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Thank you, Cedar Creek Vet

Hold Them Accountable!



A newly-hatched snapping turtle climbs aboard a healthy, well-adjusted, Stepping Stones Montessori-raised, two-year-old.

Take a Hatchling Snapping Turtle, Leave an Ecological Ethic

Take only pictures, leave only footprints.

It is a commonly seen sign at the heads of nature center trails and at the entrances of preserves and sanctuaries. The request makes perfect sense in areas set aside for the outstanding natural diversity harbored there or for the public to be able to experience and enjoy into the future.

Quite regularly, however, the more widely-encompassing message, *All wild things should be left in the wild*, that some nature center staff, teachers and parents impress on children, while well-meaning, may in fact be stifling a critical developmental pathway toward environmental stewardship.

Kids are innately curious about living things in the environment. While a squirrel or bird might not be accessible to catch, hold or (practically or legally) keep, common insects, spiders, and small reptiles and amphibians are. Not coincidentally, many of these are species which some adults view to be potentially harmful, if not outright repulsive.

Nature Discovery delivers weekly Michigan-specific nature and wildlife lessons to students at Montessori Children's House in Lansing, Stepping Stones Montessori in East Lansing and at Okemos Nursery School. In addition to presenting about many of the wild things kids often encounter in the outdoors, we occasionally facilitate opportunities for the students to keep and tend a small living thing in the classroom, temporarily or through the course of a school year with an eye on an eventual return to the wild.

It seems that, whether the subject is a pet or a small organism taken from the environment, much like a mother and a baby, the act of nurturing it - investing your focus in providing the essentials it needs to thrive and grow - instills a transcendental bond with the organism, and, by extension, a vested hope and desire for it to *continue* to survive beyond the period in which it was nurtured.

For instance...

Securing a woolly bear (larva of the Isabella Tiger Moth) in October then maintaining it in the classroom is a simple but effective, hands-on ecology lesson. Students of any age can learn to identify, locate and glean the leaves of Common and English Plantain - two wildflowers on which they feed growing on many non-chemically-treated lawns. Compared to a standard, generic, textbook definition or diagram depicting two “species-ambiguous” links in a food chain i.e., *caterpillar eats plant*, the experiential lesson provides such a more concrete, applicable and inspiring introduction to learning about the connectivity of living things. Further, “personalizing” the lesson virtually ensures that in their futures these students will never regard a wild woolly bear that crawls across their path - nor the plantains popping up on the lawn for that matter - with the kind of indifference rampant through our culture that so often results in their demise.



Woolly bears on English Plantain.

Spiders and snakes are broadly and needlessly reviled. Yet, by merely providing opportunity for our youth in their formative years to keep and provide for either stimulates positive attitudes toward their rightful ecological roles as small predators in any natural community.

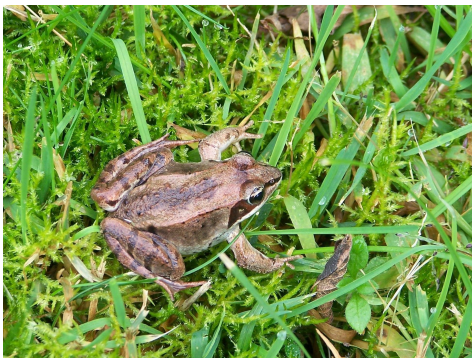
For squeamish teachers out there we’re hardly talking “classroom tarantula” here. I find that a specimen of the black, spritely *Phidippus audax*, often known by the common name, Daring Jumping Spider, is an easy-to-keep, and therefore, excellent candidate for classroom care. Most temperate jumping spiders are really tiny, making the observation process substantially more arduous. However, with up to a half-inch body length, a female *P. audax* is very observable and easy to feed. Many times over the summer we locate one climbing up the outside wall of our country home. Sometimes one finds its way through an open door or window to be found wandering across an inside wall.



Note the white, emoji-face-like markings atop the Daring Jumping Spider’s abdomen.

Many spiders spin a silken web to ensnare prey, but not jumping spiders. They actively stalk then lunge to tackle flies and other small insects. In captivity one can be maintained for months in the most simple “habitat” imaginable: a large, clean, dry jar. Just pick a live fly off the window and drop it in. Kids thrill at watching the spider stalk and pounce. Can’t find a fly? Any small insect will do, and one a day is a good dietary rule of thumb. It is also good to know that this hearty species can go days if necessary without eating before the situation becomes lethal.

While the five and six-year-old primary students at Stepping Stones are loving their pet jumping spider in the classroom this fall...



The elementary students are keeping a pair of Wood Frogs in an artificial microcosm that simply mimics habitat in which they are found. Wood Frogs were driven to local extinction long ago in most East Lansing neighborhoods, but scattered elements of this frog’s ecology are still present. For example, at Stepping Stones abundant food in the form of countless small, brown Carolina Ground Crickets teems throughout the untreated, seldom-mowed grass behind the school. We pressed a tightly-fitting rectangle of grassy turf into a small aquarium as natural substrate. Just as they would do in the wild, the frogs hunker so deeply between the tufts

of blades that they elude immediate detection. The students can step right outside their classroom door any time to chase and secure *hopping invertebrate* sustenance for their *hopping vertebrate* mascots inside. The frogs are up and out of their hiding places within seconds of the cricket-drop.

By virtue of its size alone the Common Snapping Turtle is also potentially the most dangerous Michigan turtle, should you be bitten by a large one. It also suffers the misfortune of being assigned a common name that conjures unpleasant feelings about it even prior to an encounter. Yet, from many years of keeping them within our educational menagerie we've consistently found that a snapping turtle is no more likely to bite than any other species. In fact, our snapping turtles *never* attempt to bite when handled. We've also found that one in captivity not only comes to regard the presence of large mammals around it to not be a threat, but appears to become positively excited in anticipation that it might be fed.

Female snapping turtles who leave the water in early summer to find a suitable nesting site are road-killed by the hundreds while crossing Michigan highways. Additionally, of those that successfully deposit their eggs, well over half will be unearthed and become raccoon food the very next night. You can hardly go straight to "lucky" to describe the developing young that escaped this fate to successfully hatch in September. Over ninety percent of these - due to depredation, roadkill, dehydration or freezing - will not make it to spring.



Since the odds are so stacked against these hatchlings to begin with, why not pick up a wandering individual and care for it in the classroom through the school year? This year, one class in each Montessori school will spend it feeding, maintaining and growing a hatchling that we picked off of area country roads. It's a huge "win" for the turtle *and* the students. They will feed it worms and turtle food sticks while protecting it from the killing cold. By June in all likelihood it will have tripled or quadrupled its original mass and strength. Then, as part of a year-end school picnic or field trip - perhaps at a local park or nature center - they'll carefully deposit

it at the edge of a lake or pond and watch it first crawl, then swim into the submerged weeds or muck and out of sight. They'll feel confident that it has been released back to the wild with much better odds of reaching adulthood now than from where it stood in middle of that country road back in September.

More importantly to snapping turtles and ecosystems as a whole, the students will never in the future perceive the sight of a wild snapping turtle of *any* size as something sinister or dangerous. They'll consider it a fortuitous encounter - one that made this particular moment in their lives a bit richer, naturally.

Teachers or parents, would you like to incorporate the care of a similar, pint-sized, wild thing into your children's daily experience? We've developed a care sheet specifically for woolly bears. In regard to keeping any common native reptile or amphibian all you need is either a current fishing license or an educator collector's permit from the Michigan DNR. We'd be happy to help with suggestions and to guide you through the process. Just contact us.

-Jim McGrath

Catch Us on Coffee Break October 11

Jim is scheduled to appear on Friday, October 11 at 9:15am discussing Michigan Audubon's Cranefest and swans. 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.





Tundra Swan.

Photo © Steve Sage.

Michigan Swans Up Close

Sunday, October 13

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

Three species of wild swans can be found in Michigan, yet, most state residents would be hard-pressed to differentiate between them. Join us for the original Powerpoint presentation, *Michigan Swans Up Close*. Beautiful images aid participants in differentiating between the Mute, Trumpeter and Tundra swans: one, once driven to extinction in the state; another, a regular spring and fall migrant through the state, and the third, a troublesome alien across the state. Discussion also will include identifying each species by its call, migratory timing and habits, ecological information, why it is important to be able to tell one species from another, and where to go to encounter them.

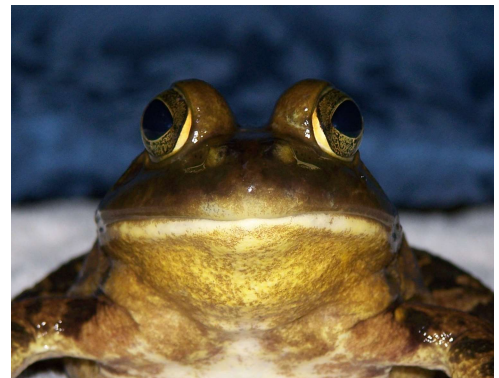
Don't forget our highly-interactive Michigan-native reptiles & amphibians zoo! Before, during or after the presentation visitors of all ages are encouraged to spend time here. Home to over 40 combined species of snakes, turtles, frogs, salamanders and lizards, it's the largest such collection in Michigan!

Identify and help feed the "grand slam" of Michigan turtles – all 10 species native to the state!

Identify and feed crickets to the "grand slam" of Michigan frogs – all 13 species found in the state!

Identify, feed and *handle* up to 10 species of Michigan snakes!

Photo ops, galore!



Saturday GATE Classes Begin October 19 at LCC

Carol is teaching 4-week Saturday LCC Fall GATE classes (East Campus) beginning October 19.

Toy Science (9am-noon, Grades 2-3) Explore the science behind how toys work. Use this knowledge along with science and engineering skills to build your own toy to take home.

Advanced Fun with Physics (1-4pm, Grades 4-6) Learn how to build a simple motor, generate electricity from renewable sources, build a solar cooker and more in this hands on, project based class.

To register or for more information visit lcc.edu/seriousfun and click on Fall/Spring GATE.

Around the State in October

- ❖ **Sunday, October 6:** 2 to 4pm. *Michigan Reptiles & Amphibians Presentation & Exhibit; MDNR Outdoor Adventure Center, Detroit.*
- ❖ **Saturday, October 12:** 1 to 6pm. *Michigan Reptiles & Amphibians Exhibit; Cranefest, Baker Sanctuary, Bellevue.*
- ❖ **Wednesday, October 16:** 6-7:30pm. *Michigan Reptiles & Amphibians Exhibit; Donley Elementary, East Lansing.*
- ❖ **Saturday, October 19:** 11am to 3pm. *MI Reptiles & Amphibians Exhibit; Hidden Lake Gardens, Tipton.*



Whitefish Point Fall Birding

***Tuesday-Wednesday,
October 29-30***

Juvenile Golden Eagle. Photo © Greg Smith.

Depart Tuesday, 7am. Return Wednesday, @ 6pm. Join an intimate group of only five adult participants on a guided trip to Whitefish Point, including a number of stops in transit. The fact that the peninsula juts into the southeast shore of Lake Superior makes it a perfect gathering point for migrants, large and small. We'll join professional hawk-counters and waterfowl counters at designated stations and visit other locations on the point. Weather-permitting after dark we will visit the owl station where owls are captured in mist nets, data collected, then released. Early Sunday morning we will walk quietly among the jack pines off the point's Vermilion Road for a chance to see the elusive Spruce Grouse.

On our way to/from the point we will stop at Point LaBarbe, located on the northeast tip of Lake Michigan and in the shadow of Mackinac Bridge. Here we will join Mackinaw Straits Raptor Watch counters identifying a variety of hawks and eagles passing overhead. Late October is the peak fall Golden Eagle migration window!

Weather-permitting, we should tally up to 50 species. Much of the birding through the trip is in or near the vehicle with a few relatively short hikes.

COST: Only \$230/person, includes all transportation and lodging. Meet at Nature Discovery. Contact us to register. (In case of an inclement weather forecast the trip may be postponed and rescheduled for Tu-Wed, Nov 5-6.)



**Cedar Creek
Veterinary Clinic**

Thank You, Cedar Creek!

Cedar Creek Veterinary Clinic in Williamston donates professional medical care for Nature Discovery's huge educational menagerie of Michigan-native reptiles & amphibians. With over 100 animals in all we need to call on them regularly. That's why we appreciatively call CCV **THE OFFICIAL VET OF NATURE DISCOVERY!** Make them your pet's health care team.

Visit www.cedarcreekvet.com.

Hold Them Accountable!

- When we heard about the state's decision to begin aerial spraying to kill mosquitoes in response to the threat of Eastern Equine Encephalitis (EEE) we were uneasy about its potential impact on non-target species, so we found out more about the insecticide being sprayed - pyrethrin-containing Merus 3.0 - and the broad swath of insect species its application is known to kill. Now? We're downright upset!

According to a State of Michigan EEE FAQ sheet, "Pyrethrins are commonly used to control mosquitoes, fleas, flies, moths, ants and many other pests..." The statement gives the casual or non-natural science-educated reader the impression that all of these insects are pests when the vast majority being sprayed and killed are not. Myriads more exist in the spray zones that – purposefully-omitted or not – did not make the short list. For instance, for most of us

positive images come to mind at the mention of butterflies. Yet, they share the same insect order with moths, so if Merus 3.0 kills moths there is no doubt it will kill butterflies, too. In fact, insects as a whole should be respected as integral, irreplaceable, interacting components of any healthy ecosystem, not wholly-dispensable because *one* of them happens to give us trouble. This is the ecological equivalent, if there ever was one, of throwing the baby out with the bath water.

We are pleased to see that we aren't the only natural science educators to express alarm. Kalamazoo Nature Center has publicly questioned the environmental impacts of the program. "This is a broad-spectrum insecticide, we don't know what kind of impact it will have on the insect communities, mosquitoes and beneficials," said Holly Hooper, the center's biological research director.

<https://www.wmuk.org/post/kalamazoo-nature-center-raises-concerns-about-mosquito-spraying>

<https://wwmt.com/news/local/master-bee-keeper-urging-those-with-hives-to-take-steps-to-protect-them-from-aerial-spray>

We emailed Governor Whitmer to make our case. Here's the online form if you'd like to express your opinion, too: <https://somgovweb.state.mi.us/GovRelations/ShareOpinion.aspx>

- Ironically, but in keeping with the upside down political world we endure today, a sixteen-year-old has become the adult voice in the room while certain adult-aged ones continue to engage in the kind of destructive behavior and abusive language that any good kindergarten teacher would be quick to admonish. We're with Greta!



Pyrethrin applications are lethal to the familiar woolly bear, larva of the Isabella Tiger Moth. This is but one example of a huge array of "non-pest" insects that will be affected by the EEE spraying program.

<https://www.theguardian.com/environment/video/2019/sep/23/greta-thunberg-to-world-leaders-how-dare-you-you-have-stolen-my-dreams-and-my-childhood-video>

- Birds Are Vanishing from North America

<https://www.nytimes.com/2019/09/19/science/bird-populations-america-canada.html>

-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



Less Beef = Less CO₂
Cowspiracy.com

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

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