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SNAKES

## Ball Python

# *Python regius*

*Python regius* is a quiet, compact python from the savannas of West and Central Africa that rolls itself into a ball when it feels insecure. It reaches 100-150 cm, is easy to handle and very widely kept, but requires high humidity, stable heat and patience when it goes off its food.

Family: Pythonidae  Former name: *Boa regia; Hortulia regia*

KEY FACTS

### THE ANIMAL

| | |
|---|---|
| Adult size | **100-150 cm**<br>total length incl. tail |
| Lifespan | **15-30 years** |
| Active | **At dusk and at night** |
| Lifestyle | **Terrestrial and burrowing** |
| Habitat | **Savanna** |
| Difficulty | **Intermediate** |

### CARE

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|---|---|
| Min. enclosure | **120 × 60 × 60 cm**<br>L × W × H for 1 adult |
| Temperature, day | **22-27 °C** |
| Basking spot | **30-32 °C** |
| Temperature, night | **21-26 °C** |
| Humidity | **60-80%** |
| Water | **Water dish** |
| UVB | **Recommended**<br>Ferguson zone 2 |
| Diet | **Vertebrates** |
| Kept | **Singly** |

### BREEDING

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|---|---|
| Reproduction | **Egg-laying** |
| Sexually mature | **12-36 months** |
| Clutch size | **3-11 eggs** |
| Incubation | **55-60 days**<br>at 31-32 °C |

### PROTECTION AND PAPERWORK

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

## About the species

*Python regius* is a heavily built python with a relatively small head and smooth scales. The ground colour is dark brown with lighter brown blotches on the back and sides, the belly is white or cream, and many animals have a pale stripe from the nostril through the eye. The species name *regius* is Latin for royal.

The species is known for its defence: when it feels threatened, it rolls itself into a tight ball with the head tucked in the middle, instead of biting. This is one of the reasons it is so easy to handle. Adults are 100-150 cm including the tail; males typically reach 110-130 cm and females are slightly longer and heavier, 115-135 cm. The largest known length is about 180 cm. Hatchlings measure 25-43 cm and weigh 65-105 g.

In captivity many thousands of morphs with new colours and patterns have been bred. Care is the same for all morphs. One of them, the spider, is linked to a hereditary malformation of the inner ear, which causes head tremors and poor coordination.

The species is long-lived: 15-30 years is normal, and some animals live for over 40 years. This is a commitment you must be ready for before buying one.

## Distribution and habitat

*Python regius* lives in West and Central Africa south of the Sahara. Its range runs from Senegal and Gambia through Guinea-Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin and Nigeria to Cameroon and the Central African Republic and on east to northern Congo, South Sudan and Uganda. The species is also found in Mali, Burkina Faso and south-western Niger near the border with Benin.

The range is large and follows in particular the savanna belt south of the Sahel. The type locality is unknown but was later given as Gambia.

> **Native range:** Senegal, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Niger, Burkina Faso, Nigeria, Cameroon, Central African Republic, Congo - Kinshasa, Mali, Uganda and South Sudan.

### HABITAT

*Python regius* lives in grasslands, savanna and open woodland and has adapted well to farmland, where it uses the burrows of rodents. It spends most of its time on and under the ground, in holes, termite mounds and other hiding places, and comes out at dusk and at night. Males climb more than females and often hunt in bushes and trees. Young animals under about 70 cm take mainly small birds, while animals over 100 cm take mostly small mammals.

The climate is tropical with a distinct rainy season and a dry period. The temperature is around 20-30 °C all year, and in the hottest season the temperature above ground can rise above 35 °C, while it is cooler and more stable down in the burrows. The humidity is 60-80 % by day and rises to 80-100 % at night. In the driest part of the year the snakes retreat into the burrows and may stop eating.

Read more: Humidity, misting and ventilation

## Care

### THE ENCLOSURE

An adult *Python regius* needs an enclosure of at least 120 × 60 × 60 cm (length × width × height), and the enclosure must be at least as long as the snake, so it can stretch out completely. Hatchlings up to 300 g can be kept in a box of about 50 × 30 × 35 cm, and animals under 90 cm in 90 × 45 × 45 cm. Enclosures that are too small lead to obesity and poor muscle tone.

Furnish with at least three hides: one at the warm end and one at the cool end and a humid hide lined with damp sphagnum. Add branches, stones or boxes so the snake can climb a little, and cover three sides of the enclosure so it feels secure. For substrate use at least 10 cm of moisture-retaining material, for example sphagnum, coconut chips or a mix of topsoil, coconut fibre and sand. Avoid pine and cedar shavings, because the aromatic oils can harm the snake, and shavings that do not retain moisture.

The species is a skilled escape artist. Use an enclosure with front doors that can be locked. The snake is kept alone. Clean immediately if the snake has passed droppings, and change the substrate completely every 3-4 months.

### TEMPERATURE

The enclosure must have a gradient. The warm hide must be 30-32 °C, the cool side 22-27 °C and the night 21-26 °C. The temperature in the enclosure must never exceed 35 °C. If the room is cooler than 21 °C at night, night heat is needed from a source without visible light, for example a ceramic heater, a heat panel or a deep heat projector.

The warm zone is created with a heat bulb or halogen bulb over a hide, so the heat comes from above like natural sunshine. Alternatively a heat mat, which must always be controlled by a thermostat, can lie under the hide, but it must lie a couple of centimetres down in the substrate or be placed under a stone, so the snake does not get direct contact. Measure the temperature with digital thermometers with probes in the warm and the cool hide. If it is too cold or too hot, the snake stops eating.

Read more: Heat and temperature

### HUMIDITY AND WATER

The humidity should be 60-80 % by day and preferably rise to 80-100 % at night. Short fluctuations are harmless. Humidity is important for the snake's breathing and for a clean shed.

A thick, moisture-retaining substrate of at least 10 cm holds humidity best. Mist the enclosure every evening and possibly again in the morning, and keep a hide filled with damp sphagnum at the cool end, changed often to avoid mould. A large bowl of fresh water must be available at all times, and the water is changed every 2-3 days, immediately if it is dirty. The snake drinks from the bowl and lies in it. Use ordinary tap water as drinking water, not distilled or softened water. A hygrometer in the middle of the enclosure and one in the humid hide show whether the humidity is holding.

### LIGHTING AND UVB

*Python regius* is most active at dusk and at night but needs a fixed day and night rhythm. At the species' equatorial range 12 hours of light and 12 hours of dark are suitable, controlled by a timer. Night light, including red or blue, is unnecessary.

The species can live without UVB, but a weak UVB tube is recommended as daylight, because it benefits both wellbeing and health in the longer term; the species can also see ultraviolet light. It belongs to Ferguson zone 2. Use a T5 HO tube of 5-6 %, and aim for a UV index of 2-3 at the spot nearest the tube. With the tube above mesh the distance to the snake's back is about 25-35 cm, without mesh about 35-45 cm; preferably measure with a UV meter. Provide shade and hides in the rest of the enclosure. Replace the tube every 12 months. Glass and plastic in front of the tube block UVB.

Read more: Lighting and UVB

### FEEDING

*Python regius* eats whole, frozen and thawed rodents. Rats and mice are the standard, but variety in the form of African soft-furred rats, gerbils, young guinea pigs and chicks gives a more varied diet. In the wild males take more birds and females more mammals. Live prey is discouraged, because the rodent can injure the snake. If the snake will take only live prey, feeding must be supervised, and the prey removed if it is not eaten after 15-30 minutes. Never stun live prey.

The weight of the prey must be 10-15 % of the snake's weight. Thaw the prey slowly in the refrigerator the night before, and warm it to about 38 °C in a sealed bag in warm water just before feeding. Feed in the enclosure, not in a separate box, because moving to another box stresses the snake and can make it refuse the food. Hatchlings and growing juveniles are fed about once a week. Adults are fed every 2-3 weeks, for example with a rat of 100-150 g for an adult female. These figures are indicative: the interval is adjusted to weight and body condition. A healthy snake is rounded at the sides with a slight ridge along the back; if the spine is clearly visible, it is getting too little, and if it is completely round, it is getting too much. Weigh the snake weekly.

Overfeeding is a widespread problem and causes obesity. Pauses are normal: adult animals in the wild eat on average about 10 times a year, and young females of about 1 kg in particular and males in the breeding season can skip meals for weeks. As long as the snake does not lose more than 10 % of its weight and otherwise looks healthy, this is harmless. Feeder animals from breeders may lack vitamin D, so occasionally dust the prey lightly with a combined calcium and vitamin supplement, with D3, if UVB is not used.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

### BEHAVIOUR AND HANDLING

*Python regius* is calm and seldom aggressive. When threatened it rolls into a ball. Juveniles can be defensive and snappy but get used to handling. Leave a new snake in peace for two weeks, or until it eats regularly, before handling it. After that handle it 1-2 times a week and at most once a day.

Wash your hands first, so they do not smell of prey, and touch the snake's head lightly with a paper roll, so it knows it is not feeding time. Lift it with two hands, one behind the head and one under the body, and never grab the tail. The snake winds around your arms as if they were branches; this is normal. Keep the head away from your face and do not let it coil around your neck. Wait 24-48 hours after a meal, because regurgitation is dangerous and can be fatal. Do not handle it when it is shedding with milky blue eyes. If it rolls into a ball during handling, it is stressed and must go back in the enclosure.

If the snake bites, do not pull it off, because the teeth can break. The teeth point backwards, so move it gently towards you instead of pulling it away, or pour cold water over the head. The wounds are small punctures and are washed with water and soap.

## Breeding

### SEXUAL MATURITY AND SEXING

Sex is best determined by inserting a probe at the cloaca, where the male has a deeper pocket, and this must be done by an experienced person or a vet. Both sexes have distinct spurs at the cloaca, remnants of hind legs; the male's are usually the largest. Females are larger than males as adults. Males become sexually mature after 11-18 months and females after 20-36 months, but weight matters more than age. Females should weigh at least 1,500 g before they are paired, and males about 800 g.

### MATING

In the wild the mating season runs from mid-September to mid-November and coincides with the short rainy season. The female must be in good condition and have gained weight before the season. A slight cooling at night, to about 26 °C, while the day is kept at 32 °C at the warm spot, helps get the follicles going in the female. The male is placed with the female in her enclosure for 1-2 days at a time about every two weeks, until she ovulates. Males often stop eating during the breeding season.

Breeding should be considered only with great care. There is a large supply of young, and many animals are not sold.

### EGG-LAYING AND CLUTCHES

Ovulation shows as a distinct swelling of the rear third of the body, lasting a couple of days. About three weeks later the female sheds, and the eggs are laid about four weeks after the shed, typically 45-50 days after ovulation in all. The clutch is 3-11 large, leathery eggs, most often about 6, and the eggs stick together. The female coils around the clutch and lies there without eating until the eggs hatch.

Not all females lay eggs every year, even after mating. The female must have plenty of food before the season and a humid hide to lay in.

### INCUBATION

The eggs are carefully removed from the female and moved to an incubator without being turned. Incubation takes place at 31-32 °C and 80-90 % humidity, and the eggs hatch after 55-60 days, most often about 58.

The young cut a slit in the shell with an egg tooth and may stay in the egg for a day or more before coming fully out. Let them do it themselves.

Read more: Incubating eggs

### REARING THE YOUNG

Hatchlings measure 25-43 cm and weigh 65-105 g. They shed within the first week, and only after that do they begin to eat. Keep them singly in small, secure boxes with a hide, humid hide and water bowl at 30-32 °C in the warm hide. Offer a small mouse or rat pup every week, but only after the first shed.

Hatchlings are defensive, and some refuse to eat at first. It can help to offer prey of a different size and type or to present it in the dark. Weigh them regularly.

## Health and common mistakes

*Python regius* is hardy, but most problems are caused by incorrect heat, humidity or feeding. The typical mistakes are:

- Refusal to feed from temperatures that are too low or too high and humidity that is too low. Check temperature and humidity first, and weigh the snake weekly. Pauses of weeks are normal, especially in young females and in males in the breeding season.
- Obesity from feeding too often or too much. It is very widespread in the species.
- Respiratory infections with wheezing breathing, mucus or an open mouth. They are often caused by an incorrect climate or poor hygiene and require a vet.
- Poor shedding with remnants of skin on the eyes and tail tip when the air is too dry. A humid hide and a water bowl help.
- Regurgitation if the snake is handled too close to a meal or gets cold. It is a serious strain on the animal.
- Head tremors and poor coordination in the spider morph, which is caused by a hereditary fault in the inner ear.

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 more than 10 % of its weight, if it has breathing problems, or if it does not eat for several months.

## 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.