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SNAKES

Arizona mountain kingsnake

Lampropeltis pyromelana

Lampropeltis pyromelana is a slender kingsnake from the mountains of the south-western USA, known for its red, black and white bands and its white snout. It reaches 50-100 cm, is fast and diurnal, and is kept dry and cool with a brumation. In the wild the species feeds mainly on lizards and can live 15-20 years.

Family: Colubridae English name: Arizona Mountain Kingsnake Former name: *Ophibolus pyromelanus*

KEY FACTS

THE ANIMAL

Adult size	**50-100 cm** total length incl. tail
Lifespan	**15-20 years**
Active	**By day and at dusk**
Lifestyle	**Rock-dwelling and terrestrial**
Habitat	**Montane forest and rocky terrain**
Difficulty	**Intermediate**

CARE

Min. enclosure	**90 × 45 × 45 cm** L × W × H for 1 adult
Temperature, day	**22-28 °C**
Basking spot	**28-30 °C**
Temperature, night	**15-20 °C**
Humidity	**40-50%**
Water	**Water dish**
UVB	**Optional**
Winter rest	**10-13 °C** 8-12 weeks
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**3-9 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 pyromelana is a slender, smooth and glossy kingsnake with a head distinctly broader than the neck and round pupils. The body has alternating red, black and white bands: each white band is edged with black, and broad red bands lie between. The black bands often widen in the middle of the back and merge across the red, while they narrow down the sides and often vanish before reaching the belly. The snout is white or cream, rarely with black or red dots, and this distinguishes the species from the closely related *Lampropeltis zonata* and *Lampropeltis triangulum*, where the snout is black or black with red. The species also has more white bands (46-85) than either of them.

Adults are 50-100 cm and rarely up to 110 cm. Males are usually smaller than females, and males over 90 cm are rare. Newly hatched young are 20-30 cm. The snake is fast and lively, and young animals can be nervous and release foul-smelling musk or nip until they get used to handling. Adults are usually calm, but so fast that they are hard to hold on to.

Two subspecies have been described, *L. p. pyromelana* and *L. p. infralabialis* north of the Colorado River, but today the species is usually treated without subspecies. *Lampropeltis knoblochi* from northern Mexico was formerly regarded as a subspecies and is today a species in its own right. The two species are separated by low, dry desert areas and are sometimes confused in the trade. Captive-bred animals of certain locality forms and captive-bred morphs exist. This guide deals with the species itself.

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

Distribution and habitat

Lampropeltis pyromelana lives in the south-western USA: in Arizona, Utah, Nevada and south-western New Mexico. In Arizona the range is divided into several areas, from the far north-western corner across the central mountain ranges and the Mogollon Rim to the isolated mountains in the south-east, the so-called sky islands. Records from northern Mexico probably belong to the closely related *Lampropeltis knoblochi*. The species lives from about 900 m to 2,750 m above sea level. The type locality is Fort Whipple in Arizona.

The snake is active from late spring to early autumn and hunts mostly in the late morning and just before sunset, on rare occasions also on warm, humid nights. It is nevertheless seldom seen, because it stays close to its hiding places.

> **Native range:** United States.

HABITAT

Lampropeltis pyromelana lives in mountainous terrain, from scrub vegetation (chaparral) up to the coniferous forest at the highest elevations, often near streams or springs and together with juniper woodland. It is found especially on wooded, rocky slopes and in steep canyons with leaf litter, fallen trunks and stones, but also on more open hills and grassland in the transition zones. It keeps to rock piles and rock crevices and seldom strays far from its hiding place. When not hunting, it lies between stones, in tree trunks or in dense vegetation. It lives mostly on the ground but climbs well and is occasionally seen in trees or high up on boulders.

The climate is dry, with hot days and cool nights, and the winters are cold. At the highest elevations there is snow, and from late autumn through the winter the snake brumates in crevices and caves. The diet is mainly lizards, and it also takes snakes, small rodents, bats and birds.

Care

THE ENCLOSURE

An adult needs at least 90 × 45 × 45 cm (length × width × height). The species is active, climbs on rocks and branches and uses the full height, so a taller enclosure is an advantage. Juveniles can live in a small ventilated box but must be moved when they can no longer stretch out.

The lid must be escape-proof and lockable. Juveniles are very small and find any opening: if the tip of a little finger can get through, it is not secure. If there is an insert in the enclosure, the snake must not be able to get behind it.

The substrate should be dry and not dusty, for example aspen shavings, paper or a rubber-backed mat that can be washed. Fine particles can cause impaction if juveniles swallow them. The species does not burrow and in the wild lives on hard-packed soil and rock.

Furnish with at least two small hides, one in the warm end and one in the cool end, so that the snake lies snugly in them. Rocks, cork, thick branches and half logs create a mountain environment with climbing opportunities. A small, shallow water dish is enough. A humid hide with sphagnum helps during shedding. The animals must be kept separately.

TEMPERATURE

The species comes from cooler mountain regions and does not tolerate the high temperatures used for many other kingsnakes. By day the air should be 22-28 °C with a warm spot of 28-30 °C at one end, and at night the temperature falls to 15-20 °C, giving a difference of about 10 °C between day and night. The temperature must not exceed 30 °C. The warm spot is especially important in the first few days after a meal. In a room that holds 22-25 °C by day, only a little extra heat is often needed. Heating is by a halogen lamp or a heat mat controlled by a thermostat; heat rocks must not be used. If the animal lies on the warm spot all the time, or avoids it entirely, adjust the temperatures.

Brumation is natural for the species and recommended. The animals are not fed for the last couple of weeks beforehand so that the gut is empty. They are then cooled to 10-13 °C for 8-12 weeks with fresh water available at all times. The temperature has not been established from studies of the species but matches that used for closely related kingsnakes. Females must be in good body condition, and the animal is checked every week. If it loses weight, the brumation is ended.

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

HUMIDITY AND WATER

The species comes from a dry area and manages with a humidity of 40-50 %, and brief peaks up to 60 % are of no consequence. Prolonged high humidity causes skin problems and respiratory infections. The enclosure must be well ventilated, and the substrate must be dry.

A small dish of fresh water must always be available. Change the water every week. Before shedding, when the eyes turn bluish, put out a humid hide with damp sphagnum, which the animal uses itself.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is most active in the morning and late afternoon but stays close to its hiding places. UVB is not necessary, but weak UVB lighting over part of the enclosure is beneficial and provides a natural day rhythm. The light is on for 10-12 hours, and day length can follow the season. There must be no light at night, and there must be hides out of the light so that the snake can withdraw.

Read more: Lighting and UVB

FEEDING

In the wild, lizards are the main food, and the snake also takes snakes, small rodents, bats and birds. In captivity most animals eat frozen-thawed mice, which is the safest diet. Do not offer live rodents, because they can bite and injure the snake. Use soft feeding tongs. The species cannot open its mouth as wide as a python, so prey should be at most as thick as the snake at its widest point, preferably slightly smaller. Several small prey items are better than one large one.

Feeding frequency: - Juveniles: every 5-7 days. - Subadults: every 10 days. - Adults: every 14 days to once a month.

The species easily becomes obese on mice, especially as an adult, so keep to longer intervals. Some juveniles will eat only lizards. Here a thawed pinkie mouse can be rubbed with a lizard, or a thawed lizard can be used as the first food while the animal is slowly weaned onto mice. Wild-caught feeder lizards can carry parasites and must therefore always be frozen first. Do not feed during brumation. The animal must not be handled for the first two days after a meal. Whole prey items cover its needs, so supplements are not necessary.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Lampropeltis pyromelana is fast and lively and suits a keeper with experience of other snakes best. Juveniles can be nervous and release musk or nip, but many become calm with regular, short handling. Support the body with both hands and let the snake crawl freely. The species is not suitable for children, because it is fast and more fragile than it looks.

It is active and inquisitive when given hides, rocks and branches to move on, and it shows itself more the more hides it has. The snake eats other snakes and must be kept alone.

Breeding

SEXUAL MATURITY AND SEXING

Males are smaller than females and have a broader tail base. Sex is most reliably determined with a probe, which only an experienced person should use. Age and size at sexual maturity are not documented for the species. The animals must be in good condition before they are put to breed.

MATING

Breeding follows the brumation, which is described under care. After cooling, the animals are slowly warmed up and fed again, and mating takes place in spring, as in the wild. Introduce the male to the female under supervision, and separate them again afterwards. Males fight and must not be kept together. The length of the mating period is not documented.

EGG-LAYING AND CLUTCHES

The species is oviparous. In the wild the female lays a clutch of 3-9 eggs in late spring or early summer. The number of clutches per year is not documented. The female is given a laying box with damp vermiculite or sphagnum and plenty of food after laying. The female does not guard the eggs.

INCUBATION

Incubation is not documented for the species in captivity; in the wild the young hatch in late summer. The figures here are borrowed from closely related kingsnakes: the eggs are placed on damp vermiculite in a closed container with a couple of small air holes and kept at 26-29 °C, where they hatch after 55-70 days. The eggs must not be turned.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched young are 20-30 cm and eat only after the first shed. Each young snake is put in a small ventilated box of its own with a hide, water and a gentle heat source, because they eat one another. After the first shed, offer a pinkie mouse. Some young eat only lizards at first, and here it helps to rub the mouse with a lizard.

Health and common mistakes

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

- Obesity from meals that are too large or too frequent.
- Shedding problems from air that is too dry: provide a humid hide when the eyes turn bluish.
- Respiratory infection from high humidity or too low temperatures during brumation: the animal breathes with its mouth open or has nasal discharge.
- Scale rot (damaged skin) on a damp substrate.
- Undigested food during cooling if the animal has not fasted before brumation.
- Temperatures that are too high, which make the animal hide and refuse food.
- Mites and internal parasites, especially in wild-caught animals. Use captive-bred animals, and quarantine new animals.

A healthy animal has clear eyes, a full but slim body and eats regularly. Weigh the animal regularly, because sudden weight loss is often the first sign of illness. Reptiles hide illness, so see a vet with experience in reptiles 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.