
THIS ISSUE

Visit Our Nature Center by Appointment

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Thank you, Donors

More Kudos to Donors / Volunteers

'Fraud' Follows Authoritarian Playbook

Be-Toad!

The Ides of April



A male toad trills for a mate on our vernal pond.

To many working adults, 'Beware, the 'Ides of April' may pertain to a foreboding that tax filings are due, but our neighborhood toads live among their own set of concerns come mid-month, proactive in nature.

Over decades of listening, I can attest that the breeding window of the Eastern American Toad swings open in the days leading up to April 15. It is now that the first males of spring begin to vocalize on various waters around our country neighborhood. In the chronology of breeding windows for various local frog species (yes, a toad *is* a type of frog) it is the fourth anuran species of a possible eight to begin vocalizing and egg-laying in our immediate community from early spring through mid-summer.

So far, we've heard the Northern Spring Peeper, the Western Chorus Frog and the Wood Frog on the frigid waters of our vernal ponds out back, as well as on other temporary wetlands in the area during seasonably warm days and evenings.

The Wood Frog has the shortest breeding window of any Michigan frog – only two weeks or so. Little more than a week into April they appear to have finished 'quacking', left their submerged egg masses behind, and returned to the surrounding woods.

By the end of the first week of April - temperatures permitting - Northern Leopard Frogs (where still found) usually begin emitting their drawn-out, descending snores on open vernal ponds and along well-vegetated shallows of permanent ponds and lakes.

Toads, however, need warmer water temperatures to stimulate breeding activity than the above four. Thus, once air temperatures begin to rise above sixty degrees with more frequency, they emerge and head directly to ponds or most any standing water. After recent uber-diluvial events around these parts, they should find an unusually high set of options.

As mid-April draws near in any year, merely watch the weather forecast to predict which evening will stage a mass emergence of toads. An especially warm and wet night induces them to sprout like tulips

from their subterranean dormancy. Against glistening asphalt, individuals of all sizes are illuminated by approaching headlights as they cross roads on their way to the nearest water.

Here we go... A several-day stretch of warm and wet conditions is upon us, and with it, the onset of this spring's Eastern American Toad breeding window. On one of these nights, when car traffic has significantly ebbed later in the evening, take the initiative to get out and walk the streets if you live in a suburban to rural neighborhood. To see many more toads get in the car and take a slow drive down and around the nearest rural side roads to witness the movement. Depending on surrounding habitat frogs of almost any other species may also be found traversing the road, too.

It is notable that frogs are physiologically fashioned to *hop* almost exclusively, in order to get from Point A to Point B, but an Eastern American Toad that is neither startled nor in any particular hurry tends to prefer *walking* over hopping. Thus, at high beam-lit distances too great to discern between road-crossing anuran species, this crawling motion as opposed to the hop is a dead give-away.

A male toad will enter a pool of water and begin trilling to attract a mate most any time, day or night, as long as the water and air temperature is sufficiently warm. The quality of the trill is relatively high-pitched and monotonous with a duration that regularly tops fifteen seconds. The toad pauses to rest, then seconds later, begins the next long, mesmerizing trill. You can mimic an Eastern American Toad vocalization quite easily. While maintaining an even, relatively high-pitched tone just roll your tongue against the roof of your mouth, then keep it going for a spell. Here's a short snippet from our *Frogs of the Great Lakes Region* app, which is featured and available for sale to download from our website: http://naturediscovery.net/audio/eastern_american_toad.wav.

A male toad (as well as the male of most any other anuran) is induced to vocalize in response to the calls of other males around him. The collective trilling is not so much the males communicating *with* one other as *against* one another. It plays out something like this...

Every male is impelled to enter the shallows with the hope of fertilizing a female's eggs. Entering females are drawn to the trills of the males. Thus, quite literally, a male vocally summons any females in hearing range. The persistent message in toad language is, *Come here...come here... come here... come here...* Another male, previously silent, hears a rival that has begun to trill twenty feet or so to his left or right, whereby his 'toady-sense' turns on to tell him: *All the females are heading over there. You better start trilling!*



Warm, wet nights now are especially conducive to toads on roads.

What is prime breeding habitat to a toad? It does not hold to the same parameters as a Spring Peeper or Gray Tree Frog. The tree frogs, among others, utilize wetlands that are well-vegetated. Dense growth in the form of hummocks and thickets of grasses, sedges, cattails and shrubbery often circle the perimeter.

A toad is relatively clumsy in contrast the other anurans. I sometimes describe the quality of its hops as 'never getting out of first gear.' As a result it appears to have a more difficult time getting through this dense, tangled barrier to the potential breeding site. Shallow waters surrounded by sparse or short vegetation, on the other hand, are especially accommodating to toads but not so much to the tree frogs.

We see and hear these associations on the waters that immediately surround us. The densely-grassy vernal wetlands out back attract a mere smattering of trilling toads while at the same time becoming shrill to deafening decibels overnight with vocalizing peepers. By contrast, the fashioned garden pond on our south neighbor's front lawn is far 'trillier' during the breeding window; ditto for the permanent pond surrounded by lawn on the property of our neighbor across the road and a bit to the north. Both attract far fewer

peepers. Within a few weeks, the peeping din on our wetlands will transition to a cacophony of signature trill-*bursts* produced by May's Eastern Gray Tree Frogs.

I'd rate the Eastern American Toad's trill to be the most calming of Michigan's fourteen anuran vocalizations. Toads won't hesitate to vocalize at any hour, on any day or evening, provided the breeding window and adequately warm weather align. However, sometimes, especially during the day, competing noises can have a sullyng, if not, overwhelming effect that can spoil the mood.

I won't complain if varied bird songs happen to horn in on the soothing trills delivered in the daytime from an active pond. Among nature's grand and varied orchestra, the more the merrier, despite this sacrifice of 'serenity.' The intrusion of human-generated noises - mostly associated in one way or another with our addiction to fossil-fuels - is harder to swallow. Avoid the static by experiencing toads later in the evening after the bustle of traffic has subsided.

The upcoming evenings should offer perfect conditions. Granted, if I step out our *back* door the din from the peepers completely overpowers the soft trill of any toad. If I step out the *front* door, though, the edifice between me and the ponds effectively shields the piercing peeps. From this vantage, I am able to relish the stereo effect of the toads in our neighbors' ponds to the south and north more clearly.

Indeed, throughout an entire year, there are only a relative handful of 'perfect' trilling nights. Most occur now, in mid-to-late April: warm, windless, perhaps even sprinkled with a spring drizzle. So many toads trill from shallow waters, near and far, that I'd swear the air itself is doing the singing. The steady, high-pitched, ethereal omnipresence seems to emanate from no single physical source. It just *is*... First hearing it prompts me to stop, so as to listen more keenly. An urge inside me begs to remain outside, to bask in this wonderful wordless message from our living planet all night. Zen, anyone?

If you live in a more urbanized location, you most likely won't be required to drive out to a country setting to experience this. If a pond or lake exists within a fairly sizeable local park, chances are good that a toad-friendly lawn is mowed right up to the edge.



An American Toad, well-camouflaged and still on a forest floor, goes undetected by most passers by.

Should you care to go a wet step further, take a strong flashlight along and wade through the shallows toward a cluster of noisy toads; or take a kid in with you on a sunlit afternoon. The rays will more than amply penetrate the water to provide good viewing. You'll witness the distended bluish vocal sac of a trilling male, and before long find one or two pairs in 'amplexus' prior to, and during, egg deposition.

Unlike those of frogs that are laid mostly in gelatinous bunches, toad eggs are deposited in convoluted strings. Like necklaces of miniature black pearls just under the surface, the strings wend and adhere among submerged sticks or decaying, brown blades of grass. Tiny, black tadpoles hatch in barely over a week, grow quite rapidly,

and begin to emerge and disperse as raisin-sized toadlets by the end of June.

Another generation launched, the next arc traced in a circle of toad life that strives to persist on this precious slice of Planet Earth.

—Jim McGrath



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Visit Our

Nature Center

by Appointment

*Suggested Minimum
Donation: \$5/person/hr*

Our Eastern Milksnake constricts a Deer Mouse.

The sky's the limit for natural science learning here – with a Michigan twist! Adults, couples and individual 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 unrivaled at any other nature center or 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 of ten Michigan-native snake species here while learning how to tell them apart, then watch them eat worms, frogs, fish or mice. Hold or “wear” a gentle 6-foot Black Ratsnake – the largest in the state!

Also, lots of state-native turtles, frogs and salamanders to identify and feed. Take a guided walk on our trails to identify spring birds by their songs. Explore the perimeters our vernal ponds at the height of their liveliness.

Make a special evening appointment to check out our ponds, loud with breeding frogs, then search for glowworms (firefly larvae) on the trail sides after dark. Contact us for additional information or to schedule a day and time.



Many adults have never seen a firefly in its larval form.

Around the State in April



- ❖ Saturday, April 4: 2-4pm. MI Reptiles & Amphibians Exhibit; Romeo District Library, Romeo.
- ❖ Thursday, April 23: 5:30-7-30pm. MI Reptiles & Amphibians Exhibit; Red Cedar Elementary STEAM Night, East Lansing.
- ❖ Saturday, April 25: 10am-2pm. MI Reptiles & Amphibians Exhibit; Earth Week Plus, Cheboygan.
- ❖ Saturday, April 25: 11am-3pm. MI Reptiles & Amphibians Exhibit & Presentation; AFFEW Earth Day, Ludington.
- ❖ Sunday, April 26: 12-3pm. MI Amphibians Exhibit; Stony Creek Metropark, Shelby Twp.

*We're grateful to the many supporters of our mission over the years,
especially to these most recent donors. Thank you all!*



*Amelia Gardner * Grand River Bait & Tackle * Jan Heminger
Deanne & Mike Lawrence * Lyn Scrimger * Tricia Thompson*

More Kudos to Special Donors / Volunteers

Thank you to Gene Wasserman & Ann Gaultney and to Robert & Lee Ann Brunetz for generous donations that fully cover the hefty travel expenses associated with our last month's week of Michigan Snakes and wildlife programs at Northern Michigan schools and libraries. Thank you, as well, to Wayne & Cheri Beasley, Petoskey-area hosts to the Jim and the snakes throughout the week. These donations significantly defray costs for these impactful experiences for youth in these communities.



Cedar Creek Vet Clinic: Official Veterinarian of Nature Discovery!

We are grateful to the professionals at CCV for their long-time support of Nature Discovery. The clinic provides health services when needed for the gamut of 'working' Michigan native reptiles and amphibians that reside in the nature center.

Did you know that CCV, located south of Williamston, is acclaimed across the state and beyond for their specialty health care services for birds and reptiles?

Check them out, and tell them you saw it here!

<https://www.cedarcreekvet.com/>

High School Volunteers Battle Invasives at Nature Discovery



Thank you to Olivia Killips, Ariela Silva (left photo), Ben Myers (right photo), Nora Nanzer, Sarah Johnson, Lila Hildebrand and Mia Chip for spending much-needed volunteer hours pulling and cutting invasive Oriental Bittersweet, Amur Honeysuckle and Multiflora Rose on our property.

Slotkin: [The Fraud] is Following History's 'Authoritarian Playbook'

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-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

Study nature, love nature, stay close to nature. It will never fail you. – Frank Lloyd Wright

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