

Interpreting Snakes

This workshop is for DPR staff only.

No pre-requisites

Materials Needed:

Herpetological Study Sites to visit

Live snakes

Snake handling tools: tongs, snake stick

Snake transportation containers: bags, boxes, and coolers

Snake enclosures for short-term care: plastic Rubbermaid type containers with appropriate husbandry accessories such as newspaper type bedding, water source, and food

Objectives:

Participant will . . .

- ☐ learn general and species-specific information for use in programs including biology, natural history, natural behaviors and reptile conservation.
- ☐ visit study sites and learn about research and monitoring methods and how to incorporate these sites into programs (ie. drift fences, mark and recapture, cover boards).
- ☐ become familiar with Interpretive Program Guidelines and use knowledge gained from this workshop to meet these guidelines in their own programs
- ☐ learn safe capture and release methods for snakes to be used in programs.
- ☐ learn the dos and don'ts of short-term snake husbandry.
- ☐ learn several techniques for using live snakes in interpretive programs including which snakes should be handled, how to handle snakes, how to approach people with snakes and how to display snakes for the audience that should not be handled.
- ☐ Learn effective and safe program techniques to get the public in the specific snake habitats and to see where they live and possible "wild" snakes

Natural History and Behavior

Include interesting snake facts for general and species specific. Venom toxicity will be covered for venomous snakes. Snake behavior will be covered for many snakes. Other interesting facts will be covered as well. Natural history, conservation measures and habitats will also be covered. Species of Special Concern, Endangered will be covered (Southern hognose, Northern pine snake, Pigmy rattlesnake, Timber rattlesnake, Eastern diamondback, Eastern coral snake, and subspecies Carolina water snake, and Outer banks king snake).

Interpretive Program Guidelines on Use of Live Animals in Interpretive Programs

The guidelines state the following:

Native cold blooded vertebrates . . . are acceptable as program aids providing proper care and maintenance is provided, and the animals are kept for a time period not to exceed 30 days. . . . Any animal kept in this manner shall be released into the appropriate habitat as close as possible to the area from which it

was originally captured. No live rare or endangered species will be maintained as exhibits. The use of live poisonous snakes as programming aids is prohibited without prior written approval from the Director. . .

This workshop will address every point listed in the guidelines concerning reptiles and more. This workshop is basically a “how to” meet these particular guidelines as well as additional information. Proper care and maintenance information as well as working examples will be provided. The time frame of 30 days will be stressed. Not only is the release of animals covered, but also safe capture methods. The non-use of rare, endangered or venomous snakes will also be covered due to conservation and safety concerns.

New guideline recommendations from the I & E Council will be covered including documentation of captured snakes (dates, husbandry).

Appropriate Live Snakes for Use Programs

Almost any snake can be used in a program, but some snakes are usually more docile than others when trying to handle. Some snakes usually perform great for a program while other species will almost always be a handful. The following snakes are recommended for use in programs and can many times be handled during the program:

- 🐍 Eastern King Snake - After a short period, an Eastern King Snake will usually become quite docile.
- 🐍 Eastern Hognose - Some snakes like the Eastern Hognose have defense mechanisms that are very interesting to observe during a program. The Eastern Hognose will usually flatten his body and hiss when disturbed, and will sometimes play dead. This usually works only one or two times and then the snake becomes accustomed to being handled.
- 🐍 Rat Snakes (Black, Yellow, Red) – After a short period and handled correctly, the rat snakes will usually perform well. They might tend to move quite a bit, but usually not too much to handle.
- 🐍 Other small snakes – Brown snake, worm snake, earth snakes – These snakes are usually small enough to handle and a good example of a small adult snake.

Some snakes such as Black Racer will usually not calm down and try to bite while being handled. These snakes, if you are not proficient and comfortable handling can be viewed best in a clear container during the program. Other snakes, such as many of the water snakes are also known for musking and defecating when disturbed. If you are in an outdoor area, and do not mind the mess, this may still be an option, otherwise you may want to avoid using these snakes in programs, or again use a clear container where the audience can see the snake without being handled.

Handling techniques: Display handling techniques with the participants. Support as much weight as possible without clamping down. Control the head. Disinfect hands between snakes to prevent parasite transmission and reduce odors (especially if handling king snake and then another type of snake). Refrain from handling snakes in the shedding process as this can injure their skin while it is in a fragile state leaving it vulnerable to infection.

Capture and Release

Cover safe methods of capture for snakes. Positive ID that it is not a venomous snake is critical. Snake sticks and tongs are nice to have and can work well for capturing snakes, but be careful not to harm the snake. Approaching snakes from the rear and grabbing towards the rear of the body, but not the tail can be an effective method with some species. Be aware that many of our snakes, especially our restrictors, have the strength to pick up their head and body to where you are holding. Placing an open hand directly over the head and main body mass of curled snake can be an effective way to pick up a snake from a bag or container. Display the different techniques. Always release snakes in the exact location that you found them. Adult snakes of most species cannot tolerate translocation.

Short-Term Husbandry

Keep it simple. Rubbermaid type containers with newspaper in the bottom and fresh, clean water are adequate for almost all of our native snakes. If kept indoors, room temperature is usually adequate for our healthy native snakes. Snakes do not need large amounts of food. If you intend to keep the snake a short period, feeding is usually not a necessity, but should be offered. If you do feed, freeze any food and thaw before feeding to prevent passing additional parasites to the snake. Virtually all adult snakes caught in the wild will have parasites. It is important to clean the enclosure promptly after defecation to prevent parasites from “building up” within the enclosure. No “natural” items are needed (rocks, sticks or soil from the “wild”). This can also lead to unnecessary parasites in the container. This can lead to a sick snake, usually dehydration and death. Mites and Ticks can be a problem, but can be treated fairly easily and inexpensively. Be careful housing wild capture snakes near any “pet” snakes due to transfer of parasites (intestinal, mites, ticks, etc.).

Alternatives and/or Additional Techniques to the Use of Live Park Snakes

Cover the use of captive bred snakes, outside presenter bringing snakes, loan of snakes from nearby education centers, etc . . . Also discuss and demonstrate methods of taking people into snake habitat and learning where snakes live and their natural behaviors. Use snake items such as a snake shed (can laminate).

Herpetological Studies

Discuss current study taking place at the park. Visit the drift fence sites and cover board sites. Also talk about other monitoring and research methods (mark and recapture, cover boards, etc.).

Resources:

[A Field Guide to Reptiles & Amphibians of Eastern & Central North America \(Peterson Field Guide Series\)](#) by Roger Conant, Joseph T. Collins, Isabelle Hunt Conant (Artist), and Tom R. Johnson (Artist)

[Reptiles of North Carolina](#) by William M. Palmer, Alvin L. Braswell, and Renaldo Kuhler (Hardcover - Sep 1995)

[A Guide to the Snakes of North Carolina](#) by Michael E. Dorcas (Paperback - May 20, 2005)

[Snakes Of The Southeast \(Wormsloe Foundation Nature Book\)](#) by Whit Gibbons, Michael E. Dorcas, and J. Whitfield Gibbons (Turtleback - May 23, 2005)

Field Component Note:

There is a field component to this workshop. Participants will visit drift fence and cover boards sites and also some of the different snake habitats to discuss how to utilize such outdoor places in programs.

AIT: Category 2 (Interpretive Skills)

EE Certification: Criteria III