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SNAKES

Gray-banded Kingsnake

Lampropeltis alterna

Lampropeltis alterna is a slender kingsnake from the Chihuahuan Desert in the south-western USA and northern Mexico, known for its silvery grey ground colour with orange, red and black crossbands. It reaches 70-120 cm, is docile and is kept in a dry enclosure with rock-like hides. In the wild it eats mainly lizards, but in captivity it usually takes mice, and it can live for more than 25 years.

Family: Colubridae Former name: *Ophibolus alternus; Lampropeltis blairi; Lampropeltis mexicana alterna*

KEY FACTS

THE ANIMAL

Adult size	**70-120 cm** total length incl. tail
Lifespan	**15-30 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Desert and rocky terrain**
Difficulty	**Beginner**

CARE

Min. enclosure	**90 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**20-28 °C**
Basking spot	**29-32 °C**
Temperature, night	**18-22 °C**
Humidity	**30-50%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Winter rest	**13-16 °C** 8-12 weeks
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**3-13 eggs**
Incubation	**55-70 days** at 26-29 °C

PROTECTION AND PAPERWORK

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

About the species

Lampropeltis alterna is a medium-sized, slender kingsnake with smooth, glossy scales, a relatively broad head that is clearly distinct from the neck, and large, prominent eyes with a round pupil and a silvery grey iris. Colours and pattern vary more than in most snakes. The ground colour is silvery grey to pale grey, overlaid with crossbands in white, black and orange or red. In animals of the broad type the orange bands are wide, in others they are narrow, and some animals lack the orange altogether. The two main types were formerly regarded as subspecies, but are now combined in one species.

Adults measure 70-120 cm, most about 90 cm, and the longest known animal measured about 145 cm. Newly hatched young are about 25 cm. The species name *alterna* is Latin for "alternating" and refers to the pattern, in which bands and wide gaps alternate.

The species is widely kept and bred and occurs in many locality forms, for example from Langtry, the Christmas Mountains, the Hueco Mountains and River Road. The lines are often kept pure, so that only animals from the same locality are paired with one another. There are also captive-bred morphs. This guide is about the species itself, not about colour genetics. *L. alterna* can be crossed with closely related species such as *L. leonis*, and such crosses should be avoided.

The animal is calm and rarely bites, and it gets used to handling easily. It is a nocturnal and reserved snake that spends much of its time in hiding.

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

Distribution and habitat

Lampropeltis alterna lives in the Chihuahuan Desert and the adjoining mountains: in the Trans-Pecos region of western Texas, in southern New Mexico and in northern Mexico, where it is found in Coahuila, Nuevo León and Durango. Suitable habitat also exists in Chihuahua, but the species has not been reliably recorded there. Most known records are from Texas, although the greater part of the range probably lies in Mexico. The species lives from about 400 m to 2,300 m above sea level, and the type locality is the Davis Mountains in western Texas.

The snake is seldom seen, because it is nocturnal and lives hidden in difficult terrain, and most records are made on roads at night.

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

HABITAT

L. alterna lives in mountainous, dry terrain with rocks, steep slopes and desert scrub. The substrate is most often limestone or volcanic rock, and the snake stays in crevices, under stones and in rock faces. In Mexico it also lives in dense, dry scrub and high up in pine-oak forest in the Sierra Madre Occidental. The climate is hot and dry with large differences between day and night and a cool winter. Rain falls mainly in the summer monsoon season.

The animal is nocturnal and hidden, and large parts of the range are almost without roads, so it is rarely seen. Its food consists mainly of lizards, and it also takes small rodents, frogs and the eggs of ground-nesting birds, lizards and snakes. The species tolerates rattlesnake venom.

Care

THE ENCLOSURE

An adult needs an enclosure of at least 90 × 45 × 45 cm (length × width × height). The species is relatively small and can live in a smaller enclosure than the large kingsnakes, but it is active at night and uses the space if it gets it. Young can live in a small enclosure or a ventilated box, but must be moved when they can no longer stretch out.

The lid must be escape-proof and lockable. All snakes find every opening, and a young snake can get out through a surprisingly narrow gap. Front-opening enclosures with a lock or a lid with clips are the safe choice.

The substrate can be a dry mixture of sand and soil, aspen shavings, paper or paper towels. For a naturalistic set-up, use 40% pure topsoil, 40% coconut fibre and 20% play sand in a layer of 5-8 cm. Avoid cedar and pine, and dusty substrates. Remove faeces immediately, and replace the substrate completely every 2-3 months.

Furnish with at least two hides, one at the warm end and one at the cool end, so small that the snake lies snugly in them when coiled. Stones, cork and branches provide climbing opportunities and a rock-like environment. A third hide with damp sphagnum or damp kitchen roll in a plastic box with a hole in the side helps during shedding. The animal is reserved and shows itself more the more hiding places it has. The animals must be kept singly.

TEMPERATURE

The enclosure needs a clear temperature gradient, so that the animal can choose its own spot. Under the heat source the surface should be 29-32 °C, and at the cool end 20-24 °C. The air in the enclosure is 20-28 °C during the day. Heating is best done with a halogen lamp or a heat mat under one end, always controlled by a thermostat so that the base does not become too hot. The heat can be switched off at night, and the temperature may fall to 18-22 °C. Heat rocks must not be used.

The animals tolerate fairly large fluctuations. If the animal lies on the warm spot all the time, or avoids it completely, the temperatures need adjusting.

Brumation is beneficial for health and breeding and often improves the appetite of animals that eat poorly. The animals are not fed for the last 14 days before cooling, so that the gut is empty. The heat is then switched off, and the temperature falls to 13-16 °C for 8-12 weeks. There must always be fresh water, and the animal is checked every week.

Read more: Heat and temperature Read more: Brumation and the seasons

HUMIDITY AND WATER

The species comes from a dry region and needs low to moderate humidity of 30-50%. Higher values for a longer period cause skin problems and respiratory infections. The enclosure must be well ventilated, and the substrate must be dry.

A bowl of fresh water must always be available, but it should not be so large that it raises the humidity. Change the water every week, and clean the bowl.

When the eyes turn bluish before shedding, provide a humid hide: a plastic box with a hole and damp sphagnum or paper. The animal uses it of its own accord and sheds in one piece.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is nocturnal and hidden and receives only little sunlight in the wild. UVB is not necessary, but is recommended for welfare. Use a T5 HO tube with 5-6% UVB over one side of the enclosure, so that there is a UV index of 1-2 at the basking spot and good hiding places outside the light (Ferguson zone 2). Replace the tubes every 12 months.

The light is on for about 12 hours, and day length follows the season. There must be no light at night.

Read more: Lighting and UVB

FEEDING

In the wild lizards are the main food, but in captivity the animals usually eat frozen and thawed mice, which are the safest diet. Do not offer live rodents, because they can bite and injure the snake. Use soft feeding tongs, and choose prey that is at most 1.5 times as thick as the snake at its widest point.

Young sometimes take only lizards at first. If a newly hatched young will not eat, a frozen, thawed pinky mouse can be rubbed with a lizard, for example an anole or a house gecko, so that the scent entices it. It also helps to cool the animal to 10-16 °C for a month and then warm it up slowly again. Animals that have been fed lizards usually switch to mice after a few meals.

Feeding frequency: - Newly hatched: every 5-7 days with pinky mice. - Young: every 7-10 days. - Adults: every 10-14 days with a small adult mouse.

Variety in the diet makes the animal less fussy: now and then quail eggs, young quail or small lizards can be used. Do not feed during brumation. Do not handle the animal for the first two days after a meal, so that it does not regurgitate its food. Whole prey animals cover the needs, so supplements are not necessary.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

L. alterna is calm and tolerant and is well suited as a first snake. Give a new animal about two weeks in peace, and start handling when it eats regularly. Keep sessions short, support the body with both hands, and let the snake crawl freely between your hands without holding it too hard. If it is held too tightly, it may release a foul-smelling secretion or nip.

An animal with a strong feeding response may mistake a hand for food. Therefore touch the animal lightly with a tool before putting your hand into the enclosure, so that it knows it is not feeding time. The animal is nocturnal and shows itself mostly in the evening.

The species eats other snakes, and the animals must therefore be kept singly. There is no benefit to the animal in having company, and never keep two together outside mating.

Breeding

SEXUAL MATURITY AND SEXING

Males have a longer, broader tail base with room for the hemipenes, and sex is most reliably determined with a probe, which only an experienced person should use. Size and condition matter more than age, and the animals must be in good condition before they are bred. Age at sexual maturity is not documented for the species.

MATING

Mating follows brumation. After cooling in the winter months, the animals are warmed up slowly and fed again, and mating takes place in spring, once the female has shed. Always place the male with the female under supervision, and separate them again after mating. Repeat the introduction at intervals of a few days until the female has mated. Males fight and must not be kept together. Feed only when the animals are separated.

Brumation before breeding lasts 8-12 weeks at 13-16 °C.

EGG-LAYING AND CLUTCHES

The female lays the eggs in early summer. A clutch is 3-13 eggs, and most females lay one clutch a year. Give her a laying box with damp vermiculite or sphagnum, and give her plenty of food after laying so that she can regain strength. The female does not tend the eggs.

INCUBATION

Remove the eggs carefully, and do not turn them. Place them on damp vermiculite in a closed container with a couple of small air holes, and do not bury them. The vermiculite should be damp, but not so wet that water can be squeezed out. The temperature is 26-29 °C, and the eggs hatch after about 9 weeks (55-70 days). At a lower temperature it takes longer. The young stay in the egg for a day or two while they absorb the yolk sac. Do not help with hatching. The incubation temperature is the same as for other kingsnakes.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched young are about 25 cm and do not eat until after their first shed. Place each young separately in a small enclosure or ventilated box with a hide, water and a heat source, because they eat one another and must never be kept together. After the first shed, offer a pinky mouse. Some young eat only lizards at first, and here scenting the mouse with a lizard can help. As they grow, the size of the prey and the frequency are increased gradually. If they refuse to eat, check the temperatures and try again after a week. A short period of cooling can help poor feeders.

Read more: Feeder animals: keeping and breeding

Health and common mistakes

Most problems are caused by errors in the set-up. The typical ones are:

- Obesity from meals that are too large or too frequent.
- Shedding problems in air that is too dry: provide a humid hide when the eyes turn bluish.
- Burns from heat rocks and unguarded heat bulbs.
- Respiratory infection in cold, damp air: the animal breathes with its mouth open or has mucus.
- Undigested food during cooling, if the animal has not fasted before brumation.
- Mites and internal parasites, especially in wild-caught animals. Use captive-bred animals, and quarantine new animals.
- Bites from live prey. Use frozen and thawed prey.

A healthy animal has clear eyes and a well-rounded body and eats regularly. Weigh the animal every week, because sudden weight loss is often the first sign of illness. Reptiles hide illness, so see a vet with reptile experience if the animal does not eat, loses weight, breathes with its mouth open or seems lethargic.

Read more: Quarantine and hygiene 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.

The full guide with map and updates: herpy.org/en/snakes/lampropeltis-alterna