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Volunteers Needed



This patch of Cut-leaved Toothwort, a native woodland wildflower growing on our property, wouldn't stand a chance if we were not annually clearing invasives from around it.

I Hate to Spoil Your Spring, but...

Picture a beautiful day in mid-May. Such a beautiful day, in fact, that it generates a desire in some to take a walk on a trail, perhaps at a local nature center. A typical couple walks a woodland trail taking in the sights, sounds and smells of the season. Comments like these might accompany the stroll:

“Look at the delicate yellow blossoms on those bushes. They smell so good..., and there are so many!”
“I love all these pink and magenta flowers. Look in this direction. It's like a solid carpet of pinks and purples. Just beautiful!”

There may be no better month in Michigan than May to awaken your awareness to our state's tremendous natural diversity. Migratory songbird species flood back into the state; reptiles and amphibians are more apparent than any other time of year as they begin their annual breeding cycles; woodland wildflowers burst into bloom; tree buds open into tender leaves; a lush renewed growth of herbaceous plants and grasses carpet any ground exposed to the sunny, blue sky; and, in step with all the above, insect abundance and diversity explodes.

Unsettlingly, however, these days it takes far more to preserve a natural area's diverse living components than merely designating it off limits to our penchant to bulldoze and mow. Ask any employee or volunteer for Michigan Nature Conservancy or Michigan Nature Association. Biological diversity in the majority of natural areas, public as well as private, is under siege from a host of invasive, alien plant life. With rare exception these species were introduced by humans, who, through lack of ecological sense had no foresight to predict the damaging effect a given introduction would have on the ecology of a native natural community. The above organizations must continuously send workers into sanctuaries to battle them. Many of the plant names reveal their non-native origins, like European Buckthorn, Amur Honeysuckle, and Oriental Bittersweet.

Since moving on to our north Williamston property in 1989, we have noticed an alarming metamorphosis in our wooded acreage. Today, the vegetative makeup of the woods is a far cry from what it was 25 years ago, despite our desire to protect it.



Take it from us, even pre-schoolers can not only learn to recognize the toothed, heart-shaped leaves of Garlic Mustard, but also grasp the gist of its negative impact on forest ecosystems.

Three species here are particularly troubling because of their tolerance to shading. One is a biennial plant, the second, a large shrub, and the third a woody vine. Each, in its own way, is particularly insidious in terms of eroding healthy vegetative diversity in our woods. On our six acres, we pull and cut them year-round as time allows, but, even if we had more time, it often feels as though there aren't enough hours in the day...

All three have this in common: they disperse seeds profusely, and almost no native creature looking for sustenance will touch them. Hence, they take over a forest unchecked. Native vegetation on which native Insects and larger animals directly or indirectly depend diminishes accordingly. The result is an erosion of the entire food web of the forest community.

Garlic Mustard is a biennial. In April and early May of its second year a stalk grows up to three feet tall. Clusters of small white, four-petaled flowers are pollinated by tiny insects, then, thin, fingerlike pods containing hundreds of seeds per plant desiccate by June, crack open, and scatter them over the ground.

We've managed, so far, to keep Dame's Rocket - another mustard that blooms a few weeks later - off our property. This alien has larger, pale, pink-to-lavender, four-petaled flowers. While beautiful to behold, its story and devastating impact mimics that of the Garlic Mustard. Dame's Rocket is spreading along roadside ditches more each year. Every May and early June we pull all blooming Dame's Rocket from the ditches immediately north and south of our property to arrest its advancement into our woods. If we were to abandon our vigilance for just a few years, its invasion is guaranteed.



Amur Honeysuckle begins to leaf-out in late April ahead of nearly all other woody growth, making it stand out like a sore thumb in the woods. Get it out of there!

The bark of the Amur Honeysuckle is pale and shreddy compared to most native shrubs. In late April, this shrub begins leafing-out a full two weeks before other shrubs in the understory. In May it produces dainty, fragrant, yellowish, paired blossoms in abundance along its many branches. Through the summer it will produce pairs of glossy, round, orange or red berries that will remain on the shrubs until birds devour them or they begin to fall off in early winter. This shrub uses our native songbirds as vectors to its invasion of new woodlands. A robin, bluebird, or waxwing will chow on honeysuckle berries then defecate the seeds wherever their wings carry them.

Oriental Bittersweet - a shade tolerant, invasive woody vine - literally chokes and kills healthy native trees, then tears them to the ground. Unlike native vines such as poison ivy, Virginia creeper and wild grape, it climbs in a tight corkscrew up the trunk. Over time, the constricting action becomes not unlike a tightening tourniquet around an animal's neck. Left unchecked, it eventually penetrates the tree's bark. Similarly to the honeysuckle it can produce a bumper crop of red berries that are irresistible to many fruit-eating songbirds. Thus, its seeds are dispersed in the same fashion.

A person who has not had the opportunity to learn to recognize diversity of plants, insects, birds, etc., is not in a position to even detect the crisis. A generic outlook produces observations that generate



Without human intervention, the Oriental Bittersweet that corkscrews up the trunk of this healthy Wild Black Cherry is a literal death sentence for the tree.

simplistic, often benign thoughts about what is being observed (like the couple observing Amur Honeysuckle and Dame’s Rocket at the start of this essay). Who can blame them? Critical education about the natural world and ecological relationships, species-by-species, has been and continues to be grossly inadequate in our public schools. Parents should demand these lessons in their children’s curricula. In the mean time, it is up to individuals of all ages to seek and engage in other opportunities available to learn about it.

We’ve made it our vocation to offer them. Michigan-specific natural diversity and ecology is what we do - in practically any venue we or you can devise. For instance, here’s a completely engaging and unique one. Check out the details of our second annual Biodiversity Day in this issue. If you can’t make the date, consider a special appointment for the same kind of exposure.

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

-Jim McGrath

Catch Us on Coffee Break Wednesday, May 14

Jim is scheduled to appear on Wednesday, May 14 at 9:45am, discussing and showing some alien invasive plants. 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.



Around the State in May



- ❖ ***Thursday, May 8: 6-7:30pm. MI Reptiles & Amphibians Exhibit; Lansing Charter Academy Science Fair, Lansing.***
- ❖ ***Friday, May 16: 9am-2:30pm. MI Reptiles & Amphibians Exhibit; Isabella Conservation District Environmental Ed Day, Chipp-A-Waters Park, Mt. Pleasant.***
- ❖ ***Saturday, May 17: 3pm. MI Reptiles & Amphibians Presentation; Lloyd A. Stage Nature Center, Troy.
1pm. MI Reptiles & Amphibians Table;
Discover Millenium Park Event, Walker.***

Visitors enjoy “snakes on a stick” at our Michigan Snakes Alive Exhibit during MSU’s Science Festival.



Second Annual

Biodiversity Day

Sunday, May 18

*Doors open from
1 to 5pm*

Admission: \$5/person

Get ready to identify, experience, and check-off well over 100 species of Michigan wildlife and plant life in a single afternoon! Knowledgeable staff will be on hand all day to assist in a range of highly-interactive, continuously-running indoor and outdoor biologically-diverse encounters for all ages.

Stations and activities include:

- ✓ Taking the live Michigan Frogs Quiz.
- ✓ Identifying “The Grand Slam of Michigan Turtles” in outside pools, featuring all 10 species found in the state. Help feed them, too!



The Marbled is one of the rarest salamanders in Michigan.



We found this Nursery Web Spider in our garage. This species is known to have the widest “leg-span” of any Michigan spider.

- ✓ Meeting 13 of our state’s 17 species of snakes. Lots of handling and feeding opportunities, too.
- ✓ Taking the live Michigan Salamanders Quiz.
- ✓ Identifying over 20 species of birds by sight and by sound.
- ✓ Identifying a long list of wildflowers, shrubs, vines and trees.
- ✓ Identifying insects encountered around the yard and trails.
- ✓ Identifying and inspecting pans teeming with diverse invertebrate life from the vernal pond.
- ✓ Identifying a host of invasive species that are eroding natural diversity in our natural areas.
- ✓ Checklists will be provided to help participants keep a record of their encounters.
- ✓ More!

“Breeding Birds of the U.P.” Tour, June 2-6, 2014



Upland Sandpiper. Photo by Andrew Nowicki.

Join our economical 5-day guided tour in Michigan's Upper Peninsula within an intimate group of no more than 5 people. Our goal is to experience as many species as possible, emphasizing locations to tally specific U.P. gems, like Connecticut Warbler, LeConte's Sparrow, Upland Sandpiper. Destinations include Kirtland's Warbler habitat on our way north, Munuscong Marsh, Whitefish Point, Seney National Wildlife Refuge, and more. On the 2012 trip the group tallied 129 species! COST: \$650 (\$250 deposit), includes all transportation, lodging, 4 breakfasts and 4 road-lunches. Any child is welcome to attend accompanied by an adult. Contact us to enroll or for more information.

Our 2014 Summer Day Camp Rosters

are filling up! Click this link for camp details:

<http://www.naturediscovery.net/pdf/summercamps.pdf>

CCR – Say Hello to 400ppm

As a keyboardist for rock stars like the Allman Brothers, Eric Clapton and the Rolling Stones one wouldn't expect Chuck Leavell to be the type to launch a popular eco-awareness website. Mother Nature Network focuses on non-partisan environmental news. "The environment really doesn't care if you're Republican or Democrat. We're really in this together, and our job at MNN is to help find common sense solutions to the issues we're all facing," he says. About 85% of the content is original writing.

Site blogger, Russell McLendon, recently posted *Earth is About to Reach Another CO2 Milestone.* That milestone is 400ppm of CO2 in our atmosphere - a concentration below which none of us will ever breathe again. Here's the link: <http://www.mnn.com/earth-matters/climate-weather/blogs/earth-is-about-to-reach-another-terrible-co2-milestone>.

Climate research has shown that CO2 levels prior to the onset of fossil fuel-supported industrialization hovered at about 250ppm. Researchers have since projected that climatic patterns, and thus, life as we know it, cannot be sustained at a carbon level in the atmosphere above about 350ppm.

Increasing worldwide CO2 emissions are making that figure shrink away in the rearview mirror. Meanwhile, a look around society shows that most Americans are too comfortable and absorbed in their day-to-day distractions to take it seriously. Everyone should be making decisions every day in every facet of their lives that take CO2 emissions into consideration, then take action to follow alternate pathways that reduce their carbon footprint. Secondly, Americans need to get over the illusion, bolstered nonstop in the media, that The Economy, our society's sacred cow, is the most important issue of our time. This misdirection of our focus may be the most damaging blow to our ability to take serious action now to curtail greenhouse gas emissions as quickly as possible, and one that will cause future generations to scratch their heads and ask, "What were they thinking?"

Volunteers Needed for Outside Work

If you have some time to spare AND you like working outside AND you like working in the soil AND you would like to do something that's good for the environment AND you'd like to do something to help our overworked and understaffed business, please contact us! During the growing season it is difficult for us to keep up all our appointments, plus all the animal care, in addition to rampant plant growth. Can you help us clear invasives out of our woods, help with our organic vegetable gardens or help to beautify our neglected flower beds? Choose any days or hours that are convenient for you.



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