



Rumbles from an approaching thunderstorm prompt a Gray Tree Frog to vocalize from its perch atop our patio light.

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We Bought Our House for the Frogs

No kidding... More specifically, we decided to go ahead and buy the unkempt, circa 1890, borderline “handyman special” when we learned of the presence of the vernal wetland that covers a quarter of the six-acre lot. A statement along these lines inevitably emerges when discussing any aspect of our long, involved, and varied relationship with Michigan-native frogs.

Carol and I were renters through the first eight years of marriage – initially, near our roots in the Chicago area, then in Mid-Michigan late in '84 when I transferred to MSU to pursue a wildlife biology degree. After graduating in the spring of '87 I worked part time at Wild Birds Unlimited in Okemos while also endeavoring to start my own wildlife education entrepreneurship. Working at a lab in Howell as an analytical chemist at the time, Carol accounted for the lion's share of our income.

September, 1988. Carol is five months pregnant. Our limited savings reached a point where we could finally consider shopping for a modest home. Over Sunday breakfast we scanned the real estate classifieds for something affordable, and, most preferably, rural. We almost missed it. The smallest of the classifieds delivered three terse lines of tiny text: *For Sale by Owner, Farmhouse on 6.3 acres, 2 BR. \$55,000. 5900 Williamston Rd, north of town. Open house Sunday 12-5.* Wow, a country house with acreage that we could afford! As we drove to the address we braced for reality to deliver a sobering slap. A house on over six acres for only \$55K - what's *wrong* with it?

In short, you name it. We were far more often disillusioned than impressed as Darlene, the owner, led us room to room through two stories then into a dark, oily-odored Michigan basement. Hearing our comments and reading our facial expressions throughout the tour, she may have sensed the prospect of a sale to these particular shoppers slipping away. By the time we climbed back up the cramped basement stairs, she seemed far less enthusiastic than at the start, but when we asked to see the rest of the property she offered to walk with us anyway.

We strolled across the weedy lawn, past a sizeable fenced-in vegetable garden that looked like it had been idle for years, then toward the opening of a trail that led through a patch of early successional woods. Darlene probably delivered the question merely as idle chit-chat. Her voice carried a tone of matter-of-fact resignation, yet, suddenly, the tide of our visit took an abrupt and unexpected turn.

“You like frogs?”

I looked at her. “Why do you ask that?”

“Well,” she said, “You’ll see these couple of big, low grassy areas back here. They’re dry now but in the spring they fill with water and...” She paused and rolled her eyes in mock-exasperation. “The frogs are *really* loud.”

“Really!” I said.

“Yeah. In fact, some nights - even when all the windows are shut it can be hard to sleep at night.”

I turned to Carol. She gave me a look that delivered plenty of tacit meaning: What about the furnace, what about the windows, the kitchen, the roof, the ceilings...?”



The front pond in early April. In addition to seven frog species, Tiger and Blue-spotted Salamanders also breed here.

The work pit behind us seemed suddenly surmountable! We walked around the perimeter of two dry, grassy depressions that took up almost two acres, combined. They were separated by a thin isthmus scattered with dogwoods and autumn olives. I peppered Darlene with other questions. She didn’t know what kinds of frogs they were, but she acknowledged hearing many different sounds through the spring. Along the trail I spotted a couple of spring peepers clinging to bramble leaves near the ground. A fat, bronze wood frog and several spotty leopard frogs hopped off the trail ahead of our feet and disappeared into the growth.

A vision materialized: My fledgling wildlife education business would be headquartered and expanded within a modest, private nature center built onto our home, complete with trails leading back to what my schooling had revealed to be an example of the most biologically-rich natural community type, not only in Michigan but in most temperate regions of the world.



An impressive but short-lived glut of fairy shrimp occurs each spring in the vernal pond.

Three months later we moved in. The first of four children was born the following month. When spring arrived I was thrilled to count vocalizations of seven species of frogs breeding on the ponds. Since that initial spring, Carol and I have waded through the vernal waters day and night every year – studying and collecting samples of frog and salamander eggs, as well as seemingly countless forms of insect and other invertebrate life to use in an array of educational venues. It’s a mini-jungle out there!

Of course, you can read about the critical ecological and environmental attributes of vernal ponds in any wetland ecology text, but everyone should be required to wade through one (as we’ve done hundreds of times now), flashlight in hand, on a warm, wet night in April or May. The overwhelming density of life makes a physical impression that leaves no room for doubt. The textbook was right on. Inch for cubic inch, no field, no forest, or any other natural community at this latitude harbors the abundance and diversity of life present in a vernal pond. How does its quality differ from that of a permanent pond, lake and stream? A healthy one literally *screams* its identity on warm spring nights!

On our ponds through many such nights each spring the sheer cacophony of peeps, quacks, snores and trills overwhelms your senses. In fact, prolonged, up-close exposure to the steady, shrill din of hundreds of spring peepers can’t possibly be good for your hearing. Annually, since that initial revelation the interpreter in me yearned desperately to share it. More people needed to know about this overwhelming

force of nature, especially given their rate of decline on an increasingly occupied and altered landscape.

Encouraged by the fact that over half of the frogs native to the state were calling here I acquired some equipment and started audio-recording in the spring of 1993. I would then travel around the rest of the state to find wetlands that harbored the other six species. It took me three years to get a quality recording of ten species, then it took another *five* to obtain the last three - a testament to their scarcity. Finally, Nature Discovery's audio CD, entitled *Frogs of the Great Lakes Region*, was completed and made available for sale in 2002.

Michigan has already lost over three-fourths of its vernal wetlands. The entire country has lost over half. Farmland, urbanization, and myriad other forms of environmental degradation in the name of under-regulated industrial activity have steamrolled these oases and nurseries of life. For anyone who feels they don't see as many frogs as they used to, say, when they were kids, we point to such statistics. Our blanket statement, often applied to explain the rarity or extinction of any living creature in the environment, applies starkly to frogs and vernal ponds: Take away its ability to make more of itself, and any species is doomed to extinction. Tens of billions of passenger pigeons couldn't even make it.

Carol and I are stewards - our property, a sanctuary for all life that arises from the vernal waters here. We use no pesticides. We wage an ongoing battle with invasive plant species. Yet, we have seen significant declines in nearly every frog species since we arrived - especially in the last ten years. Why? We can strive to protect the integrity of the habitat here, but there is nothing we can do to deter the growing threat from above. Extreme weather phenomena associated with fossil-fuel-driven climate change are upsetting the dynamics and ecology of the ponds in ways we never could have predicted a decade ago.



An American Toad vocalizes on our vernal pond.

In light of a Trump administration that struts about its "Make America Great Again" illusion with a blatant and demeaning anti-environment posture, the threats to these wetlands and to the life they support can only continue to grow. We would be failing the environment, our values, and our very mission statement to remain mum over this looming menace simply because there is a chance we might raise the hackles of a few loyalists. We encourage you to join us!

On Sunday, March 12 attend our open hours and sit in on *Breeding Frogs of Mid-Michigan*. At the presentation's conclusion take a walk out back with us to visit our awakening vernal wetland. Read on for details.

-Jim McGrath



Catch Nature Discovery on Coffee Break Tuesday, March 7

Carol is scheduled to appear on WLNZ's *Coffee Break* show Tuesday, March 7 at 9:15am, discussing "frogging by ear" and other topics. 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.

Open Hours

Sunday, March 12

Featuring

Breeding Frogs of Mid-Michigan



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

What frogs breed in your Mid-Michigan neighborhood? Through spring and early summer, you need not get your feet wet to find out. Michigan is home to 13 species of frogs and toads, eight of which can be found around the Greater Lansing area. Each can be identified by its specific breeding call, given only by the male. Each species also has its own breeding “window,” the period of time when it is egg-laying



on a particular wetland from early spring to mid-summer. At 2pm, sit-in on our presentation, *Breeding Frogs of Mid-Michigan* With the use of beautiful Powerpoint images, live specimens, and audio recordings from Nature Discovery’s original CD, *Frogs of the Great Lakes Region*, immerse yourself “knee-deep” into the world of Mid-Michigan frogs.

*** Our *Frogs of the Great Lakes Region* CDs are normally priced at \$15. Participants in this program are invited to purchase one for only \$12.

At the presentation’s conclusion, visitors can participate in a guided hike around our vernal pond at the advent of frog-

breeding and the awakening of invertebrate life. Weather permitting, wood frogs may be heard giving their distinctive quacking calls. A staff person will wade into the pond to net some of the abundant and diverse invertebrate life that shares the biologically-rich vernal waters with the breeding frogs. If you’d like, you can even join us for a wade. (We recommend pants and old shoes – not boots. Bring a change of clothes.)

There is more! Visit our highly interactive Michigan reptiles & amphibians zoo. Hold a snake, feed some turtles, drop a cricket to a frog. Enjoy the action at our bird feeders or ask for your own personalized guided walk on the trail. Knowledgeable staff is on hand to help visitors of all ages make the most of their time here.



Weather-permitting, wood frogs may have already started egg-laying in our vernal ponds by Sunday.

“Welcome Spring” Maple River Birding Day

*Wednesday, March 29
6am to 1pm*



Wood Duck

Photo © Steve Sage

Join a guided trip for adults to Maple River State Game Area north of St. Johns, followed by a stop at Park Lake to check out migrant waterfowl through our spotting scope. We will leave early enough to catch woodcocks performing aerial courtship displays at first light. Up to 20 species of waterfowl can be seen from dikes around the flooding. There is also a good chance to view active Great Horned Owl and Bald Eagle nests. We will stop on roadsides to view them up-close through our spotting scope. As many as 50 species are in store by day's end. Participants will be given bird checklists to keep track of the day's finds. Feel free to pack any food/drink you like to consume on the road through the morning. Enrollment is limited to five. Advance registration required. FEE: \$50, includes all transportation. Arrangements may also be made to pick up /drop off at your door or another convenient location.

Spring Break Camp and Field Trip...

Spring Break Wildlife Day Camp

Tuesday or Thursday, April 4 or 6, 9am-3pm.

For K & older.

Students can sign-up for one or both days of nature and outdoor-oriented activities. Each day will encompass feeding, caring for, and handling our huge captive collection of Michigan snakes, turtles, frogs, salamanders and lizards. We will also offer a variety of engaging outside explorations and activities dependent on the weather, including bird-watching and exploration of our vernal pond now alive with breeding frogs and invertebrates galore. Students who wish to wade into the pond can bring old shoes, socks and pants, a change of clothes, and a towel. Boots are NOT recommended for wading.

Cost: \$55/day. Hot lunch and snack are provided. Advance registration required.



Maple River Birding Field Trip

Wednesday, April 5, 9am-3pm.

For 3rd grade & older.

Maple River State Game Area is peaking now with migratory ducks and a slew of other birds. See an active bald eagle nest, plus hawks and owls on nests, too. We'll hike dikes that surround the massive flooding, too. Students will tally up to 50 birds on personal checklists. Bring binoculars if you have them.

COST: \$65. Pack a bag lunch and water bottle, and be sure to dress for weather conditions. Advance registration required.

2017 Summer Camps Online Now

Wow, there is a glut of organized things for children to do over the summer these days! However, we are highlighting any of our unique summer weeks as “Not Just Another Day Camp.” Each week’s roster will be strictly limited to only **6 special participants** - specifically targeting **children who demonstrate a strong interest in learning about the natural world**. Our 2017 schedule can be found on the website: <http://naturediscovery.net/pdf/summercamps.pdf>

Trump Orders to Strike Clean Water Initiatives

You’ve read our point of view for preserving small wetlands in the opening column. In the graphic found on the EPA website (right) the justification for Obama’s extension of the clean water act to include small waterways and other wetlands is neatly outlined. Frankly, we were surprised to see that Trump has not ordered the graphic stricken from the EPA website yet, seeing it makes such a strong argument for keeping the rule intact. In this link and others, note how vernal ponds are defined and reduced to mere “puddles” that occasionally dry up rather than the cradles of life that ecologists know them to be.

<http://www.npr.org/sections/thetwo-way/2017/02/28/517016071/trump-aims-to-eliminate-clean-water-rule>

-JM

From <https://www.epa.gov/cleanwaterrule/why-clean-water-rules>

WHY #CleanWaterRules

Clean water upstream means cleaner water downstream.
Our Clean Water Rule protects the streams and wetlands that feed our rivers, lakes, bays and coastal waters. These waters are critical for agriculture, healthy communities, our economy and our way of life.

60% of stream miles in the U.S. only flow seasonally or after rain.

One-third of threatened and endangered species live only in wetlands.

Farms depend on clean water for irrigation, crops and livestock.

Normal farming and ranching activities – like planting, harvesting and moving livestock – won't be affected by the Clean Water Rule.

1 in 3 Americans get drinking water from seasonal and rain-dependent streams.

19 million people per year go paddling, spending \$86 billion on gear and trips.

Tourism, fishing, recreation, energy production, manufacturing and other industries that depend on clean water add billions of dollars to our economy every year.

Fishing adds \$48 billion to the economy every year, and supports nearly a million jobs.

EPA www.epa.gov/cleanwaterrule

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

350.org

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