

THE FORKED TONGUE

THE MONTHLY NEWSLETTER OF THE GREATER CINCINNATI HERPETOLOGICAL SOCIETY

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www.cincyherps.com

September 2006

The Editor's Den

This Forked Tongue features articles on conservation efforts of the Lake Erie Watersnakes (LEWS).

Calendar of Events

December, 6 2006 - Annual Holiday Meeting at Ryan's Steakhouse in Erlanger KY.

January 3, 2007 - Monthly meeting featuring Jason Folt speaking on Adventures from Snake Road.

February 7, 2007 - Monthly meeting featuring Phil Peak and Will Bird speaking on Snake Conservation in Kentucky.

Artificial Hibernacula

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www.respectthesnake.com.

Hibernacula, hibernaculum, hibernation site, overwintering site, refugia, den - All of these words are used to describe the places where many snakes spend the cold months of the winter and at times, the extreme heat of summer. Hibernacula can range in form from natural structures such as caves and sinkholes to man-made structures such as foundations, crawl spaces and garages. Although seemingly very different, these structures have one thing in common; they provide a thermally stable place for snakes to hide while the temperatures are too extreme for activity.

Because they are ectothermic animals, snakes are vulnerable to excessive temperatures, both hot and cold. When the temperature reaches levels outside the snakes' comfort zone, its response is to seek shelter. In the fall, when temperatures start to drop, most people refer to this behavior as hibernation. In August of 2006, members of The Ohio Division of Parks and Team Snake constructed two artificial hibernation structures for the Lake Erie Water Snake at the Middle Bass Island State Park.

These structures will hopefully provide hibernation habitat for LEWS and other snake species residing within the park and marina. The hibernacula are just a

portion of the beneficial aspects for Lake Erie Watersnakes (LEWS) the ODNR has included within their plans for development.

So just how does one build a snake "hibernacula"?

The MBISP hibernacula were modeled after similar structures built in southern New Jersey by other snake researchers, but with a few modifications.

Construction begins by digging a hole approximately 6' deep and 10' x 10' in size. Large rocks are placed at the bottom of the hole to create crevices that the snakes can utilize.

Several pieces of flexible drain pipe fitted with "T" shaped pieces at the terminal ends are placed among the rocks within the structure providing entrance. The pipes also had 2" holes cut into the sides along the entire length of the pipe to provide snakes multi-level access. More large rocks, small logs and left over pieces of drain pipe are carefully placed and piled creating a multi-layered shelter. In the case of the MBISP hibernacula, recycled pieces of concrete were also used from an old septic tank the park had planned to remove. Smaller rock rubble is then piled on top and a piece of filter fabric is laid over the structure. The fabric is covered with approximately 2-3' of sand and dirt while leaving the ends of the flexible pipes uncovered. As a final step, the entrances are surrounded with more pieces of small rock to reduce erosion.

In late October, after the snakes have moved to where they plan on spending their winter, the hibernacula will be surrounded with a "snake barrier" made of silt fencing and small snake traps. As snakes begin to emerge from hibernation in the spring of 2007, the structures will be monitored to determine whether any snakes have successfully spent the winter within the hibernacula.

Special thanks to those who helped in the planning and construction of these unique structures.

Watch this site for updates on their future success!

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Radiotelemetry of the Lake Erie Watersnake

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www.respectthesnake.com.

In July of 2000, the project: Hibernation, Seasonal Activity, Movement patterns and Foraging Behavior of Adult Lake Erie Watersnakes was initiated by Rich King, Kristin Stanford (Northern Illinois University) and Doug Wynn (Westerville North High School). The primary goals of this project were to obtain information on these little known aspects of LEWS biology utilizing radio-telemetric observation. Of special interest was the location of hibernation areas in relation to the shoreline as well as the duration watersnakes used these sites in order to update the management and construction guidelines recommended by USFWS.

So just where do you stick a transmitter on a snake???

Actually, we put them inside the snake's body! All of our transmitters are surgically implanted by a veterinarian or skilled professional. Snakes are placed under anesthesia while we perform the surgery. A small incision is made toward the beginning of the lower third of the snake. The body of the transmitter is inserted just under the rib cage of the snake and attached to a rib. The 8 inch long antenna is placed just under the skin running toward the head. We use transmitters lasting between 1-3 years which vary in size (longer lasting transmitters are larger) but can typically be described as being the size of a AA battery. Following surgery, snakes are stitched up and allowed to recover in the lab for three days before being released back where they were initially captured. Over 60 Lake Erie watersnakes were surgically implanted with radio-transmitters on 5 islands (Kelleys, South Bass, Middle Bass, North Bass and Gibraltar) between July of 2000 and June of 2002. Initially, snakes were located almost daily. However, when the number of snakes increased, we attempted to locate them about twice per week. Over the course of the 3-year study, we learned several interesting things about Lake Erie Watersnakes.

Amount of Shoreline Used: By tracking snakes several times per week during their active season, we were able to determine the average amount of shoreline snakes used during the active season.

We found that 75% of snakes are using about 440 meters (about 1/4 mile) or less of shoreline during the summer months and additionally that 75% of LEWS stay within the first 13 meters (about 45 feet) of shore. Neither of these variables was found to differ between

males and females.

Timing of Hibernation Activity: In order to determine the approximate duration LEWS were utilizing hibernation areas we calculated mean dates for both entrance into and emergence from hibernation sites. The dates of entry into hibernation ranged from mid September to mid October. When these dates are compared with the mean daily air temperatures, the data suggests that snakes begin entering into hibernation when the mean minimum daily temperature falls below 60 degrees F. Additionally, the entrance into hibernation is typically completed by the time the mean maximum daily temperature fails to exceed 60 degrees.

LEWS begin their emergence from hibernation in the spring from late April to late May and again were compared to the mean daily temperatures. Snakes begin their emergence from hibernation when the mean maximum daily temperature first exceeds 55 degrees F and are typically finished with their emergence when the mean daily minimum temperature exceeds 57 degrees F.

It should be noted however, that snakes can and do emerge from their hibernation sites to bask on warm days. Typically, they do not venture far from their refuge and only surface briefly to take advantage of warm temperatures.

Hibernation Sites: Over the course of the study we were able to locate 50 hibernation sites for LEWS using data from 49 snakes. All but 1 snake utilized the same hibernation location (within 10 meters or less) in successive years. However, it should be noted that this snake failed to emerge from hibernation the following Spring indicating that she may have died prior to being able to move to her hibernation site.

For some snakes, hibernation sites were located directly inland from the shoreline occupied during the summer. However, for other snakes hibernation sites were located adjacent to shoreline that was not within their summer active areas. In addition, we found that even though these snakes moved out of their active area to hibernate, they did return to the same site the following spring.

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Classified Advertising Policy

GCHS Members may run a free classified ad of 7 lines or less at no charge for an unlimited time; however, the ad will be canceled after one month unless the editor is informed to continue it. Please include scientific names for the animals with your ad as well as your phone number and area code. Ads of up to 7 lines for non-member are \$2 per issue; ad charges for items more than 7 lines long are as follows:

Business card size	\$3 per issue
1/4 page	\$6 per issue
1/2 page	\$10 per issue
Full page	\$20 per issue

The GCHS is not liable for the quality of the merchandise advertised. The Society also reserves the right to refuse any ad considered inappropriate.

Requirements for Submitting Articles to the Forked Tongue

Articles can be submitted via 3.5" floppy disk or hard copy to Editor, GCHS 11470 Gatch Hill Road, Aurora, IN 47001.

Articles may be e-mailed to Grady Calhoun at gradycalhoun@earthlink.net.

Black and white photographs can be included with articles. Photo submissions should include your name, phone number, and description of photo on the back. Photos can be returned.

All time dependent submissions must be in the editor's possession no later than the meeting previous to the publication.

Classifieds

Rats and Mice for sale. Reasonable price. Call Jesse or Tom (513) 876-0579.

For Sale: 75 gallon aquarium including freshwater filter system, lighting, hood, all accessories, fish, solid pine stand. Excellent condition. Asking \$400 OBO. Please call Erin at 513-471-2950.

Discount: A 10% discount is offered to all card-carrying members of the GCHS at *All Creatures Animal Hospital*. Dr. Dan Meakin, All Creatures, 1894 Ohio Pike, Amelia, OH 45102, 513-797-7387.

Discount: A 10% discount is offered to all card carrying members of the GCHS at Dr. Dahlhausen's Veterinary Clinic, 5989 Meijer Dr., Suite 2, Milford, Ohio 513-576-0131

(Number to left of decimal indicates males; number to right of decimal indicates females; number to right of second decimal indicates number of unknown sex. For example, 3.2.1=3 males, 2 females, and 1 unsexed specimen)

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Currently Held Positions

President	Grady Calhoun	(812) 926-1206	Vice President	Dean Alessandrini	(513) 347-0099
		(513) 564-6041	Editor	Grady Calhoun	(812) 926-1206
Treasurer	Peggy Fille	(513) 528-4452			(513) 564-6041
Sergeant-at-Arms	Bruce Fille	(513) 528-4452	Education Committee Chairman		
Advisor	Vacant		Peggy Fille		(513) 528-4452
Secretary	Kyle Becker	(513) 831-4898			

About the GCHS

The Greater Cincinnati Herpetological Society holds monthly meetings which typically consist of a short business section, a refreshment intermission, and a program related to herpetology. Both members and nonmembers are invited to attend. Membership is open to anyone with an interest in reptiles and amphibians. New members may sign up by mail or at the monthly meetings. Members receive monthly issues of *The Forked Tongue* and free classified advertising. Annual dues should be directed to the secretary at the society's mailing address, according to the rates below:

Student	\$10.00	Corresponding	
	\$10.00		
Individual	\$15.00	Sustaining	\$25.00
Family	\$20.00	Institutional	\$30.00
Contributing	\$50.00		

Why Be a Member?

Receive monthly issues of *The Forked Tongue*

- Meet individuals knowledgeable about herpetoculture
- Have access to captive-bred herps and feeder animals
- Participate in society-sponsored field trips, and outings.
- Receive a 10 percent discount on herp-related items and services when you show a valid membership card at the following establishments:

Delhi Pet Center	(513) 451-4015
Kentucky Reptile Zoo	(606) 663-9160
Harrison Pet Center	(513) 367-1115
All Creatures Animal Hospital	(513) 797-7387
Dr. Dahlhausen's Veterinary Clinic	(513) 576-0131.

P.O. Box 14783
Cincinnati, OH 45250

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