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SNAKES

Desert Sand Boa

Eryx miliaris

Eryx miliaris is a small, thick sand boa from the deserts and steppes of Central Asia that buries itself with only its eyes showing above the surface. Most grow to 40-60 cm, but the large eastern form, formerly listed as *Eryx tataricus*, can exceed 1 m. The species is calm and is often one of the easiest sand boas to get feeding.

Family: Boidae Former name: *Anguis miliaris; Boa tatarica; Eryx tataricus; Eryx speciosus; Eryx nogaiorum*

KEY FACTS

THE ANIMAL

Adult size	**40-120 cm** total length incl. tail
Lifespan	**15-25 years**
Active	**By day, at dusk and at night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Desert and semi-desert**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**22-28 °C**
Basking spot	**30-32 °C**
Temperature, night	**20-24 °C**
Humidity	**30-50%**
Water	**Water dish**
UVB	**Optional**
Winter rest	**14-18 °C** 8-12 weeks
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Litter size	**4-15 young**
Clutches per year	**1**
Gestation	**120 days**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Least Concern (LC)**

About the species

Eryx miliaris is a small, heavy-bodied snake with a rounded head that is not clearly set off from the neck, small eyes that sit on top of the head and point upwards, a vertical pupil and a very short, blunt tail. The scales are smooth or weakly keeled. The colours vary enormously: most are tan with darker blotches that may be brown, rusty brown, olive green or almost black and often fuse into stripes along the tail, sometimes with orange flecks, and a few animals are almost entirely orange.

In the north-western part of the range, females rarely exceed 60 cm and males rarely exceed 45 cm. Animals from the eastern and southern parts, formerly listed as the separate species *Eryx tataricus*, are larger: males rarely exceed 75 cm, while females can reach 120 cm. Females are heavier than males. Newborns weigh 6-7 g. Lifespan has not been documented; the 15-25 years in the specifications is an estimate based on related sand boas.

In the north-western part of the range, by the Caspian Sea, adults are sometimes almost black. They are sold as *Eryx nogaiorum* and treated by some as the subspecies *E. m. nogaiorum*, but are mostly regarded as a colour variant. Many other colour forms exist, and care is the same for all of them. *Eryx tataricus* was long regarded as a separate species, but genetic

studies show that it belongs to *E. miliaris*, and the name was formally made a synonym in 2020.

When threatened, *E. miliaris*, like *Eryx johnii*, can roll its body into a ball. Newly imported animals may at first lunge sideways in wild, inaccurate strikes, but captive-bred animals do not bite out of fear.

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

Distribution and habitat

Eryx miliaris lives in Central Asia, from southern Russia on the north-western Caspian coast through Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan and Tajikistan to Afghanistan, western Pakistan, Iraq and north-eastern Iran, and east to western China (Xinjiang to Inner Mongolia) and southern Mongolia. The populations in the eastern and southern parts were formerly listed as *Eryx tataricus*. The exact range is poorly known, because large parts of the area are rarely surveyed.

Animals in the trade come both from captive breeding and from the wild, and wild-caught animals often carry heavy parasite loads.

> **Native range:** Russia, Kazakhstan, Uzbekistan, Turkmenistan, Afghanistan, Iraq, Iran, China, Mongolia, Kyrgyzstan, Tajikistan and Pakistan.

HABITAT

Eryx miliaris lives in dry and semi-arid areas with sandy or firm soil, scattered shrubs and rocky slopes, mostly below 1,200 m but up to about 2,700 m. It spends much of its time in burrows and tunnels. The activity period runs from March to October, and the animals are most active on the surface in spring. In the hottest part of the year they are nocturnal; otherwise they are also active by day. Its prey is rodents, small birds and desert lizards, which the snake ambushes from cover.

Care

THE ENCLOSURE

An adult *Eryx miliaris* needs an enclosure of at least 60 × 30 × 30 cm (length × width × height). The species uses almost no height, so floor area is what counts. Most animals can be kept in a small glass enclosure or a plastic box with many small ventilation holes. Animals of the large form, formerly listed as *Eryx tataricus*, need a correspondingly larger enclosure. Young animals do well in small, tight plastic boxes.

The name sand boa is misleading, and pure sand is not the best substrate, because the animals can swallow it while feeding, and it is heavy and awkward to keep clean. Use instead an 8-10 cm layer of aspen shavings, optionally mixed with untreated topsoil and a little sand. The deeper the layer, the more secure the snake feels. Avoid cedar and pine. Paper and kitchen roll with a hide can be used for young animals and in quarantine.

Place a small, snug hide at each end so the snake does not have to choose between the right temperature and security. Also put a heavy, tip-proof water bowl at the cool end. The lid must fit tightly, because sand boas slip through small gaps.

Read more: Quarantine and hygiene

TEMPERATURE

The heat comes from below. Put a heat tape or heat mat under no more than a quarter of the floor at one end, controlled by a thermostat, so that the substrate at the warm end is 30-32 °C. The air in the enclosure is 22-28 °C by day, coolest at the cool end, and 20-24 °C at night. Measure the substrate temperature with an infrared thermometer, because the snake takes its warmth from the substrate and not from the air. Heat lamps are not necessary. A gravid female needs a warm spot of 32-35 °C.

The species comes from areas with cold winters, and sand boas from temperate regions breed best after a cool period. It is therefore worth offering a winter rest of 8-12 weeks at 14-18 °C, and letting the snake fast for the last two weeks before cooling. The figures for the winter rest are estimates, not documented.

Read more: Heat and temperature

HUMIDITY AND WATER

Eryx miliaris lives in a dry climate, and the enclosure should be dry. Humidity is best at 30-50 %; the figure is an estimate based on the habitat. Change the water in the bowl regularly. Before a shed, a hide with lightly moist sphagnum or coconut fibre is useful at the cool end. Remove it again afterwards. A constantly damp substrate causes skin problems.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

UVB is not documented as necessary for *E. miliaris*, and the species spends a large part of its time hidden. A weak UVB tube can be offered as an option, provided there is plenty of cover as well. The light is on for 12 hours a day, controlled by a timer.

Read more: Lighting and UVB

FEEDING

Eryx miliaris takes whole prey. The staple is small mice, not much thicker than the snake itself. Prefer thawed prey to live prey. The species is often easy to get feeding and takes food aggressively from the first day, including from tongs. Offer food in the evening, because sand boas prefer to eat at dusk and after dark, and remove uneaten prey in the morning.

Young animals are fed every 7-10 days and adults every 2-3 weeks; the figures are borrowed from related sand boas. Newborns are very small, and many take pinkies after their first shed. Some take pinkies only after a couple of weeks. If they will not take pinkies, a thawed pinkie with a little brain tissue smeared on the snout, or a pinkie rubbed against a small lizard, can get them started. Males often stop eating during the breeding season. Skip feeding when the eyes are bluish.

BEHAVIOUR AND HANDLING

Eryx miliaris is calm and does not bite out of fear, but it can be a greedy feeder and snap at anything that looks like food, including a hand. Handle it rarely, and wash your hands after feeding. Keep it singly: the larger female may eat all the food if two animals share an enclosure, and the animals meet only in the breeding season.

Newly acquired, wild-caught animals should be checked for parasites by a vet with reptile experience and kept in quarantine before they are placed near other snakes.

Breeding

SEXUAL MATURITY AND SEXING

Females are larger than males and have shorter tails. Sand boas normally reach breeding size after 3-4 years, and the snakes should be about two thirds to three quarters of adult size. In females weight matters more than length: a female is mature only when she weighs about 160 g and is about 45 cm long, while the male is mature at about 30 cm and 35 g.

MATING

Sand boas from temperate regions do not breed without a cool period, so a cool winter rest (see Temperature) is the first step. After the winter rest both animals are fed up, and the male is put in with the female a few days a week for a few weeks. The male often does not eat during the breeding season. Mating is rarely observed. The timing of mating in captivity is not documented for the species.

EGG-LAYING AND CLUTCHES

Eryx miliaris gives birth to live young, in the wild in July-August, 4-15 in a litter. Gestation in sand boas lasts about four months; the figure is borrowed from related species, and the time for pairing is worked out by subtracting four months from the expected birth. The gravid female often lies in the warmest part of the enclosure. Keep the substrate at the warm end at 32-35 °C, offer only small prey, and leave her in peace. She may refuse food in the last weeks.

INCUBATION

There is no incubation, because the young are born alive in thin membranes. Birth takes place at night. Put a small container of moist sphagnum in the enclosure as the birth approaches, since it helps the young out of the membranes. Keep the gravid female on a coarse substrate without fine sand, because sand sticks to the membranes and can get into the eyes and mouths of the young.

Read more: Incubating eggs

REARING THE YOUNG

Move the young to a clean, small box with moist kitchen paper and a hide, and keep them singly. The young weigh 6-7 g and often take food only after their first shed. Start with pinkies, and see Food if they will not eat. Feed every 7-10 days.

Health and common mistakes

Eryx miliaris is one of the easiest sand boas, and most problems stem from care mistakes or wild-caught animals. The typical problems are:

- Sand in the gut when the animal swallows substrate during feeding. Use aspen shavings, and feed on a smooth surface, such as a piece of kitchen roll or a flat dish.
- Skin and respiratory problems in a persistently damp substrate.
- Intestinal parasites, especially in wild-caught animals.
- Mites, which show as small dots on and around the snake. They must be treated, and the enclosure cleaned thoroughly.
- Obesity in animals fed too often.

Seek a vet with reptile experience if the snake loses weight, refuses food beyond its normal fasting, breathes with an open mouth or with a wheeze, or if the birth drags on.

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.