herpy

SNAKES

Indian Sand Boa

Eryx johnii

Eryx johnii is a small, stoutly built sand boa from dry South Asia. It spends most of its time buried in loose soil, often with the blunt tail, which resembles a head, as the only visible part. It is calm, rarely bites and does not need much space, so it suits well as a first snake.

Family: Boidae

KEY FACTS

THE ANIMAL

Adult size	**50-90 cm** total length incl. tail
Lifespan	**20-30 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial and burrowing**
Habitat	**Semi-desert and rocky terrain**
Difficulty	**Beginner**

CARE

Min. enclosure	**60 × 30 × 30 cm** L × W × H for 1 adult
Temperature, day	**26-28 °C**
Basking spot	**32-35 °C**
Temperature, night	**22-25 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Optional**
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Litter size	**4-14 young**
Clutches per year	**1**
Gestation	**120-180 days**

PROTECTION AND PAPERWORK

CITES	**Appendix II**
EU annex	**Annex B**
IUCN	**Near Threatened (NT)**

About the species

Eryx johnii is a small, thick and almost worm-shaped boa with a wedge-shaped head, narrow nostrils and very small eyes. The body is round in cross-section and covered in small, glossy scales. The tail is short, blunt and rounded and barely set off from the body, so it looks cut off. It can resemble a head when the animal lies buried.

The colour ranges from reddish brown to dull yellow-brown. Young have distinct dark and light bands, which are often strongest on the tail. With age the pattern fades, and adults become more uniformly dark. Adults rarely grow longer than 60 cm, but a few reach about 90 cm. The size difference between the sexes is not documented for the species, but in several relatives females are clearly larger than males.

The species is a calm, patient snake that rarely tries to bite. It lies in wait under the surface and ambushes prey that passes by, and it can live 20 years or more. There are no recognised subspecies; the Persian form that was formerly treated as a subspecies is now assigned to *Eryx jaculus*.

Distribution and habitat

Eryx johnii lives from eastern Iran through Afghanistan and Pakistan to India and Nepal. In India it occurs across much of the country, especially in the west, north-west and south, including Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Andhra Pradesh, Telangana and Tamil Nadu. The species was described from Tranquebar in Tamil Nadu and is named after the missionary and naturalist Christoph Samuel John, who worked at the Danish trading station Tranquebar from 1771 until his death in 1813.

In India the species is attributed supernatural powers because of its two-headed appearance, and it is caught in large numbers for an illegal trade. Therefore buy only captive-bred animals.

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

> **Native range:** Afghanistan, Pakistan, Iran, India and Nepal.

HABITAT

Eryx johnii lives in dry, open landscapes with scrub vegetation: semi-desert, dry thickets on the plains and dry, rocky foothills. It prefers loose sand or lightly crumbling soil, which it digs into, and lives much of its life underground. It is most active at dusk and at night.

Prey is mainly rats, mice and other small rodents, which the snake constricts, but some animals also eat other snakes. The young are born in late summer and during the monsoon.

Care

THE ENCLOSURE

An adult *Eryx johnii* 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; a large female needs a larger enclosure. Young do well in small, tight plastic boxes and are moved to a proper enclosure when they have grown.

The substrate must be good for digging: sand mixed with additive-free topsoil in a layer of 8-10 cm or aspen shavings and bark chips in small pieces. The species often prefers bark chips, because they hold a little more moisture. Never use pine or red cedar, as the fine particles can cause respiratory problems. Paper and kitchen paper work for young and quarantine, but not as a permanent substrate for a burrowing snake.

Put two hides on the floor, one at the warm and one at the cool end. An upturned terracotta saucer with a notch in the rim or a hollow cactus skeleton suits well, and the species readily uses them, even though it also digs down. Everything heavy must stand firm, because the snake digs under it. Branches are not necessary.

The lid must fit completely tight and be secured against being pushed up. Remove faeces and urates as soon as they are seen, and replace the substrate completely every month or every second month.

Read more: Quarantine and hygiene

TEMPERATURE

Eryx johnii needs a warm and a cool end. The sand at the warm spot must be 32-35 °C and at the cool end 24-28 °C. The air in the enclosure must be 26-28 °C. At night the temperature may fall a couple of degrees to 22-25 °C, but this is not necessary for the snake's health.

Heat comes from a heat mat or heat cable under a third to a half of the enclosure, or from a halogen bulb above, always controlled by a thermostat. Measure the substrate temperature with a probe laid at the bottom of the sand on the warm side, and check the surface with an infrared thermometer. The snake must always be able to choose a cooler spot. Heat is also necessary for digestion.

Read more: Heat and temperature

HUMIDITY AND WATER

Eryx johnii comes from dry lowland areas, and humidity should be about 40-50 %. During a shed it can be up to 60 %. A hygrometer shows whether the figure holds.

Put a shallow ceramic bowl of clean water at the cool end, wide enough for the snake to lie in and heavy enough not to tip over. Change the water every day or every other day, and scrub the bowl once a week. When the snake is in a shed, a closed hide with damp paper or sphagnum can stand at the warm end; it softens the skin, so it comes off in one piece. Remove it

again afterwards. A persistently damp substrate causes skin problems and fungus.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

Eryx johnii is most active at dusk and at night, and UVB has not been documented as necessary for the species. A weak UVB tube over one end is optional and can support the daily rhythm, as is recommended for related sand boas; the snake must always be able to withdraw into the substrate or a hide. If UVB is used, the UV index must be 2-3 at the basking spot.

The light follows the seasons or is on for 12 hours a day, controlled by a timer. All bulbs and tubes are switched off at night.

Read more: Lighting and UVB

FEEDING

Eryx johnii takes whole prey and is known for its good appetite. The staple food is mice; large adult females can take small rats. The young are large at birth and can start on newborn rats or small fuzzy mice. Some will take only live prey at first, but they can almost always be weaned onto thawed. Preferably give frozen and thawed prey, not live, as prey can bite and injure the snake. Thawed prey is offered with long tongs or placed on a small plate, so no sand gets in.

Young are fed every 7-10 days in the first year. Adult males have enough with a prey item every 2-3 weeks, while females must be fed more often, once to twice a week. The prey must be no wider than the snake at its widest point. Offer it in the evening, just before the light goes out, because the snake is nocturnal. Snakes in a shed rarely take food, so skip the feeding when the eyes are bluish. Weigh the snake regularly, and adjust the amount so it does not become fat. Supplements are not strictly necessary.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Eryx johnii is calm and rarely tries to bite; when frightened, it is more likely to thrash its body without striking. If it bites anyway, the hand must not be pulled away, because that can injure the snake. Let new animals settle in for two weeks, and begin handling only when they feed regularly. Keep the first sessions short, and support the whole body, because the species is a poor climber and cannot hold on. Do not handle the snake right after feeding.

Never place the snake loose on the floor, because it immediately looks for something to hide under, and then it is quickly gone. It lives best alone. Males must not be kept together. Because the species digs, it is often completely hidden in the substrate; a snake that cannot be seen has therefore rarely escaped.

Breeding

SEXUAL MATURITY AND SEXING

Age and size at sexual maturity are not documented for *Eryx johnii*. Sex is most reliably determined by probing, which should be carried out only by an experienced keeper or a vet. The female must be fully grown and in good condition before she is put into breeding.

MATING

The mating season in captivity is not documented for the species. In related sand boas a cool period promotes mating, for example two weeks at 22-24 °C or longer at 18-20 °C, after which the temperature is raised again. This is not necessary for all animals. Put the male in with the female in her enclosure, and remove him when mating has been seen. The male may eat less or fast during the mating season.

EGG-LAYING AND CLUTCHES

Eryx johnii gives birth to live young and does not lay eggs. The length of gestation is not documented for the species; in related sand boas it lasts 4-6 months. The young are born in late summer and during the monsoon in the wild, with up to 14 in a litter. The pregnant female must have peace and constant access to warmth and water, and she is offered food regularly. She often uses the warm spot for up to 12 hours at a stretch. After birth she must have peace and be offered food again after a week or two.

INCUBATION

There is no incubation period, because the young are born live and are independent from day one. The pregnant female must have the same gradient as otherwise, so she can regulate her own temperature and the embryos develop evenly. If she is too cold for long periods, it can cause weak or stillborn young. Remove dead young and foetal membranes as soon as they are noticed.

Read more: Incubating eggs

REARING THE YOUNG

The young are large at birth compared with most baby snakes and weigh 30-40 g. Keep them singly in small, completely tight plastic boxes with air holes, 2-3 cm of coarse substrate, a small hide and a shallow water bowl, and with a warm and a cool zone. Their first shed comes after one to two weeks, and they normally eat only after it. Start with newborn rats or small fuzzy mice, and feed every 7-10 days. Larger prey can be offered after two to three months.

Health and common mistakes

Eryx johnii is robust, and most problems are caused by husbandry errors. The typical errors are:

- A persistently damp substrate, which causes skin infections and blisters on the belly. Keep the substrate dry, and add moisture only during a shed.
- Too low a temperature, which causes poor digestion and regurgitation. Always measure both substrate and surface.
- Skin remnants, especially on the tail tip and around the eyes, after a shed in an enclosure that is too dry. Provide a humid hide during the next shed.
- Respiratory infections (wheezing breathing, bubbles from the nose), often from too low a temperature or a dusty substrate.
- Inclusion body disease (IBD), a viral disease in boas in which the snake may twist its head up and backwards and lose coordination. It cannot be cured.
- Birthing problems, if the female cannot give birth to all the young.
- Mites, seen as small dots on and around the snake and in the hides.

A healthy animal has clear eyes, a firm body and eats readily. See a vet with reptile experience if the snake loses weight, refuses to eat beyond the normal fasting, has an open mouth or wheezing breathing, or if a 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.