of 8-12 weeks at 4-8 °C with a short day. Only healthy animals in good condition should be brumated. Feeding is stopped, and the heat and day length are lowered gradually over 2 weeks, so that the gut is empty. If the animal is weakened, or its weight cannot be monitored, it is kept awake and fed throughout the winter. The duration is borrowed from *Elgaria multicarinata*; in the wild the winter is longer in many places.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity should be 50-80 %, highest near the moist end and at night. The species lives in cool, moist forests and along watercourses and does not thrive in dry air. The enclosure should have a moist zone with moss and damp soil and a drier zone.

Place a low, stable water bowl in the enclosure and change the water daily. Mist lightly once a day, and let the enclosure dry out in between, so that mould does not develop. During shedding there must be a humid hide with moss or damp soil.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal and basks briefly in sunny patches, so the enclosure needs a basking spot and weak UVB. A UVB tube of weak strength corresponding to Ferguson zone 1 over one half suits its way of life. The animal must be able to retreat from the light into shade.

The day length follows the season: about 12-14 hours in summer and 8-10 hours in the period before and after brumation. Replace the UVB tube according to the manufacturer's instructions, even if it still lights up.

Read more: Lighting and UVB Read more: Brumation and the seasons

FEEDING

Elgaria coerulea eats a wide range of small animals: crickets, beetles, spiders, moths, slugs and worms. Larger animals also take small lizards and, rarely, newborn mice. It approaches its prey quietly and pounces from a short distance, and it digs out food that hides in the substrate.

In the enclosure, feed crickets, grasshoppers, cockroaches, mealworms, slugs and earthworms. Feed when the animal has had time to warm up, so that it is active. Adults are fed 2-3 times a week, young animals more often. Offer what is eaten in a short time, and remove the leftovers. A thawed newborn mouse can be given occasionally, but small invertebrates are the staple food.

Dust the feeder insects with calcium without D3 at every second or third feeding, and give a multivitamin 1-2 times a month. Never feed wild-caught insects from places that are sprayed.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements Read more: Buying animals: captive-bred, wild-caught and transport

BEHAVIOUR AND HANDLING

The species is secretive and hides under cover, but is also out in the open in the morning and evening. It is not an animal for handling. If it is grabbed, it bites hard and empties its bowels, and the tail is easily dropped. A bite must be washed and disinfected. Use feeding tongs, and let the animal take the food itself.

The animal is kept alone. The species eats smaller lizards, so young and smaller animals are at risk in a shared enclosure, and adults are put together only for mating, under supervision. Stress shows as lack of appetite, the animal hiding all the time and loss of the tail; calm and many hides prevent it.

Breeding

SEXUAL MATURITY AND SEXING

The male has a broader, more triangular head than the female, but the difference is small in young animals. Reliable sexing requires a vet. The age at sexual maturity is not documented.

MATING

In the wild the species mates in spring. The male bites onto the female's head and holds on for many hours, until she is ready. After brumation the temperature and day length are raised gradually. The animals are put together only for mating, under supervision, and separated again afterwards.

EGG-LAYING AND CLUTCHES

The species gives birth to live young and does not lay eggs. The female becomes clearly thicker during gestation, and in the wild the young are born from June to September. A litter is up to 15 young, typically 4-5. How often the female breeds is not documented. She needs plenty of varied food during gestation and a calm enclosure with many hides, a moist zone and moderate warmth.

INCUBATION

There are no eggs to incubate. Gestation lasts two to four months. The figure is an estimate based on mating in spring and birth from June to September. Keep the female calm in a cool, ventilated enclosure with hides. Other adults may eat the young, so separate the young or the other animals if several share the enclosure.

REARING THE YOUNG

The young are about 10 cm long at birth and have a plain, shiny back. They are kept apart from adults and preferably each on its own. Give them small feeder animals such as fruit flies, small crickets and springtails every day or every other day, dusted with calcium, and an enclosure with many hides, a slightly moist substrate and a small basking spot. Growth and age at separation are not documented for captivity.

Health and common mistakes

The species is hardy, but little is known about animals in captivity, and its lifespan is not documented; 10-15 years is borrowed from *Elgaria multicarinata*. The most common problems are:

- overheating and stress from too high a temperature
- stress and lack of appetite, especially in new animals and animals that are handled
- loss of the tail through handling or fights
- metabolic bone disease from a lack of UVB and calcium
- obesity from too much food and too little movement
- ticks, especially around the ears, and intestinal worms in wild-caught animals; have a faecal sample examined
- bites and wounds if several animals are kept together
- birthing difficulties and stillborn young from too much heat or too little humidity

Contact a vet with reptile experience in the event of persistent lack of appetite, weight loss, swellings, ticks, wounds, nasal discharge or blood in the faeces.

Read more: Common diseases and signs of illness

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.