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SNAKES

Indian Rock Python

Python molurus

Python molurus is a large, placid python from the forests, grasslands and rocky foothills of South Asia, with brownish, pale-edged blotches on a light background. Adults are usually 250-350 cm, and females are far heavier than males. The species tolerates drier conditions than the closely related *Python bivittatus*, needs a very large, escape-proof enclosure with a pool and a great deal of experience, and can live for 20 years or more.

Family: Pythonidae Former name: *Python molurus molurus*

KEY FACTS

THE ANIMAL

Adult size	**250-400 cm** total length incl. tail
Lifespan	**15-25 years**
Active	**At dusk and at night**
Lifestyle	**Terrestrial and semi-aquatic**
Habitat	**Savanna, dry forest and wetland**
Difficulty	**Expert**

CARE

Min. enclosure	**300 × 150 × 120 cm** L × W × H for 1 adult
Temperature, day	**27-31 °C**
Basking spot	**32-34 °C**
Temperature, night	**26-28 °C**
Humidity	**50-60%**
Water	**Water section**
UVB	**Recommended** Ferguson zone 2
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**24-36 months**
Clutch size	**12-100 eggs**
Incubation	**65-85 days** at 28-32 °C

PROTECTION AND PAPERWORK

CITES	**Appendix I**
EU annex	**Annex A**
IUCN	**Near Threatened (NT)**

About the species

Python molurus is a heavily built snake with smooth scales, a broad, wedge-shaped head, vertical pupils and heat-sensitive pits along the lips. The ground colour is whitish, yellowish or light brown, and large, irregular blotches in brown to reddish-brown tones run along the back and flanks. Each blotch often has a paler "eye" in the centre. The marking on the head is a lozenge-shaped patch that is indistinct towards the front, and the stripes on the sides of the head are reddish or pinkish. Animals from the Western Ghats and Assam are darker, while those from the Deccan Plateau and the Eastern Ghats are usually paler.

Adults are normally around 300 cm, and across much of the range 240-300 cm is typical. A few animals reach almost 360 cm, and the longest reliably measured specimen was 460 cm and weighed 52 kg. Older reports of larger animals are often based on misidentifications, exaggeration and stretched skins. The female is longer and far heavier than the male, while the male has the larger vestigial hind limbs (the cloacal spurs) beside the vent.

P. molurus was formerly regarded as one species together with *Python bivittatus*, which was split off in 2009. The trade and older literature still use the old collective name for both, so information on care, size and weight may come from the other species. *P. bivittatus* is darker, has a more distinct arrow-shaped marking on the head and lives in wetter areas further east. It has its own care guide. Colour and pattern variants (morphs) exist in captivity. This guide deals with the species itself, not with genetics.

The species is placid, sluggish and shy and rarely tries to bite, but a fully grown animal is strong enough to be dangerous. It is a commitment of many years that demands space, time and money.

Distribution and habitat

Python molurus lives on the Indian subcontinent south of the Himalayas: in India, south-eastern Pakistan, Nepal, Bhutan and Bangladesh. In India it occurs across much of the country, from Punjab and Gujarat in the north and west to Kerala and Tamil Nadu in the south and Assam, Nagaland, Mizoram and Odisha in the east. The type locality is given as "India".

The limits to the east are unclear. The populations in Myanmar, Thailand and the rest of South-East Asia, which used to be included, belong to *Python bivittatus*. Sri Lanka is no longer included either; the population there was described in 1945 as the subspecies *Python molurus pimbura*.

> **Native range:** India, Pakistan, Nepal, Bhutan and Bangladesh.

HABITAT

P. molurus lives in many habitat types: grassland, swamps and marshes, rocky foothills, open forest, scrub and river valleys. It is almost always found near water and needs a reliable water source. For shelter it uses abandoned mammal burrows, hollow trees, dense reedbeds and mangrove thickets. The species prefers a drier environment than *P. bivittatus*.

The animal is slow-moving and spends most of its time on the ground, but climbs occasionally. It is an excellent swimmer and can stay fully submerged for many minutes, but usually keeps to the bank. In the cooler months, from October to February, the animals withdraw into hiding and enter a short winter rest until temperatures rise again.

The species is solitary, and the animals are seen together only during the breeding season. Prey is mostly mammals, but also birds, reptiles and amphibians. The snake locates prey by scent and its heat pits, strikes and constricts it, and then swallows it whole. After a large meal the animal can go for weeks without food.

Care

THE ENCLOSURE

Only a little care information exists that applies solely to *Python molurus*; size, heat and diet are therefore borrowed from *Python bivittatus*, which is kept in the same way in captivity. The figures are cautious estimates.

Size is the greatest challenge. An animal must be able to stretch out fully, and the width should be half the animal's length. For a 300 cm animal the enclosure must be at least 300 × 150 × 120 cm, and for a 350 cm animal at least 350 × 175 × 120 cm. Hatchlings are 45-60 cm and grow quickly, so for a short period they can live in a smaller enclosure but must be moved before they reach 150 cm.

The enclosure must be escape-proof with lockable doors, and the snake must not be able to push up against the lid or doors. Ventilation is in the sides, so that moisture and heat do not escape through the top. The material should be smooth and easy to clean, and one or two sides can be covered so that the animal feels secure.

The substrate must be at least 10 cm deep and tolerate moisture: for example coconut chip or a mix of soil and coconut fibre, drier than for rainforest species. For very large set-ups newspaper is practical. The animal produces large amounts of faeces and urine, so the substrate must be changed often. Furnish with sturdy branches and shelves low in the enclosure, at least two large hides and fixed plants or artificial foliage. Everything must be secured so that it cannot fall onto the animal.

TEMPERATURE

The enclosure must have a distinct gradient. The basking spot should be 32-34 °C, measured with an infrared thermometer, the rest of the enclosure 27-31 °C by day and 26-28 °C at night. The temperature must not fall below 26 °C at night, so most set-ups need a heat source that gives no light, such as a radiant heat panel.

A cluster of halogen bulbs over the basking spot warms the whole animal from above. All heat lamps must have guards so that the animal cannot burn itself. Heat mats and heating cables require a proportional thermostat with the probe directly under the heat source. Never use heat rocks. Digital thermometers go at the basking spot and at the cool end. Too little heat causes refusal to feed and respiratory infection.

In the wild the animals go through a short winter rest in the coldest months. There are no documented recommendations for cooler periods in captivity, and animals that are not to be bred can be kept at an even temperature all year.

Read more: Heat and temperature

HUMIDITY AND WATER

Humidity should be 50-60 %, measured with a digital hygrometer in the middle of the enclosure. This is slightly lower than for *Python bivittatus*, because *P. molurus* lives in drier areas, but never far from water. The enclosure must be able to dry out between mistings, because damp, clammy air causes respiratory infection.

The animal needs a large, deep pool on the floor, which is also its drinking water. It should at least be big enough for the animal to lie coiled in it with a little room to spare, and ideally big enough for it to swim. The water is changed every week and immediately if soiled, and the pool is scrubbed with a reptile-safe disinfectant. Misting a couple of times a day and a substrate that holds a little moisture are usually enough. During shedding, a more humid zone with a moist hide helps.

Read more: Humidity, misting and ventilation Read more: Quarantine and hygiene

LIGHTING AND UVB

The species is most active at dusk and at night, but needs a fixed day-night rhythm with about 12 hours of light and 12 hours of darkness. UVB is not strictly necessary but is recommended, because the animal comes out into daylight in the wild and because light supports vitamin D, the immune system and appetite. *P. molurus* belongs to Ferguson zone 2. Use a T5 HO tube with 5-6 % UVB over the warm side, covering about half the length of the enclosure. The aim is a UV index of 2-3 at the basking spot, checked with a UV meter. Tubes are replaced every 12 months.

Halogen lamps and a UVB tube alone do not give enough light in a large enclosure. Supplement with T5 fluorescent tubes or powerful LED bars over most of the length. The light must not be on at night.

Read more: Lighting and UVB

FEEDING

P. molurus is a carnivore and needs whole prey animals, mammals and birds. Rats are standard, and as the snake grows, rabbits, guinea pigs, quail and chicks are used. Feed thawed, frozen animals, thawed in a bag in warm water at about 38 °C. This is safer than live prey, which can injure the snake. Use long feeding tongs.

The thickness of the prey should be 1-1.5 times the snake's body width. Larger prey requires a longer pause. Feeding frequency: - Juveniles under 1 year: every 1-2 weeks. - Young animals of 1-2 years: every 2-3 weeks. - Young adults of 3-4 years: every 3-4 weeks. - Adults over 4 years: every 4-6 weeks.

An adult can go several months without food without harm, and feeding too often causes obesity, organ damage and a shorter life. Only feed when another person is present. The animal can learn to distinguish: a knock on the lid means food, and a snake hook means cleaning. After a meal the animal should be left in peace for at least two days. Drinking water is always available in the pool.

BEHAVIOUR AND HANDLING

P. molurus is sluggish and calm and rarely aggressive, but an animal over 250 cm is stronger than a human and can be life-threatening. An adult must only be handled when at least two people are present, and children must never handle it alone.

A new animal needs at least 3 months of quarantine, and handling begins only when the animal is feeding regularly. Lift with one hand behind the head and one under the body, and never grab the tail. The snake coils around the arms as if they were branches. Do not let it wind around the neck. The animal must not be handled when the eyes are bluish before shedding, or in the first 2 days after a meal.

The animals are kept separately. The female may brood and defend her eggs, and a female with eggs is more defensive.

Breeding

SEXUAL MATURITY AND SEXING

The female is longer and far heavier than the male, while the male has the larger cloacal spurs. Sex is most reliably determined with a probe, which only an experienced person or a vet should use. The animals reach sexual maturity after 2-3 years, provided the animal is at the right weight, and weight matters more than age.

MATING

During mating the male wraps himself around the female and strokes her head and body with his tongue and massages her with the cloacal spurs. Mating lasts from 5 to 30 minutes. The male is placed with the female in her enclosure. Details of cooler periods in captivity are not documented for the species. Breeding should only be considered with great care, because a large animal is hard to rehome.

EGG-LAYING AND CLUTCHES

The female lays her eggs around 3-4 months after mating. The clutch is 12-100 eggs, most often around 40, and the eggs are large: 10 cm long and up to 200 g. The female coils around the eggs and stays with them without eating until they hatch. With small, rapid muscle shivers she raises the temperature around the eggs by several degrees. She needs a large, quiet hide and water.

INCUBATION

For artificial incubation the eggs should be kept at 28-32 °C and 70-90 % humidity, for example on moist vermiculite in a closed container with a couple of air holes. They hatch after 65-85 days. Low and fluctuating temperatures produce fewer hatchlings and hatchlings with abnormal markings. The young often stay in the egg until their first shed is over. Do not help with hatching.

Read more: Incubating eggs

REARING THE YOUNG

The young are 45-60 cm at hatching and are independent from day one. They are kept individually in a secure box with hides, water and a heat source. They grow quickly and must be moved to larger units at regular intervals.

Health and common mistakes

Most problems are caused by incorrect heat, humidity and feeding, and by enclosures that are too small. The typical ones are:

- Obesity and organ damage from feeding too often or too much.
- Refusal to feed from too low a temperature or disturbance.
- Respiratory infections from cold or damp air, with wheezing, mucus or an open mouth. Needs a vet.
- Poor shedding from air that is too dry.
- Burns from unguarded heat bulbs.
- Mites and internal parasites, especially in newly acquired animals. Use captive-bred animals, and keep new animals in quarantine for at least 3 months.
- Regurgitation if the animal is handled too close to a meal.

Snakes hide illness, so weekly weighing and notes on feeding, shedding and behaviour are the best early warning. Contact a vet with reptile experience if the snake loses weight, has breathing problems or does not eat for several months.

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

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.