
THIS ISSUE

Sunday, August 16 / Feeding Frenzy

Coffee Break, August 28

Rolling Stone Reports on Climate

Effects' Point of No Return

***Meet a Weird Katydid,
a Rare Hatchling,
& Internet Snake Stars***



Having harbored a keen interest in all things wild since as early as I can remember, it is not often that I see a local insect that I've never seen before. It happened last month when my son, Glen, held up a jar with a foreign-looking katydid inside that he had found crawling/hopping across our patio. Instead of sporting the green hue of most species that helps them melt into their vegetative surroundings, this one was more brownish. A black shield along the side of its thorax was rimmed with a thin yellow border. The sword-like ovipositor jutting from the end of its abdomen told us it was a female.

After a short search through our various field guides we located and identified it in the *Kaufman Guide to North American Insects* as a Roepel's Katydid. A European species, it was introduced in New England and has been steadily making its way westward. A range map from the 2007 field guide showed the western edge of its advance near the Pennsylvania-Ohio border.

I took it outside in order to photograph it within a natural setting. I stepped into the box turtles' bricked-in pen just next to our back door and positioned it on top of a tuft of long grass. Got some excellent photos despite the settling blanket of mosquitoes, however, when I tried to return it to the jar it hopped once and disappeared into the depths of the long grass. The prospect of additional blood loss kept my attempt at recovering it brief. The specimen was gone.

I emailed the photo and an inquiry to Rufus Isaacs, a parent to one of our regular students and MSU entomologist. He forwarded it to Gary Parsons, curator of MSU Entomology's extensive pinned insect collection and director of MSU's Bug House. Parsons had never seen the species, either! In fact, it was absent from the MSU collection, as well. I told him that if it turned up again, I'd secure and donate it.

A week later, our assistant, Andrew, noticed a grasshopper jump across the floor of our nature center. This, in itself is never surprising since we leave the back door open while working on any summer day, and since we are netting hundreds of insects daily to bring inside and feed to our many Michigan frogs. He grabbed it and said, "Hey, isn't this the katydid you photographed last week?" Sure enough, it was back! As I was getting it into a holding jar I did a double-take. This was not the same individual after all. The multiple, shorter, sharp projections at the end of the abdomen confirmed it to be a male. I photographed this one, then contacted Parsons again to make arrangements to deliver it.

While mowing the lawn next to the turtle pen the very next day, my eye caught something appropriately-sized jump a few feet out of the way of the advancing mower. Could it be? I quickly stooped and scooped it up. A (the?) female Roepel's! At the end of the work day a few days later Carol and I met Parsons at Reno's East to make the drop.

Parsons had done some further Michigan-specific investigation and found recent photographs on Bugguide.net (a great insect identification source!) from Ishpeming, Sturgeon River, Ann Arbor and Howell. I submitted our photo to Bugguide, as well. This is almost certainly the first official Ingham County record. Most likely, coming soon to a rural backyard near you...

We met Ken Dudley, a retired physician and turtle aficionado, while exhibiting our Michigan reptiles and amphibians at Ludington State Park's beach house last summer. He was especially captivated as he watched our three-year-old male (apparently mature now) relentlessly swimming after and "shell-riding" a similar-sized young Blanding's turtle in our small display pool.

The Blanding's is Michigan's only other turtle with a spotty pattern on its carapace. The pattern, however, is much more profuse with speckling than on the Spotted Turtle. Since our male showed no amorous intentions with its other pool mates, we assumed it was keying on the spots, and wrongly assuming the Blanding's was another of its species.



This precious little state-threatened Spotted Turtle hatched here on July 28.

Dudley has been breeding Spotted Turtles for decades. He would breed a few adults he owned then sell the hatchlings. (Since this is a rare turtle throughout its range in the Eastern U.S., I'm sure he was able to sell them at a good price. We paid a Florida breeder close to \$100 for ours as a hatchling.) He said he only had two old females and one old male remaining, and that he had been entertaining the idea of giving up the breeding business. Then, his male died. With only the two females remaining, the decision had gotten much easier. That fall, he delivered them to us. We were surprised both had plain, dark, virtually unspotted carapaces. Apparently, the spots fade on old ones?

It took a while, but our, now four-year-old, feisty, young male eventually figured out they were females of his species. At different times we observed copulation. Each female eventually laid two eggs. The first took us by surprise and laid them in the water of the community pool they share with other similarly-sized turtles. We found one bitten open. We tried to incubate the other but it never hatched. The second female's eggs were laid safely in substrate. One egg eventually began to cave-in, indicating that the contents had died. The other just hatched last week. It began eating its first food a few days ago.

We're thrilled at the relationship that has blossomed over the years between Nature Discovery and the State of Michigan. Every April the DEQ contracts us to exhibit our state-native reptiles and amphibians at their huge, annual Earth Day celebration at Constitutional Hall in Lansing. The DNR uses Nature Discovery's Michigan-specific programs, presentations and exhibits in various state parks as well as at special events like Detroit River Days each summer. We just presented to an audience of over 100 at the grand opening of the DNR's Outdoor Adventure Center in Detroit. We have also presented and exhibited for the DNR's volunteer-based Frog & Toad Survey, as well as for their up and running volunteer-based Michigan Herp Atlas Project (visit www.miherpatlas.org). Next week we will be co-presenting on Michigan frogs with DNR Non-game Biologist and Survey Coordinator, Lori Sargent, at the Wildlife Division's annual conference. Here, we will give state biologists an unprecedented opportunity to see live specimens of all 13 state-native species.

Early this spring DNR Wildlife Education Technician, Hannah Schauer, contacted us about becoming involved in a new public outreach internet project regarding Michigan snakes. She and Wildlife Division Web & Social Media Coordinator, Eric Hilliard, visited our nature center and shot video footage of most of the species on hand to use for a series of one-minute Youtube videos to be released, one species at a time, over the course of the following year.

Schauer says, “The Michigan DNR’s *60-Second Snakes* video series talks about identification tips and information about Michigan’s snake species. With Nature Discovery’s partnership on our *60-Second Snakes* videos we have been able to get some excellent, up close footage of many native Michigan snakes, allowing viewers to see what amazing critters they are... and what makes each of them unique and important to our state’s ecosystems. We appreciate Nature Discovery allowing us the opportunity to film their snakes for these videos.”

The first release featured the Eastern Massasauga Rattlesnake, Michigan’s only venomous species. Schauer and Hilliard videotaped it at a nature center that was housing and displaying it. The next three releases are from our collection: Eastern Hognose, Eastern Milk, and Northern Water Snake. These gentle and very handle-able individuals are becoming internet stars in a hurry. As of today the water snake video has had over 12,000 hits, the milk snake over 15,000 hits, the hognose over 25,000 hits, and the massasauga (not handle-able!) nearly 50,000 hits! Here are the links:

Massasauga: www.youtube.com/watch?v=-PFnXe_e02w

Hognose: www.youtube.com/watch?v=Qz5W-co6itw

Milk: www.youtube.com/watch?v=ENV9WC8Svn4

Water: www.youtube.com/watch?v=Uw6W8NaJmfo



We can't blame our Eastern Hognose for wanting to keep a low profile now that it's become an internet star. Despite its newly-found fame it remains gracious about mingling with, and being handled by the commoners.

Schauer says to watch for the next release featuring our Fox Snake in the coming week. The duo is visiting again this week to video two relatively new additions to our menagerie: a Northern Ring-necked and Smooth Green Snake.

Come visit our famous snakes, our new rare hatchling, and so much more during our open hours this Sunday. Details on page 4; or make an appointment for a special visit on another day or evening.

-Jim McGrath

Catch Us on Coffee Break Friday, August 28

Jim is scheduled to appear on Friday, August 28 at 9:15am, discussing a Michigan wildlife topic. The show airs weekdays from 9 to 10am on 89.7 FM. Listen live online at lcc.edu/radio/onair/ or watch it live (or later in the day at 6pm) online at lcc.edu/tv/watch. We'll post a reminder on our Facebook fan page.



Feeding Frenzy

**SUNDAY,
AUGUST 16**



Doors open from 1 to 5pm. Admission \$5/person.



Who doesn't love feeding time at the zoo? That's why we've set up a whole afternoon of nothing but... With over 100 hungry Michigan-native reptiles and amphibians of 46 species, plus an always-hungry red-footed tortoise, plus an array of butterfly and moth caterpillars, there will be a LOT of feeding. Throughout the day, knowledgeable staff is on hand to mingle with visitors, giving everyone up-close opportunities to watch snakes, turtles, frogs, salamanders and lizards eat a wide variety of foods – fruits and vegetables plus many kinds of small animals, including worms, slugs, insects galore, fish, frogs, toads and even mice.

- We'll provide nets for you to catch your own insects around the yard and on the trails to feed to frogs of all 13 species found in the state. Tree frogs will take one right out of your fingers!
 - Feed food sticks, worms and fish to 20 aquatic turtles in small pools on the patio. Small ones will take food right out of your fingers!
- Watch our large snapping turtle take a stroll on the lawn, then watch it chase minnows in a pool.
 - Feed berries to our box turtles and tortoise.
 - Learn to identify all 3 species of Michigan garter snakes then watch them eat worms, fish and frogs.
 - Watch a hognose snake consume a live toad.
 - Hold specimens of all sizes of the Black Rat Snake, Michigan's largest. Then, watch some of them eat frozen, thawed mice.
 - Meet 9 species of Michigan salamanders, then watch them eat worms and insects.
 - Watch caterpillars of various butterflies and moths devour leaves of a variety of native trees.
 - Staff is always on hand to help visitors of all ages make the most of their visit.



See the bizarre-looking caterpillar of the Monarch-mimicking Viceroy Butterfly this Sunday. This species feeds largely on willows.

Rolling Stone's Latest on Climate Effects Begg for Urgency in Our Energy Transformation

<http://www.rollingstone.com/politics/news/the-point-of-no-return-climate-change-nightmares-are-already-here-20150805>



Carol models for clean, renewable energy amid fields of Huron County turbines in Michigan's thumb. Ditching dirty fossil fuel energy begins with personal commitment at home and even in your financial portfolio, the sooner the better. Carol is currently developing a class for gifted/talented students in Grades 6-9 involving alternative energy usage and design. Students will work together to design and build a generator and solar cooker. The class will be offered on Saturdays this October through Lansing Community College (East Campus). Contact us for more information.

Become a fan of *Nature Discovery* on Facebook!



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