Care of Boas and Pythons

This information leaflet is provided as a method of communication between veterinarians and clients who own a boa or python. These large constrictor snakes commonly kept in captivity, require special care in their cage environment. Specific heating, lighting, and feeding instructions are given, and common diseases affecting boas and pythons in captivity are discussed, If you have any questions after reading this material, be sure to ask your veterinarian to answer them for you.

Boas and pythons are both large constrictor snakes commonly kept in captivity. Their popularity is often related to their large, impressive size and the associated concerns and fears sometimes represents. These snakes are not ideal pets for amateur herpetologists, rather they are much better suited to people who have had experience keeping other snakes in the past. In some states, the ownership of large constrictors is restricted. Your veterinarian can advise you on specific laws that may apply to the ownership of such snakes before you purchase one.

The boa constrictor is a New World species found between Mexico and Argentina, although some have been found in Madagascar, an island off the southeastern coast of Africa. These snakes tend to be arboreal in nature, residing in small bushes or trees. In captivity, they usually become tame and accept handling, but some will retain their aggressive instincts and can cause severe injury to the inexperienced handler. Fortunately, many boas have been raised in captivity and are readily available through a pet trade. In addition to the boa constrictor, some other popular boas include anacondas, rosy boas, and emerald tree boas.

Pythons are native to Africa, Asia, and Australia and can be found in a range of habitats. Some species dwell in the rain forest while others reside in desert climates. Like boas, most pythons are arboreal and live in bushes and trees, although a few are ground dwellers. The Burmese and reticulated pythons are two of the world's largest snakes, each measuring up to 20 feet in length. Other species, such as the ball python or children's python, grow only to a maximum length of a few feet. Many species of pythons tame easily and can be handled by their owners. Reticulated pythons and African rock pythons, however, are known for extremely aggressive behaviors and are not recommended as pets.

Captive Environment

Cage space is a common limiting factor in keeping large snakes. Many snakes are acquired as juveniles and their environment is prepared without considering the snake's eventual adult size. In general, the perimeter of the cage should be one to one-and-a-half times the length of the snake. The height of the cage is important for arboreal species to accommodate for a climbing branch or perch in the cage. The shape and dimensions of the cage are very dependent on the individual species; therefore, potential snake keepers should consult with their veterinarian and conduct some research on their own before acquitting a snake as a pet.

The temperature, humidity, and ventilation are three basic environmental factors to be considered when establishing the cage habitat. Daytime temperature should be at 85 to 90° F (30-32° C), with a cooler temperature of 75 to 80° F (24-27° C) at night. A basking site of 90° F (32° C) or more should be provided at one end of the cage so the snake can coil to warm itself. Heat can be provided be heat lamps or under-the-cage heaters. Hot rocks placed within the enclosure should not be used as they can cause serious burns if the snake rests on them for an extended period of time.

It is important to have a thermometer in the cage to monitor temperature ranges and adjust them as necessary. The relative humidity can be regulates with the use of a humidifier or vaporizer, occasional misting of the cage with water, or by providing a shallow water bowl for gradual evaporation. The snake can be kept moist by directly misting with warm water or by soaking in a water bath. Proper ventilation is a vital environmental factor as well. High levels of bacteria, mold, and fungi can develop if ventilation is inadequate and result in skin and respiratory infections.

Lighting is also crucial in the captive husbandry of reptile. The precise requirements of natural or full-spectrum lighting for snakes is not known. It is believed that arboreal snakes benefit from full-spectrum lighting, whereas ground-dwelling snakes may not require as much. If long-term maintenance or breeding is intended, a full-spectrum lighting system is recommended.

The substrate for the cage should be chosen with several factors in mind. It should be easy to clean, non-abrasive, and readily available. Improper substrates can result in serious skin and respiratory conditions. Common substrates include dirt, indoor/outdoor carpet, Astroturf™, newspaper, and various wood or pelleted paper products. Some wood products, such as cedar and pine, have aromatic oils which can be irritating to the snake's mouth and respiratory system. Ground corn cob and clay cat litter are not good choices either, as they can cause dehydration, poor shedding, and respiratory disease. When selecting a substrate, evaluate its ease of cleaning. Knowing in advance whether or not a substrate is easy to clean or change will help you make the right decision regarding the best method to maintain proper hygiene for your pet.

Providing the snake with a hiding area is an excellent way to reduce stress in the captive environment. Hiding areas provide the snake with a sense of security and retreat which are both vital to its well being. Hide boxes are typically plastic or ceramic and can be made from a number of objects, including overturned flower pots, litter boxes, storage containers, or commercially available reptile boxes. This simple addition to the cage not only enhances the snake's level of security and reduces stress, but it also improves appetite and ultimately increases potential life span.

Arboreal snakes must be able to climb. Branches or platforms placed in the cage will meet this need. One raised area should be positioned in the warmer, basking, portion of the cage, while another is placed in a secluded, sheltered site. The constrictor should be able to rest comfortably off the ground to minimize stress. If proper climbing or platform areas are not provided, the snake may not eat and will be more susceptible to disease.

Feeding

All snakes are carnivorous by nature. They must be fed whole prey every 7 to 28 days depending on the size and the age of the snake. Small and juvenile snakes are fed more frequently, while larger, mature snakes eat less often. Large constrictors will consume adult rats, rabbits, and chickens. Juvenile and smaller snakes will eat mice, small rats, other rodents, and baby chicks. Hatchlings should be fed newborn rodents known as "pinkies." They will not eat insects, worms, fish, or turtle food.

Pre-killing prey before giving it to the snake will reduce trauma to the snake. Mice and rats can seriously injure a snake before the snake can kill them. A snake will not typically kill its prey unless it is hungry and intends on eating it.

Most snakes will not eat until certain cage requirements are met. They must be provided with sense of security, usually either a branch or a hide box. Proper temperature and humidity

also play a role in the snake's well being. Some snakes are particular about what they eat and will only accept one type of food. Once you determine this, you can make sure that you only feed the snake what it will eat. If both the dietary and husbandry requirements of the snake are met and the snake will not eat, a parasite or other disease condition may be the cause.

Common Disease Conditions

Veterinary health problems affecting constrictor snakes include rodent bites, infectious stomatitis, dermatitis, anorexia and parasites. Many of these conditions are directly related to improper husbandry and care.

Anorexia

Snakes will stop eating for a variety of reasons, including improper temperature and humidity, lack of security, poor hygiene, and inappropriate diets. Ball pythons are commonly presented to veterinary hospitals with anorexia; quite often improper husbandry and overhandling are the causes. In addition, bacterial infections, parasites, trauma, and tumors are some other reasons why a snake may not be eating. Your veterinarian can often determine why a snake has an insufficient appetite and offer appropriate therapy or suggestions to improve husbandry.

Rodent Bites

Feeding snakes only pre-killed prey will eliminate this problem. Owners who feed their snake live rodents, however, are exposing their pet to potentially receiving a traumatic bite wound. Because snakes will not kill their prey unless they are hungry, the rodent, out of its own fear and hunger, may first attack the snake, causing severe and sometimes even fatal wounds. If the snake suffers a rodent bite, your veterinarian will prescribe topical and systematic antibiotics to combat potential infection. All rodent bites should be considered an emergency requiring immediate veterinary attention.

Dermatitis

Skin infections are common in snakes kept under poor husbandry or poor hygienic conditions. Environments that are too moist and cool often cause blister-like lesions on the skin. Surfaces that are too warm, such as those provided by hot rocks, can cause burns on the ventral aspect of the snake's body. These may present as mild pink to red discolorations or severe peeling and sloughing of burned skin. Abrasive or caustic substances can lead to raw or inflamed skin wounds. Bacterial or fungal organisms often invade such skin lesions, causing further complications. Therapy consists of eliminating the underlying cause from the snake's environment and appropriately medicating the wounds.

Infectious Stomatitis

This condition is commonly called by its more familiar term, "mouth rot." The first signs of infectious stomatitis are small red spots, known as petechial hemorrhages, in the mouth and increased saliva production. As the disease progresses, the membranes in the mouth become swollen and covered with a cheesy white to yellow-colored discharge known as caseated exudates. In chronic cases of infectious stomatitis, the infection can spread into the jawbone causing osteomyelitis. This is a serious condition requiring prompt veterinary care.

Pneumonia

Signs of pneumonia include wheezing, open mouth breathing, excessive or thick mucus in the mouth, and bubbling or discharge from the nose or mouth areas. This is a serious respiratory disease and requires immediate veterinary attention. Initial treatment consists of

increasing the cage temperature to above 90º F (32º C) and raising the relative humidity. Additional therapy may be recommended by your veterinarian.

Parasites

Internal and external parasites are common among snakes caught in the wild or those fed prey from non-captive environments. In addition, contact with other snakes that have parasites or their contaminated cage or its accessories can lead to infestation. Your veterinarian will want to conduct a thorough examination and fecal tests on all newly acquired snakes before they are added to your collection to avoid a new snake transmitting parasites to other pets.

Several types of internal parasites can cause disease including roundworms, tapeworms, lungworms, and protozoa. Signs of potential infestation include anorexia, regurgitation, diarrhea, constipation, and weight loss. Fecal examinations can usually determine if a snake is harboring any of these organisms.

Mites and ticks are the external parasites most frequently affecting snakes. These parasites can cause anemia and spread certain diseases. The most common eternal parasite encountered by snakes is the snake mite or *Ophionyssus natricis.* Your veterinarian can advise you of the best way to remove these mites. Ticks can often be removed manually. Be sure that the head is removed when you pull a tick off the snake's body or it will continue to feed off the snake. Never attempt to remove a tick by burning it off. Thorough cleansing and disinfecting of the cage is crucial to avoid reinfestation.

Conclusion

Boas and pythons can make good pets if their owners learn several important fundamentals pertaining to their care. Because these snakes can be dangerous if not properly handled, only an experienced herpetologist, one who has kept other, smaller snakes as pets should attempt to keep a boa or python in captivity. Maintaining a proper environment for such pets is key. Many of their health problems, unfortunately, are directly related to poor husbandry practices. In addition to the material provided in this pamphlet, your veterinarian may be able to offer you additional advice on keeping a boa or python, as well as refer you to other publications and local resources.

Glossary

Anemia- Disorder due to a deficiency in the number of red blood cells and/or of their hemoglobin content

Antibiotics- Anti-bacterial substances derived from fungi and bacteria which can be administered to help a body combat infectious diseases

Carnivorous- Flesh-eating; predatory

Dermatitis- Inflammation of the skin

Hemorrhage- The escape of blood from a vessel

Osteomyelitis- Inflammation commencing in the marrow of bone

Petechial- Pertaining to a small, hemorrhagic spot

Pneumonia- Inflammation of the lung caused by a virus or bacteria

Respiratory- Pertaining to the lungs

Stomatitis- Pertaining to or affecting the whole body; medications include those that are given orally or intravenously

Topical- Can be applied directly to a specific part of the body; medications such as creams, ointments, or drops are considered topical

Ventral- Of, relating to, or near the belly

Review

Boas and pythons are large constrictor snakes commonly kept as pets in captivity. The boa constrictor is primarily a New World species generally found between Mexico and Argentina. Pythons are native to Africa, Asia, and Australia. Certain snakes from each species are arboreal and others are ground dwellers. It is best to design each snake's cage environment according to these considerations as well as its adult size. Temperature, humidity, and ventilation must all be monitored to ensure the snake has the most optimal surroundings. In general, the environment should be very warm (but able to be cooled slightly at night) and bright. Branches and perches should be provided for arboreal snakes and hiding places should be furnished for all snakes, as this reduces stress.

Snakes are carnivorous by nature and must be fed whole prey every 7 to 28 days. Pre-killing prey is recommended, since feeding the snake live animals can result in the snake being bitten or otherwise injured, as the snake will not kill its prey until it is hungry and ready to eat.

A number of disease conditions affect large constrictor snakes kept in captivity—and many of these are related to poor husbandry practices or over handling. Anorexia, dermatitis, infectious stomatitis, and parasite infestation are all common. These conditions are treatable if the snake receives prompt veterinary attention.