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RESEARCH ARTICLE

THE SNAKES IN CAPTIVITY

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Abstract

Reptiles can now adapt to different types of food and shelter because they have evolved to withstand the uncertain environment. It is crucial to recognize the similarities between the human world and the captivity-dwelling snakes because they now bear similarities to the human empire. The significance of creating a snake enclosure for the reptiles is also discussed in this piece. Additionally, some of the most important elements that must be taken into account when designing the enclosure are covered in this article.

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Introduction:-

Evolution has favoured the modification and disrupted the way the reptiles live and evolve. India is an incredible destination for reptiles, home to countless deadly elapids, colubrid, multiple vipers, narrow-snouted pythons, aquatic keelbacks, four of the world's flying snakes, and vermicious caecilians. However, many misconceptions exist about reptile diversity. There is a commonly held misconception that all snakes are 'venomous creatures'. There are over 3000 snake species in existence today, only about 700 of which are venomous (Williams, 2023). They live everywhere except Antarctica.

Due to their ecological importance, snakes have taken up space in the ecosystem in order to maintain balance with other species. Often recognised for their predatory tendencies, snakes have evolved to adapt to the unpredictable environment and can now adapt to the new kinds of food and shelter. Since they no longer pose a threat to humans or cause conflicts between humans and wildlife, snakes have migrated over time and are now observed in captivity, changing the dynamics of the new environment. The snakes in captivity now draw a parallel with the human empire and thus it is essential to see the rhymes between the snakes and the human world.

Snakes in captivity must be handled appropriately. Putting the snake at ease is the first step before handling it. Avoid handling a snake immediately after feeding it, as this may cause it to regurgitate its food (a highly stressful event for snakes). It is recommended that you depart the snake 48 hours after feeding it. When handling hatchlings, exercise extreme caution because they are easily bruised if pressed. It is important to wash hands before and after handling.

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(1.1 Handling of the snake)

Building a Snake Enclosure

Determining what the ideal enclosure temperature should be is crucial when creating a habitat for the snakes. Will the species be active at all time? Do the snakes desire to ascend? Prior to designing the enclosures, it is imperative to comprehend the fundamental factors that should satisfy the snakes' physical and psychological requirements.

Primarily prevalent in tropical areas, they are recognised for their cold-blooded nature. Several kinds prefer the warmth, and snakes frequently bask in order to stay warm. On the other hand, snakes that are used to chilly environments can be provided with adequate warmth. Dwelling into the size of the habitat, it is ideal to keep the size of habitat of approximately 10-20 gallons for juveniles and approximately 20-40 gallons for adult species. The snake's size and rate of growth must be taken into account when designing the enclosure.



(1.2 The optimal arrangement for a snake enclosure)

The enclosure's width can be as much as 40 cm, its height can be as much as 35 cm, and its depth should not be less than 30 cm. The optimal dimensions for an adult species are 70 cm in width, 40 cm in depth, and up to 50 cm in height. It should be designed in such a manner that it resembles the true wild environment, and the snakes should be able to move freely. Snakes feel more secure when they are able to conceal themselves in tight fitting spaces. To allow the snakes to enjoy burrowing and hiding within, a thick layer of bedding can be included during the design. You can add up to two inches of soil and can use aspen bedding as well. It is essential to replace the substrate entirely every few weeks and to eliminate any filthy areas as soon as they are spotted. Before putting in fresh bedding, make sure the enclosure is thoroughly cleaned and disinfected.

The Ideal Temperature

As species, snakes have evolved to be ectotherms, or creatures that adjust their body temperature to match the environment. It is crucial to choose the right heating form and temperature for them after giving it considerable thought. The enclosure's optimal temperature can be found at either 21°C or 70°F on the colder side or 35°C or 95°F on the hot end. Heat mats or lamps can be placed on one side of the enclosure to allow snakes to choose whether they want to bask or not. The heating light inside the enclosure should never be placed close to the water source.



(1.3 The snake is basking under the heating lamp)

Humidity requirements vary depending on the species, but the optimal levels are 40–50 kelvin. Typically, the humidity benefits snakes throughout their skin-shedding process. The humid area must have adequate ventilation, and the snakes should have a suitable hiding place or hide box. There are a variety of hides available in these humidity shelters for both the warm and chilly seasons. The water dish should be positioned at the cooler end of the enclosure, and it should only be partially filled to reduce the likelihood of spills.



(1.4 Placement of thermohygrometer)

Enriching the Enclosure

The enrichment process ensures that diverse enrichment programs foster natural behaviour. One of the best ways to encourage the snakes to engage in some of its natural digging behaviours is to provide them with a beautiful digging space within their enclosure. It is possible for snakes to become uninterested, and when that occurs, you may observe undesirable consequences such as altered behaviour or even disease. It is advisable to create foraging areas, puzzle feeders, and even modify the entire décor of your snake's enclosure. Providing semi-arboreal and terrestrial animals with plenty of climbing opportunities is a great technique for supporting muscle mass growth in order to nurture a healthier creature.



(1.5 The physical enriching process is aided by the wood logs placed in the enclosure.)

It is essential to clean and replenish the water dish once a day. Also regularly do visual inspection of snakes. Ensure to make sure the right humidity and temperature are being kept, eliminating any residue or stains. Make sure you remove the shed skin. Check that the weight of the snakes is taken (if needed), the enclosure has been disinfected, and that the snakes are physically inspected once a week. Perform a thorough cleaning and replacement of all substrates once a month.

Keeping the Snakes Healthy

The snakes retain their health when you provide them with a stress-free habitat, the right temperature, and regularity. A snake is considered healthy if it is active, attentive, has clean eyes (except from when it sheds), eats frequently, maintains a healthy weight, has smooth, supple skin, sheds its skin in whole sections on a regular basis, and is free of ticks and mites.

Every seven days, provide food to snakelets. Feed mice or chicks roughly equivalent in size to a snake's girth. The fully grown up snakes typically eat once a week or once every two weeks. Avoid feeding during shedding process. The majority of snakes that consume defrosted rodents can also be provided with chicks.

Common symptoms of an unhealthy snake include hard breathing, bubbles coming from the mouth and nose, difficulty in shedding, frequent or infrequent shedding, vomiting or regurgitating, lethargy or reluctance to eat, abnormal faeces, bumps or spots on skin, red or pink skin colour possibly indicating systemic infection, and some swelling.

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