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SNAKES

Rainbow Boa

Epicrates cenchria

Epicrates cenchria is a slender, iridescent boa from the rainforests of South America, with an orange to red base colour, black rings and a sheen like oil on water. It grows to 150-200 cm, is nocturnal and calm as an adult, but needs very high humidity, steady warmth and a large enclosure. The species has been split into several species, and many rainbow boas in the trade belong to the separated ones.

Family: Boidae Former name: *Boa cenchria; Epicrates cenchris*

KEY FACTS

THE ANIMAL

Adult size	**150-200 cm** total length incl. tail
Lifespan	**20-30 years**
Active	**At night**
Lifestyle	**Arboreal and terrestrial**
Habitat	**Savanna and rainforest**
Difficulty	**Intermediate**

CARE

Min. enclosure	**180 × 90 × 90 cm** L × W × H for 1 adult
Temperature, day	**24-29 °C**
Basking spot	**29-32 °C**
Temperature, night	**22-24 °C**
Humidity	**70-100%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Diet	**Vertebrates**
Kept	**Singly**

BREEDING

Reproduction	**Live-bearing**
Sexually mature	**30-48 months**
Litter size	**1-30 young**
Gestation	**104-135 days**

PROTECTION AND PAPERWORK

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

About the species

Epicrates cenchria is a slender but powerful boa with a long, tapering head, a blunt snout, a vertical pupil and heat-sensitive pits along the lips. The base colour is orange to red with black rings along the back and black spots with pale half-moons along the sides. The head has three dark stripes, the eyes are very dark and the belly is pale. The scales have a strong iridescent sheen in blue, green and purple shades, which is caused by the refraction of light in the cells of the skin and not by pigments.

Adults are 150-200 cm including the tail. Females grow slightly longer and heavier than males and can weigh up to 4 kg, while males are stronger in relation to their size. Newborn young are 20-30 cm. The species is long-lived: 20-30 years, although most animals reach about 20 years.

The species name *cenchria* comes from the Latin word *cenchris*, an old name for a kind of snake. The genus name *Epicrates* is Greek and means conqueror.

The species has been split. *Epicrates maurus*, *Epicrates crassus*, *Epicrates assisi* and *Epicrates alvarezi* have been raised from subspecies to separate species. *E. maurus* lives in Central America and northern South America, *E. crassus* in the cerrado and grasslands of central and southern Brazil, Paraguay and Argentina, *E. assisi* in the dry regions of north-eastern Brazil and *E. alvarezi* in the Chaco region of northern Argentina, south-eastern Bolivia and western Paraguay. *E. cenchria* in the narrow sense is the form that lives in the Amazon region and the Atlantic Forest. Older sources and care guides still treat the separated species as subspecies, so many rainbow boas in the trade are in reality a different species. Colour morphs exist, but the care is the same.

Distribution and habitat

Epicrates cenchria in the narrow sense lives east of the Andes in northern and central South America: French Guiana, Suriname, Guyana, Colombia, Venezuela, Ecuador, Peru, Brazil, Bolivia and northern Argentina. In Brazil it is found in the Amazon region and in the Atlantic Forest.

The species does not occur in Costa Rica, Panama, or Trinidad and Tobago, where the snake that was formerly counted as a subspecies of *E. cenchria* is *E. maurus*. In Paraguay only the separated species occur. There is an introduced population in Florida.

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

HABITAT

Epicrates cenchria lives in rainforest and humid forest, but also in open savannas and in drier places at the edge of its range. It is semi-arboreal: it lies on the forest floor and climbs in trees and scrub, and it is a skilled swimmer. It is nocturnal and is most active in the middle of the night. During the day it hides, and at night it lies in ambush with its head out of the hide. Its prey is mammals, birds, bats and lizards.

The climate is warm and humid. The temperature stays at 23-32 °C all year, annual rainfall is 1,500-3,500 mm depending on the location, and the humidity is relatively stable at 60-70 %. The forest floor is damp and shaded, so the species needs higher humidity and a cooler temperature than most other snakes.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

An adult *Epicrates cenchria* needs a terrarium of at least 180 × 90 × 90 cm (length × width × height). A good rule of thumb for a semi-arboreal snake is that the length equals the snake's full length and the width half of it. The height must be at least 90 cm, so that there is room for floor and branches. The large size gives the snake the chance to climb and regulate temperature and humidity. Juveniles are kept in small boxes of about 30 × 15 × 10 cm, and in a terrarium that is too large the temperature gradient is too great. Animals of about 60 cm are moved to larger boxes, and animals of 120-180 cm to the adult terrarium.

The terrarium must be well insulated and sufficiently ventilated, so that humidity is held but the air does not stand still. A glass terrarium with a mesh lid is unsuitable, because the moisture disappears. Use a front-opening terrarium or a plastic container with limited ventilation, and make the lid escape-proof. The snake is kept alone.

Use a moisture-retaining substrate of at least 10 cm, for example coconut fibre, topsoil, coconut chips or cypress mulch, and lay leaves on top. Furnish with a fixed climbing branch of at least 120 cm, sturdy foliage as cover, at least two hides and a humid hide with sphagnum. Avoid cedar and redwood, because they contain substances that are toxic to snakes. The branches must be fixed in place, because the snake becomes heavy.

Read more: Heat and temperature

TEMPERATURE

By day there should be 24-29 °C in the terrarium with a basking spot of 29-32 °C at one end, and at night 22-24 °C. The temperature must not stay above 32 °C for long, except for gravid females, because the species is sensitive to high temperatures and overheating is one of the most common causes of death.

Use a thermostat. A heat mat or a radiant heat panel under or over one side gives an even warmth that dries the air less than a lamp. Heat lamps dry the air and require extra humidity. If lamps are used, the bulb must sit in a protective cage. Measure the temperature with digital probes in the middle of the terrarium and on the surface of the basking spot.

Before breeding, the night temperature is lowered gradually to about 20 °C (see Mating).

HUMIDITY AND WATER

Epicrates cenchria dries out easily and is entirely dependent on high humidity. Keep it at about 70 % by day and 90-100 % at night. Juveniles under one year are more delicate and need 90-100 % around the clock.

Mist the terrarium evening and morning, or use an automatic misting system. A fogger at night helps, used with distilled or reverse-osmosis water. Limit the ventilation so that the terrarium dries out a little between mistings but holds the humidity. Misting alone does not raise the humidity: a dense substrate layer and a large water bowl do more. A little condensation on the glass shows that the humidity is right.

The snake needs a humid hide with sphagnum and a large bowl of fresh water where it can lie completely submerged, because it basks and swims readily in water. The bowl is scrubbed weekly with a disinfectant for animals. Dehydration and overheating are the two most frequent causes of death. Signs of thirst are shedding in pieces, wrinkled dry scales and regurgitation.

Read more: Quarantine and hygiene

LIGHTING AND UVB

E. cenchria is nocturnal, but needs a fixed day and night rhythm with 12 hours of light and 12 hours of darkness, controlled by a timer.

The species can live without UVB, but UVB is strongly recommended: it regulates the daily rhythm and hormones, gives the snake vitamin D and strengthens the immune system. The species belongs to Ferguson zone 2. Use a 5-6 % T5 HO tube covering about half the length of the enclosure and sitting over the warm side. Aim for a UV index of 2-3 at the snake's back on the surface of the basking spot. With the tube over mesh the distance is about 23-28 cm, under mesh about 30-38 cm. Replace the tube every 12 months. A low-output fluorescent tube over the enclosure brings out the snake's iridescent sheen and can also be used for live plants.

Read more: Lighting and UVB

FEEDING

Epicrates cenchria eats mice, rats, hamsters, gerbils, quail, chicks and small guinea pigs. Preferably offer frozen and thawed animals rather than live ones, and warm the prey to about 38 °C in a sealed bag in warm water. Feed in the evening with tongs with a soft tip, and wave the prey in front of the snake until it strikes. Never use your hands, because body heat can confuse the snake.

The prey must be as wide as the snake at its widest point and weigh about 10 % of the snake's weight. Juveniles are fed about once a week, and adults every two to three weeks. The snake is an eager eater, but easily regurgitates if fed too often or with too large prey. Variety in prey is an advantage. The snake must be fed alone. Disturbance, too much handling or wrong temperature or humidity can make the snake skip meals; check the environment first and then offer new prey after a few days.

Juveniles may at first need small mice or pinky rats. The species is fully grown after 4-6 years. Prey can be lightly dusted with a combined calcium and vitamin supplement.

Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

E. cenchria is relatively calm as an adult, but it does not like being petted and is easily stressed if handled for too long. Young are nervous and bite easily, and they become more relaxed when they are about a year old. Do not handle until after several meals without problems, and preferably in the evening.

Begin with at most 5 minutes at a time with a few days in between, and build up slowly. Wash your hands first. Tap the snake's head lightly with a paper roll so that it knows it is not feeding time. Use two hands: one behind the head and one under the body, and never grab the tail. The snake wraps itself around the arms as if they were branches, but keep it away

from the neck. Wait 24-72 hours after a meal and do not handle it during shedding. Children must not handle the snake alone.

The snake is kept alone, because several animals together cause stress and competition for resources.

Breeding

SEXUAL MATURITY AND SEXING

The male is sexually mature at a length of about 120 cm and the female at about 140 cm, and this usually happens after 2.5-4 years. The female must have the right size to avoid problems at birth. Newborn young can be sexed without tools: stroke thumb and ring finger along the belly side and back side past the vent, and feel two small knobs in the male, where the hemipenes end. The female has no knobs. The female is slightly longer and sturdier than the male.

MATING

The animals are cooled first: the night is lowered by 2 °C a week from about 29 °C to 20 °C, while the daytime temperature is kept at about 29 °C. The lowest night temperature is held for three weeks, after which it is raised gradually again. Males and females are kept apart during cooling and fed as normal. The animals are put together when the warmth is back, and males ready to mate often stop eating or leave shed skin in the water bowl. Females seek cooler spots and lie in the water bowl.

Mating begins with a chase around the enclosure and can last several hours. It is repeated every few days for several weeks. Males often stop eating during the mating season. Parthenogenesis, that is, reproduction without a male, has been demonstrated in the species, but is rare.

EGG-LAYING AND CLUTCHES

E. cenchria gives birth to live young. The gravid female seeks the warmth and lies at the warm end of the enclosure for up to four and a half months. Some females stop eating, while others eat all the way through. From the shed after ovulation to birth, 104-110 days pass when the female maintains a body temperature of about 30 °C. At about 27 °C gestation is 129-135 days. Two to four weeks before birth the female becomes restless and may lie on her side or back.

Check the enclosure before it is time: remove loose objects and place plastic plants in the water bowl so that the young do not drown. The young are born each in a transparent membrane, which they tear open. The litter is 1-30 young, on average about 10, and they weigh 12-30 g. The female usually breeds only every other year.

INCUBATION

The species is live-bearing and does not lay eggs, so there is no incubation. The time of fertilisation is rarely known, so birth is calculated from the shed after ovulation, which is easy to see: at about 30 °C the young arrive 104-110 days later. At about 27 °C gestation is 129-135 days, and the warmer the female is kept, the shorter it becomes. In the wild gestation lasts 3-8 months.

Read more: Incubating eggs

REARING THE YOUNG

Newborn young are 20-30 cm. They are kept singly in small boxes with kitchen paper as substrate, a damp hide and a small water bowl, at a high humidity of 90-100 %. They can be weighed and sexed on the first day and can be offered thawed pinkie rats as early as the next day. Most accept the first meal.

Young are defensive and bite readily, but become calm with careful, steady handling. Shedding is easier with light spraying every day.

Health and common mistakes

Epicrates cenchria is hardy when climate and humidity are right. Typical problems are:

- Dehydration with a shed in pieces, wrinkled dry scales and regurgitation. Prevented with high humidity, a thick substrate layer and a large water bowl.
- Eye caps that stay stuck after shedding, and eye infections in air that is too dry.
- Dented or sunken eye caps in dry conditions. This often passes when the snake gets access to more water and higher humidity, but can persist for over a year.

- Overheating at temperatures above 32 °C.
- Regurgitation if the snake is fed too often, with prey that is too large or handled too soon.
- Birth problems in females that are too small.

Contact a vet with experience in reptiles if the snake skips three meals in a row for no visible reason, loses weight, has breathing problems or shows signs of dehydration.

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.