

CAPTIVE CARE OF BALL PYTHONS

(*Python regius*)

Natural History

Ball pythons (*Python regius*) are found at the edges of the forested lands of Central and Western Africa. They are equally comfortable on the ground and in trees. They are crepuscular, active around dawn and dusk. Called royal pythons in Europe, here in North America we call them ball pythons due to their habit of curling themselves up into a tight ball when they are nervous, their heads pulled firmly into the center. Like most pythons, ball pythons are curious and gentle snakes.

Ball pythons typically reach 4 feet (1.2 m) in length; occasionally there are specimens that reach 5 feet (1.5 m). When properly fed, their bodies become nicely rounded. Like all pythons and boas, ball pythons have anal spurs. These single claws appearing on either side of the vent are the vestigial remains of the hind legs snakes lost during their evolution from lizard to snake millions of years ago. Males have longer spurs than do the females; males also have smaller heads than the females.

Ball pythons, like all pythons and boas, devour a variety of prey in the wild - amphibians, lizards, other snakes, birds and small mammals. They do not eat mice in the wild, however, and do not recognize the mice we offer them as being something edible. Thus, imported wild-caught ball pythons tend to be very picky eaters, at least initially, and drive their owners to distraction in their attempts to get them to eat something.

Note: Ball pythons are reputed to be able to go for extended periods of time without food; wild-caught ball pythons have gone for a year or more without food until finally enticed to eat lizards and other snakes. This is *not* a healthy trait and must not be a reason for selecting this species. This should also make you suspicious when a pet store tells you that their ball pythons are eating well.

Buying captive-bred ball pythons reduces the stress on the threatened populations in the wild and helps ensure you will get a healthy, established eater and a snake already used to contact with humans. Buying from a reputable breeder will ensure that you will get the help and advice you need to assure that your ball feels comfortable and secure enough to eat after you bring it home and let it get settled for a week or so.

With the increased popularity of reptiles as pets there is increased pressure on wild populations. In addition to the more than 60,000 ball pythons that are imported annually, ball pythons are killed for food and their skin is used for leather in their native land. For some reason, despite their low reproduction rate, wild ball pythons are the least expensive pythons on the market, generally wholesaling for under ten dollars. Imported ball pythons also harbor several different types of parasites, which may go unnoticed by the novice snake owner. All around, it is better to buy a captive-born hatchling or an established, well-feeding juvenile, sub-adult or adult than an imported ball of any age.

In captivity, young ball pythons will grow about a foot a year during the first three years. They will reach sexual maturity in three to five years. The longest living ball python on record was over 48 years old when it died. Egg-layers, female ball pythons encircle their four to ten eggs, remaining with them from the time they are laid until they hatch. During this three-month period, they will not leave the eggs and will not eat.

Getting Started

Selecting Your Ball Python

Choose an animal that has clear firm skin, rounded body shape, clean vent, clear eyes, and who actively flicks its tongue around when handled. All ball pythons are naturally shy about having their heads touched or handled by strangers; a normal reaction is for the ball to pull its head and neck sharply away from such contact. When held, the snake should grip you gently but firmly when moving around. It should be alert to its surroundings. All young snakes are food for other, larger snakes, birds, lizards and mammalian predators so your hatchling may be a bit nervous at first but should settle down quickly.

Selecting an escape-proof enclosure

Select an enclosure especially designed for housing snakes, such as the glass tanks with the combination fixed screen/hinged glass top. All snakes are escape artists; ball pythons are especially powerful and cunning when it comes to breaking out. A good starter tank for a hatchling is a 10-gallon tank (approximately 20"L x 10"W [50 x 25 cm]). A young adult requires a 20-gallon tank, and full adult may require a 30-gallon tank (36" x 12"W [91 x 35 cm]).

Select a suitable substrate

Use paper towels at first. These are easily and quickly removed and replaced when soiled and, with an import, will allow you to better monitor for the presence of mites and the condition of the feces. Once the animal is established, you can use more decorative ground cover such as commercially prepared shredded cypress or fir bark. Pine and aspen shavings should not be used as they can become lodged in the mouth while eating, causing respiratory and other problems. The shavings must be monitored closely and all soiled and wet shavings pulled out immediately to prevent bacteria and fungus growths. The utilitarian approach is to use inexpensive Astroturf. Extra pieces can be kept in reserve and used when the soiled piece is removed for cleaning and drying (soak in one gallon of water to which you have added two tablespoons of household bleach; rinse thoroughly, and dry completely before reuse). Remember: the easier it is to clean, the faster you'll do it!

Provide a hiding place

A half-log is available at pet stores. An empty cardboard box or upside-down opaque plastic container, both with an access doorway cut into one end, can also be used. The plastic is easily cleaned when necessary; the box can be tossed out when soiled and replaced with a new one. The box or log must be big enough for the snake to hide its entire body inside; you will need to eventually replace it as your snake grows. Ball pythons prefer dark places for sleeping and, as they are nocturnal, they like the dark place during our daylight hours; they also like to sleep in something that is close around them, so do not buy or make too big of a cave for its size. Place a nice climbing branch or two in the tank with some fake greenery screening part of it; your ball will enjoy hanging out in the "tree."

Keeping it warm

Proper temperature range is essential to keeping your snake healthy. The ambient air temperature throughout the enclosure must be maintained between 80-85F (27-29C)-during the day, with a basking area kept at 90F (32.5C). At night, the ambient air temperature on the coolest side may be allowed to drop down no lower than 73-75F (23-24C) only if a basking area of at least 80F (27C) remains available. Special reptile heating pads that are manufactured to maintain a temperature about 20 degrees higher than the air temperature may be used inside the enclosure. There are adhesive pads that can be stuck to the underside of a glass enclosure. Heating pads made for people, available at all drug stores, are also available; these have built-in hi-med-lo switches and can be used under a glass enclosure. You can also use incandescent light bulbs in porcelain and metal reflector hoods to provide the additional heat required for the basking area. All lights must be screened off to prevent the snake from burning itself. All pythons, especially ball pythons, are very susceptible to thermal burns. For this same reason do not use a hot rock. New on the market are ceramic heating elements. They radiate heat downwards, do not emit light, and are reported to be long lasting. Plugged into a thermostat will enable you to adjust the temperature inside the tank as the ambient room temperature changes with the seasons.

Buy at least two thermometers - one to use in the overall area 1" (2.5 cm) above the enclosure floor, and the other 1" (2.5 cm) above the floor in the basking area. Don't try to guess the temperature - you will either end up with a snake that will be too cold to eat and digest its food or one ill or dead from overheating.

Lighting

No special lighting is needed. Ball pythons are nocturnal snakes, spending their days in the wild securely hidden away from possible predators. To make it easier to see your ball during the day, you can use a full-spectrum light or low wattage incandescent bulb in the enclosure during the day. Make sure the snake cannot get into direct contact with the light bulbs as ball pythons are very prone to getting seriously burned. Respect your ball's needs, however, and be sure to provide a hide box, and expect them to use it!

Feeding

Allow your snake to acclimate to its new home for a couple of weeks. Start your hatchling (about 15" in length) off with a single pre-killed one week to 10-day old "fuzzy" mouse. A smaller sized hatchling may require a smaller mouse; try a pre-killed 5-day old. Older ball pythons may be fed larger pre-killed mice or pinkie rats. If you have not had any experience force feeding a snake, you may not want to try it yourself until you have seen someone do it. Force-feeding, whether of a mouse or with a formula inserted by catheter and syringe, is very stressful for the snake (and it isn't much fun for the owner!). If your new ball has gone several months without eating and is beginning to noticeably lose weight, take it to a reptile vet or contact your local herpetology society and ask to speak to someone who is knowledgeable about ball pythons and feeding problems. A good inexpensive book that covers some of the tricks to enticing reluctant ball pythons to feed is *The Care and Maintenance of Ball Pythons* by Philippe de Vosjoli, or the new edition, *The Ball Python Manual*, by de Vosjoli, Dave and Tracy Barker and Roger Klingenberg.

Water

Provide a bowl of fresh water at all times. Your snake will both drink and soak, and may defecate, in it. Check it daily and change when soiled. Soaking is especially good just before a shed. When they eyes clear from their milky opaque, or "blue" state, soak the snake in a tub of warm water for ten minutes or so, then lightly dry it off, and return it immediately to its tank; it should shed cleanly within twenty-four hours.

Health problems

Routine veterinary care for newly acquired snakes is essential. Many of the parasites infesting ball pythons and other reptiles can be transmitted to humans and other reptiles. Left untreated, such infestations can ultimately kill your snake. When your snake first defecates, collect the feces in a clean plastic bag, seal it, label it with the date, your name and phone number and the snake's name, then take it and your snake to a vet who is experienced with reptiles. There it will be tested and the proper medication given if worms or protozoan infestations are found.

A common problem encountered in captivity includes retained eye shed (spectacles) and mites. When snakes shed their skin, the layer of skin over their eye is also shed, and can be clearly seen when looking at a piece of head shed. Always check your ball's head shed to assure it has shed the spectacles. If one or both spectacles have been retained, bathe the snake again in warmish water for about ten minutes. Before returning it to the enclosure, place a dab of mineral oil on that eye with a cotton-tipped swab. The spectacle should come off within twenty-four hours. If it does not come off, wrap your four fingers with transparent tape, sticky side out. Gently rock your fingers from left to right (or, from nose to neck) across the eye; the spectacle should come off. If this does not removed the spectacle, then seek veterinary assistance.

Mites are a sign of poor environmental conditions. Adult mites are tiny reddish brown dots barely bigger than the period at the end of this sentence. You may first notice them swarming over your hand and arm after you have handled your snake (don't worry--they are harmless to humans) or see them moving around your snake's body or clustered around the eyes. Mites are harmful to snakes, especially ones that have not been kept properly. On the positive side, they are easy and relatively inexpensive to get rid of, although the process is time-consuming.

Snakes, including ball pythons, should routinely shed is one piece, from snout (including spectacles) to tail tip. If a snake does not shed cleanly, it is a sign that something is not right, either with the snake or with its environment. Newly acquired snakes may not shed properly for the first month or two as they are getting acclimated to their new surroundings. This is a sign of transient stress. If it continues, or begins to occur in a long established snake, the snake must be evaluated for possible health problems, and the snake's environment must be evaluated for humidity problems

Humidity and Ball Pythons

Ball pythons are native to very warm, but not hot, dry areas in Africa. Many people make the mistake of trying to keep them in a too humid overall environment, using damp sphagnum moss or misting them frequently throughout the day. The problem with this is that keeping the overall environment damp leads to conditions such as blister disease where in the skin, usually of the belly, becomes covered with blisters, leading to bacterial infections of the skin, which in turn leads to overall health problems.

In fact, all a ball python needs is an area within its dry enclosure to which to retreat when it requires higher humidity. One way to accomplish this is to provide a water bowl large enough for the snake to soak in when it wants. Depending on the ambient room (and thus enclosure) humidity, this may be enough, or may be enough during part of the year. Another good, safe option for a ball python is a humidity retreat box.

Handling your new snake

After giving your ball a couple of days to settle in, begin picking it up and handling it gently. It may move away from you, and may threaten you by lashing its tail and hissing; don't be put off - it is usually just a bluff, and snakes, like most reptiles, are very good at bluffing! Be gentle but persistent. Daily contact with each other will begin to establish a level of trust and confidence between you and your snake. When it is comfortable with you, you can begin taking it around the house. Don't get over-confident! Given a chance and close proximity to seat cushions, your ball will make a run (well, a slither) for it, easing down between the cushions and from there, to points possibly unknown. Always be gentle, and try to avoid sudden movements. If the snake wraps around your arm or neck, you can unwind it by gently grasping its tail and gently unwrapping it from around your neck or arm - do not try to unwrap it by moving the head. Some snakes are a bit sensitive about being handled soon after they have eaten. If you feed your snake out of its enclosure, go ahead and replace it back into its enclosure after it has finished eating. Then leave it be for a couple of days. As the snake gets more comfortable with you, it will be less nervous and less likely to give you back your mouse.

Inclusion Body Disease / Quarantine

Inclusion body disease (IBD) is a virus that affects boas and pythons (boids). It is always fatal in pythons. Unfortunately, the lust to sell has overcome common sense in private breeders as well as pet stores and wholesalers, and an increasing number of boas and pythons are being sold who are infected with this virus.

Always spend a considerable amount of time observing boids before you buy them, especially at pet stores. Even reptile specialty stores have been selling infected stock so buying from such stores is no guarantee that you are buying an uninfected/unexposed snake. Don't buy a boid because you feel sorry for it, because it looks sick and the store isn't providing proper care for it - you may lose every boid you own.

Always observe strict quarantine procedures when bringing in a new boid into your house if you already have other boids. IBD may take several months to manifest itself. Owners have reported their new snakes showing signs as little as one month after acquiring hatchlings to well over one year after acquiring a new boid.

Always have boids who are not acting well (loss of appetite, regurgitating meals, mouth rot, respiratory infection, contorted body positions, stargazing) seen by a reptile vet as soon as possibly after symptoms are noticed. Warn the vet before coming in that it may be IBD so they may take precautions to reduce exposure to other boids who may be in their office at that time.

Remember that it doesn't require snake-to-snake contact to spread the disease. You may unwittingly spread it by handling other snakes without first thoroughly washing your hands. Viruses are airborne - think twice about taking your snakes to places where they will encounter snakes belonging to people who may not be taking proper precautions.

Necessities

Some things you should have on hand for general maintenance and first aid include: Nolvasan (chlorhexidine diacetate) for cleaning enclosures and disinfecting food and water bowls, litter boxes, tubs, sinks, your hands, etc. Betadine (povidone/iodine) for cleansing scratches and wounds. Set aside a food storage bowl, feeding and water bowls, soaking bowl or tub, even sponges, to be used only for your snake.

Enjoy yourselves

You have a companion that will be a part of your life for a great many years if taken care of properly. They should remain alert and active well into their old age. The main causes of death of snakes in captivity are directly related to their care: improper temperatures, contact with heating and lighting elements, no regular access to water, lack of necessary veterinary care and treatment, careless handling--all things for which we, as their caretakers, are directly responsible.

Places to Go, Things to See and Learn

Join your local herpetological society where you can meet other reptile owners, learn more about your ball python, and find an experienced reptile veterinarian in your area. Check your local pet stores, library, or mail order herp booksellers (<http://www.anapsid.org/herplit.html>) for these and other python and reptile care books:

- *The Ball Python Manual*, by Philippe de Vosjoli, Dave and Tracy Barker, and Roger Klingenberg, 1995. Advanced Vivarium Systems, Lakeside CA.
- *Completely Illustrated Atlas of Reptiles and Amphibians*, by Obst, Richter and Jacob. 1988. TFH Publications, Inc. Neptune City, NJ.
- *Snakes of the World*, by Scott Weidensaul. 1991. Chartwell Books, Seacacus, NJ.

- *Living Snakes of the World*, John M. Mehrtens. 1987. Sterling Publishing Co. New York.

Related Articles:

Dealing with Ball Feeding Problems (<http://www.anapsid.org/ballfeed.html>)

Boid Inclusion Body Disease (<http://www.anapsid.org/ibd.html>)

Cleaning & Disinfecting (<http://www.anapsid.org/cleaning.html>)

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