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SNAKES

Mexican Kingsnake

Lampropeltis mexicana

Lampropeltis mexicana is a slender kingsnake from the highlands of central Mexico with red, black-edged crossbands on a grey or brown ground colour and a variegated red pattern on the head. It reaches 60-90 cm, is nocturnal and reserved and needs a dry to slightly humid terrarium with many hides and a cool winter rest. The pattern resembles that of a coral snake, but the snake is completely harmless.

Family: Colubridae Former name: *Ophibolus triangulus mexicanus; Coronella mexicana; Oreophis boulengeri*

KEY FACTS

THE ANIMAL

Adult size	**60-90 cm** total length incl. tail
Lifespan	**15-25 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial**
Habitat	**Montane forest and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**20-26 °C**
Basking spot	**28-30 °C**
Temperature, night	**16-20 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Winter rest	**10-14 °C** 8-12 weeks
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**3-5 eggs**
Incubation	**60-70 days** at 25-27 °C

PROTECTION AND PAPERWORK

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

About the species

Lampropeltis mexicana is a slender, smooth and glossy kingsnake with a broad head, large eyes and a long tail. The body is slightly more flattened on the underside than in most other kingsnakes. The ground colour is grey or brown, and over it lie broad red saddle-shaped crossbands with a black edge, separated by chalk-white, brown or pink gaps. The order of the colours is the same in all animals, but the proportions between them and the shades of the colours vary. The head has an intricate red pattern, often in three parts, and a black stripe behind the eye is typical. Males are usually more heavily marked than females, and the difference is often visible even in newly hatched young. In animals from the northern part of the range the red crossbands are elongated, while they are shorter in animals further south.

Adults are 60-90 cm, and the largest reach about 115 cm. The species name *mexicana* is Latin for "Mexican" and refers to the country where the species lives. The name *L. mexicana* was formerly used in a broad sense for several related mountain kingsnakes. Today, among others, *L. alterna*, *L. greeri* and *L. leonis* are regarded as separate species, and this guide deals only

with the species in the narrow sense. Animals sold under the name are therefore not always this species, so ask about origin and parent animals.

The animal is calm and reserved and spends most of the day in hiding. The pattern resembles that of a coral snake and protects against predators, but the snake is completely harmless to humans.

Distribution and habitat

Lampropeltis mexicana lives only in Mexico, on the eastern part of the central highlands and out into the Sierra Madre Oriental. There are confirmed records in San Luis Potosí, Guanajuato, Hidalgo, Aguascalientes and the State of México. Most records come from the mountains of eastern San Luis Potosí, around Valle de los Fantasmas and Alvarez. The type locality is the region around the city of San Luis Potosí.

The species lives in a relatively narrow altitude belt from about 1,200 m to 2,400 m above sea level. It is seldom seen, because it is nocturnal and hides under stones.

> **Native range:** Mexico.

HABITAT

L. mexicana lives in open, rocky terrain, from high-altitude desert to humid oak forest. Near Alvarez in San Luis Potosí there is rain and fog in summer, and the habitat is limestone cliffs in scattered oak forest. East of the city of San Luis Potosí and in the Sierra de las Pozos in Guanajuato the landscape is rocky and treeless. The days are warm and the nights cool, and the altitude gives a cool winter. Rain falls mainly in summer.

The snake is nocturnal and hides by day under stones and fallen trees. The food is mainly diurnal lizards, but it also takes small mammals and frogs. The species is not threatened, but it is occasionally killed because it is mistaken for a venomous coral snake.

Care

THE ENCLOSURE

Little is known about the care of *Lampropeltis mexicana* specifically. Care is based on the climate of the highlands and on the closely related mountain kingsnakes, especially *Lampropeltis alterna*.

An adult needs a terrarium of at least 90 × 45 × 45 cm (length × width × height). The species is slender and active at night, and it makes use of the space if it gets it. Juveniles can live in a small terrarium or a ventilated box, but must be moved when they can no longer stretch out.

The lid must be escape-proof and lockable. Snakes find every opening, and a young snake can escape through a surprisingly narrow hole. Front-opening terrariums with a lock or a lid with clips are the safe choice.

The substrate can be a mixture of 40% topsoil without additives, 40% coconut fibre and 20% play sand in a layer of 5-8 cm, possibly with a layer of dry leaves on top. Aspen shavings and paper can also be used. Avoid cedar and pine and dusty substrates. Remove droppings at once, and replace the substrate completely every 3-4 months.

Furnish with at least two hides, one at the warm end and one at the cool end, so small that the snake lies snug in them when coiled. Flat stones, cork and branches give a rocky environment, and the snake shows itself more the more hides it has. A third hide with moist sphagnum in a plastic box with a hole in the side helps during shedding. The animals must be kept separately.

TEMPERATURE

The terrarium must have a distinct temperature gradient, so the animal can choose a spot. By day the air in the terrarium is 20-26 °C, with 20-22 °C at the cool end and 28-30 °C on the surface under the heat source. Heat with a halogen lamp, possibly supplemented with a heat mat under one end, always controlled by a thermostat, and measure the surface with an infrared thermometer. The heat is switched off at night, and the temperature falls to 16-20 °C. Hot rocks must not be used.

The species comes from highlands with cool nights and a cool winter, so it should not be kept warmer than stated. If the animal lies on the warm spot all the time, or avoids it completely, the temperatures must be adjusted.

A winter rest promotes health and breeding. The animals are not fed for the last 14 days before cooling, so the gut is empty. The temperature is then lowered gradually to 10-14 °C for 8-12 weeks, and the animals always have fresh water. Check them every week, and end the rest if an animal seems ill.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity is 40-60%, and the terrarium is well ventilated. The substrate is dry to slightly moist, and higher values for longer periods cause skin problems and respiratory infections. The air may be slightly more humid at the cool end and at night.

A dish of fresh water is always available, and the water is changed every week. The dish must not be so large that it raises the humidity too much.

When the eyes turn bluish before shedding, a humid hide is provided: a plastic box with a hole and moist sphagnum. The snake uses it of its own accord, and the skin comes off in one piece.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is nocturnal and secretive and in the wild gets only a little direct sunlight. UVB is not necessary but is recommended for welfare. Use a T5 HO tube of 5-6% UVB over one side of the terrarium, so there is a UV index of 1-2 at the basking spot and good hiding places outside the light (Ferguson zone 2). The tubes are replaced 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 diurnal lizards are the main food, but in captivity the animals usually eat thawed, frozen 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 no more than 1.5 times as thick as the snake at its widest point.

Some juveniles will only eat lizards at first. If a newly hatched juvenile will not eat, a frozen, thawed newborn mouse can be rubbed with a lizard, for example an anole or a house gecko, so the scent entices it. It also helps to cool the animal for a month and then warm it slowly again. Animals that have been given lizards usually switch to mice after a few meals.

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

Variation in the diet makes the animal less fussy: now and then quail eggs, young quail or small lizards can be used. Do not give food during the winter rest. Do not handle the animal for the first two days after a meal, so it does not regurgitate. Whole prey covers the need, so supplements are not necessary.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

L. mexicana is reserved and nervous at first, but usually gets used to handling. Give a new animal about two weeks in peace, and begin handling only once it is eating regularly. Keep sessions short, support the body with both hands, and let the snake crawl freely between the hands. If held too tightly, it may release 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 terrarium, so it knows it is not feeding time. The animal is nocturnal and shows itself mostly in the evening.

Kingsnakes eat other snakes, and the animals must therefore be kept separately. Put animals together only for mating and under supervision. Choose a captive-bred animal of known origin, and avoid crosses with related mountain kingsnakes.

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

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. Males are often more heavily marked than females. Size and condition matter more than age, and the animals must be in good condition before they are bred. The age of sexual maturity is not documented for the species.

MATING

Mating follows the winter rest. After cooling, the animals are warmed slowly and fed again, and mating takes place in spring, once the female has shed. Introduce the male to 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.

The winter rest before breeding lasts 8-12 weeks at 10-14 °C. The method is borrowed from related kingsnakes.

EGG-LAYING AND CLUTCHES

The female lays the eggs in early summer. A clutch is 3-5 eggs. How many clutches a female can lay per year is not documented. Give her a laying box with moist vermiculite or sphagnum, and give her plenty of food after laying so she can recover. The female does not tend the eggs.

INCUBATION

The incubation figures are borrowed from related kingsnakes. Take the eggs out carefully, and do not turn them. Place them on moist vermiculite in a closed container with a couple of small air holes, and do not bury them. The vermiculite must be moist but not so wet that water can be wrung out. The temperature is 25-27 °C, and the eggs hatch after 60-70 days. At lower temperatures 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.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched juveniles eat only after the first shed. Put each juvenile separately in a small terrarium or a ventilated box with a hide, water and a heat source, because kingsnakes eat one another and must never be kept together. After the first shed a newborn mouse is offered. Some juveniles eat only lizards at first, and here scenting the mouse with a lizard can help. As they grow, the size of the prey is increased gradually, and the intervals become longer. If they refuse to eat, check the temperatures and try again after a week. A short cooling can help poor feeders.

Read more: Feeder animals: keeping and breeding

Health and common mistakes

Most problems stem from faults in the setup. 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 hot rocks and unguarded heat bulbs.
- Respiratory infection in cold, humid air: the animal breathes with an open mouth or has mucus.
- Undigested food during cooling if the animal has not fasted before the winter rest.
- Mites and internal parasites, especially in wild-caught animals. Use captive-bred animals, and quarantine new animals.
- Bites from live prey. Use thawed animals.

A healthy animal has clear eyes, a plump 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 an open mouth 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.