



An Eastern Gray Tree Frog vocalizes on our vernal pond. Many of the segments in the production came from audio recordings made on our own property north of Williamston.

THIS ISSUE

Around the State in April

Visit Our Nature Center by Appointment

Volunteer to Save a Forest

Summer Day Camp Update

Thank You, Donors

Thank you, Cedar Creek Vets

Tiny Ponds & Singing Frogs Matter

The Making of

Frogs of the Great Lakes Region:

‘Snorin’ in the Rain’

There were times I was stopped by the police in the middle of the night because of what they perceived as aberrant, even suspicious behavior ...

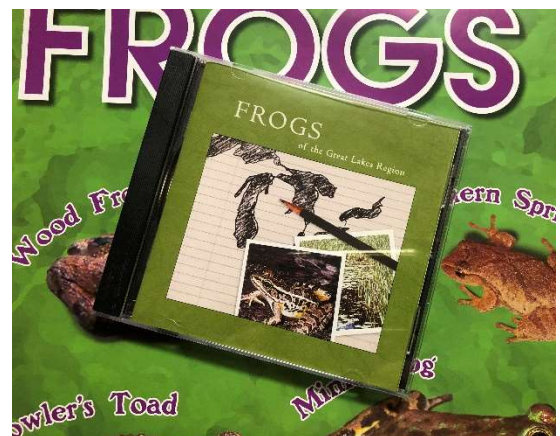
And times I was engulfed by clouds of mosquitoes, then endured their feasting on my blood unfettered, consciously choosing *not* to slap at or shoo them away...

And times I waded into water so ice-cold that my legs, feet and toes went numb within seconds, then stayed in it for another hour...

And the time I rolled my canoe and ruined not only my binoculars, but other, far more expensive equipment...

We’ve all seen special productions that take us behind the scenes in the making of a specific blockbuster movie or music video. They come to mind as I recall all the various circumstances, hurdles, trials, tribulations and bloopers that arose in my quest, beginning in the early ‘90s, to amass audio recordings of all thirteen species of Michigan frogs. Over half of the frog species native to the state conveniently called right out our back door. How hard could it be to get six more?

Some species on the Michigan list are uncommon, rare, and/or substantially limited in their ranges within our borders. That’s why I figured it might take a few years and some serious drive time to far reaches of the state before completing the project. At this point if a clairvoyant were to have tapped me on the shoulder and told me that it would, in fact, take *eight years* to obtain good audio recordings of all of them I probably would have canned the idea from the get-go. It turns out that in this, as in many cases in life, it is better not to know what the future holds.





In 2002, about ten years after its inception, the audio CD, *Frogs of the Great Lakes Region*, finally became a reality. In the educational portion I narrate useful information over a background of each vocalizing species arranged in the loose order in which they breed through the spring into summer. Then follows over fifty minutes of environmental listening - extended segments of the featured frogs, each doing their thing in species-appropriate place and chronology. Last year we converted it to a downloadable app now available on our website (<http://naturediscovery.net/frogcd.htm>).

FROGS BY EAR

We moved to this country locale north of Williamston in 1989. That very first spring, the volume and diversity of vocalizations on the two vernal ponds out back quite literally blew us away. By late spring we counted seven species breeding here. And so, the clarion called: *More people needed to know about this*, and the seed - to create a means by which to teach citizens how to identify frogs 'by ear' - was planted (Read 'We Bought Our House for the Frogs': <http://naturediscovery.net/pdf/WILD%20TIMES%20Mar17.pdf>).

The chronology of the breeding windows of the seven species present here, with much overlap, progresses approximately like this... Beginning in late March vocalizations of the first Northern Spring Peepers are followed in close succession by the Western Chorus Frogs and Wood Frogs (All three are currently breeding like gangbusters as I write.). Northern Leopard Frogs begin to join the mix only a week or so into April. American Toads dig out of the earth and head to the ponds in mid-April (Think of *two* Ts that arise circa April 15th – taxes and toads; for me, not necessarily in that order.). The first Eastern Gray Tree Frogs hit the ponds in the last days of April, and finally, the largest, most ubiquitous and most potentially troubling of them all, the Green Frogs, begin to *twang* on the ponds – a familiar sound that progresses deep into the summer (Read 'When Temporary Becomes Permanent': <http://naturediscovery.net/pdf/WILD%20TIMES%20Oct22.pdf>).

The past tense is now more apropos for one species. The Northern Leopard Frog, once incredibly abundant here, is for all intents and purposes extinct on our wetlands. In fact, all species here have declined to some degree, despite our staunch protection of their immediate environment. However, there is a glimmer of hope that they can stage a comeback, as explained with fingers crossed in the above-cited column.

If I had to choose I'd pick the vocalization of the Leopard as my favorite. In the audio production I describe it as a long, drawn-out series of clicks that steadily descends over a few seconds; very much like a long, descending snore. Interspersed with these drawn out ones are shorter, mumbling snores (http://naturediscovery.net/audio/northern_leopard.wav).

On sunny days in April when temperatures top fifty degrees breeding Leopards can be found floating and calling in well-vegetated shallows of permanent lakes and ponds in addition to marshy habitats and vernal ponds adjacent to open fields or meadows. Mature or shady woodlands are not favored.

By far, however, most of the recordings, including those of the Leopard, were made in the overnight hours. For some species, like the Eastern Gray Tree Frog, this is necessary because of their strong nocturnal tendencies. However, others that may breed and call during the day are too often surrounded by auditory baggage – myriad sounds of bustling humanity, the most common of which is car noise. Without retreating to the wilderness, it is quite challenging to record any natural sounds for even a few minutes completely unpolluted by human-generated sounds.

In the mid-90s on seasonably warm April nights our vernal ponds hosted a veritable snore-fest of Leopard Frogs. However, for instructional intent, nighttime recording was unsatisfactory for a different reason.

The Spring Peepers were too darn loud! I needed to locate a wetland where the Leopard's low snores were not dominated by a shrill barrage. I found it quite unexpectedly not out our back door but out our front.

SNORIN' IN THE RAIN

Late one wet and warmish mid-April night I was about to call it a day and head upstairs to bed. Carol and the kids had retired quite a bit earlier. As I turned off lights I don't remember what prompted it, but I opened the front door. A steady drizzle pattered the wet porch and the surroundings. The din of the peepers on our ponds out back was very evident but somewhat obstructed on this side of the house; enough that it allowed me to catch another sound up the road to the north that I definitely would not have been able to hear from our backyard – the distinct snoring of pure, 'peeperless' Leopard Frogs.



I gathered my recording equipment (which, pre-cell phone era, entailed a video camera and a plug-in shotgun microphone), threw on a hooded sweatshirt, then a plastic poncho under which to keep myself and the equipment dry. Seconds after I stepped into the rain, I abruptly turned around. Raindrops slapped way too loudly against the surface of the poncho. I had to find a different cover against which the impact of the rain would be more muffled. I retrieved an old queen-sized comforter from a box of stored camping gear, threw that over me, stepped outside and listened to the rain against it: much, much better.

About a tenth of a mile up the road a large, oval pond about a half-acre in area was situated in middle of a neighbor's front lawn. However, an especially low spot between the pond and the road which was surrounded by overgrowth routinely filled with snow melt in early spring. The Leopard Frogs were surely gathering here. Thrown over my head the bulky comforter completely engulfed my body and legs all the way to the ground. I peeked out of a crack and shined a small flashlight onto the road in front of my feet as I walked.

I hadn't gotten far when, over a rise in the road ahead shone the brightening illumination of an approaching car's headlights. I found myself instantly envisioning the driver's point of view. The vehicle crests the hill as raindrops splatter the windshield and wipers swish from side to side. The headlights abruptly fall upon the blurry image of a large, dark, amorphous hulk advancing through the rain on the edge of the road.

How would the driver react? Could it be a cop? I decided on the spot that I didn't want to be bothered to find out. I clumsily scurried to the soggy shoulder and hid behind the trunk of a large oak. Seconds later the car passed, the driver clueless to the clandestine onlooker in the dark, rainy night.

Two minutes later I carefully stepped down a slope off the road and into the overgrowth at the edge of the shallow expanse of flooded ground. I thrilled at how close and loud the snores were. If I had approached during the daytime the frogs may have been startled by my movement enough to stop calling or even to dive under water to elude me. In the dark, however, they would carry on, oblivious to the large mammal skulking so close to them.

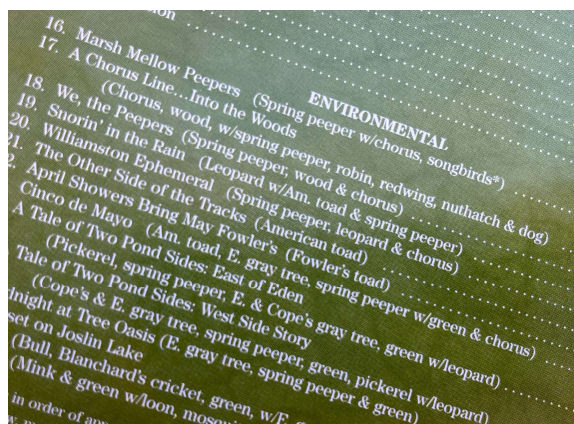
There was no clean edge to the standing water. The ground simply got mushier with every step. I could feel my shoes oozing slowly downward into the saturated ground; cold water breaching the canvas barrier and tingling my toes.

I briefly cast the beam over the flooded area. At least a dozen pairs of bulging eyes facing various directions broke the surface, the closest only about five feet from where I crouched. With the flashlight back under the covers I quickly readied the equipment, turned the light off then poked only the tip of the shotgun mike out of an opening in the blanket in the direction of the snoring frogs. The sound of the rain against the comforter was evident but seemed far from obtrusive.

Almost two tenths of a mile as the frog hops I could still hear the distant chorus of peepers on our own ponds. However, the shotgun mike was designed to capture sounds immediately in front of it and to pick up far less of the sounds to the side and behind it. Still, a few peepers vocalized on and off not far from where I crouched. I could also hear the trill of a toad further ahead of me, probably on the edge of the big pond on the neighbor's lawn. The mike would pick these up in the recording.

As minutes passed my bent knees and other scrunched joints became increasingly uncomfortable. I grew sweaty from the accumulation of my own body heat trapped under the blanket. I kept glancing at my watch, however, and willed myself to hold the position so as to record the frogs for at least twenty minutes. A few minutes later, mercifully for my aching joints, the heavens dictated that it was time to end. The precipitation knob quickly twisted from 'drizzle' to 'downpour.' In the recording's final seconds the listener can hear the increasing intensity of muffled taps before I ended the recording.

As I stood to climb the slope to the road to begin my walk home the comforter over me had become much more water-laden and heavy than when I had walked out the door a half hour earlier. I felt the wetness beginning to penetrate my clothing. My concern shifting to keeping the equipment dry, I stuffed the recorder and microphone under my hoodie and slogged homeward down the road.

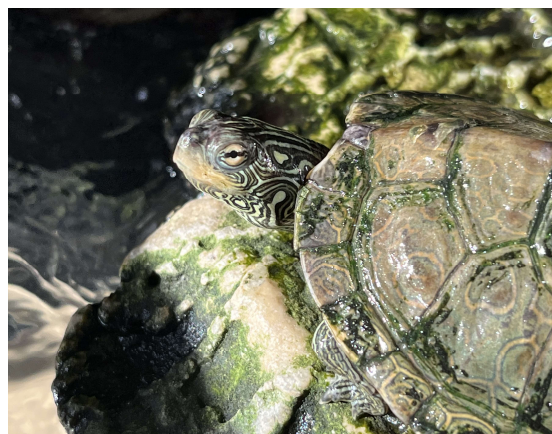


The accumulated discomforts had little effect on me. I was thrilled to have gotten the microphone so close to vocalizing Leopard Frogs. When I stepped back inside I would shed the saturated blanket, change into dry clothes, and *not* wait until morning to sit and listen to the quality of the playback. In the wee hours I crawled into bed very content with the results. In fact, I had already come up with a title for what I projected to be a future environmental track on the finished production.

-Jim McGrath

Around the State in April

- ❖ **Tuesday, April 4:** 2-3:30pm. *MI Reptiles & Amphibians Presentation; Omer Library, Omer.*
- ❖ **Tuesday, April 4:** 4:30-6pm. *MI Reptiles & Amphibians Presentation; Mary Johnston Memorial Library, Standish.*
- ❖ **Friday, April 7:** 6-8pm. *MI Reptiles & Amphibians Exhibit; Kinawa 5-6, Okemos.*
- ❖ **Tuesday, April 18:** 5-7pm. *MI Reptiles & Amphibians Exhibit; North Huron School, Kinde.*
- ❖ **Thursday, April 20:** 5-7pm. *MI Reptiles & Amphibians Exhibit; Red Cedar Elem, E. Lansing.*
- ❖ **Saturday, April 22:** 10am-2pm. *MI Reptiles & Amphibians Exhibit; Earth Week Plus, Cheboygan.*
- ❖ **Saturday, April 22:** 2:30-3:45pm. *MI Snakes Presentation; AFFEW Earth Day, Ludington.*
- ❖ **Saturday, April 29:** 11am-2pm. *MI Amphibians Exhibit. Stony Creek Metropark Nature Center.*



Nature Discovery

5900 N. Williamston Road
517.655.5349

Williamston, MI 48895

naturedisc87@gmail.com

www.naturediscovery.net

Visit Our Nature Center by Appointment

Suggested Minimum

Donation: \$5/person/hour



The sky's the limit for natural science learning here – with a Michigan twist! Adults, couples and families are welcome to schedule an intimate indoor/outdoor visit to what we call “The Biggest Little Nature Center in Michigan,” and “Home to the Largest Zoo of Michigan-native Reptiles and Amphibians.” The unique, in-person, hands-on experiences here are unmatched by a trip to a conventional zoo! We will bring snakes, turtles, frogs and salamanders out of tanks to interact with adults or students of any age or grade-level.

Identify and feed “the grand slam of Michigan turtles” - all ten species native to our state! Meet, pet and feed “Milberta”, our always hungry Red-footed tortoise.

Handle any or all of Michigan’s three species of garter snakes while learning how to tell them apart, then watch them gobble up worms and live tadpoles. Hold or “wear” a gentle 6-foot Black Rat Snake – the largest in the state!



Many more snakes, turtles, frogs and salamanders to identify and feed. Take a guided walk on our trails to identify birds and bird song, trees, vines, and invasive plants in early spring.

Make special arrangements now for a simply magical field trip at dusk! Wade through our vernal pond by flashlight while being serenaded LOUDLY by frogs all around you. Let your eyes adjust to the darkness then walk the trails with eyes to the ground in search of glow worms – the larvae of this summer’s fireflies.

Contact us for more info or to make an appointment.



Volunteer to Save the Forest...

Adults and high school students. Want to get out of the house into a natural landscape AND do something for its benefit? Help us save our woods! This photo shows alien, invasive Oriental Bittersweet engulfing and strangling a healthy, native, wild black cherry tree. Jim will introduce you to this, as well as the invasive shrub, Amur honeysuckle, and the invasive biennial, garlic mustard – each in its own way destroying the ecology of this and nearly every other natural area on private and public properties. Learn methods for removing them, then come to the rescue.

The removed alien growth accumulates rapidly, so we regularly light a bonfire to burn what we've cut.

Want to learn more about invasive plants on your own rural property? Schedule an on-site appointment!

Summer Day Camp Updates...

Field Birding Day Camp

June 19-22; 8am to 2pm; 5th gr & older

Enroll your student in this whirlwind 4-day adventure - the focus, to encounter as many birds as possible in a variety of locations and habitats. Each day we'll head in a different direction within an hour drive to see up to 90 bird species, many of which you can't find just anywhere. Birders will keep their own personal checklists. Bring a good pair of binoculars. We can lend you some, too. **FEE: \$325 (\$150 deposit).**



Photo by Steve Sage

Other Day Camp Openings

There are currently openings left in two day camp sessions.

A two-day 'mini' day camp is now scheduled for Monday and Tuesday, July 24 & 25, 9am to 3pm, for 7-8 year-old students. Currently there are four spaces remaining. **COST: \$160/student (\$80 NR deposit).** Contact us for more details or to reserve a spot.

Monday-Thursday, August 7-10, 9am to 3pm, for 9-12 year-old students. **COST: \$300/student (\$150 NR deposit).** Contact us for details or to reserve a spot.



We wish to extend appreciation to our many supporters over the years, including these most recent donors...

*Jan Heminger * Hiawatha Elementary PTO * Sonia Lerch
Okemos Nursery School * Chris Paige * Gene Wasserman*

Thank You, Cedar Creek Vets!

This past month, our ailing tortoise, Milberta, and two Michigan-native turtles in our zoo required a visit to Cedar Creek Veterinary Clinic, south of Williamston. Thank you to the folks at Cedar Creek for supporting what we do with what they do so well. While providing veterinary care for all creatures, they specialize in birds and reptiles. Check them out for your pet's health care, and tell them you saw it here. <https://www.cedarcreekvet.com/>



Cassie, a LVT at CCV, poses with Millberta.

Why Tiny Ponds and Singing Frogs Matter So Much

My brother Mike McGrath forwarded this *New York Times* column from opinion writer, Margaret Renkl. A well-written explanation of the value of vernal wetlands not just to frogs, but to biodiversity itself – and in timely keeping with the season and this issue of *The Wild Times*.

https://www.nytimes.com/2023/03/27/opinion/frogs-vernal-pools-ecosystem-climate.html?unlocked_article_code=kH7shaLHU-FDvEEEnDiXkNKN6IPsTCfo0PNMVz3B4WrWmHnPEXEPJp0fIGcH8Q5U11ayR0aUPN_G1Nf5EQ2LxIe3GStrTTHLOvNpa_4igBXu60jO486LLaMSIYY6HTJjF0DbFPbYWUitljAJs5gAXiCbOhlf54KMJVPMgEkCo6008GoHOOOeUp7XmD6dSIXSd-xdDG-JQ7xqS4JVv-TfH0vGFYGoQvgW-wo3l6t2loU4dxtqTN1sd_wgr5J9VUxVHGP5uhfhGAg_Hd8h5drvqrfUcLQhYpchzP4FskgDeSnB0-U8MrStf48xhCc1N10psXSSk9tNkMJHcNg6F1V_ftZ13mgVwLDyAaPfbMUTA&smid=em-share

-JM

The next generation would be justified in looking back at us and asking, “What were you thinking? Couldn’t you hear what the scientists were saying? Couldn’t you hear what Mother Nature was screaming at you?” - Al Gore

I don’t want you to be hopeful. I want you to panic. I want you to feel the fear I feel every day. I want you to act. I want you to act like you would in a crisis. I want you to act like your house is on fire, because it is. - Greta Thunberg

The personal actions that cut climate pollution fast are to go flight-, car-, and meat-free. Start with the one that feels most feasible for you; if you can’t totally go without, aim to cut your consumption today at least in half. – Kimberly Nicholas, Under the Sky We Make

What if we had storytelling mechanisms that said it is important that you know about the well-being of wildlife in your neighborhood? –Robin Wall Kimmerer



Less Beef = Less CO₂
Cowspiracy.com

**Union of
Concerned Scientists**
Science for a healthy planet and safer world



Flightfree.org



RSPO.org



insideclimatenews.org

Become a fan of *Nature Discovery* on Facebook!

NATURE DISCOVERY 5900 N. Williamston Road Williamston, MI 48895

(517) 655-5349 naturedisc87@gmail.com www.naturediscovery.net