



A Cedar Waxwing unwittingly prepares to do the bidding of an alien European Buckthorn. Photo © Greg Smith

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Invasion Via the Berry Snatchers

One day last week I observed a huge flock of Cedar Waxwings – about two hundred in all – alight en masse among the topmost bare branches of the tallest tree on our property, a towering female cottonwood. Over the next twenty minutes small groups, amid a continuous cacophony of thin, lispy notes, broke from the big flock to descend among the crowns of smaller trees situated below and around their original lofty perch. These treetops were loaded with red-orange berries. Through binoculars, and then closer through my spotting scope, I observed the birds greedily stripping twigs of their juicy, bite-sized lures.

An intimate look at this slice of avian group behavior should be an inspiring one on a number of levels. However, knowledge of the origin of those berries - actually suspended, not from the tree itself, but from the outstretched tendrils of a woody vine that had scaled the tree's trunk all the way to its crown – dropped a wet blanket of unease over me that effectively dampened the wonderful view of the waxwings.

It's a common angle in sci-fi book and movie tales about extraterrestrial alien invasions. Humans are used as - initially, at least - unwitting vectors to the dispersal and exponential expansion of the menacing organism from outer space.

In an ecology lesson for elementary students, mentioning "alien" for the first time requires exposing them as quickly as possible to a second definition of the word to bring their imaginations back down to Earth - an organism native to a distant ecosystem which, accidentally or on purpose, is introduced and becomes established within an ecosystem in which it previously did not exist. From sea lampreys to house sparrows, autumn olives to zebra mussels, with rare exception humanity got the ball rolling. Too often the introduction snowballs into an all-out invasion over the ecosystem, to the detriment of native species diversity and, potentially, to the eventual collapse of the ecosystem as it once existed.

To the educated eye familiar with a specific living ecosystem and its interconnected components, a view of contrasting snapshots “before” and “after” an invasive species has become established would be, I imagine, as starkly evident as knowing that your spouse’s body has been overtaken by a pod person. By contrast, a person who doesn’t personally know the spouse has no “before” experience from which to draw the same conclusion. Broad lack of education about woodland ecosystems and their living components renders most citizens incapable of recognizing an alien invasion in progress. Therefore, no alarm is raised until it is too late.

In past newsletter essays I’ve written about a number of highly-invasive, alien, woody plants that are eroding the ecological integrity of woodland communities in Mid-Michigan and beyond. In fact, to the trained eye a stark metamorphosis has occurred over the past two decades in nearly every local area – private or public – that harbors wild growth. The woods at Fenner and Woldumar nature centers in Lansing are overrun with Amur Honeysuckle, and European Buckthorn - alien woody shrubs. Oriental Bittersweet - a woody vine – is also present and spreading. All are capable of producing bumper crops of berries. Herein lies their common, seemingly insidious, invasive strategy. Our native berry-consuming birds can’t resist the easy and abundant opportunity for sustenance entering a season where the promise of a good meal becomes increasingly dicey. The Robin, Cedar Waxwing, and Bluebird, as well as the non-native, invasive European Starling, and others act as extremely effective vectors for seed dispersal. After gorging on berries they fly away to alight elsewhere and defecate the seeds.

December may be the best month of the year to identify these three invasives specifically by way of their berries. Foliage that obstructed the view a few weeks ago has fallen. The berries – especially the



Amur Honeysuckle berries in early December.

red ones – stand out boldly from the drab backdrop of the woods, or, overhead, from the blue skyscape. However, as winter progresses the heavily-laden branches become steadily denuded of fruit, if not from unwitting avian vectors, then from simply being wrested loose and dropping to the ground due to wind, snow or ice. Indeed, by late January a dangling berry becomes a rarity.

Another invasive shrub, Autumn Olive, produces red, ovate berries. However, it is not quite as shade-tolerant as the others discussed here, and so, it is not the menace in woodland settings as these others. Autumn Olive also drops its berries much more quickly than the others once the first frosts occur.

An **Amur Honeysuckle** that has flowered in the spring continues to hang onto small, red, globular, ripe fruits after its foliage has fallen in late fall. The bright berries are arranged, sometimes quite densely, in pairs along the outer twigs. Its leaves and live twigs are unpalatable to deer, rabbits, and native insects, thus eliminating any level of control-via-consumption.

When we moved here at the start of 1989 no honeysuckle could be found on the property. Now, it has largely displaced the native gray dogwood stands, and is, by far, the most abundant shrub. When I work to cut and pull all honeysuckles on a given patch of ground virtually no other growth remains. Their sheer density almost completely eliminates the ability of any other plant to grow beneath them.

The ripe, round berries of **European Buckthorn** are of such a deep, blue hue that they look black from a distance or on a dreary overcast day. This shrub has not become established on our property. However, its presence and growth is apparent in many wooded areas not far from us. It is especially dense in most woods closer to the Greater Lansing area. I can imagine some of the baccivorous birds mentioned above loading-up on buckthorn berries in a woodlot down the road, then, later that day alighting in trees on our property to perch, roost, preen, and... yes, poop.

So why then has this one not become established here? Not for lack of trying... Most seedlings require at least three years of growth before accumulating enough stored energy to reproduce. Traversing the property many times throughout the seasons I occasionally encounter a lone, knee-high, buckthorn perhaps in its second year of growth, and waste no time in uprooting it. Unfortunately, the honeysuckle became established before I was fully aware of its potential to invade out of control.



Oriental Bittersweet berries.

The green skin of an **Oriental Bittersweet** berry turns yellow as it matures in late summer. It then cleaves into thirds, and each section curls upward to expose the reddish-orange berry within. In early December most bittersweet berries retain this tri-sectioned “cap” until they are eaten or drop from the vine. Unlike the two alien shrubs mentioned above the height to which a bittersweet vine can grow is only limited by that of the host tree to which it clings. Over time it is capable of tightly corkscrewing all the way to its crown. On a sunny December day clusters of bittersweet berries stand out brightly against the knotty curtain of growth that tangles a tree’s branches. This vine is ultimately lethal to any tree it begins to scale. Deem any view of accumulated bittersweet



A deciduous tree chock full of bittersweet berries emits a silent scream to be rescued from impending death by strangulation.

berries occupying a native cherry, oak, or maple as a harbinger of that tree’s demise. Without direct human intervention the otherwise healthy tree is destined to be slowly strangled to death over the course of a few years. I’ve walked through patches of many woodlots in advanced stages of invasion. The shade-providing canopy has been completely ripped down by bittersweet. What’s left is an impenetrable twisted blanket of vines. Random broken stumps jut from the tangled web as a grim reminder of the woodland community that used to be.

This time of year I can identify the most advanced bittersweet growth in our trees by simply looking up for berries. Once identified I grab my limb-loppers and saw then pay a visit to the base of the tree. I often find not just one but several bittersweet vines growing up its trunk and lower branches. If the roots are small enough I may be able to rip them up by brute strength. Otherwise, I will cut the woody vine as close to the ground as possible and carefully squirt about one cc of herbicide onto the stump. I do the same with the honeysuckle that is sure to be growing in any direction I look.

Get some personal experience identifying some of these berry-bearing invasives by attending our open hours this Sunday. We’d be happy to give you a personal tour of our woods, point out and demonstrate their removal. Can’t make it on Sunday? Contact us to schedule a special appointment.

- Jim McGrath

Catch Jim on Coffee Break December 8

Jim is scheduled to appear on Friday, December 8 at 9:15am, discussing the annual Christmas Bird Count and other seasonal wildlife 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.



Visit Our Interactive Michigan Reptiles & Amphibians Zoo

Sunday, December 10

Doors open from 1 to 5pm.

Admission \$5/person.



In last month's issue we discussed our rat snake eggs that were ready to hatch. They're hatching now!

Did you know Nature Discovery houses the state's largest zoo of Michigan-native reptiles and amphibians? Currently, this highly interactive menagerie consists of 40 combined species of snakes, turtles, frogs and salamanders.



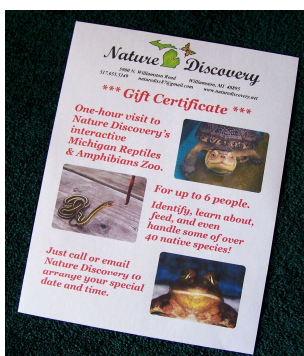
Kids feed grapes to our ever-hungry pair of state-listed Wood Turtles. Interact with all 10 Michigan turtles during your visit!

We take pride in striving to offer up-close encounters with well over 100 individuals in the zoo. Watch and feed turtles as they swim in pools at your feet. Feed lettuce and fruit to our large, friendly red-footed tortoise. Watch crickets being fed to frogs and salamanders. Watch various snakes eat worms, frogs and other prey. "Wear" a huge Black Rat Snake, the largest and one of the rarest snakes in Michigan, and so much more!

Interested participants are also welcome to take a guided walk through our natural area. Jim will point out some of the invasive, berry-producing plants discussed in this issue's opening column.

Inside or out, knowledgeable staff is on hand to help participants of all ages make the most of their visit. Photo ops, galore!

Give a natural gift this season - GIFT CERTIFICATE or FROGS CD



"VISIT NATURE DISCOVERY" GIFT CERTIFICATE:

For adults, families. Base price is \$25, or only \$5/person/hr. Upon payment we will email you a certificate to print and present to the recipient. Gift certificates also available for Owling Nights, Birthday Parties, Day Camps, and other ND functions.

"FROGS OF THE GREAT LAKES REGION" CD:

Instructional and Environmental listening. \$15. Visit our website for more details.

Contact us to purchase or for more information.

Michigan Owls & Owling

Friday, December 29; 7-9pm

The evening begins with a Powerpoint presentation over hot beverages and a snack. We'll present *Michigan Owls Up Close*, featuring all 10 species found in the state, covering identification, vocalizations, behavior and ecology of various species. Weather-permitting, we will then go out and attempt to "call one in" with audio recordings. Dress warmly, and don't forget your binoculars and camera! Advance registration required. Maximum 10 participants, so sign up early. Not recommended for small children. Fee: \$12/person. Do you have a small group of family/friends that would like to get together for an owling night? Contact us to make your own special appointment!



Muskegon Area Youth Birding Day

Tuesday, January 2 7:30am to 4pm

For 4th grade students and older. Join Jim for a whirlwind day of winter birding in the Muskegon area. We'll spend the first part of the trip at the expansive Muskegon Wastewater Facility, one of the premier birding spots in the state. Snowy Owls, eagles and tons of waterfowl of many species, plus much more! We will also stop at a Lake Michigan beach to search for loons, long-tailed ducks and

other visitors from the Arctic. Each student will be provided with a personal Michigan Birds checklist to keep a running tally species through the day. Arrange for your student to be dropped right at your door at day's end! Pack a bag lunch, binoculars, and dress for the weather (Open spaces are windy!). Enrollment limited to 5. COST: \$75/student. Contact us to register.

New Year Day Camps

***Wednesday & Thursday, January 3 & 4
9am-3pm***

Recommended for students, K & older. Enroll for either or both days of hands-on Michigan nature. Participants will interact with over 100 animals within our Michigan reptiles & amphibians zoo! Identify, handle and feed many of our 13 species of snakes, 10 species of turtles, 9 species of frogs and 7 species of salamanders. We'll watch and identify birds at our busy feeders and check them off on personal checklists. Lots of time outside and on the trails, as well! A photo of your student in action will be emailed to you. Hot lunch, hot chocolate and snacks provided. \$60/student/day. Advance enrollment required.



Opening the Arctic to Drilling “Simply Shameful”



From www.nationalaudubon.org. Snowy Owl. Photo Diane McAllister / Great Backyard Bird Count.

So says National Audubon Society President and CEO, David Yarnold, and we agree.

Some of the Arctic-breeding birds mentioned in the column linked below are the very ones Nature Discovery will be giving kids a chance to personally experience on an upcoming field trip. In so doing, these young participants will gain one more perspective in support of our ever more urgent need for purposeful, sustainable living that the man posing as president, most of Congress, and the insatiable corporate lobby they serve clearly have missed.

Vocabulary word of the month: bolotnyy
(Russian for “swamp”)

Audubon Condemns Passage of Senate Tax Bill Opening Arctic National Wildlife Refuge to Drilling
<http://www.audubon.org/news/audubon-condemns-passage-senate-tax-bill-opening-arctic-national-wildlife-refuge>

The GOP Tax Bill Could Forever Alter Alaska’s Indigenous Tribes
<https://www.theatlantic.com/science/archive/2017/12/senate-tax-bill-inigenous-communities/547352/>

-JM

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

350.org

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