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SNAKES

Macklot's Python

Liasis mackloti

Liasis mackloti is a robust, active python from Timor and the nearby Lesser Sunda Islands. It reaches 180-250 cm, is dark olive-brown with an iridescent sheen and reacts lightning-fast to prey. Young animals are often defensive, and adults are strong and need a large, solid enclosure, so the species is best suited to experienced snake keepers.

Family: Pythonidae Former name: *Python timorensis; Morelia mackloti*

KEY FACTS

THE ANIMAL

Adult size	**180-250 cm** total length incl. tail
Lifespan	**15-25 years**
Active	**At dusk and at night**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Savanna and wetland**
Difficulty	**Experienced**

CARE

Min. enclosure	**180 × 90 × 90 cm** L × W × H for 1 adult
Temperature, day	**26-30 °C**
Basking spot	**32-35 °C**
Temperature, night	**22-25 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Optional** Ferguson zone 2
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Clutch size	**8-20 eggs**
Incubation	**60-75 days** at 30-32 °C

PROTECTION AND PAPERWORK

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

About the species

Liasis mackloti is a muscular python with an elongated head that is clearly distinct from the neck, and heat-sensitive pits along the lips. The ground colour is dark brown to olive-brown, and the smooth scales take on a blue, green or violet sheen in strong light. The belly is pale with small, scattered spots. Females grow the largest and can weigh up to twice as much as males.

Adults usually measure 180-250 cm including the tail. A few animals grow larger. The species is closely related to *Liasis fuscus* and *Liasis olivaceus*, and their care is broadly similar.

Three forms have been described: the nominate form from Timor, *dunni* from the island of Wetar and *savuensis* from the island of Savu. *savuensis* was originally described as a separate species but is now regarded as a subspecies. It is smaller than the other forms, and the young are bright orange, while the adults become dark brown to black with an almost white iris. Care is the same. The species was described in 1844 by Duméril and Bibron and is named after Heinrich Christian Macklot, a Dutch naturalist and taxidermist.

L. mackloti is active, alert and inquisitive. It is strong and strikes quickly and accurately when it senses prey. Newly hatched and young animals are often defensive, but most captive-bred animals become calm with firm, quiet handling. Wild-caught animals are shyer and harder to tame. The species breeds readily in captivity.

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

Distribution and habitat

Liasis mackloti lives on Timor and the surrounding islands in the eastern part of the Lesser Sundas: Wetar, Savu, Roti, Semau and Alor in Indonesia, as well as East Timor (Timor-Leste). The type locality is Timor, *dunni* was described from the north coast of Wetar and *savuensis* from Savu, which is one of the smallest ranges of any python. The species is also reported from New Guinea. Records from the coasts of northern Australia are probably confusions with other species of *Liasis*.

Both captive-bred and wild-caught animals are found in the trade.

> **Native range:** Indonesia, Timor-Leste and Papua New Guinea.

HABITAT

L. mackloti is found in grassland, savanna, forest edges and scrub, and it often stays close to rivers, marshes and other wetlands. It is an able swimmer but also a good climber, able to rest on branches and in low vegetation. By day it hides in burrows, crevices, under fallen trees and in dense vegetation, and at night and at dusk it hunts.

The climate in its range is tropical, with a distinct, heavy rainy season and a long dry season. Its prey is small mammals, birds and reptiles. Few field studies of the species exist.

Care

THE ENCLOSURE

Liasis mackloti reaches 180-250 cm, is active and climbs, and an adult needs an enclosure of at least 180 × 90 × 90 cm (length × width × height). The smaller *L. m. savuensis* manages in slightly smaller enclosures, but bigger is always better for such an active snake. Young snakes are kept singly in small, escape-proof boxes of about 35 × 25 × 15 cm and moved up as they grow, for example to 90 × 45 × 45 cm as subadults.

Furnish with at least two hides, one at the warm end and one at the cool end, and several elevated resting places. Add stout branches, flat stones, cork bark and hollow logs. A thick layer of dry leaves makes a good hide that the snake likes to use. Everything must be fixed in place so that it cannot shift, because the snake is strong and can move loose items. The enclosure needs doors with reliable locks, tight joints and protected cable entries, because the snake pushes against the doors with great force.

Use orchid bark, coconut fibre or another substrate that holds a little moisture without being constantly wet. Avoid cedar and pine as well as scented and very dusty substrates. Remove droppings straight away. The snake is kept alone outside the breeding season.

TEMPERATURE

The enclosure needs a clear gradient. By day the enclosure should be 26-30 °C, and the basking spot should have a surface temperature of 32-35 °C. At night the temperature should fall to 22-25 °C.

Use a heat lamp or a deep heat projector for the basking spot. Everything is controlled by a thermostat, and the snake must never be able to touch or coil around a heat source, because this causes serious burns. The whole enclosure must not be kept at the basking temperature: the snake must always be able to choose a cooler zone. Measure the surface temperature with an infrared thermometer and the air temperature with digital probes at both ends.

For breeding, the night temperature is lowered in winter; see under mating.

Read more: Heat and temperature

HUMIDITY AND WATER

L. mackloti thrives at 40-60 % humidity. Humidity rises after misting and at night, when the temperature falls. The enclosure must not be constantly wet, and ventilation must be good. Mist the enclosure lightly with lukewarm water a few times a week, and let the substrate dry out between sessions.

A large, heavy, stable water bowl must be available at all times. It must be large enough for the snake to lie coiled in it, because the species likes to bathe. The water is checked daily and changed as soon as it is soiled, and the bowl must be easy to remove and clean. A humid hide with lightly dampened sphagnum provides extra humidity when the snake is about to shed. Gravid females and newly hatched young need over 70 %.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is active at dusk and at night, but it needs a fixed day-night rhythm. The light is on for 10-12 hours a day and switched off completely at night, controlled by a timer. Do not use red, blue or violet night lamps.

UVB is optional; the species also breeds without it. A weak UVB light can be included in its care. The species belongs to Ferguson zone 2. Aim for a UV index of 1-2 at the surface of the basking spot, and make sure the hides in shade give almost no UV, so that the snake can choose how much light it gets. UVB must not make the enclosure too hot.

Read more: Lighting and UVB

FEEDING

Liasis mackloti is a constrictor that eats whole prey. In the wild this is small mammals, birds and reptiles, and in captivity captive-bred animals readily take mice and rats of a size that suits the snake. Adults can also be given chicks or large rats. Prey must be frozen and fully thawed and warmed to body temperature. Use long feeding tweezers, and never warm prey in a microwave.

Young snakes are fed every 7-10 days and adults every 2-3 weeks. Prey should be about as wide as the snake at its widest point and should cause only a moderate bulge in the body. The species has a good appetite and can become fat if it is fed according to appetite rather than body shape. An adult snake should look muscular and athletic. Weigh and assess body shape regularly.

The snake strikes quickly and accurately. Never open the enclosure without knowing where the snake is and how it is behaving, and wash your hands so that they do not smell of prey. Do not feed the snake if it has been too cold.

BEHAVIOUR AND HANDLING

L. mackloti is inquisitive, active and strong. Young animals and newly acquired animals can be defensive: they hiss, form an S with the body and strike repeatedly, and some bite. Captive-bred animals usually become calm with a firm, quiet routine, while wild-caught animals remain shyer.

Leave a new snake in peace for about two weeks, and begin handling it only once it is feeding regularly. Start with short sessions. Move calmly, support as much of the body as possible, and never grab it by the head. Do not handle the snake for the first few days after a meal, or when it is shedding and has milky-blue eyes. Large adults are strong and are best handled by two people.

Snakes hide illness. A check-up by a vet with reptile experience every 6-12 months is a good habit.

Breeding

SEXUAL MATURITY AND SEXING

Age and size at sexual maturity are not documented. Females grow clearly larger and heavier than males, and males have larger spurs beside the vent, which they use during mating. Sex is determined with a probe and must be done by an experienced person or a vet, because incorrect use can cause serious injury.

MATING

Breeding is triggered by a drop in the night temperature in winter. Lower the night temperature to 18-20 °C for a month and then to 14-16 °C, while the daytime and basking temperatures are kept unchanged. The female often sheds just after the drop, and mating follows shortly afterwards. Several males with one female increase the chance of mating. Males of the nominate form and *L. m. dunni* can fight, so the animals must be supervised and there must be enough space.

Males usually stop eating during the breeding season. The species can lay fertile eggs at any time of year.

EGG-LAYING AND CLUTCHES

The gravid female spends a lot of time on the basking spot and raises her body temperature to 29-36 °C. She sheds about 40 days before laying. Give her an enclosure of her own with a nest box of dry sphagnum and 70-90 % humidity around the box.

The clutch is 8-20 eggs, which measure about 64 × 38 mm. The female coils around the eggs and broods them, and infertile eggs are pushed aside. How many clutches a female can lay per year is not documented.

INCUBATION

The eggs can stay with the female or be moved to an incubator. Use vermiculite mixed with water in a ratio of 2:1 by weight in a closed box, and place damp sphagnum in the corners if desired. Humidity must be 90-100 %, and the lid is lifted briefly every 2-3 days to let in fresh air. At 31-32 °C the eggs hatch after 60-66 days, at 30 °C after 71-73 days.

Read more: Incubating eggs

REARING THE YOUNG

Newly hatched young are kept singly in small, escape-proof boxes of about 35 × 25 × 15 cm with orchid bark and dry leaves to hide under. The first shed comes 6-12 days after hatching; raise the humidity to over 70 % until then. The young usually take small newborn mice shortly after the first shed and quickly move on to larger mice.

The young are often very defensive and strike at anything that moves, and they must be introduced to handling gently. Young snakes are fed every 7-10 days.

Health and common mistakes

Liasis mackloti is hardy, and most problems are caused by incorrect temperature, humidity or feeding. Typical problems are:

- Wheezing breathing, bubbles at the nostrils or an open mouth. This needs a vet and is most often caused by temperatures that are too low or poor ventilation.
- Difficult sheds, most often because of humidity that is too low. A humid hide helps.
- Scale rot, if the substrate is constantly wet or dirty.
- Mites, which most often arrive with new animals or furnishings. New animals are kept apart in quarantine.
- Obesity, if meals are too large or too frequent.
- Regurgitation, if the snake is fed prey that is too large, is too cold or is handled too soon after a meal.
- Burns from direct contact with a heat source.

Contact a vet with reptile experience if the snake shows any of the signs above, loses noticeable weight or loses its appetite for no known reason.

Read more: Quarantine and hygiene

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.