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## Dallas-Fort Worth Herpetological Society

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*To promote understanding, appreciation, and conservation of reptiles and amphibians, to encourage respect for their habitats, and to foster responsible captive care.*



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Photo by Michael Smith

## Ball Python (*Python regius*)

By Stan Grumbeck

One of the most familiar snakes to both professional and amateur herpetologists alike has to be the ball python, *Python regius*. The common name comes from a defensive tendency in which they coil into a ball with their head protected in the middle. Another name for the ball python is the royal python, which comes in part from legend that Cleopatra supposedly wore them around her wrists. For decades this animal has been imported from its native Africa in such numbers as to boggle the imagination. Tens of thousands of this little python are brought in each year to feed the ever-increasing demand for the pet trade. Fortunately, in recent years, many more breeders are working with ball pythons, especially with the development of the many diverse color morphs that are now available in the herpetocultural trade.

Though this snake has always been popular, probably no other python can rival the attention this snake has enjoyed in the herpetocultural world in recent years. It seems that every year new color and pattern morphs are developed by breeders giving ball python enthusiasts even more reasons to continue increasing cage space in their homes. Fortunately for those people, ball pythons are not large snakes nor do they require a great deal of room to move around so housing a number of these beauties does not present the same challenge as some of their larger relatives.

### *Description*

Ball pythons are a relatively small, heavy-bodied python averaging three to five feet in length with very large individuals reaching six feet or more. Males are generally smaller than

## Ball Python (*Python regius*) - continued

females averaging less than four feet while adult females are generally four to five feet in length. Like most pythons their head is wedge shaped and very distinct from the neck with a series of heat sensitive pits lining the mouth in the top row of scales. The top of the head is dark brown to black in color with light tan to yellow lines running the length on the head on either side, a black line under that and then light colored lips. The ground color of the body can be light brown to black as well, but is more often dark than light. Ball pythons have a series of what are usually described as blotches down the length of the body and extending onto the tail, but the blotches are extremely variable and irregular in shape. Often the blotches are not restricted to the dorsum, but will extend well onto the side of the body. In animals where the blotches are primarily to the top of the back there are lateral blotches down either side of the body. One of the exciting aspects of ball pythons is how almost no two look alike and this is due to the variability and irregularity of their patterns.

### Habitat

Ball pythons are found over an extensive range in Central and Western equatorial Africa. They are very adaptable in their choice of habitats, but occur primarily in savannahs, grasslands and open forests throughout their range. Ball pythons are usually found in thick undergrowth and leaf litter where their pattern does an excellent job of providing camouflage. They are mostly terrestrial, but do spend a surprising amount of time climbing.

### Prey and Feeding

Ball pythons are extremely powerful constrictors and feed primarily on warm-blooded prey such as small mammals and birds, but like many pythons, are somewhat opportunistic feeders and will eat other reptiles and amphibians as well. They often hunt in rodent burrows where they may spend a great deal of their time as well. In captivity, ball pythons generally accept rats and mice quite readily, however, wild-caught animals have a reputation of often being difficult feeders when they first arrive and will test the patience of their keeper. Many people in this situation have had success with offering gerbils, hamsters or some other species of rodent instead and then gradually switching the python to mice or rats later on.

### Activity

Ball pythons are primarily crepuscular, being active at dawn and dusk, but may remain on the move well into the night hunting prey. For all that they are shy and secretive ball pythons seem to do just as well living in areas cleared by humans as they do in much wilder habitat. They are slow moving animals that rely on cryptic pattern

and defensive mechanisms rather than speed to protect them in the event of a threat.

Being heavy-bodied animals they seem to be built for life on the ground, and indeed they do spend a great deal of time on or under the ground, however, they are very agile climbers and are often found on rocks or in trees. In captivity they will take advantage of every sturdy branch or shelf suitable for climbing or basking.

### Abundance

Various herpers and naturalists alike, both professional and amateur, have for years predicted an ebb in the flood of ball pythons that are exported from Africa each year and yet the numbers of animals being shipped out are still astounding and do not seem to be on the decline. I believe this speaks volumes about this little python's resilience. There are more than 60,000 shipped into the United States alone each year for the pet trade. Added to that are many more that are shipped to other countries for their pet trade as well as the number that are killed to supply the leather trade. Most of the



The defensive "ball" position (Photo by Michael Smith)

ball pythons shipped out are exported from a few countries in West Africa, primarily Ghana, Togo and Benin, though some of the snakes are probably collected from others parts of their range and then brought into the export houses. A growing number of the ball pythons

being exported now come from python "farms" where collectors bring in gravid females, which are maintained until they lay eggs and then the eggs are hatched so the babies can be shipped out. Reportedly the females are released after they lay to breed again. Another concern with ball pythons is the same for so many animals around the world and that is habitat destruction.

Fortunately for the pet trade, ball pythons have proven very easy to breed in captivity and it is possible to purchase captive-bred ball pythons rather than helping to fuel the wild-caught trade by purchasing an animal that has been through a great deal more stress and abuse. As with any animal it is always better to obtain a captive-bred specimen whenever possible as they will be much better adapted to

captive conditions and prove to be a much more suitable pet. This can not be truer than with a ball python. As mentioned earlier, they are very shy, retiring snakes and wild-caught animals have proven to be very difficult to get started in captivity. This is particularly discouraging to someone new to keeping snakes and best avoided. Captive-hatched ball pythons, on the other hand, generally prove to be voracious feeders, which make quite suitable pets.

### Reproduction

Ball pythons' reproductive activity is very much the same as the other members of their genus including the females maternally incubating the eggs. Male and female ball pythons are not sexually dimorphic and distinguishing one from the other generally requires probing by someone familiar with them. Both sexes have short, tapered tails as well as spurs on either side of the anus, which are thought to be rudimentary appendages. As with most pythons, the male's spurs are larger than the females, but unless one had the two sexes together for comparison this can be as much a guess as anything.



"Cinnamon" ball python (photo courtesy Ken McAlexander)

The primary breeding season for ball pythons is generally between October and February, though there are reliable records of copulation and egg-laying in just about every month of the year. Beginning in October males will begin to lose interest in much of anything except finding a female receptive to his amorous advances. Both males and females may go off feed during this time. When a male does find a receptive female he will initiate courtship by crawling up to and over the female the whole time rubbing his chin along her back. As he brings his tail up along side he will also begin tickling her along her tail and lower body. If the female is not ready to mate, she may try to flee even as the male begins to line up with her. If she cannot get away from the male she may begin whip-



"Pastel" ball python (photo courtesy Ken McAlexander)

ping her tail about to resist. If, however, she is receptive to the male's advances, she will raise her tail at some point during the courtship and allow the male to wrap his tail around hers at which point copulation takes place.



Albino ball python (photo courtesy Ken McAlexander)

Gestation lasts about three months in which time the female



Piebald ball python (photo courtesy Ken McAlexander)

will shed her skin approximately 28 days before laying. Ball pythons clutch sizes can be anywhere from two to ten eggs with five or six being the average. Females will wrap around their eggs to help maintain temperature and humidity until the eggs hatch. The females maintain a very near constant temperature of around 89oF to 90oF while incubating the eggs. They have been observed basking to raise their body temperature and then rewrapping the eggs to keep them warm. In this way the eggs hatch in approximately 56 days. Hatchlings are miniature reproductions of their parents and about 12" at the time of hatching.

Breeding ball pythons was considered a tremendous challenge for many years, but as mentioned earlier, ball pythons are now being bred with regularity in captivity and this has led to an abundance of readily available captive-bred animals to help supplement the demand for pets. Captive ball pythons follow the same breeding season as the wild animals with breeders beginning to put their pythons together in October or early November.



Although the females can be allowed to hatch their own eggs as they do in the wild, many breeders choose to hatch the eggs artificially. This is done by use of an incubator to maintain the proper temperature and humidity.

#### Notes

Because of their docile nature, small size and attractive color and pattern and ready availability, ball pythons have been a favorite of both amateur and professional herpers alike and are one of the first snakes that many new herpers keep. They are well suited to this as, once they are established, they do not make very demanding captives. A large adult will do very well in an enclosure the size of a 20-gallon long aquarium, 30" x 12" x 12" tall. They need little more than an easily cleanable substrate, a water bowl and a hide box and they can thrive for years.

Interest in ball pythons has grown at an incredible rate in the last several years with the development of so many new morphs and pattern variants. Some of the genetically recessive traits that have been reproduced with a great deal of success include piebald, axan-

thic and several different types of "albinos" or amelanistic, each very different looking from the next. Other types of ball pythons are the result of selective breeding to produce predictable pattern or color variations such as spiders, pastels, cinnamon, clowns and striped and there are many more. Combinations of the genetic morphs with the pattern variations continue to produce incredible looking animals and further selective breeding promises to keep this species new and exciting for years to come.

#### References and Suggested Reading:

Coborn, John. 1991. Atlas of Snakes, The, T.F.H. Publications, Inc., Neptune City, NJ.

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