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SNAKES

Boa Constrictor

Boa constrictor

Boa constrictor is a heavily built boa from South America, especially east of the Andes, brown to grey with dark saddle markings and a tail that in many local forms is reddish brown to red. It reaches 180-300 cm, is active at dusk and at night and lives 20-30 years. It is larger than the closely related *Boa imperator* and requires a large enclosure, infrequent meals and a keeper who can take responsibility for decades.

Family: Boidae Former name: *Constrictor constrictor*

KEY FACTS

THE ANIMAL

Adult size	**180-300 cm** total length incl. tail
Lifespan	**20-30 years**
Active	**At dusk and at night**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Savanna, dry forest and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**240 × 120 × 120 cm** L × W × H for 1 adult
Temperature, day	**24-30 °C**
Basking spot	**30-32 °C**
Temperature, night	**20-24 °C**
Humidity	**55-75%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Sexually mature	**18-48 months**
Litter size	**10-65 young**
Gestation	**100-120 days**

PROTECTION AND PAPERWORK

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

About the species

Boa constrictor is a heavy, powerfully built snake with a triangular head, vertical pupils and a pattern of dark saddle markings on a brown, grey or golden ground colour. Many animals have a reddish brown to red tail, and the saddles are often bat-shaped. Young animals are greyer and acquire yellow and brown tones with age. Colours and patterns vary greatly with locality.

Adult females are normally 210-300 cm and males 180-240 cm. Females are distinctly larger and heavier than males. A few animals reach about 370 cm, but that is rare; size depends on locality and on how fast the animal grows. Animals pushed into rapid growth with large and frequent meals do not get any bigger, but live shorter lives.

The distinction from *Boa imperator* is important. Both species were formerly regarded as *B. constrictor*, but DNA shows that the Central American forms are a separate lineage, and they are now listed as *B. imperator*. It has its own care sheet: it is smaller (130-250 cm), comes from Mexico, Central America and north-western South America and is the one most often sold

in the trade. *B. constrictor* in the narrow sense lives only in South America, mostly east of the Andes. Trade animals are often mixtures of local forms and species, so ask what is actually being sold. The subspecies *B. c. occidentalis* from Argentina and Paraguay is one of the largest; the females reach about 300 cm.

The animals are calm once they are used to handling, but their size and strength require experience. Many morphs exist, but this care sheet deals with the species.

Distribution and habitat

Boa constrictor lives in most of South America east of the Andes and also in north-western Peru west of the mountains: from Colombia and Venezuela through Guyana, Suriname and French Guiana to Brazil, Peru, Ecuador, Bolivia, Paraguay and Argentina. The species is also found on Trinidad and Tobago. To the north-west, in Colombia and Ecuador, it is replaced by *Boa imperator*.

Earlier records from Mexico and Central America now refer to *B. imperator*. The subspecies *B. c. occidentalis* (Argentina, Paraguay and south-eastern Bolivia), *B. c. longicauda* and *B. c. ortonii* (northern and north-western Peru) are not delimited in the same way by everyone, and *B. c. longicauda* may belong to *B. imperator*. The boas on Dominica and St Lucia are now treated as separate species, *Boa nebulosa* and *Boa orophias*.

> **Native range:** Colombia, Venezuela, Guyana, French Guiana, Suriname, Ecuador, Peru, Bolivia, Brazil, Paraguay, Argentina and Trinidad & Tobago.

HABITAT

Boa constrictor lives in a wide range of habitats, from humid rainforest to dry forest, savanna and scrub. It is often found near rivers and streams, because it is a good swimmer, and it uses rodent burrows, hollow trees and dense bushes as hiding places. The species tolerates changing conditions and is active from about 17 °C to 40 °C, but most often at 19-32 °C.

Young animals climb and hunt in bushes and trees, while older and heavier animals live mostly on the ground. The species is nocturnal but can bask by day when the nights are cool. The animal is an ambush hunter that eats rodents such as squirrels, rats and agouti as well as birds, lizards, amphibians and smaller mammals such as opossums. Prey is killed by constriction. Food is irregular in the wild, and the metabolism is slow.

Care

THE ENCLOSURE

An adult animal over 240 cm needs an enclosure of at least 240 × 120 × 120 cm (length × width × height), and smaller adults of 180-240 cm at least 180 × 90 × 90 cm. Since most females grow to over 240 cm, the larger size is the safe choice. Larger and taller is clearly better. The rule of thumb is that the length matches the length of the snake, and that the width and height are each half of that. The animal must be able to stretch out fully and have room for a distinct temperature gradient. Ready-made enclosures of that size are expensive and rare, so many people build their own. Use moisture-resistant materials: PVC board or wood sealed with animal-safe varnish. Melamine breaks down in the damp.

A newborn can live in an adult-size enclosure if there are many hides and a shallow water bowl. Young snakes can triple their length in the first year. Alternatively, a ventilated plastic box is used as a temporary rearing enclosure. Adults must not be kept in plastic boxes.

The enclosure must have front doors and a lid that can be locked. A large boa escapes through even small openings, and an animal that sees a hand coming from above takes it for a predator.

The substrate must be at least 5 cm deep, preferably 8-10 cm, so that the animal can dig and the substrate retains moisture. A mixture of topsoil, coconut fibre and a little play sand is a good choice, and a layer of sphagnum and dry leaves on top increases the humidity. Avoid pure sand, gravel, carpet substrate, pine and cedar. Furnish with sturdy branches, cork and hides, both on the ground and higher up. Remove droppings immediately, and replace the substrate completely every few months.

Read more: Heat and temperature Read more: Humidity, misting and ventilation

TEMPERATURE

There must be a gradient from cold to warm. The air at the basking spot must be 30-32 °C and the cold end 24-26 °C, and the whole enclosure should contain zones between 24 and 32 °C. Use at least two halogen lamps or infrared heat lamps side by side, so that the whole coiled animal is warmed evenly, and place a pale stone or a piece of wood as the basking spot. Lamps over mesh are safest. If they are inside the enclosure, they must have a protective cage. Use clear or white bulbs, not coloured ones.

Heat mats and heat cables can only be a supplement and must always have a thermostat. The animal usually uses the basking spot only during digestion.

Switch off all heat at night, so that the temperature falls to 20-24 °C. If the room is colder, a lightless heat source with a thermostat must supplement. Animals of the South American nominate form benefit from a seasonal rhythm: a day of about 14 hours in summer and a day of about 8 hours and 24-26 °C in winter. The rhythm is necessary for breeding.

HUMIDITY AND WATER

Humidity should be 55-75 % and fluctuate a little. Briefly above 70 % does no harm if the enclosure is allowed to dry out, whereas persistent damp causes mould. Before a shed, 75-85 % can help the animal to shed in one piece. Measure with a digital hygrometer; analogue gauges are unreliable.

Humidity is maintained by mixing water into the substrate, with a large, heavy water bowl that the animal can lie in, by misting or a fogging or irrigation system, and with a damp hide with sphagnum at the cool end. The water bowl must be so heavy that it does not tip over, and must be cleaned and disinfected every time the animal has defecated in it. A shallow water bowl is safest for young animals, which can drown in a deep one.

LIGHTING AND UVB

The species is nocturnal and does not need strong light, but UVB is recommended. It belongs to Ferguson zone 2: occasional sun-basking. The target is a UV index of 2-3 at the basking spot. A T5 HO tube of 5-6 % UVB over mesh should be mounted 25-35 cm above the animal's back at the basking spot, without mesh 35-45 cm. Check with a UV meter, and replace the tube every 12 months, even if it still lights up.

Switch the light on for about 13 hours in summer and 11 hours in winter. There must be no light at night, because the animal's eyes are adapted to darkness, and light disrupts the day-night rhythm.

Read more: Lighting and UVB

FEEDING

B. constrictor is a carnivore and must be given whole prey. Young animals get mice and small rats, and adults get rats, young rabbits, guinea pigs, chicks and quail. Variety is healthy. Use thawed, frozen prey: it is safer than live prey, which can bite and injure the snake. If live prey is offered, it must be removed if it has not been eaten after 15-30 minutes.

The weight of the prey must be no more than 10 % of the snake's weight, and it must not be thicker than the snake's widest point. Boas do not tolerate large prey as well as pythons, and prey that is too large causes regurgitation, which can injure or kill the animal. After the meal there should be at most a slight bulge.

Feeding frequency: - Under 12 months: every 10-12 days. - 12-18 months: every 12-14 days. - 18-30 months: every 2-3 weeks. - 2.5-3 years: every 3-4 weeks. - 3-4 years: every 4-6 weeks. - Over 4 years: every 4-8 weeks.

Lean meals and a slow metabolism are healthy, and feeding too often causes obesity. Wait a week after arrival before the first feeding, and avoid handling for 48 hours after a meal. The snake cannot digest plant food. Captive-bred feeder animals may lack vitamin D, so occasionally dust the prey lightly with a calcium and vitamin supplement.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements Read more: Buying animals: captive-bred, wild-caught and transport

BEHAVIOUR AND HANDLING

B. constrictor is an intelligent, individual snake. Some animals tolerate and like handling, others prefer to be left in peace. Hatchlings and young animals are often nervous and may hiss and bite. Consistent, gentle handling makes them calm.

Give a new animal at least a week in peace, and wait with handling until it feeds regularly. Start with a few minutes and increase gradually. Wash your hands before and after. Gently tap the animal on the head with a paper roll or a snake hook, so that it knows this is handling and not food, and lift it from below with one hand under the forebody and one under the hindbody. The animal coils around your arm to keep its balance, and that is not an attack.

Do not handle the animal when the eyes are bluish before a shed, on the feeding day or within 48 hours after a meal. Adults over 2 m are handled together with another adult. Never leave children alone with the animal.

Keep the animals separately. The species is solitary, and two animals in the same enclosure can eat each other. Mating is the exception, and the animals must be separated after a period.

Breeding

SEXUAL MATURITY AND SEXING

Females are distinctly larger than males, but apart from size the sexes cannot be told apart reliably by appearance. The sex is determined with a probe, which a vet or an experienced breeder should use. Males are sexually mature after about 18 months, but should be at least 120 cm before they are put to breeding. Females should be about 3 years old and weigh at least 3.5 kg. Gestation is a strain on the female, so she must be in good condition. The figures are borrowed from *Boa imperator*.

MATING

In the wild the species mates in the dry season, from April to August, and the males can mate with several females. Only about half of the females breed in a given year, and females in poor condition do not attempt it.

In captivity breeding requires a seasonal rhythm. The recipe here is borrowed from *Boa imperator*. From June to October the air is kept at 28-29 °C, and in October it is lowered to 24-28 °C. Give the animals a meal a week beforehand, because the males eat little or nothing during the cool period; after that smaller prey is offered every week. A quarter of the enclosure is kept at about 31 °C, so that the female can mature the eggs and digest, and this prevents respiratory infection. The males are put in with the females from late October to March, and the temperature is raised gradually from March to May. Keep the animals apart during feeding.

EGG-LAYING AND CLUTCHES

B. constrictor gives birth to live young. Ovulation is seen as a pronounced swelling in the middle of the body that looks like a large meal. Two to three weeks later the female sheds, and gestation is counted from this shed and lasts about 100-120 days. The young arrive within about four months of ovulation.

A litter is 10-65 young, typically about 16-25, and some may be stillborn or unfertilised eggs. The female has at most one litter a year, and a female typically has three to five litters over her life in captivity. The figures apply to *Boa constrictor* in the old, broad sense, which also includes *Boa imperator*.

INCUBATION

There are no eggs to incubate, because the species gives birth to live young. During gestation the female must have a distinct heat gradient with a warm spot, but she must not be overheated. Give her fresh water and peace. The young are born in a thin membrane, which they quickly leave, and are independent from the first day. Remove stillborn young and unfertilised eggs. In rare cases females can produce young without a male (parthenogenesis); this has been demonstrated in the species.

REARING THE YOUNG

Newborn young are about 40-50 cm and independent from birth. Keep them together at first in a ventilated box with a damp substrate, hides and a shallow water bowl. After about 10 days they shed for the first time, and then they must be moved each to its own box or enclosure. The first meal is a small mouse about two weeks after birth, then a mouse every week for the first months. The young shed every 1-2 months and can triple their length in the first year, so they must be moved regularly to larger enclosures.

Health and common mistakes

Most problems are caused by mistakes in the setup. Typical problems are:

- Regurgitation from prey that is too large, handling too soon after a meal or too low a temperature. Regurgitation puts a strain on the animal and can be fatal.
- Obesity from feeding too often or prey that is too large.
- Mites (*Ophionyssus natricis*) and internal parasites, especially in wild-caught animals. Use captive-bred animals, and quarantine new animals.
- Shedding problems in air that is too dry: use a humid hide.

- Intestinal blockage from substrate, too low a temperature or dehydration.
- Respiratory infection in air that is too cold or damp: the animal breathes with its mouth open or has a runny nose.
- Mould and bacteria from persistent damp.

Weigh the animal regularly and keep a diary of weight, feeding and sheds. A sudden loss of weight is often the first sign of illness. Reptiles hide illness, so see a vet with reptile experience if the animal does not eat, loses weight 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.