

THIS ISSUE

Visit Us by Appointment

Thank You, Donors

Thank you, Elisabeth!

Cedar Creek Vets

A Rescue Plan for the Planet?

Ain't Misbehavin'



From the lines suspended twenty feet over our lawn a female bluebird "eagle-eyes" the grass below her for the slightest movement of insect life.

No matter the size, the shape or the phylogenetic limb on which it perches, one of the joys of becoming acquainted with any wild creature in its environment is the awareness and actual witness to certain adaptive behaviors that may be as defining to that species as the crest on a cardinal or the blue on a racer. Species-specific behaviors are ubiquitous and, by virtue of the fact these behaviors have evolved at all, must be of some benefit to the organism's survival - whether humans, from our limited perspective, can surmise the nature of that advantage or not. The survival purpose of many behaviors come clear with extended observation and are often demonstrated in the pursuit of sustenance, territoriality and procreation. Three personal examples of note...

Hawks and eagles aren't the only birds with keen eyesight. All birds possess excellent vision. We watch the male or female bluebird in our yard "hawk" insects from the ground in an invariably signature bluebird way - by first sighting perhaps a cricket, a cutworm or a grass spider from an elevated perch, dropping down to quickly land, then snatch it, secure it within its bill, and return to an elevated perch to devour it. Although other species, like blue jays, catbirds and phoebes will occasionally glean insects off the ground in this way, the procedure is by far the bluebird's most common feeding procedure, so much so that any accomplished birder can identify a bluebird - colorless to the eye on an overcast day - all the way across a field by simply noting this behavior.

In our yard the most commonly-used perches are the multiple power lines and cables that traverse the airspace over the lawn behind the patio as well as along the side of the house to the south. It is apparent that this pair does not deem the humans that roam their breeding home range as physical threats. We marvel at how close one will land when it sets its sights on a ground-dwelling insect near where we stand or sit.

A nesting box is mounted on a post across the back lawn, the opening strategically positioned to face our patio. Currently it houses several half-grown, perpetually-hungry nestlings. For the past week since they hatched, the parents have been working overtime doing the high wire dive, securing invertebrate morsels,

then delivering them to the four gaping, pleading mouths hidden inside the box. How many combined thousands of feeding trips to the box will the parents have made before the young fledge in another week?



The father bluebird alights to snatch an insect.

As the sun slowly sinks in the western sky the house's shadow advances over the patio but the powerlines and nesting box are still brightly lit. I break out the binoculars, crack a beer and pull up a patio chair. I am able follow their separate perch-to-ground movements so closely through the lenses that I can often identify the type of insect just secured.

Sure, sometimes the mother or father will flutter groundward, secure an insect then fly back to a perch to eat it. A parent bluebird has got to keep fueling its own engine. After all, the task of feeding young starts at first light and continues to the last light of day.

The bluebirds efficiently and tirelessly go about fulfilling their parental duty in this uniquely-bluebird way. Their independent positions - on a wire, then on the clothesline pole, then from a low dead limb of a boxelder, then from some perch out of my sight – change by the minute: from the raised perch, down to the ground, *snatch*, over and into to the box (Light, desperate peeps of vying siblings emanate from within.), back out and up to a different perch, drop to the ground, *snatch*, back to the box, then over to yet another perch, flutter to the ground, and so on. The sun begins to set, but the starkly angular, varied feeding course is run relentlessly by the pair until even the topmost foliage of the tallest trees are in shadow. The air grows dusky and the first fireflies begin to flash over the lawn. Finally, their activity begins to wane. The familiar feeding waltz will recharge overnight, to be continued as soon as enough daylight allows.

A field guide may list the habitat of a particular form of wildlife but may give you no more than a few words or brief phrases to indicate behavioral traits in a generalized way. For instance, the phrase, *primary diet is earthworms and small amphibians*, on the Eastern Gartersnake page, while useful to the user, does not provide detail regarding how specifically it goes about searching for and securing the stated items.

In order to keep gartersnakes here for educational purposes we purchase live nightcrawlers but supplement as much as possible with wild-captured worms and small Green Frogs. We don't hesitate to show visitors and remote audiences these snakes in full feeding mode. We simply place a worm in front of an individual. The snake smells it via flickering tongue, then swiftly keys on the wriggling movement. While this is quite a thrilling experience for kids as well as for many adults, it is almost impossible to witness a wild garter in the active process of hunting for, then locating the prey item before devouring it. Why?



If you encounter a basking garter in a coiled posture in front of a dense shrub, at the edge of long grass or near other quickly-accessible cover, the individual is simply resting, digesting, and – if a mature female – warming the developing young within her. Approach it cautiously and you may be able to get as close as you'd like for an excellent photo. Often, however, the basking snake goes unnoticed until it decides to bail out when your step eventually violates its safe zone. A second later the snake is out of sight.

On the other hand, when a gartersnake is encountered that is *not* basking, but active in a stretched-out, mobile mien, you may have stumbled upon one that is hungry and on the hunt. Very often, unfortunately,

the observer does not notice the snake until it darts out of the way of the suddenly looming, ambulatory mammal. At this point any opportunity to observe the snake's method for seeking prey has passed. It has already transitioned from hunt-mode to flee-mode.

All of our garter snakes were once wild individuals, yet, through gentle handling mostly within myriad educational venues they've grown accustomed to all types of human proximity, movement and physical contact. These snakes have no fear of people, and are therefore completely docile when handled properly.

How would it react if we were to take a gartersnake outside and place it on the lawn? Would it suddenly sense freedom and take off? No. For instance, with multiple family members here on a visit we can place the snake on the ground and participants can watch it move in a calm manner in any direction it chooses to explore. After several minutes of observation anyone can calmly approach the snake and lift it off the lawn. It feels no urge to evade the hand.

Upon closer inspection over several minutes it becomes evident that one of our gartersnakes on the ground at your feet is, in fact, doing much more than randomly exploring. Stoop, sit or even lay on the lawn to get closer to its level. Far from becoming alarmed it will continue its movements the same as would any wild one *when you aren't there*.



The tongue flicks and waves at an increased rate. The head tilts downward often, as it stops to “smell” a particularly interesting odor beneath its chin. The snake resumes its deliberate forward motion, perhaps drifting to the right or left. With the next stop-and-smell incident it nuzzles its nose out of sight among the roots, raises its head and continues on its way. It repeats the procedure a half-minute later, nuzzling its nose deep among the roots. Suddenly its body tenses, then pushes forward. It tugs once, tugs again, then tugs a third time. Its head snaps out of the grass, the back half of a thin, dirty worm squirming out of the corner of its flexible mouth. The worm is swallowed in the blink

of an eye. This was a mere morsel for the snake, but there are many more to be had in this productive foraging habitat, so it immediately resumes the behavior it has been evolutionarily-wired to perform.

Since a typical public school education is not likely to enlighten students about turtles any further than the most rudimentary information (The turtle is a reptile. The turtle has a shell. The turtle lives in a pond.) it is not surprising that most adults are surprised to hear that nearly all aquatic turtles are incapable of swallowing food while out of the water. They must have water in the gullet to help slide it down.

Michigan does have one terrestrial species, the state-protected Eastern Box Turtle, which is therefore capable of eating on land. However, another state-listed species, the Wood Turtle, holds the behavioral distinction (among others) of being the only Michigan turtle that is an “amphibious” feeder. That is, it can swallow food items under water within its northern river habitat then climb the bank, enter a forest or other terrestrial habitat and feed like a box turtle.

During appointed visits here this summer we put the Wood Turtle's double-edged feeding behavior on display regularly. Visitors drop turtle food sticks into pools on our patio that feature a mix of the nine state-native aquatic species. The Wood Turtle feeds on food sticks in the company of two Blanding's Turtles, a Red-eared Slider, a Painted Turtle and an old Common Musk Turtle. Seemingly perpetually hungry, we will then pull the Wood Turtle out of the pool and let it move freely on the lawn. Almost immediately it begins grazing on grasses like a ruminant in a shell. Sometimes we will drop a fat nightcrawler on the grass. The turtle charges, then avidly clips it apart and devours it in short order.

While a family was visiting one day last week we took the Wood Turtle out of the pool to join us in the shade under our overgrown Japanese maple. While the turtle contented itself in grazing on the grass here, we took a couple of our huge Black Ratsnakes outside to show the visitors.

A few minutes later I glanced in the turtle's direction and was stunned and pleasantly surprised by what I saw. I abruptly announced to the visitors that a behavior unique to wild Wood Turtles was in progress - one that I had only read about but never got a chance to see and one that I assumed I would never witness firsthand.



In James H. Harding's field guides, *Michigan Turtles & Lizards* and *Amphibians & Reptiles of the Great Lakes Region*, he discusses casual observations of wild Wood Turtles on land in which an individual deliberately "thumps" the front of the plastron against the ground, ostensibly, the vibrations from which cause worms to surface. The turtle accomplishes this by straightening and rising up on its front legs then abruptly allowing its plastron to drop against the ground.

When my eyes first fell upon the turtle, it had been standing atop a patch of bare, moist soil in the midst of displaying this exact behavior. It suddenly turned its head to the far side of its body, briefly out of my sight and began to pick at something. It turned its head in time for me to see a small worm going down its gullet. The turtle immediately turned and began moving into a grassy patch, continuing to thump the ground, nose often down, and muzzle-ready for another surfacing worm.



A small aggregation of busy but unaggressive sand wasps has developed at the base of the brick tortoise pen outside our back door. We enjoy watching them chase one another, dig burrows, and arrive with prey to bury within. Invariably, this species' signature prey items are meadow katydids.

This proceeded for several minutes allowing me time to run into the house to retrieve my cell phone so as to record it. I will be putting a short video of the final minutes of this behavior on Nature Discovery's Facebook page.

There is something else that all three of the above behavioral accounts have in common. They require the human observer to stop and remain still over many minutes or longer. While a walk through the woods has its merits, a "sit" in the woods evinces far more behavioral discoveries - and with each one an incrementally deeper understanding of, and appreciation for the myriad dynamics of a functioning, symbiotic natural community.

Make an appointment to visit us any day through the rest of the summer. We're happy to facilitate observational opportunities to the above behaviors, and to so many more

-Jim McGrath

Individual, Family & Small Group Visits

BY APPOINTMENT

Geared specifically for the times... Individuals, individual couples, families or other small groups are invited to spend an hour or more immersed in any of an array of guided experiences outside - virtually any day through the summer by appointment at Nature Discovery. The sky's the limit as to the range of activities. Here are some ideas...

- Identify Michigan turtles up close as they swim and bask in pools at your feet. Kids *love* feeding them!
- Visit our big red-footed tortoise, Milberta, as she wanders in slow-motion around the lawn. Kids love hand-feeding her, too!
- Snakes! Meet, handle and even feed our gentle rat snakes, garter snakes, water snakes and others.
- Identify and feed up to twenty species of Michigan frogs and salamanders.
- Spend a morning identifying birds by sight and “by ear.” Take a guided birding walk around our country block, or arrange to meet at a natural area of your choice. We supply our own Michigan Birds checklist for you to keep track of the finds.
- Learn how to find and raise a huge variety of native butterfly and moth caterpillars “beyond the monarch.” Arrange a guided search around our neighborhood or yours, identifying specific food plants then searching for larvae on them.
- **VISIT US** any time throughout the summer! In fact, visits planned as often as weekly can feature a different theme or area of interest all summer long: Think *Bird Day*, *Caterpillar Day*, *Turtle Day*, *Frog Day* or *Snake Day*. Visiting kids love their time with our snakes so much that we could easily arrange more focused “snake days” such as Rat Snakes Day (lots of handling, watching them crawl through grass, climbing trees, feeding), or Garter Snakes Day (identification of 3 species, handling, crawling in the grass and feeding).

Through July and August we will not be charging a specific minimum fee so as not to exclude visitors who may be financially-stressed through these times. However, **DONATIONS ARE ACCEPTED** in light of each participating party's ability and discretion. Wondering about a “suggested” donation? Our previous base fee for such visits was set at only \$5/person/hr.



*Our sincerest thanks to those who have supported us
with generous donations throughout June...*

*Katie Blair
Alec Chirillo
Giselle Claux
Bonnie Flood
Katie Gillies
Marcia Horan
Lynette Johnson
Jon Kazsuk
Erin Kanitz
Bettie Landauer-Menchik
Katharine Merritt
Doris Moran
Dorothy Perri
Eric Petrie
Nicole Sammartino
Stacey Smith
Chantal Tetreault*



Thank you, Elisabeth!

Elisabeth Baumann of East Lansing is beginning her senior year at East Lansing High School. In addition to volunteering at Nature Discovery for the past few summers she has volunteered here this summer nearly every weekday since the end of the school year – feeding frogs, turtles, snakes and salamanders, maintaining and cleaning tanks and pools, clearing invasive growth on the property and assisting when families visit by appointment. She’s been a tremendous help! Thank you, Elisabeth!

The Official Vets of Nature Discovery!

The folks at Williamston's Cedar Creek Veterinary Clinic have been a valuable key to the continued health of Nature Discovery's huge educational zoo of Michigan-native reptiles & amphibians. Did you know that CCV specializes in the treatment of reptiles & birds? To learn more about Cedar Creek Vets go to www.cedarcreekvet.com.

Arrange an appointment for your pet, and tell them you saw it here!



**Cedar Creek
Veterinary Clinic**

A Rescue Plan for the Planet?

As our country fumbles from the top down to match what many other countries have accomplished to contain COVID-19, the much more impactful and longer-lasting destruction from fossil-fuel-driven climate change is not just going to go away "like magic" either.

Hosted by *The New York Times*, here is a "virtual event with eight speakers and one question: Has Covid-19 created a blueprint for combating climate change?"

https://www.nytimes.com/2020/07/10/climate/netting-zero-debate.html?campaign_id=54&emc=edit_clim_20200715&instance_id=20331&nl=climate-fwd%3A®i_id=97652655&segment_id=33470&te=1&user_id=e2b8dd8c9b543fb8c35d5dd30658067e

-JM



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