An_Hand_Ep023_200407

# Containments for Turtles, Snakes, and Lizards

Our topics for this week are enclosure needs specific for:

- Chelonians (turtles and tortoises)
- Snakes
- Lizards

## Turtle or Tortoise (Chelonians) Containment

The most common turtles kept in captivity are red eared sliders, painted turtles, and box turtles. Red eared sliders and painted turtles are primarily fresh water turtles, while box turtles are primarily woodland dwellers, terrestrial turtles. All tortoises are terrestrial. Turtles can usually be housed together with the exception of some territorial males.

Enclosures for chelonians may be glass aquariums or plastic boxes made for general storage. Opaque sides will reduce stress to the turtle and aid particularly in the first week's adjustment period to a new containment. Handling should be avoided when possible during the first week in a new containment. Tortoises need to be kept in pens. Pens should have buried wire mesh to prevent digging out and to provide additional protection from dogs.

A terrestrial turtle should have an enclosure at least six times as long and six times as wide as the turtle's shell. Aquatic turtles should have enclosure space at least 5 times as long and three times as wide as its shell. The height of the enclosure should be sufficient to prevent the turtle climbing out. Water for terrestrial turtles should be provided in a shallow bowl no deeper than the height of the edge of the upper shell (carapace).

A swimming area should be provided at one end of the enclosure and a basking area at the other end. The pool water should be maintained at 70-75$^{o}$F with the use of a submersible aquarium heater. The water should be changed daily. Aquatic turtles prefer to defecate in the water so used water must be discarded carefully due to possible disease agents, such as *Salmonella* being in water. Sinks used for food preparation or personal hygiene should not be used for disposing of the used pool water.

A hiding spot for turtles can be provided with a hollow log, artificial vegetation, and other underwater objects as hiding spaces. Terrestrial turtles should have deep substrate for burrowing, hide boxes, or heat-treated bark. Small rocks and sand may be used a substrate for digging. Absorbent substrate might harbor intestinal bacteria from the pool water.

Containment of aquatic chelonians is the most labor intensive of all reptile enclosures. Water needs to be as deep as the width of the turtle's shell, and the bottom should be at least four times the width of the shell. A dry basking area is needed in addition. The water temperature must be maintained within the range tolerated by the species, usually 75-85F. Water filters and separate feeding enclosures are helpful but do not eliminate the need for frequent cleaning of the aquarium and replacement of the water.

**Snake Containment**

Appropriate enclosures for snakes vary widely because, depending on the species, the snake may be burrowing, arboreal, or semiaquatic. Snakes that need higher humidity should be kept in glass or plexiglass tanks with adequate hiding areas to relieve stress of threatening activities that might go on outside the transparent walls. Enclosures should have tightfitting lids and free of sharp protrusions. King snakes must be housed alone since they will eat other snakes.

Minimal size of the enclosure should be at least the length of the snake. Adult snakes should be in at least the size of a 30-gallon aquarium with a secure lid to prevent escape. Rough rocks or branches should be provided to aid in shedding. Substrates are play sand for burrowing snakes, and newspaper, brown packing paper, indoor/outdoor carpeting; or aspen shavings for surface dwelling snakes, including semiaquatic snakes. All snakes should have access to a large and heavy enough bowl of water to permit them to soak their entire body to aid in shedding. Arboreal snakes need branches or platforms sturdy enough to easily support their body weight to climb on. Hide boxes should be placed at each side of enclosure so the snake will not limit its movement due to stress of being in the open.

Snakes should be fed in a separate container than their main enclosure. They may strike at anything that is within reach if excited about being fed. The lid of the feeding box can serve as a shield while presenting the food, e.g., a thawed frozen mouse, in the feeding enclosure. Any uneaten food after 12 hours should be removed. Feeding enclosures should not contain substrate to prevent accidental ingestion and resulting impaction.

Snakes only have one fully functional lung, the right lung. The left lung is vestigial or absent. Their containment must be kept clean to reduce the risk of lung infections. They cannot cough to clear their lungs of exudate.

**Lizard Containment**

The most popular lizards kept in captivity are the bearded dragon, leopard gecko, uromastyx (uros, spiny tailed lizard), blue tongued skink, and green iguana. All but the iguana and gecko are terrestrial lizards from arid or semiarid environments. The iguana and gecko are arboreal from tropical forests. Many male lizards (geckos, water dragons, bearded dragons) are territorially aggressive and must be housed alone or with females.

Smaller lizards require at least 20 to 50 gallon enclosures depending on species age, size, and number of individuals. Small lizards should have at least 12 X 12 inches and 16-inch high enclosure or at least four times the width and four times the length of a smaller lizard should be provided for an enclosure. Small terrestrial species can be maintained in glass aquariums or plastic bins with screened or ventilated tops

Large lizards, i.e., iguanas, need an enclosure at least 80 X 60 inches and 60 inches high or at least as tall as the lizard, including its tail; a depth of 2/3 the lizard's length; and a width of twice the length of the lizard. The minimum size enclosure for a young iguana is 50 gallon aquarium. Enclosure requirements will increase with growth of the lizard. Enclosures for all lizards need tight lids to prevent escape. Glass tanks are acceptable for small lizards, but larger lizards need hand-built structures.

Arboreal species (iguanas, anoles, chameleons, and some geckos) require branches and perches to climb on. Arboreal lizards need good air circulation and should not be enclosed in solid wall enclosures. Mesh sided closures should rather be used.

Arid and semiarid origin lizards should be provided with full spectrum UV light (UVA and UVB). The resting end of the enclosure should be about 80°F during the day and the basking area should be 90°F to 100°F, or higher for uromastyx. Light sources should be mounted outside the cage and 18 to 24 inches above a basking surface. Adding peat moss to the hide box and spraying it with water daily can add moisture that aids with shedding. If more than one lizard is in the same enclosure, each needs its own hide box.

Water bowls should provide lizards a means to climb out of the bowl if they go or fall in. Some arboreal species need water from leaves which requires misting of the leaves daily.

Now, let's recap the key points to remember from today's episode:

- **Aquatic turtles are a significant risk for Salmonellosis in handlers**
- **Snakes should be fed in a separate feeding containment from their normal containment**
- **Arboreal lizards should be contained in mesh wire sided containments**

More information on animal handling is available in my book, *Animal Handling and Physical Restraint* published by CRC Press. It is also available on Amazon and from many other fine book supply sources.

Additional information is available at www.betteranimalhandling.com

Don't forget serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.