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**“Hognose Snake, Come Away From the Light!”**



*This water snake and hognose snake were the main players in a life-and-death drama at our facility last week.*

After discussing adventures with rogue snakes around the house in last month’s newsletter, I’d be inclined to avoid another snake topic for this month’s issue, but get a load of this... a serpentine near-death experience!

A quick preface concerning a snake’s sense of smell, food recognition and reasoning limitations. By and large, a snake does not recognize its food by sight as much as by smell. Furthermore, almost any snake that smells prey - worm, fish, frog or mouse - will bite at anything that moves in front of it, assuming it must be the prey. This is testament to a snake’s simple, limited and quite predictable reasoning processes. Needless to say, we need to be careful to avoid being bitten during feeding time. If one of us is bitten (and it’s really no big deal with any of the Michigan species we keep), we never blame the snake. It doesn’t know any better. We blame ourselves for not being careful enough and chalk it up as another “feeding accident.”

Most of the snakes that occupy a given tank at our facility feed on the same prey item, like mice, for instance. If we tried to feed thawed mice to our rat snakes in close proximity to one another things would get ugly. To minimize accidents we separate the snake to be fed from the others. If we don’t, two will commonly latch on to the same mouse, with neither one bound to relinquish it willingly. Another more serious scenario occurs when a hungry snake smells prey on the mouth and head of a snake that has just eaten. Despite living around and on top of one another day in and day out, a snake will grab its tank mate’s mousy-smelling head as if it is the actual mouse, then refuse to release until the other struggles free. The result is usually no more than a small scratch or two. However, if a snake mistakes a smaller tank mate as food and grabs hold, there is a real possibility the smaller snake will not be strong enough to pull free. The result? The smaller snake may be completely consumed!

Our last open Sunday was April 21. We had a nice turnout of about 50 - an even mix of adults and kids. At the end of the presentation about Michigan frogs, we announced that we would feed a toad to our almost-two-year-old hognose snake on the patio. Toads are the primary prey items of wild hognose snakes in Michigan. Many of the participants watched in amazement as the snake downed a toad several times wider than the width of its head.

The hognose shares a tank with three water snakes. Two are very slightly longer than the hognose and one is a bit smaller. After it had eaten, we could not simply return it to the tank. The toady odor on its mouth would stimulate the water snakes into a literal frenzy for food along with the strong likelihood of their biting its head. We tied it in a pillow case until the following morning. This way, it could start to digest the toad in peace, and the odor would dissipate by the following day. The following morning, my son returned the hognose to its tank before he left for work. Carol and I were working in the yard. Nearly an hour later, Carol entered our classroom and did a double-take as she passed the tank. One of the water snakes lay inside the glass, so bloated it appeared ready to pop. She quickly scanned the rest of the tank to confirm what happened. She opened the door and yelled the news to me. We were mortified at the loss of such a beautiful specimen, and, at the same time, amazed that a snake could completely consume another that was nearly its own size. This was our only hognose snake, and, since the species does not occur around Mid-Michigan, we would need to search elsewhere in the state to find another.

We discussed the realization that the hognose could not have been in the water snake's belly for very long. Could it still be alive in there? What did we have to lose?

We pulled the bloated water snake out of the tank and put it on the floor. While Carol firmly held its tail I started behind the lump and began to squeeze forward, not unlike the process of getting the last bit of toothpaste out of the tube. Since snakes, of course, have a spine, I purposefully concentrated on squeezing my fingertips into the belly side rather than into the back. As the elongated lump moved forward, the water snake struggled to get free. Wet feces smeared the tile and the signature musky odor of "upset snake" filled the air.

As the lump advanced, the snake's neck began to widen. Its mouth involuntarily began to gape. The tip of the tail emerged, then more, a centimeter at a time with every forward palpation. Suddenly, when several inches of the hognose snake had emerged, the water snake's gag reflex finally kicked in. It stretched its mouth widely and the rest of the hognose snake's body was expelled in a single fluid slide.

I returned the water snake to its tank. Carol picked up the hognose. Its limp body hung from her hand like a wet, spotty noodle. Our hopes began to fade. She brought it to the sink and began to rinse the clear slime-coating away.

I ran in the house, called Cedar Creek Veterinary Clinic, and quickly explained the situation to Dr. Wayne Beasley, emphasizing that it had been in the water snake's belly for less than an hour. I asked if he had any tips for attempting to resuscitate it in case there was some chance it was still alive. "Mouth to mouth," he said, deadpan. I waited for a laugh to follow, but apparently his tongue was no where near his cheek. "Treat it just like you would to a person who's not breathing," he stated matter-of-factly.

I barely had time to wrap my mind around this when Carol called from the classroom. "I just saw its head move!" I told Dr. Beasley I'd call him back to let him know how things transpired.

As Carol cradled its body in her hands, we saw it weakly attempt to lift its head once more. If you watch a healthy snake's sides around the front third of its body, it only takes a few seconds to notice respiratory expansion and contraction.



*Fresh after a toad meal and preparing to shed its skin, the hognose digests comfortably in temporary isolation from the water snakes with which it normally shares living space.*

The hognose's sides were perfectly still. Surely there was something we could try before resorting to mouth-to-mouth!

I grabbed a pair of hemostats, gently pushed the closed tip into the corner of its mouth, then, spread them to force the snake's mouth open. The instant I did, its sides heaved outward, then in, then outward again! I held its mouth open in this way for another several breaths, then eased the hemostats away. Its mouth closed... and breathing continued! Carol cradled the snake, and, yes, talked to it. With each passing minute, its strength and movements increased. Within thirty minutes, we never would have known by its behavior that our hognose just survived a near-death experience!

The snake is again sharing the tank with the water snakes. We're positive there is no danger that the same water snake would try to eat it again – as long as it doesn't smell like toad, that is.

On Tuesday morning, Stepping Stones Montessori's lower elementary classroom came here for a field trip. They marveled and learned as the hognose swallowed its next meal – another toad that you'd swear was too big. We learned our lesson, too. It remained comfortably housed in its own temporary tank for an extra day. When we eventually reunited it with the water snakes we kept a close eye on their behavior to make sure they were not acting as if they sensed any vestige of toady odor.

Would you like to see our resurrected hognose snake eat a toad? We'll feed one to it during our next open Sunday, May 19.

-Jim McGrath

### ***Catch Nature Discovery on WLNZ Radio's Coffee Break on May 16***

Jim is scheduled to appear on Thursday, May 16 at 9:30am, discussing invasive plants. The show airs weekdays from 9 to 10am on 89.7 FM. Listen live online at [lcc.edu/radio/onair/](http://lcc.edu/radio/onair/) or watch it live (or later in the day at 6pm) online at [lcc.edu/tv/watch](http://lcc.edu/tv/watch). We'll post a reminder on Facebook.



### ***Students Environmentally Engaged at Nature Discovery***

Shari Rose of East Lansing felt her 6th-grade son, Benjamin, was not being sufficiently challenged in his science class. Benjamin is now engaged in a specially-designed, outdoor-oriented lesson with us studying local ecosystems and invasive species every week through May.

Natalya Swartz is a long-time Nature Discovery student, and currently an 8<sup>th</sup>-grader at Okemos Public Montessori. As part of a community betterment project, Natalya is coordinating a small team of classmates to visit us through the remainder of the school year to help pull garlic mustard and other woodland invasives on the property.

*Benjamin Rose inspects two invasives - Amur honeysuckle and Oriental bittersweet, a shrub and a woody vine -, that are eroding biodiversity within woodland ecosystems throughout mid-Michigan.*

## Mid-May Birding

**Saturday, May 18; 7am to 1pm**

More bird diversity can be experienced here in mid-May than at any other time of the year, including our most colorful migratory songbirds. Join our intimate group of only 5 adults on a guided excursion starting at Nature Discovery then heading south to Waterloo Recreation Area. If the weather cooperates, we may encounter 70 species or more through the course of the morning! A Michigan Birds checklist is provided to each participant. COST: \$40, includes all transportation. Advance reservations required.



Black-throated Green Warbler. Photo © Steve Sage.



**Sunday, May 19**  
**1 to 5 pm; \$5 Admission**

**2pm Presentation**

***Meet the Grand Slam  
of Michigan Turtles***

The environment we've created for human convenience is devastating to turtle survival in many ways. Yet, with broad-based understanding of their needs, habits and the impact of our man-made threats, their chances to survive can increase dramatically. Here's a unique opportunity to meet, interact with, and learn about all 10 species of turtles found in the state. At 2pm, we'll present *Meet the Grand Slam of Michigan Turtles*. Beautiful Powerpoint images and up-close inspection of live specimens highlight this 90-minute seminar. Learn about classification, identification and behavior of each species as well



as specific habitat requirements, ecological relationships, and conservation issues that challenge their continued existence among us. June is "Turtle Egg-laying Month" in Michigan. Learn how to keep turtle eggs from being eaten by raccoons, how to safely move a snapping turtle off the road, and more.

After the presentation, participants can "practice" how to safely pick up and move a large snapping turtle off the road to safety. Perform a "dry run" with our large snapping turtle under our supervision! Don't forget the camera.

Feed turtles in our outdoor pools and pen. Plus so many more Michigan snakes, frogs and salamanders to view and feed. Take a guided walk on our trails during or after the program.

## Summer Camps & Classes

*In addition to summer day camps on-site at Nature Discovery, Jim and Carol are leading programs for youth in other venues, as well. Here is a list.*

### **LANSING COMMUNITY COLLEGE** (East Lansing )

**Adventures in Science** (Grades 4-5), June 24-28, 1-4pm.

**Mystery Festival** (Grades 4-5), July 8-11, 9am-12pm.

**Science with Experiments** (Grades 2-3), July 8-11, 1-4pm.

**Build-a-BOT** (Grades 4-5), July 15-18, 9am-12pm.

**Robotics & Rocketry** (Grades 6-8), 1-4pm.

**Science Wizards** (Grades 2-3), July 22-25, 9am-12pm.

**Adventures in Science** (Grades 4-5), July 29-Aug 1, 9am-12pm.

**MI Reptiles & Amphibians** (Grades 2-3), Aug 5-8, 1-4pm.

**Science Wizards Advanced** (Grades 2-3), Aug 5-8, 1-4pm.

For tuition and enrollment information, visit <http://lcc.edu/lifelong/youth>.



### **STEPPING STONES MONTESSORI** (East Lansing)

There are still openings for a special Nature Discovery day camp for 4-6 year-olds, July 8-11, 9am-12pm. Stepping Stones offers other day camps over the summer for students, 4 years of age through elementary. For tuition and enrollment information visit

<http://steppingstoneseastlansing.org/wp-content/uploads/2008/12/Summer-Camp-Primary.pdf>

### **NATURE DISCOVERY DAY CAMPS**

Several of our summer day camp weeks have reached maximum enrollment. Here are the camp titles and dates that still have openings:



**Budding Naturalists** (5-6 yrs), July 22-25, 9am-12pm or 9am-3pm enrollment options.

**Okemos Nursery School Nature Day Camp** (4-6 yrs), July 29-Aug 1, 9am-12pm. This camp, on-site at Nature Discovery has given first enrollment option to Okemos Nursery School students. It is now open to any students.

**Michigan Reptiles & Amphibians** (9 yrs & older), August 5-8, 9am-3pm.

**Insect Collecting** (9 yrs & older), August 26-29, 9am-3pm.

For more details or to enroll, visit

<http://naturediscovery.net/pdf/summercamps.pdf>.

## ***Birding Trip for Visually Impaired Still Has Openings***

Do you know a visually-impaired adult who likes to be outdoors? Opportunities Unlimited for the Blind is sponsoring a 5-day trip to the Upper Peninsula, led by Jim, June 3 through 7. The group will stop at a number of sites to and from our ultimate destination, a house on Otter Lake, near Munising. The price is only \$125 per person. Scholarships may be available. For more details email OUB Field Services Director, Donna Posont, at [donnabutterfly50@gmail.com](mailto:donnabutterfly50@gmail.com) or phone her at 313-220-8140.

## *Around the State in May*

- ❖ Wednesday, May 8: 7-8:30pm. *Michigan Snakes Presentation; Manistee Audubon Society, Manistee. Public is welcome.*
- ❖ Thursday, May 9: 6-8pm. *MI Reptiles & Amphibians Exhibit; Lansing Charter Academy Science Fair, Lansing. Public is welcome.*
- ❖ Saturday, May 11: 1:30-2:30pm. *Birding by Ear Presentation; Isabella Conservation District International Migratory Bird Day, Zübiwing Center, Mt. Pleasant. Public is welcome.*
- ❖ 1:30-2:30pm. *MI Reptiles & Amphibians Presentation. Michigan Birdathon & Nature Festival; St. Thomas Aquinas College, Grand Rapids. Public is welcome.*
- ❖ Friday, May 17 : 9am-2:30pm. *MI Reptiles & Amphibians Exhibit; Isabella conservation District Environmental Education Day, Chipp-A-Waters Park, Mt. Pleasant.*
- ❖ Saturday, May 25: 1pm & 3pm. *MI Reptiles & Amphibians Presentation; Mitchell State Park, Cadillac. Public is welcome.*

## *Climate Change Realist*

By 2050 or so, the human population is expected to reach nine billion, essentially adding two Chinas to the number of people alive today. Those billions will be seeking food, water and other resources on a planet where, scientists say, humans are already shaping climate and the web of life. In *Dot Earth*, a blog about climate change, the environment and sustainability, *New York Times* Op-Ed columnist, Andrew C. Revkin, examines efforts to balance human affairs with the planet's limits. Conceived in part with support from a John Simon Guggenheim Fellowship, *Dot Earth* tracks relevant developments from suburbia to Siberia. The blog is an interactive exploration of trends and ideas with readers and experts. Check it out at <http://dotearth.blogs.nytimes.com/>.



*Ten days ago, after several weeks of battling house sparrows (We successfully trapped three.), a female bluebird began to gather material for a nest in the box on our clothesline pole.*



*As of May 5, she already has three eggs laid. She will not begin incubating until she has laid her full clutch – usually 5 to 7 eggs.*

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Check out the new video on our Youtube channel, *Wild Williamston*

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