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The Thumb Naturalist

Journal of the Thumb Land Conservancy

Supporting nature and naturalists of Michigan's Thumb region and adjacent Ontario

The Thumb Land Conservancy had a very productive spring thanks to our staff, volunteers, and donors, and we continue to push through the heat of the summer.

Work continued on the 11.5-acre Loznak Sanctuary in Marysville through the spring with invasive shrub removal and native lakeplain prairie plantings. There were even a few exciting plant discoveries on the preserve.

The Southern Lake Huron Coastal Park trail now extends a full mile through 160 acres of the Shorewood Forrest preserves in Fort Gratiot on a large dune ridge from Carrigan Road up to Brace Road. Along the way, a large amount of invasive honeysuckle and privet was cleared, improving habitat for native flora. Shorewood Forrest has also given us some surprising new plant and animal discoveries.

The TLC worked with Ducks Unlimited to begin planning wetland restoration on the 113-acre Morley Sanctuary north of Bay City, which should get started this fall.

Our annual Garlic Mustard removal went very well this spring. We worked in the Dead End Woods Sanctuary in Fort Gratiot the first four Saturdays of May. It's still clear that our 16 years of work has paid off. On the last Saturday in May, we returned to our old Garlic Mustard control area in the Port Huron State Game Area near Ruby in Clyde, which is still looking good after four years of absence.

Since last December, Burtchville Township has continued to delay progress on developing the Metcalf Road entrance of the 42-acre Bidwell Sanctuary. We are awaiting further instruction, but until then, we are holding-off on proposed improvements including a surfaced drive, small parking area, three small pavilions, and an information kiosk for which the TLC received a grant of \$4,500 in early 2022 from the Bioregion Reparation Fund (Full Circle EcoHouse of Prayer) of the Community Foundation of St. Clair County.

In May, the TLC was awarded a grant of \$20,000 from the Bay Area Community Foundation to develop park facilities at the new Morley Sanctuary north of Bay City. The grant allows the TLC to get a full start on our plans.

In June, the TLC was awarded a challenge grant of \$100,000 from The Carls Foundation to fund TLC staff pay. The TLC has 2 years to raise an additional \$100,000 required as match to receive The Carls Foundation funding. If successful, this will ensure TLC workers will be able to continue their great work for several years.

If you are interested in submitting anything for The Thumb Naturalist or have questions, please e-mail or call.

Bill Collins, Executive Director

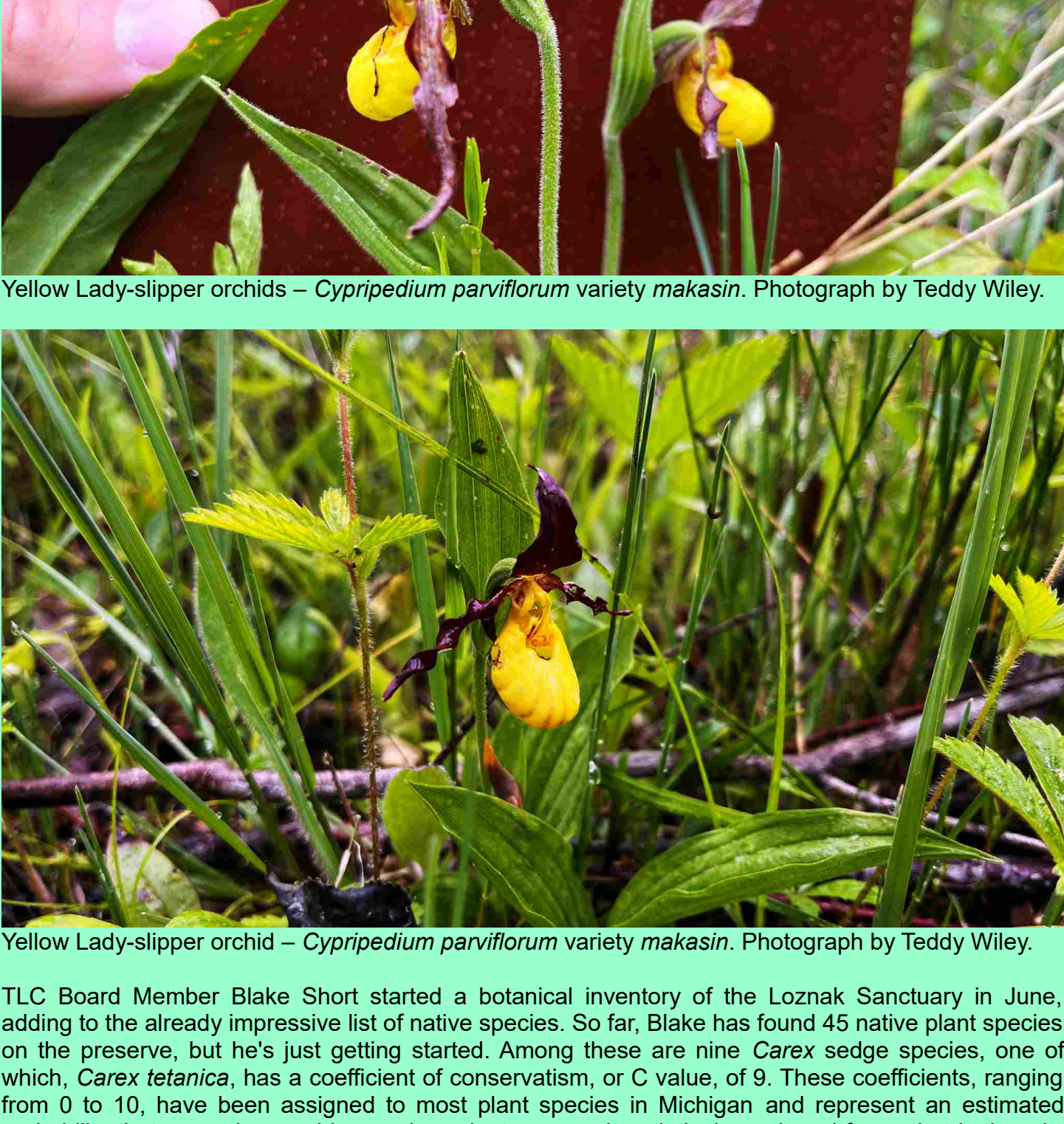
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Loznak Sanctuary

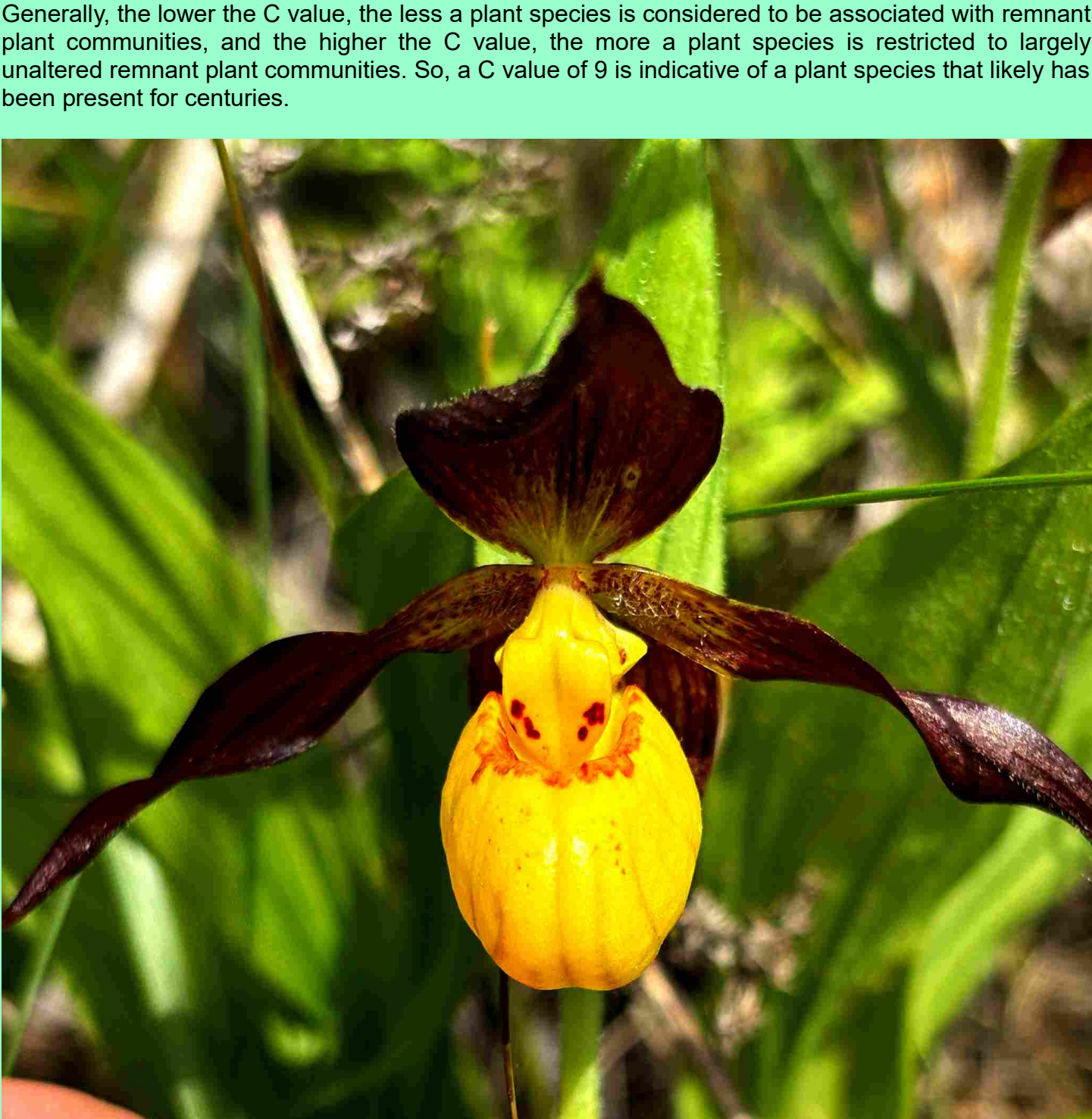
Yāhndawa' yeh de yenh'ta' iyaen' - *The Prairie is Near the River* - Huron-Wendat City of Marysville

TLC Board Member Dan Rhein and TLC Program & Stewardship Director Teddy Wiley continued their work on the Loznak Sanctuary through the spring. In addition to the locally collected native seed he planted in March, Teddy transplanted a bunch of Cord Grass - *Spartina pectinata* rhizomes from Port Huron Township. Cord Grass will make a durable addition to the native prairie community.

A nice surprise in May was that Teddy found a bunch of Yellow Lady-slipper orchids - *Cypripedium parviflorum* variety *makasin* in an area he cleared of invasive buckthorn back in the fall and winter. Yellow Lady-slipper can potentially be found in a variety of habitats, but in Saint Clair County, it seems to be largely limited to remnant lakeplain prairie and the dune and swale forest along Lake Huron.



Yellow Lady-slipper orchids - *Cypripedium parviflorum* variety *makasin*. Photograph by Teddy Wiley.



Yellow Lady-slipper orchid - *Cypripedium parviflorum* variety *makasin*. Photograph by Teddy Wiley.

TLC Board Member Blake Short started a botanical inventory of the Loznak Sanctuary in June, adding to the already impressive list of native species. So far, Blake has found 45 native plant species on the preserve, but he's just getting started. Among these are nine *Carex* sedge species, one of which, *Carex tetanica*, has a coefficient of conservatism, or C value, of 9. These coefficients, ranging from 0 to 10, have been assigned to most plant species in Michigan and represent an estimated probability that a species would occur in a plant community relatively unaltered from what is thought to have existed prior to major human disruption, or in other words, prior to Euro-American settlement. Generally, the lower the C value, the less a plant species is considered to be associated with remnant plant communities, and the higher the C value, the more a plant species is restricted to largely unaltered remnant plant communities. So, a C value of 9 is indicative of a plant species that likely has been present for centuries.

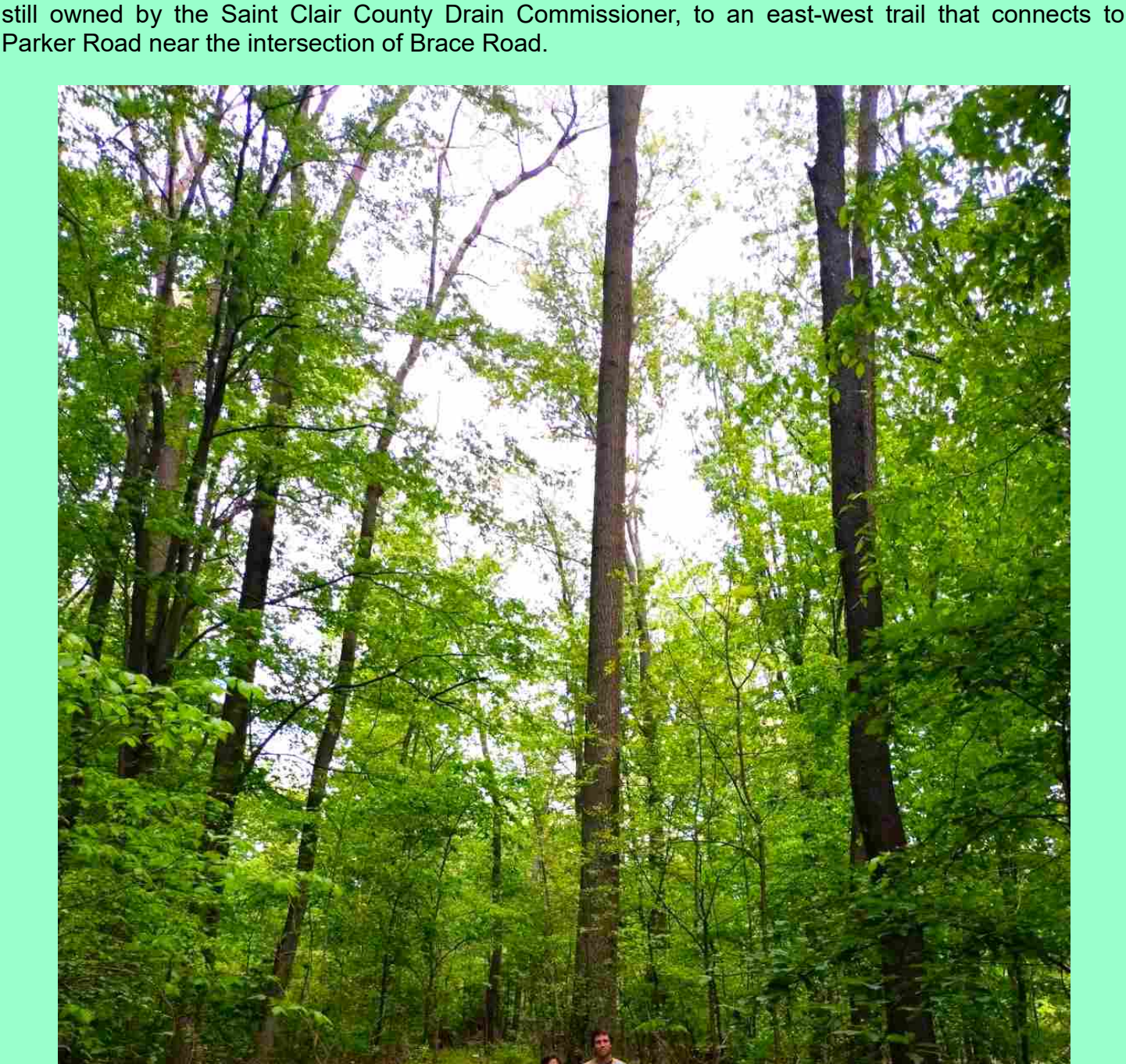


Yellow Lady-slipper - *Cypripedium parviflorum* variety *makasin*. Photograph by Blake Short.



Mountain Blue-eyed-grass - *Sisyrinchium montanum*. Photograph by Blake Short.

Blake, and later Teddy, found several new Butterfly Milkweed - *Asclepias tuberosa* plants which is good to know they are hanging on and expanding, as we found only a few there last year. Butterfly Milkweed has a coefficient of conservatism of 5, right in the middle of the scale, as they do get around and take advantage of disturbed sandy soils, but are really not a weed and far from common.



Butterfly Milkweed - *Asclepias tuberosa*. Photograph by Blake Short.

Shorewood Forrest Southeast Sanctuary

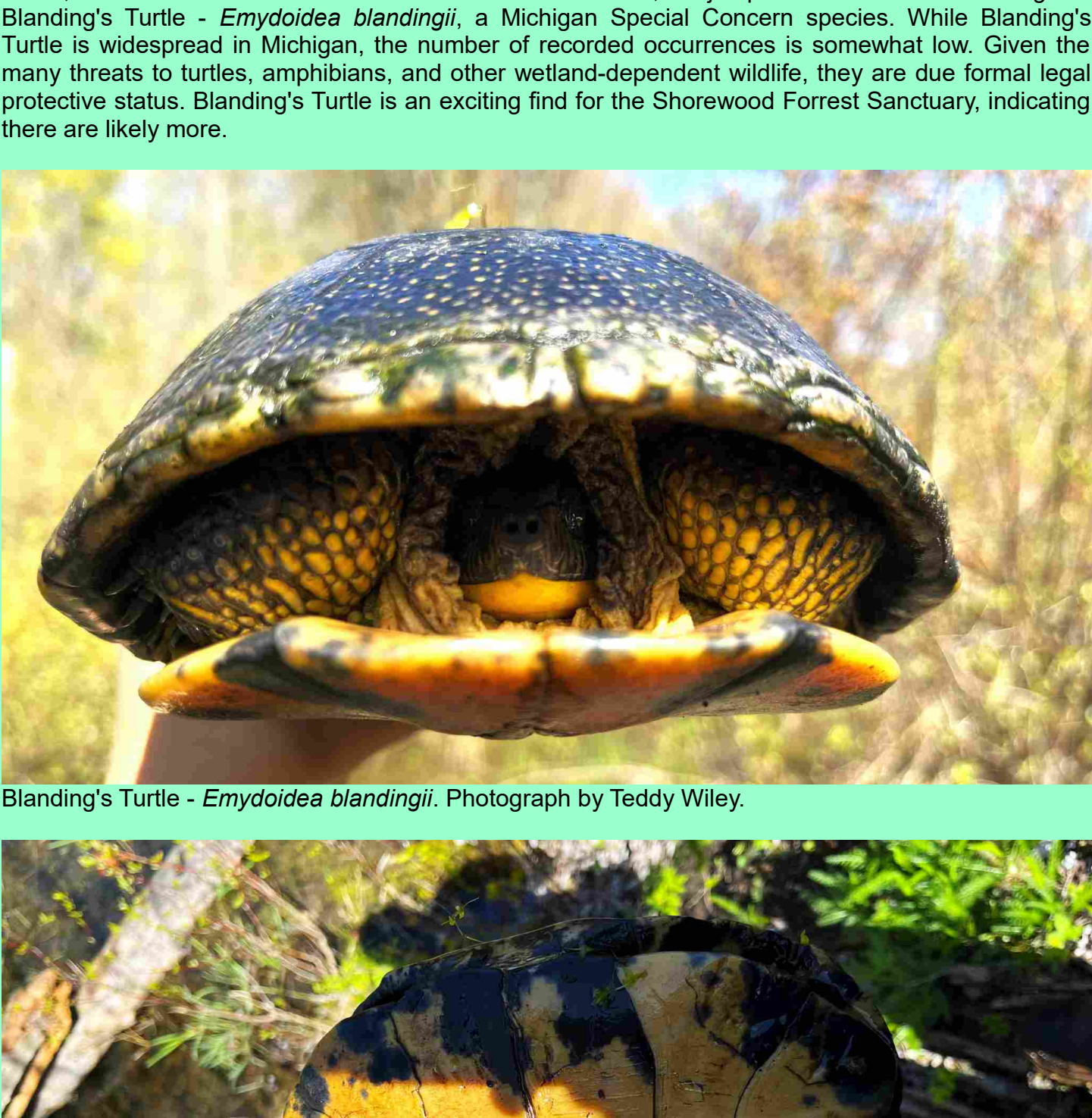
Fort Gratiot Township, Saint Clair County

Since last December, TLC Member Connie Neese has led the invasive shrub removal and trail clearing on our new 80-acre Shorewood Forrest Southeast Sanctuary and the 5-acre Cunningham Connector Sanctuary. Thanks to Connie, new TLC Stewardship Assistant Jake Defrain, TLC Program & Stewardship Director Teddy Wiley, Lisa Powell and Irene of the Trailblazers group, Erica Harmon, Michael Jefferson, Travis Jodway, TLC Stewardship Assistant Jason Sawyer, and TLC Volunteer Luke Wilhelm, the coastal trail now extends a full mile on a large dune ridge from Carrigan Road through the Shorewood Southeast Sanctuary and the adjoining 80-acre northwest Shorewood Forrest parcel still owned by the Saint Clair County Drain Commissioner, to an east-west trail that connects to Parker Road near the intersection of Brace Road.



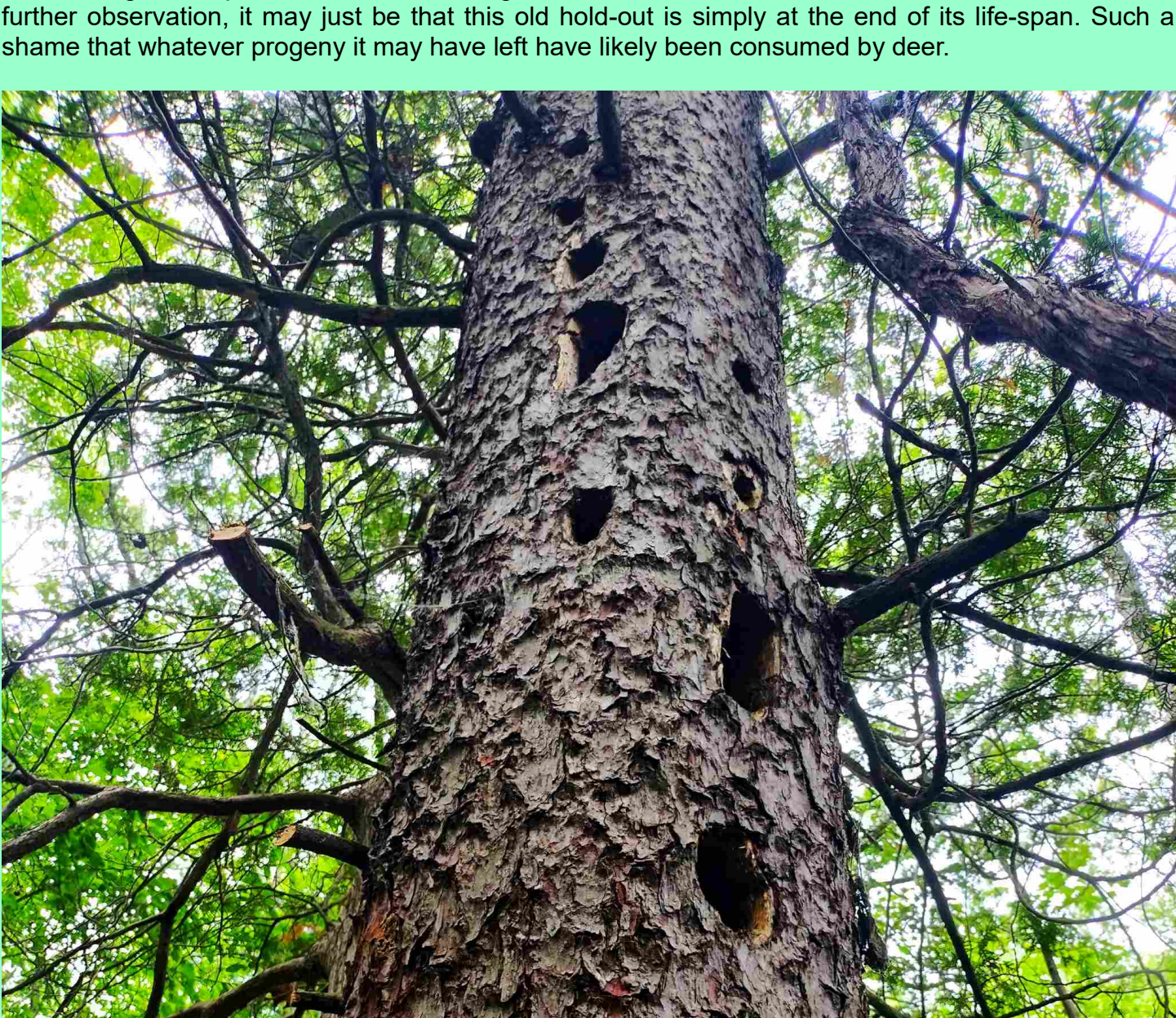
TLC Volunteer Connie Neese and Stewardship Assistant Jake Defrain. Photograph by Bill Collins.

Important discoveries have been made on the Shorewood Southeast Sanctuary this spring. The work crew found several Yellow Lady-slipper orchids - *Cypripedium parviflorum*, variety *makasin*, in late May and early June. Because of the cool spring, while most lady-slippers are in full bloom by late May, it seemed they were generally delayed until the first week of June. Blake Short explored in early June and found at least one Yellow Lady-slipper that appears to be closer to variety *pubescens* with green lateral petals (twisted), as opposed to the purplish petals of variety *makasin*. Yellow Lady-slipper orchids are characteristic of the dune and swale forest in Saint Clair County, so it was good to see that several still survive on the Shorewood Forrest Sanctuary. Deer take a heavy toll on orchids as they often nip off the leaves and flowers.



Yellow Lady-slipper orchid - *Cypripedium parviflorum*, variety *pubescens*. Photograph by Blake Short.

Earlier in the spring, the crew encountered a grove of about 25 to 30 mature Northern White-cedar - *Thuja occidentalis* in a lower spot of approximately 100 feet long by 70 feet wide. This area was named "The Grove" by Connie and her crew. These trees are undoubtedly descended from the original plant community of the dune and swale complex, much of it mapped by the Michigan Natural Features Inventory as cedar swamp prior to Euro-American settlement. They are commonly called cedars, or arbor vitae, but they are technically not cedars. They are in the Cupressaceae or Cypress Family and more closely related to cypress and juniper trees. There is some debate, but only three species of true cedar, genus *Cedrus* in the Pinaceae or Pine Family, are known to currently exist. These include the Cedar of Lebanon - *Cedrus libani* of Biblical fame from Lebanon, Syria, and Turkey, the Atlas Cedar - *Cedrus atlantica* of North Africa, and the Deodar Cedar - *Cedrus deodara* of the western Himalayas.



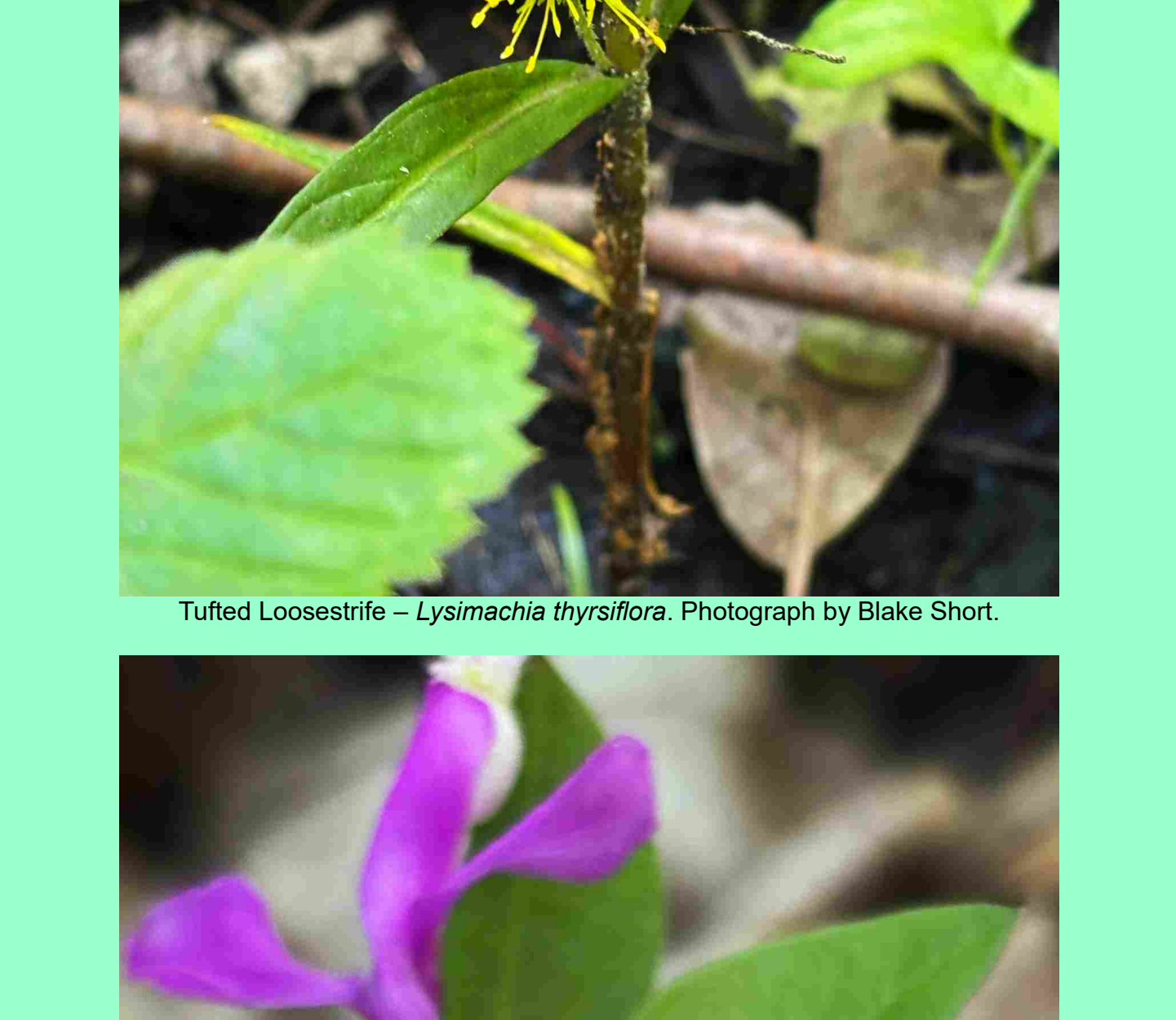
The Grove. Photograph by Connie Neese.

We will eventually fence-off The Grove to exclude deer that eat all of the seedlings and are a major impediment to cedar regeneration in Michigan. New seedlings, if we are fortunate, will be used to restore cedar across the preserve. Of course, all of these will need to be caged and it won't look pretty, but that's the reality we face until the excessive deer herds are reduced.

While cutting invasive shrubs in early May, Teddy caught the flash of yellow on a turtle in the adjacent swale, which is still full of water in late June. In true form, he jumped in the water and caught a Blanding's Turtle - *Emydoidea blandingii*, a Michigan Special Concern species. While Blanding's Turtle is widespread in Michigan, the number of recorded occurrences is somewhat low. Given the many threats to turtles, amphibians, and other wetland-dependent wildlife, they are due formal legal protective status. Blanding's Turtle is an exciting find for the Shorewood Forrest Sanctuary, indicating there are likely more.



Blanding's Turtle - *Emydoidea blandingii*. Photograph by Teddy Wiley.



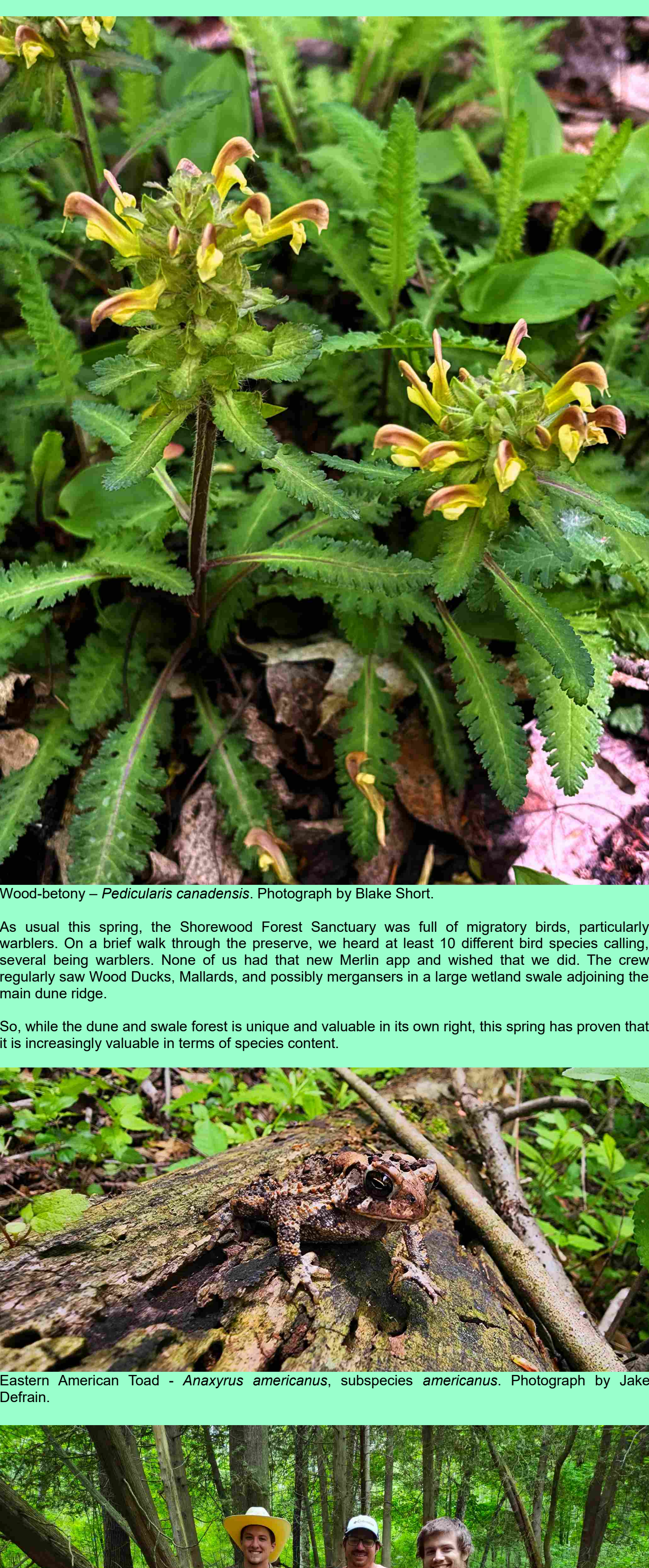
Blanding's Turtle - *Emydoidea blandingii*. Photograph by Teddy Wiley.

As if a Cedar Grove wasn't enough, while botanizing on the Shorewood Forrest Southeast Sanctuary in June, he has barely started and already found 92 native plant species on the preserve. Among these are 14 species with a coefficient of conservatism over 5, including: Blue-beech or Hornbeam - *Carpinus caroliniana*, Round-leaved Dogwood - *Cornus rugosa*, American Beech - *Fagus grandifolia*, Tufted Loosestripe - *Lysimachia thyrsiflora*, Large-leaved Shinleaf - *Pyrola elliptica*, Black Oak - *Quercus velutina*, Wild Black Currant - *Ribes americanum*, Purple-flowering Raspberry - *Rubus odoratus*, and Swamp Goldenrod - *Solidago patula*, all at C values of 6; White or Doll's-eyes Baneberry - *Actaea pachypoda*, Red Baneberry - *Actaea rubra*, Long-awned Wood Grass - *Brachelytrium erectum*, and Gay-wings - *Polygala paucifolia* (found by Teddy first), all at C values of 7; Alder-leaved Buckthorn - *Rhamnus alnifolia* at a C value of 8 and quite a surprise as this is certainly a left-over from the former cedar swamp and early open swales; and Wood-betony - *Pedicularis canadensis* at a C value of 10, another surprise as it doesn't get any better than a 10 in regards to native plant species. Actually, Teddy was the first to find a large patch of Wood-betony on Shorewood. It is a fairly widespread woodland herb in Michigan, typical of dry forest openings but sometimes found along forest edges extending into fields. With a C value of 10, no doubt that this Wood-betony patch is descended from the original vegetation of the dune and swale complex.



Tufted Loosestripe - *Lysimachia thyrsiflora*. Photograph by Blake Short.

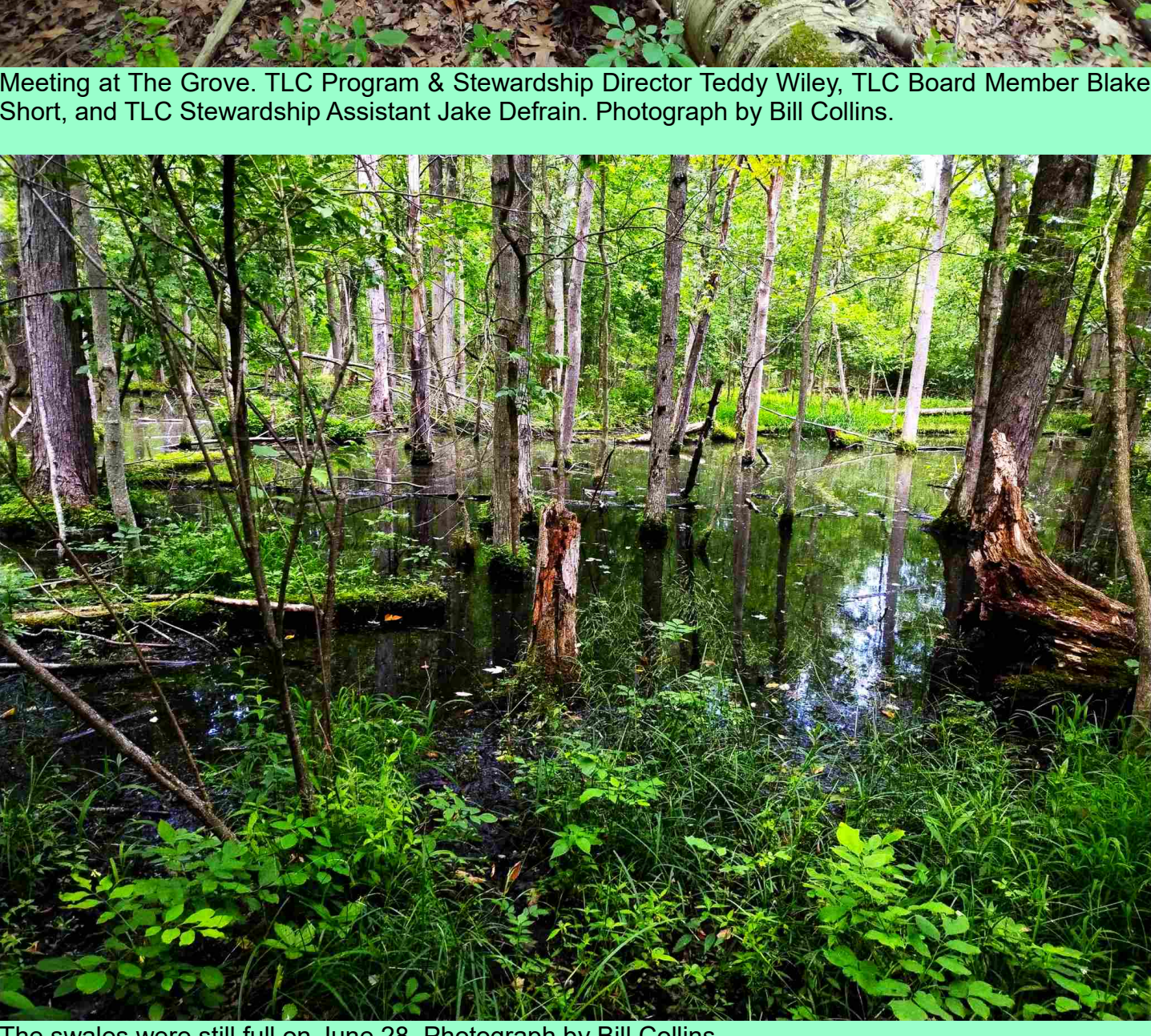
Gay-wings - *Polygala paucifolia*. Photograph by Blake Short.



Wood-betony – *Pedicularis canadensis*. Photograph by Blake Short.

As usual this spring, the Shorewood Forest Sanctuary was full of migratory birds, particularly warblers. On a brief walk through the preserve, we heard at least 10 different bird species calling, several being warblers. None of us had that new Merlin app and wished that we did. The crew regularly saw Wood Ducks, Mallards, and possibly mergansers in a large wetland swale adjoining the main dune ridge.

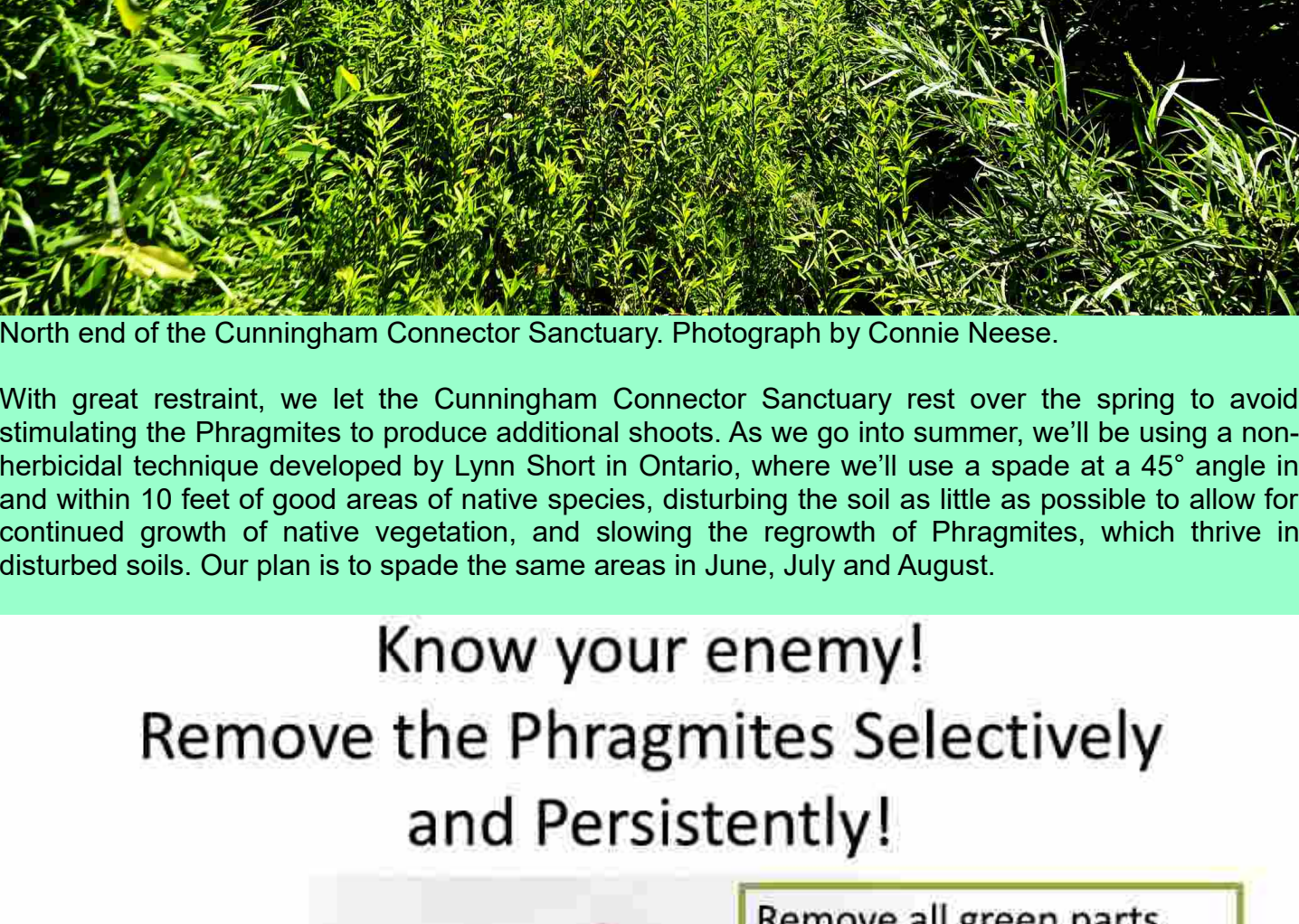
So, while the dune and swale forest is unique and valuable in its own right, this spring has proven that it is increasingly valuable in terms of species content.



Eastern American Toad – *Anaxyrus americanus*, subspecies *americanus*. Photograph by Jake Defrain.



Meeting at The Grove. TLC Program & Stewardship Director Teddy Wiley, TLC Board Member Blake Short, and TLC Stewardship Assistant Jake Defrain. Photograph by Bill Collins.



The swales were still full on June 28. Photograph by Bill Collins.

The TLC again thanks the Consumers Energy Foundation, our sole funder for the Shorewood Forest Southeast Sanctuary acquisition. We also thank Saint Clair County Drain Commissioner Bob Wiley for working with us to ensure this significant area of dune and swale forest remains protected and part of the Southern Lake Huron Coastal Park.

Cunningham Connector Sanctuary

Fort Gratiot Township, Saint Clair County

By Connie Neese, TLC Member and Stewardship Assistant

The TLC purchased the new Cunningham Connector Sanctuary along the south side of Carrigan Road in January from the estate of Shirley Cunningham. This 5-acre parcel is a crucial link between the Fort Gratiot Trail system and the Southern Lake Huron Coastal Park. The southern portion of the property is wooded dune and swale forest, but the north end of the property has sections thick with invasive Reed – *Phragmites australis*, subspecies *australis*.



North end of the Cunningham Connector Sanctuary. Photograph by Connie Neese.

With great restraint, we let the Cunningham Connector Sanctuary rest over the spring to avoid stimulating the *Phragmites* to produce additional shoots. As we go into summer, we'll be using a non-herbicidal technique developed by Lynn Short in Ontario, where we'll use a spade at a 45° angle in and within 10 feet of good areas of native species, disturbing the soil as little as possible to allow for continued growth of native vegetation, and slowing the regrowth of *Phragmites*, which thrive in disturbed soils. Our plan is to spade the same areas in June, July and August.

Know your enemy!

Remove the *Phragmites* Selectively and Persistently!



Lynn Short, Professor in Horticulture, Humber College, Toronto, Ontario, Canada.

Phragmites Removal Technique



- Identify *Phragmites*
- Use leg muscles on spade
- Cut below soil surface
- Remove plant stalk
- Leave soil undisturbed

Lynn Short, Professor in Horticulture, Humber College, Toronto, Ontario, Canada.

Benefits of the Technique

- Green parts of plant are removed to prevent photosynthesis
- Plant stalk removed below soil surface which results in more comfort walking over soil (no sharp stalks protruding from soil)
- Surrounding soil is not disturbed, allowing for continued growth of native species already present and slowing regrowth of *Phragmites* (which thrives in disturbed soil)

Lynn Short, Professor in Horticulture, Humber College, Toronto, Ontario, Canada.



Working on the north end of the Cunningham Connector Sanctuary. Photograph by Connie Neese.

Links to more information about Lynn Short and her method can be found here:
<https://www.thelandbetween.ca/wp-content/uploads/2020/05/Invasive-Phragmites-Removal-Protocol-1.pdf>
<https://www.greatlakesphragmites.net/resources/casestudies/wymbolwood-beach-ontario/>

Thanks to all who have worked on the Cunningham Connector Sanctuary, including Mike Edmondson, Erica Harmon, the Trailblazers group in general, Michael Jefferson, Travis Jodway, TLC Stewardship Assistant Jake Defrain, TLC Program & Stewardship Director Teddy Wiley, and not the least, TLC Members Connie Neese and Luke Wilhelm.

Purchase of the Cunningham Connector Sanctuary was made possible by funding provided by a grant from the North American Wetlands Conservation Council. Ultimately, we thank Kall Rush of the Great Lakes/Atlantic Regional Office of Ducks Unlimited in Dexter, Michigan for this grant opportunity and her continued work on behalf of the TLC.

Annual Garlic Mustard Removal

Dead End Woods Sanctuary, Fort Gratiot

Our annual Garlic Mustard and other invasive weed removal work went well this spring. Garlic Mustard - *Alliaria petiolata*, in the Brassicaceae or Mustard Family, is a very tasty and nutritious plant, originally brought to North America from Europe as a culinary herb. We conducted our work on May 3, 10, 17, and 24. Again, the Dead End Woods Sanctuary is in good shape in terms of Garlic Mustard. There are still some patches of seedlings but we seem to have gotten most of the mature plants. The removal of which gradually depletes the seed bank. Small occurrences of Multiflora Rose - *Rosa multiflora* in the Rosaceae or Rose Family, are increasing but not beyond what we can easily control. We finally moved over to the west side of the preserve where there are new weeds to deal with; mostly invasive ground-cover from yards in the adjacent Old Farm subdivision, including Periwinkle - *Vinca minor* in the Apocynaceae or Dogbane Family, Pachysandra or Japanese Spurge - *Pachysandra terminalis* in the Buxaceae or Boxwood Family, Yellow Archangel - *Lamium galeobdolon* in the Lamiaceae or Mint Family, and Carpet Bugle - *Ajuga reptans*, another invasive mint. These plants are not terribly widespread on the preserve, but there is a lot on the adjacent properties that will make long-term control a problem.



A patch of *Pachysandra* - *Pachysandra terminalis* and Yellow Archangel - *Lamium galeobdolon* along the northwest edge of the Dead End Woods Sanctuary.

Thank you to TLC Board Member Scott Ferguson, TLC Board Member Blake Short, TLC Program & Stewardship Director Teddy Wiley, TLC Stewardship Assistant Jason Sawyer, TLC Stewardship Assistant Sam Lazar, TLC Member Emily Sekelsky, TLC Member Connie Neese, and Very Special Guests Lynne Ball, Michael Ball, Amy Jean Ball, and Blandine Bebey.



Dead End Woods Crew 1. Left to right: TLC Program & Stewardship Director Teddy Wiley, TLC Executive Director Bill Collins, TLC Stewardship Assistant Jason Sawyer, and TLC Board Member Scott Ferguson. Photograph by Scott Ferguson.



Dead End Woods Crew 2. Left to right: TLC Program & Stewardship Director Teddy Wiley, TLC Member Michael Ball, TLC Member Connie Neese, TLC Member Amy Jean Ball, TLC Member Lynne Ball, TLC Executive Director Bill Collins, and TLC Member Blandine Bebey. TLC Stewardship Assistant Sam Lazar was still working. Photograph by Connie Neese's camera.

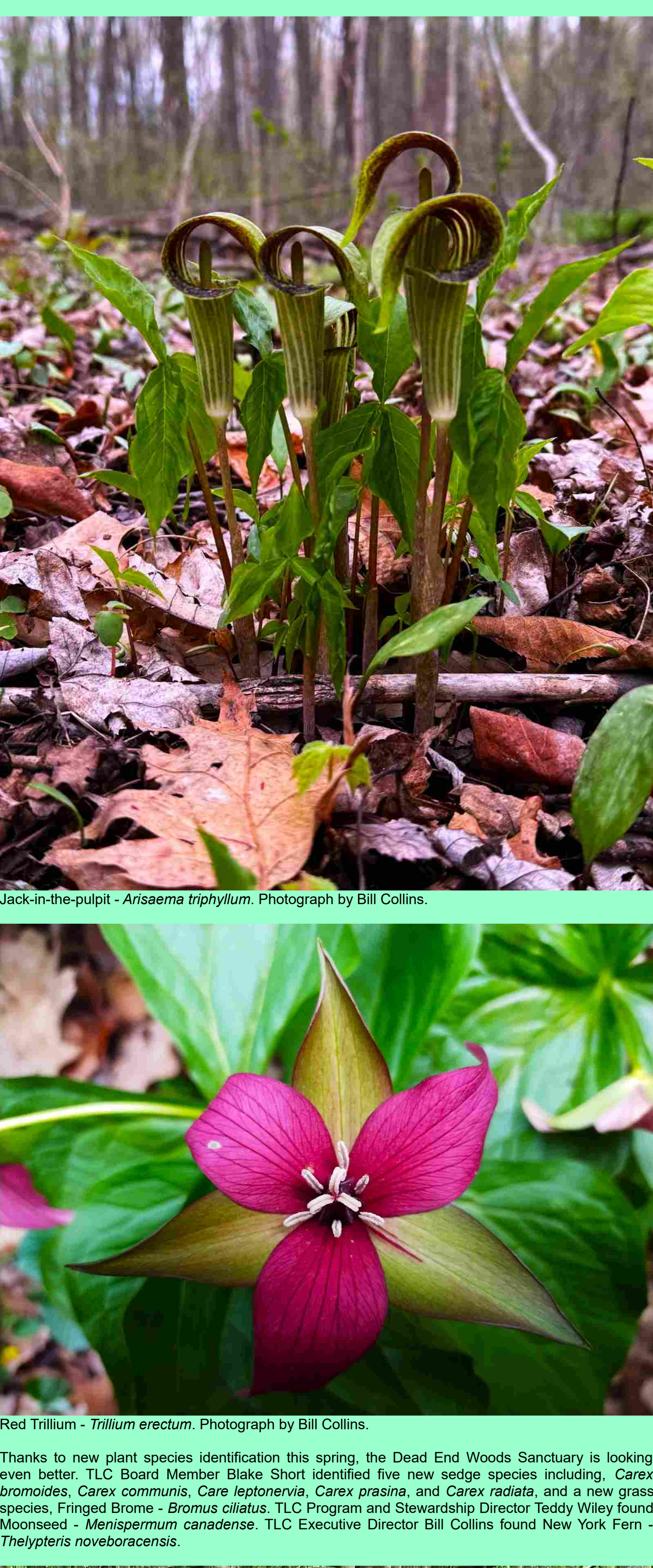
Dead End Woods Crew 4. Left to right: TLC Program & Stewardship Director Teddy Wiley, TLC Stewardship Assistant Sam Lazar, and TLC Member Emily Sekelsky. TLC Board Member Blake Short left shortly before. Photograph by Bill Collins.

The Dead End Woods Sanctuary is one of the most floristically diverse forests in Saint Clair County. In addition to the usual native plants of mesic southern forest and hardwood swamp, such as Jack-in-the-pulpit - *Arisaema triphyllum*, Marsh-marigold - *Caltha palustris*, Yellow Trout-lily - *Erythronium americanum*, Wild Geranium - *Geranium maculatum*, May-apple - *Podophyllum peltatum*, Christmas Fern - *Polystichum acrostichoides*, Skunk-cabbage - *Symplocarpus foetidus*, and Red Trillium - *Trillium erectum* there are several less common species such as Red Baneberry - *Actaea rubra*, Maidenhair Fern - *Adiantum pedatum*, Wild Leek - *Allium tricoccum*, Wild Sarsaparilla - *Aralia nudicaulis*, Spikenard - *Aralia racemosa*, Richweed - *Collinsia canadensis*, Hazelnut - *Corylus americana*, Squirrel-corn - *Dicentra canadensis*, Spicebush - *Lindera benzoin*, Cardinal Flower - *Loebelia cardinalis*, Black Gum - *Nyssa sylvatica*, Round-leaved Pyrola - *Pyrola americana*, Bluestem Goldenrod - *Solidago caesia*, Zigzag Goldenrod - *Solidago flexicaulis*, and Foamflower - *Lysimachia* (formerly *Tiarella*) *cordifolia*. The woods is also one of the few isolated havens where Eastern Hemlock - *Tsuga canadensis* is barely regenerating, a relic of a cooler climate.

Squirrel-corn - *Dicentra canadensis*, just discovered this spring by Teddy. Photograph by Teddy Wiley.

Foamflower – *Lysimachia* (formerly *Tiarella*) *cordifolia*. Photograph by Bill Collins.

Marsh-marigold – *Caltha palustris*. Photograph by Bill Collins.



Jack-in-the-pulpit – *Arisaema triphyllum*. Photograph by Bill Collins.

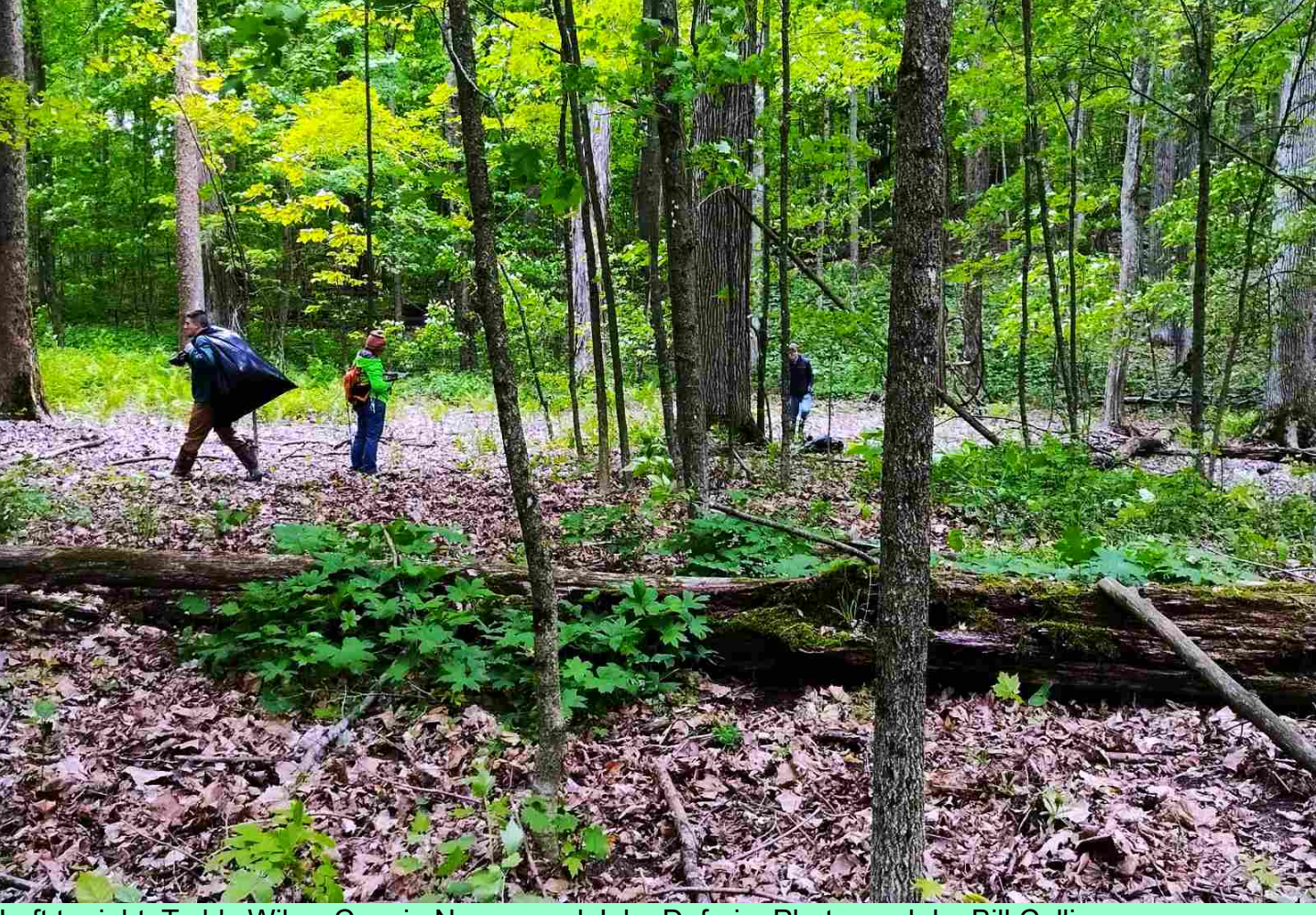


Red Trillium - *Trillium erectum*. Photograph by Bill Collins.

Thanks to new plant species identification this spring, the Dead End Woods Sanctuary is looking even better. TLC Board Member Blake Short identified five new sedge species including, *Carex bromoides*, *Carex communis*, *Carex leptoneuria*, *Carex prasina*, and *Carex radiata*, and a new grass species, Fringed Brome - *Bromus ciliatus*. TLC Program and Stewardship Director Teddy Wiley found Moonseed - *Menispermum canadense*. TLC Executive Director Bill Collins found New York Fern - *Thelypteris noveboracensis*.



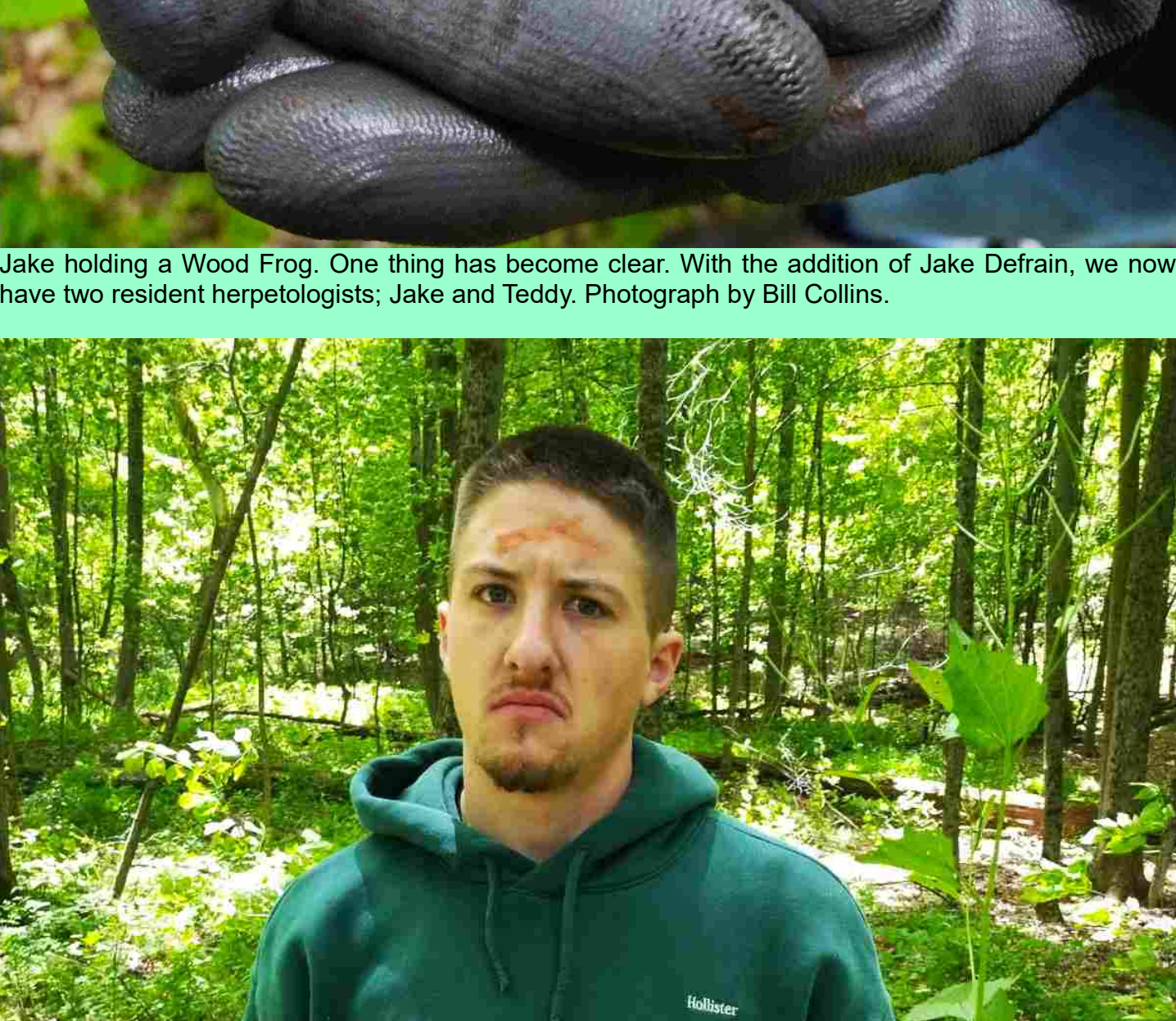
Blake showing Teddy how to identify sedges. Photograph by Bill Collins.



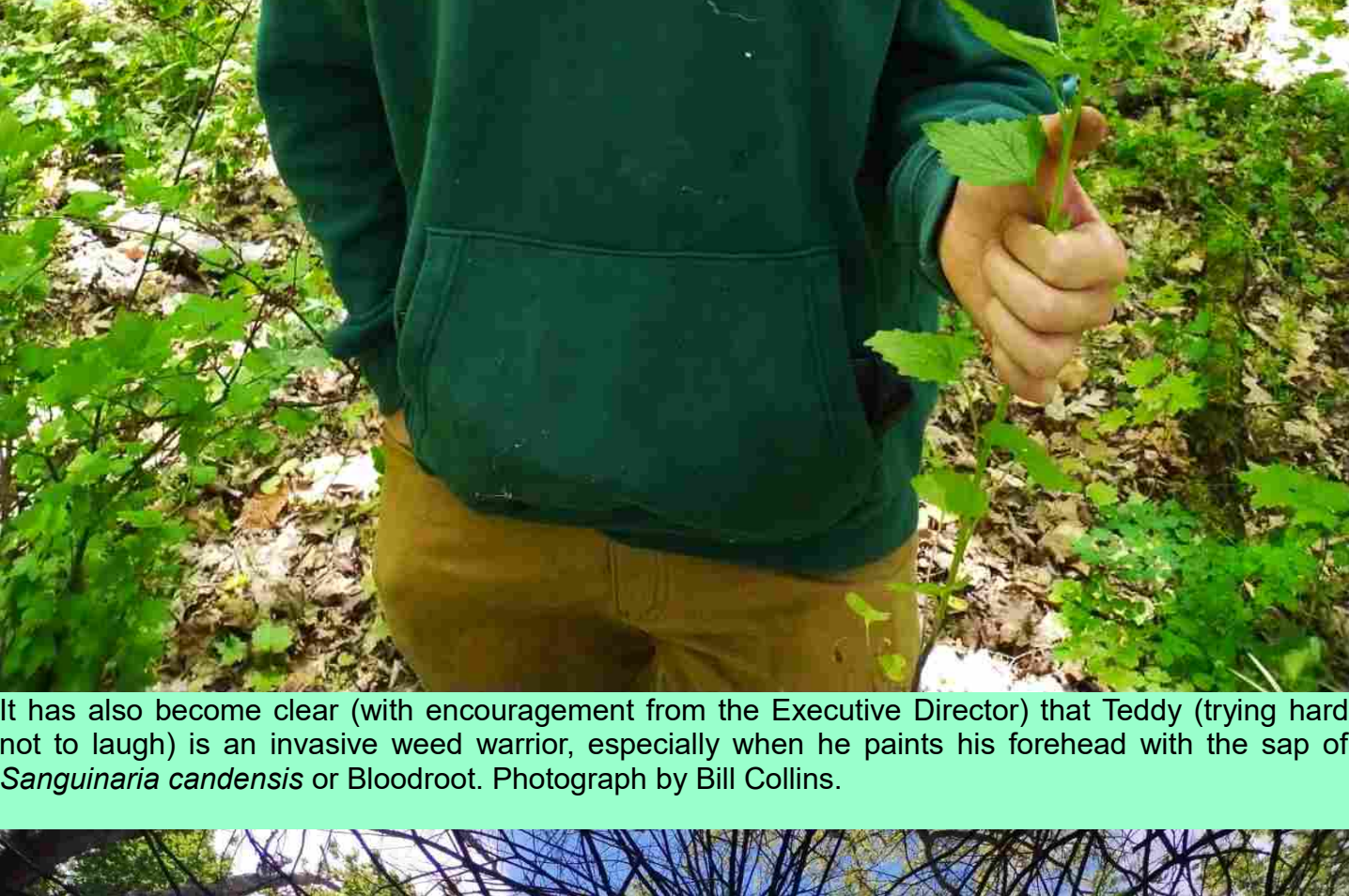
Teddy checking out one of our few Spikenard plants – *Aralia racemosa*. Photograph by Bill Collins.

Port Huron State Game Area, Ruby

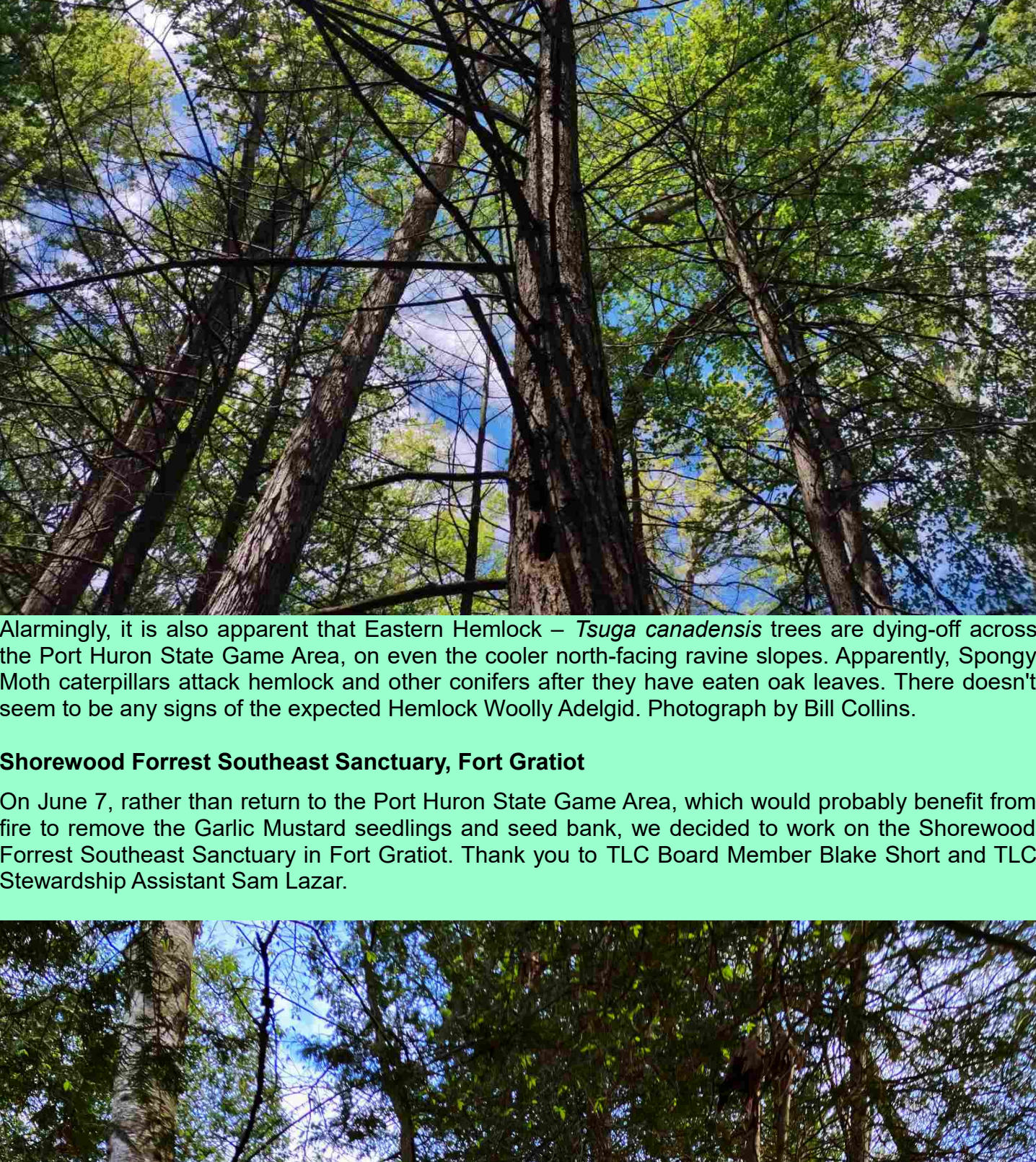
On May 31, we returned to our old Garlic Mustard control area in the Port Huron State Game Area near Ruby in Clyde Township. After four years of absence, it looked pretty good, mostly lacking mature flowering Garlic Mustard, but still with a lot of seedlings, especially along the outer edges. But not bad for not working on it for a while. This was again a nice opportunity to enjoy the beautiful, secluded forest of the Black River valley while improving the habitat for native woodland flora. Thank you to TLC Program & Stewardship Director Teddy Wiley, TLC Stewardship Assistant Jake Defrain, and TLC Member Connie Neese.



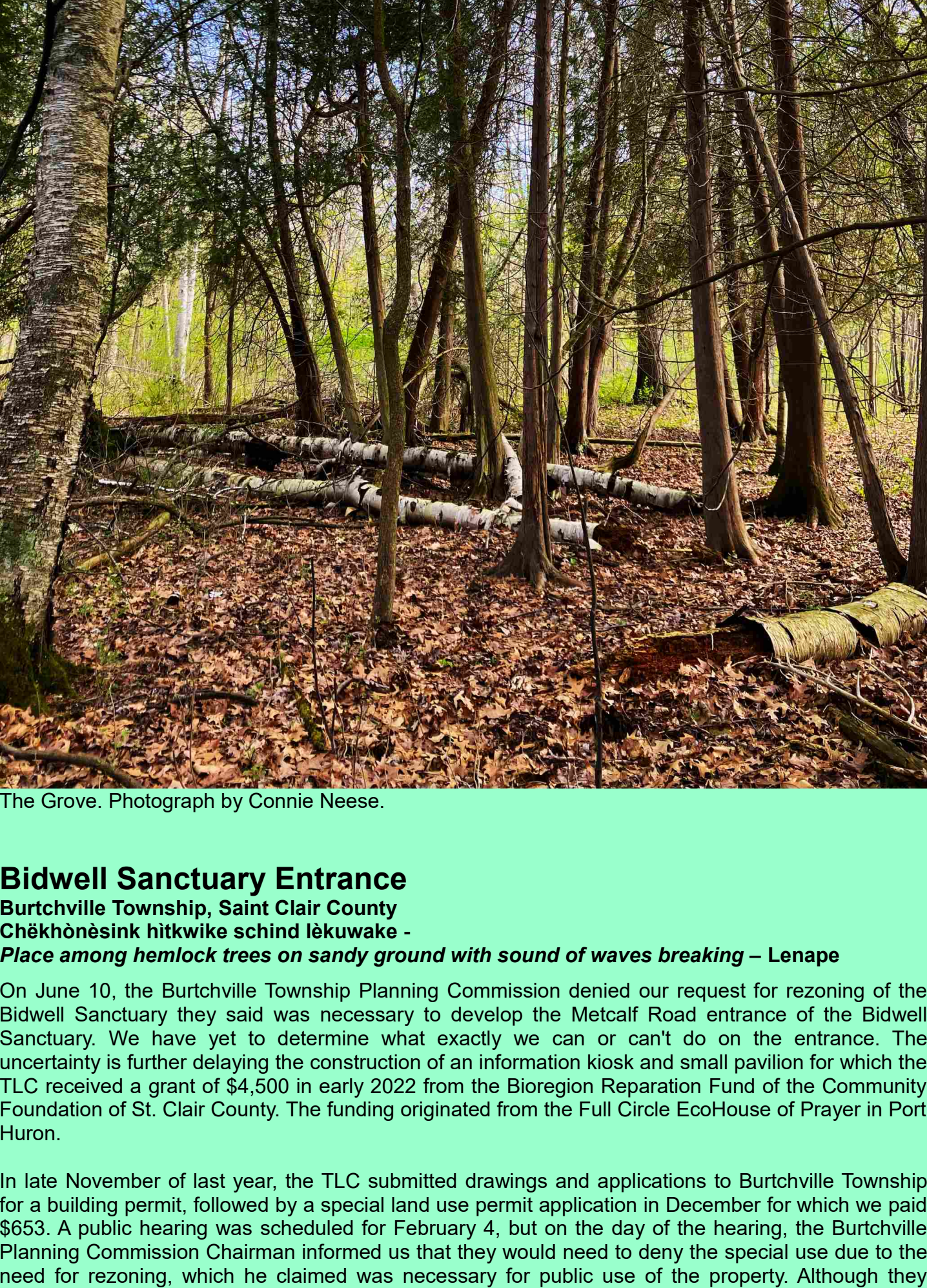
Our old Garlic Mustard removal area, assigned to the TLC by John Fody. Photograph by Bill Collins.



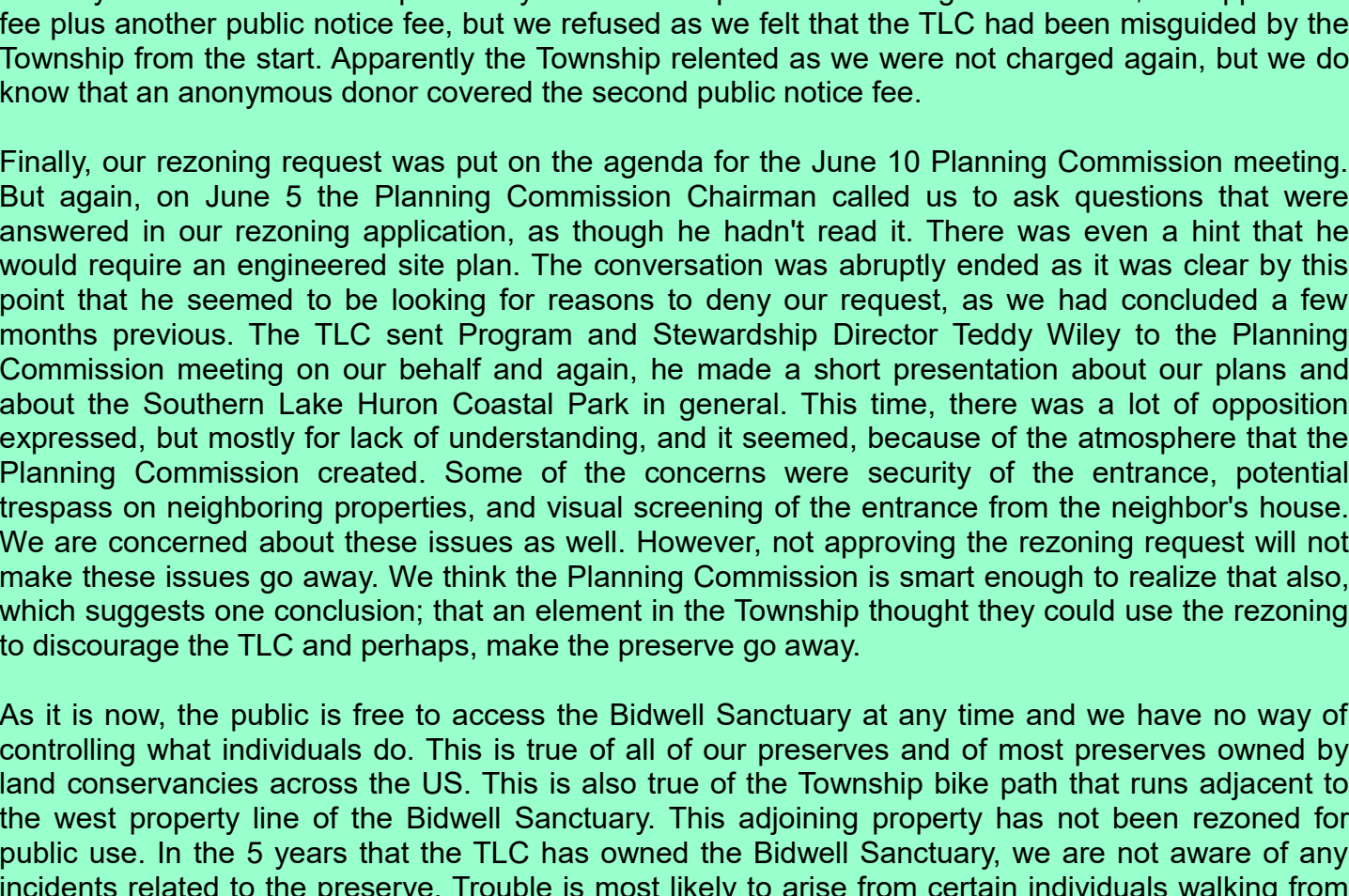
Left to right: Teddy Wiley, Connie Neese, and Jake Defrain. Photograph by Bill Collins.



Jake holding a Wood Frog. One thing has become clear. With the addition of Jake Defrain, we now have two resident Herpetologists; Jake and Teddy. Photograph by Bill Collins.



It has also become clear (with encouragement from the Executive Director) that Teddy (trying hard not to laugh) is an invasive weed warrior, especially when he paints his forehead with the sap of *Sanguinaria canadensis* or Bloodroot. Photograph by Bill Collins.



Alarminglly, it is also apparent that Eastern Hemlock – *Tsuga canadensis* trees are dying-off across the Port Huron State Game Area, on even the cooler north-facing ravine slopes. Apparently, Spongy Moth caterpillars attack hemlock and other conifers after they have eaten oak leaves. There doesn't seem to be any signs of the expected Hemlock Woolly Adelgid. Photograph by Bill Collins.

Shorewood Forrest Southeast Sanctuary, Fort Gratiot

On June 7, rather than return to the Port Huron State Game Area, which would probably benefit from fire to remove the Garlic Mustard seedlings and seed bank, we decided to work on the Shorewood Forrest Southeast Sanctuary in Fort Gratiot. Thank you to TLC Board Member Blake Short and TLC Stewardship Assistant Sam Lazar.



The Grove. Photograph by Connie Neese.

Bidwell Sanctuary Entrance

Burtchville Township, Saint Clair County

Chêkhônesink hitkwe schind lekuwake -

Place among hemlock trees on sandy ground with sound of waves breaking – Lenape

On June 10, the Burtchville Township Planning Commission denied our request for rezoning of the Bidwell Sanctuary they said was necessary to develop the Metcalf Road entrance of the Bidwell Sanctuary. We have yet to determine what exactly we can't do on the entrance. The uncertainty is further delaying the construction of an information kiosk and small pavilion for which the TLC received a grant of \$4,500 in early 2022 from the Bioregion Reparation Fund of the Community Foundation of St. Clair County. The funding originated from the Full Circle EcoHouse of Prayer in Port Huron.

In late November of last year, the TLC submitted drawings and applications to Burtchville Township for a building permit, followed by a special land use permit application in December for which we paid \$653. A public hearing was scheduled for February 4, but on the day of the hearing, the Burtchville Planning Commission Chairman informed us that they would need to deny the special use due to the need for rezoning, which he claimed was necessary for public use of the property. Although they would deny, he said that the hearing that evening would count as the required rezoning hearing. We attended and made a short presentation at the hearing, during which there were only a few questions from neighboring landowners and no significant opposition. The special land use request was denied as expected, and then we waited for further instruction from the Township that was not forthcoming. After inquiry several weeks later, we submitted an application for rezoning on April 1. Two Planning Commission meetings passed with no action as our application was not forwarded to the Burtchville Zoning Administrator.

We were then informed that another public hearing and public notice was required for the rezoning, contrary to what we were told previously. The Township wanted to charge us another \$500 application fee plus another public notice fee, but we refused as we felt that the TLC had been misguiding by the Township from the start. Apparently the Township relented as we were not charged again, but we do know that an anonymous donor covered the second public notice fee.

Finally, our rezoning request was put on the agenda for the June 10 Planning Commission meeting. But again, on June 5 the Planning Commission Chairman called us to ask questions that were answered in our rezoning application, as though he hadn't read it. There was even a hint that he would require an engineered site plan. The conversation was abruptly ended as it was clear by this point that he seemed to be looking for reasons to deny our request, as we had concluded a few months previous. The TLC sent Program and Stewardship Director Teddy Wiley to the Planning Commission meeting on our behalf and again, he made a short presentation about our plans and about the Southern Lake Huron Coastal Park in general. This time, there was a lot of opposition expressed, but mostly for lack of understanding, and it seemed, because of the atmosphere that the Planning Commission created. Some of the concerns were security of the entrance, potential trespass on neighboring properties, and visual screening of the entrance from the neighbor's house. We are concerned about these issues as well. However, not approving the rezoning request will not make these issues go away. We think the Planning Commission is smart enough to realize that also, which suggests one conclusion; that an element in the Township thought they could use the rezoning to discourage the TLC and perhaps, make the preserve go away.

As it is now, the public is free to access the Bidwell Sanctuary at any time and we have no way of controlling what individuals do. This is true of all of our preserves and of most preserves owned by land conservancies across the US. This is also true of the Township bike path that runs adjacent to the west property line of the Bidwell Sanctuary. This adjoining property has not been rezoned for public use. In the 5 years that the TLC has owned the Bidwell Sanctuary, we are not aware of any incidents related to the preserve. Trouble is most likely to arise from certain individuals walking from Indian Trails modular park along Metcalf Road to the party store at M-25 and back. The TLC obviously had nothing to do with that planning situation, and why should it eliminate an opportunity for local residents and visitors to enjoy a great public recreation opportunity? We have offered to plant a tree barrier, possibly arbor vitae, along the east side of the entrance. Until we are finished removing invasive shrubs along that property line, it will not be conducive to planting trees. But no, we are not installing an electric gate, closing the preserve from dusk to dawn, hiring a security guard, installing lights, chain link fencing, razor wire, alarms, or keeping guard dogs there.

People tend to make the mistake of considering only one part of a larger equation in most matters they are concerned about. Land preservation yields major benefits for everyone, and in regard to neighbors, it's a two-way street. They may be concerned about visitors, as the TLC is. But the neighbors forget that the market value of their property has increased significantly because they now adjoin a large nature preserve, the likes of which new buyers often pay a premium and some homeowners can only wish for in vain as they watch an adjoining woods or field get ripped up for yet another subdivision. The neighbors can go out and enjoy the Bidwell Sanctuary any time they want to. Some even hunt our preserves. The neighbors could just as well be surrounded by more houses, with loud neighbors, and need to install privacy fencing. Or maybe they would like a new commercial development with a big parking lot, or a solar panel installation?

Proposed Bidwell Sanctuary entrance plan.

On a positive note, TLC Board Member Blake Short also started a botanical inventory of the Bidwell Sanctuary in June. Just having started, he has recorded 34 native plant species on the preserve. Among these are four species with a coefficient of conservatism over 5, including: Wild Black Currant – *Ribes americanum* and Purple-flowering Raspberry – *Rubus odoratus* at C values of 6; and White or Doll's-eyes Baneberry – *Actaea pachypoda* and Red Baneberry – *Actaea rubra* at C values of 7.

In early May, Teddy Wiley found several Butternut – *Juglans cinerea* on the Bidwell Sanctuary. Many of these now rare trees are dead or dying due to Butternut canker - *Sirococcus clavignenti-juglandacearum*, a fungus that produces stem cankers that girdle and kill adult trees. However, native Butternut apparently hybridize with Japanese Heartnut – *Juglans ailanthifolia*. The few live and healthy trees that Teddy found appear to be these hybrids, and Teddy now has an eye for them.

Butternut have been found at other locations near the shoreline of Lake Huron on the Burtchville Township Lakeport and Lexington, especially in the dune and shale complex and along large stream floodplains. Why they are concentrated in that area and how they hybridized with Japanese Heartnut are mysteries, for which Teddy has some ideas. It will be interesting to learn more about our Butternut enclave, but as with so many other apparently relict populations, we may have very little time remaining to observe them.

The TLC again thanks major funders of the Bidwell Sanctuary acquisition and Southern Lake Huron Coastal Park project, including The Carls Foundation, Consumers Energy Foundation, the North American Wetlands Conservation Council, Ducks Unlimited, Community Foundation for Southeast Michigan, Community Foundation of Saint Clair County, Moore Family Foundation, Cargill Salt of Saint Clair, Cargill, Incorporated, the Bioregion Reparation Fund, SEMCO Energy Gas Company, and individual donors.

Bay Area Community Foundation Grant

Morley Sanctuary, Bangor Township, Bay County

On May 13, the TLC was awarded a grant of \$20,000 from the Bay Area Community Foundation to begin development of the proposed nature park facilities at the Morley Sanctuary in Bangor Township, Bay County. This is one of the largest grants the BACF has awarded in their history and will be a great help in developing the Morley Sanctuary as a recreational and educational asset for the community and Bay Area visitors.

Proposed Morley Sanctuary park plan.

The Bay Area Community Foundation is a nonprofit organization created by and for the people of the Saginaw Bay Area. Since 1992, the BACF has made charitable gifts to support arts and culture, community initiatives, education and youth, environment, health and wellness, human services, and recreation in the Bay Area. The BACF manages a permanent endowment and award grants to address the community's most pressing needs and promising opportunities.

As with every grant and donation, the TLC is honored that the Morley Sanctuary project was considered one of the many promising opportunities of the Bay Area. The TLC sincerely thanks the Board of Trustees of the Bay Area Community Foundation, and particularly Program Officer Madi Syring for guiding us through the grant application process.

Morley Sanctuary Restoration and Development

Bangor Township, Bay County

For more good news on the Morley Sanctuary, Bangor Township has concurred with our application and determined the entire 113-acre preserve to be exempt from property taxes in 2026. The TLC will still need to pay the 2025 property taxes.

On April 22, Ducks Unlimited Tri-State Biologist Colleen Gleason, with the help of TLC Program and Stewardship Director Teddy Wiley, completed an elevation survey of the Morley Sanctuary to plan wetland restoration by blocking ditches and cutting field tiles. We are still uncertain about the extent of field tiling on the preserve, but Colleen and Teddy found a few tile sections. A survey and restoration plan is expected in late summer. Restoration of the site will be coordinated with Ducks Unlimited and the US fish and Wildlife Service through their Partners for Fish and Wildlife Program.

Natural Features

The Morley Sanctuary consists of about 95 acres of imperiled lakeplain prairie along the south side of the Kawkawlin River, only a half-mile west of Saginaw Bay; one of the larger intact occurrences of lakeplain prairie that remained unprotected in the Bay City area. Lakeplain prairie is a species-rich grass-dominated plant community on generally sandy soils near the Great Lakes shoreline, maintained by seasonal flooding, cyclical variations in Great Lakes water levels, and fire during dry periods; and providing habitat for many rare species like Prairie Fringed Orchid, Sullivan's Milkweed, and Tall Green Milkweed. In Michigan, lakeplain prairie was historically limited to shoreline counties of the southeast Lower Peninsula, now with less than 1% remaining across its range. Much of the original lakeplain prairie occurred along the Saginaw Bay, and in the heavily developed Bay City area, long since eliminated by farming, drainage, and development.



TLC Morley Sanctuary plant community and feature map. 2024 photograph. Fetch GIS Bay County: <https://app.fetchgis.com/bay>

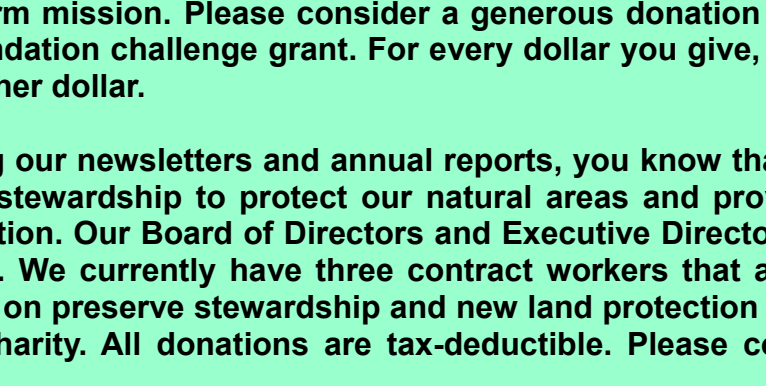
About 8 acres of the sanctuary consists of wooded beach or dune ridges covered by large Black Oak, possibly with Hill's Oak hybrids, and a few White Oak, most appearing to be around 100 years old. A long, winding sand ridge with scattered oaks extending through the middle of the Morley Sanctuary is particularly scenic; a wild and windy peninsula with a great view of the adjoining prairie to the north, south, and east.

About 10 acres along the west side of the Morley Sanctuary is an old railroad bed of the former Detroit and Mackinac Railroad with a paved rail trail. The trail provides excellent public access to the sanctuary and connects with the nearly 2,400-acre Bay City State Park just over one-half mile to the north. The Morley Sanctuary is also connected by a paved trail to the 415-acre Bay City Ecological Restoration property one-half mile east at the mouth of the Saginaw River.

The Morley Sanctuary even contains the remnants of an historic open-pit coal mine dating back at least to the late 1800s. The pit has since been largely filled and is partially a pond. An old railroad spur bed is still visible across the lakeplain prairie where coal was hauled from the pit to the main section of the Detroit and Mackinac Railroad.

Funding

Again, our sincere gratitude to the Great Lakes/Atlantic Regional Office of Ducks Unlimited in Dexter, Michigan, and to the Wetland Conservation Program Steering Committee for funding the acquisition of the Morley Sanctuary. The Wetland Conservation Program is managed by the Great Lakes/Atlantic Regional Office of Ducks Unlimited on behalf of the Michigan Department of Natural Resources, Wildlife Division in cooperation with the Michigan Department of Environment, Great Lakes and Energy and Michigan Department of Agriculture and Rural Development. Michigan DNR developed the Wetlands Conservation Program to guide expenditure for a portion of these funds, and selected Ducks Unlimited through a competitive process to manage the program. The Wetland Conservation Program grants are designated for protection of wetlands in the Saginaw Bay and Lake Erie watersheds, as part of a larger initiative to secure and improve the water quality of Saginaw Bay and Lake Erie.



Ducks Unlimited is a non-profit company that has preserved, enhanced, or restored 16 million acres of wetlands in North America since 1937. Organizations like Ducks Unlimited are increasingly vital to environmental protection in our current political climate. Consider the narrowly averted sale of millions of acres of federal public lands that was just rejected by the US Senate. If not for the outdoor community of hunters, fishers, recreational users, and conservationists working together to very strongly oppose the idea of huge federal land sales, the provision might have passed.

TLC Fundraising

An additional \$195,000 for the Morley Sanctuary acquisition was paid by a private loan to the TLC. We are currently fundraising to repay that acquisition loan.

Please consider a generous donation to the TLC. If you've been reading our newsletters and annual reports, you know that the TLC is all about land acquisition and preservation in a region where very few others are. The TLC is a 501(c)(3) non-profit charity. All donations are tax-deductible. Please contact the TLC if you have any questions.

The Carls Foundation TLC Capacity Grant

The TLC was informed on June 20 that we have been awarded a challenge grant of \$100,000 from The Carls Foundation of Bloomfield Hills to help fund TLC worker pay. We will have until June of 2027 to raise a total of \$100,000 from other donors which The Carls Foundation will match 1 to 1. If we are successful, the TLC will have raised a total of \$200,000 by June of 2027, which will help ensure that we are able to continue paying our workers for several years.

As a reminder, due to funding limitations, we did not pay anyone from our founding in 2008 until 2024, except for limited contract work. The TLC Executive Director is not paid and no one receives a salary. With a substantial donation in 2024 from the estate of Dottie Craig, our senior Board Member who passed away in late 2023, we began paying a small group of workers at \$20 per hour. Among our newest workers are Program and Stewardship Director Teddy Wiley, Stewardship Assistant Jason Sawyer, and Stewardship Assistant Jake Defrain. Others have included RoseAnn Shetler, Kris Heyworth, and Sam Lazar. Their work has increased our capacity and resulted in great progress in stewarding our preserves. But of course, our thanks also goes out to our Super Volunteer Connie Neese and her crew for their work on the Shorewood Forrest Southeast and Cunningham Connector sanctuaries, and also TLC Board Member Dan Rhein for all of his hard work on the Loznak and Bidwell sanctuaries.

A huge thank you once again to The Carls Foundation of Bloomfield Hills, Michigan, and especially Executive Director Elizabeth Stieg, for this TLC capacity match grant. The Carls Foundation shares our vision for the Thumb, a generally neglected region in terms of natural area protection.

T H E C A R L S F O U N D A T I O N

William and Marie Carls established the Carls Foundation in 1961 to fund children's health and welfare. The Foundation added the preservation of natural areas in Michigan through land conservancies in 1995. Bill Carls immigrated to the United States from Germany in 1924 at the age of 21. With his training and experience in European apprentice programs, he was readily employed with major industrial companies in Detroit. In 1945, Bill Carls started Numatics, Inc. in his garage. The company was headquartered in Highland, Michigan and became a leading worldwide manufacturer of industrial air valves. They had a plant in Sandusky, Michigan for many years.

The Carls Foundation has funded many land preservation projects throughout Michigan and in our region where few other foundations have. In 2020, they funded most of our purchase of the Bidwell Sanctuary in Burtchville, and in 2023, purchase of the Shorewood Forrest Northeast Sanctuary in Fort Gratiot. Years ago, The Carls Foundation funded acquisition of the Michigan Nature Association's Sharon Rose Leonatti Memorial Nature Sanctuary in Kimball Township near Wadham's, with a large population of Michigan Endangered Painted Trillium – *Trillium undulatum*. They have also funded the Six Rivers Land Conservancy in their efforts to acquire large parts of Anchor Bay Woods in New Baltimore adjacent to the TLC Gerrits Sanctuary in Ira Township.

The TLC really needs your help to ensure that the organization is able to continue operating and fulfill our long-term mission. Please consider a generous donation to the TLC to help us match The Carls Foundation challenge grant. For every dollar you give, The Carls Foundation will give the TLC another dollar.

If you've been reading our newsletters and annual reports, you know that the TLC is all about land acquisition and stewardship to protect our natural areas and provide opportunities for outdoor public recreation. Our Board of Directors and Executive Director are all volunteer. No one receives a salary. We currently have three contract workers that are paid \$20 per hour. Their work is focused on preserve stewardship and new land protection projects. The TLC is a 501(c)(3) non-profit charity. All donations are tax-deductible. Please contact the TLC if you have any questions.

Teddy's Excellent Adventures

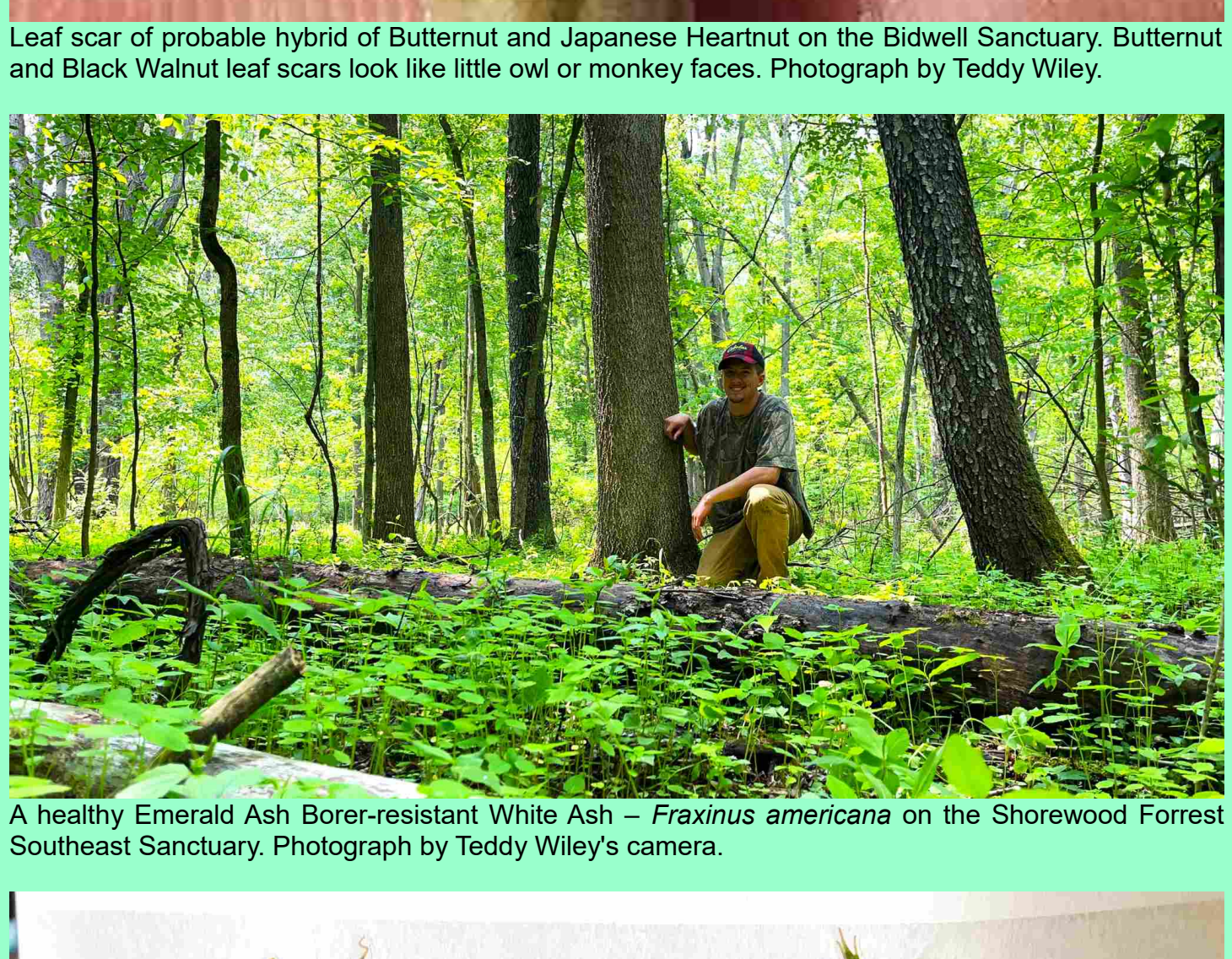
With Bill On The Phone

By TLC Program & Stewardship Director Teddy Wiley

For the last couple of months, my life has been filled with endless adventures and discoveries. As summer slowly creeps in, I have been keeping myself busy with transplanting, Garlic Mustard pull, rare plant finds, and wetland scouting. One of my first projects this spring was transplanting in Loznak Sanctuary. After compiling a plant list for this preserve, I noticed the prairie was lacking some key species found in other lakeplain prairies like St. John's Marsh. The two plants I decided to focus on transplanting were Tussock Sedge (*Carex stricta*) and Prairie Cordgrass (*Spartina pectinata*). I collected four Tussock Sedge hummocks, planting them in the wettest areas of Loznak Sanctuary. I then made my way to an endemic population of Prairie Cordgrass in Marysville, collecting a 10-gallon buckets-worth of its rhizomes. They were planted in areas of the prairie where vegetation was sparse. After several visits this growing season, both plants seemed to be doing well. It was during these visits that I discovered something remarkable. Yellow Lady Slipper orchids had started to return to areas recently cleared of invasive buckthorn. The fruits of my labor are finally paying off!



Tussock Sedge - *Carex stricta* planted. Photograph by Teddy Wiley.



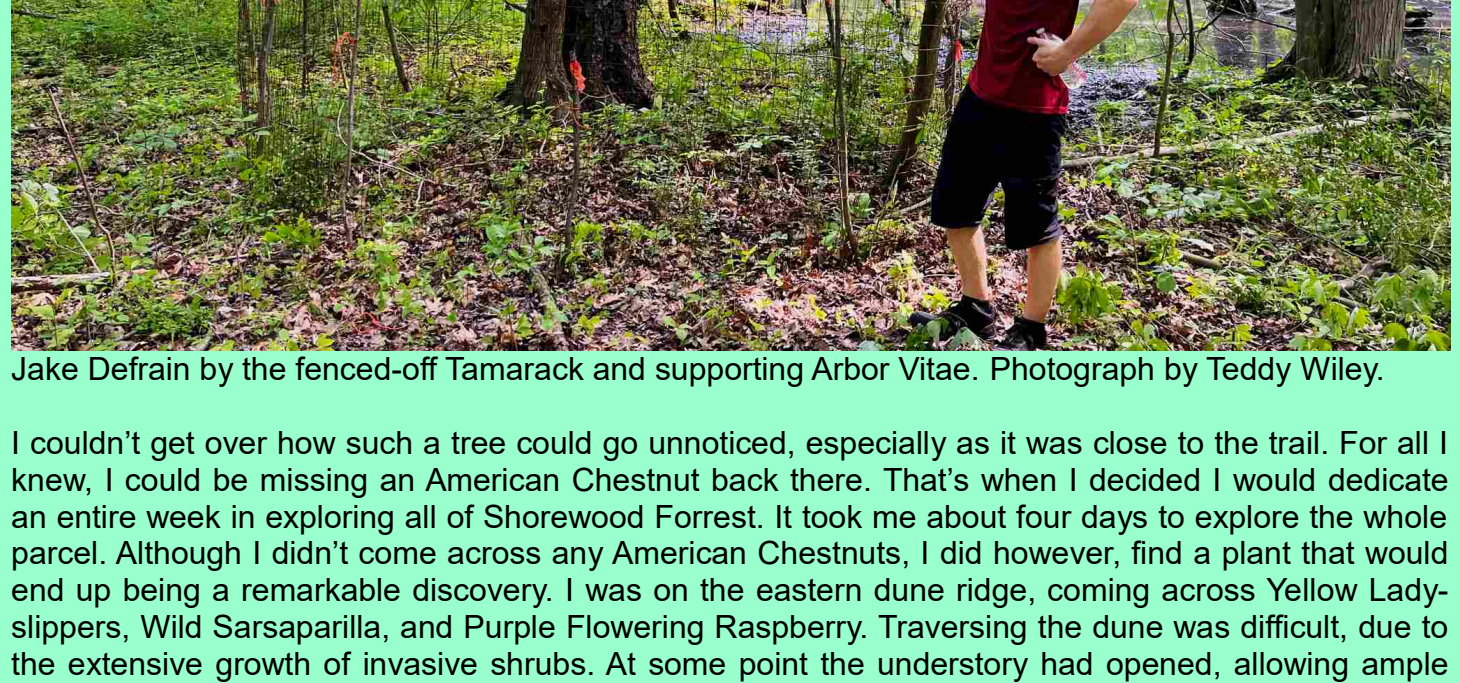
Prairie Cordgrass - *Spartina pectinata* rhizomes to be planted. Photograph by Teddy Wiley.



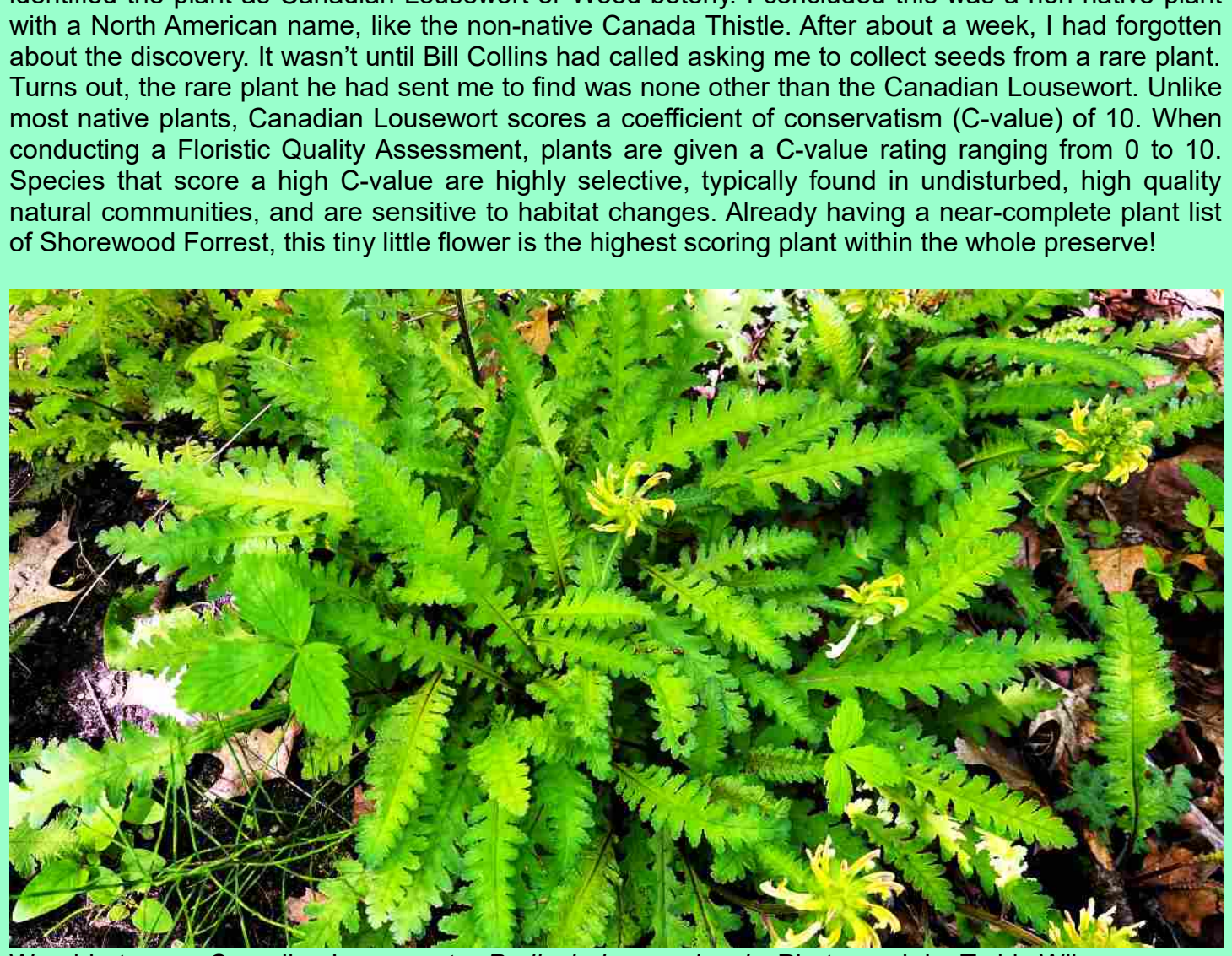
Planted Tussock Sedge - *Carex stricta* flowering. Photograph by Teddy Wiley.

Speaking of prairies, I was able to bring this work home with me, literally. My parents for the longest time wanted to establish a nice garden in front of our house. It wasn't until this spring that we started to put some work into it. Thankfully, I was able to persuade my parents to turn this garden into a mini prairie sanctuary. Unfortunately, they were very particular about what native plants would make their home here. For example, they wanted grass that didn't spread and had a beautiful display of colors during autumn. After much discussion, we ended up choosing Little Bluestem - *Schizachyrium scoparium*. Its non-rhizomatous nature and red-bronze fall color made it the perfect choice. Luckily, the Road Commission made it its priority to plant this sucker on every roadside in the county. I found a large population between Michigan and Griswold roads, transplanting a total of 21 bunches. So far, they seem to be growing well but may never grow to their true height due to the heavy clay on our property. Once they are established, other plants will be introduced to the garden like Butterfly Milkweed – *Asclepias tuberosa*, Culver's-root – *Veronicastrum virginicum*, and blazing-star – *Liatris spicata* and *L. aspera*.

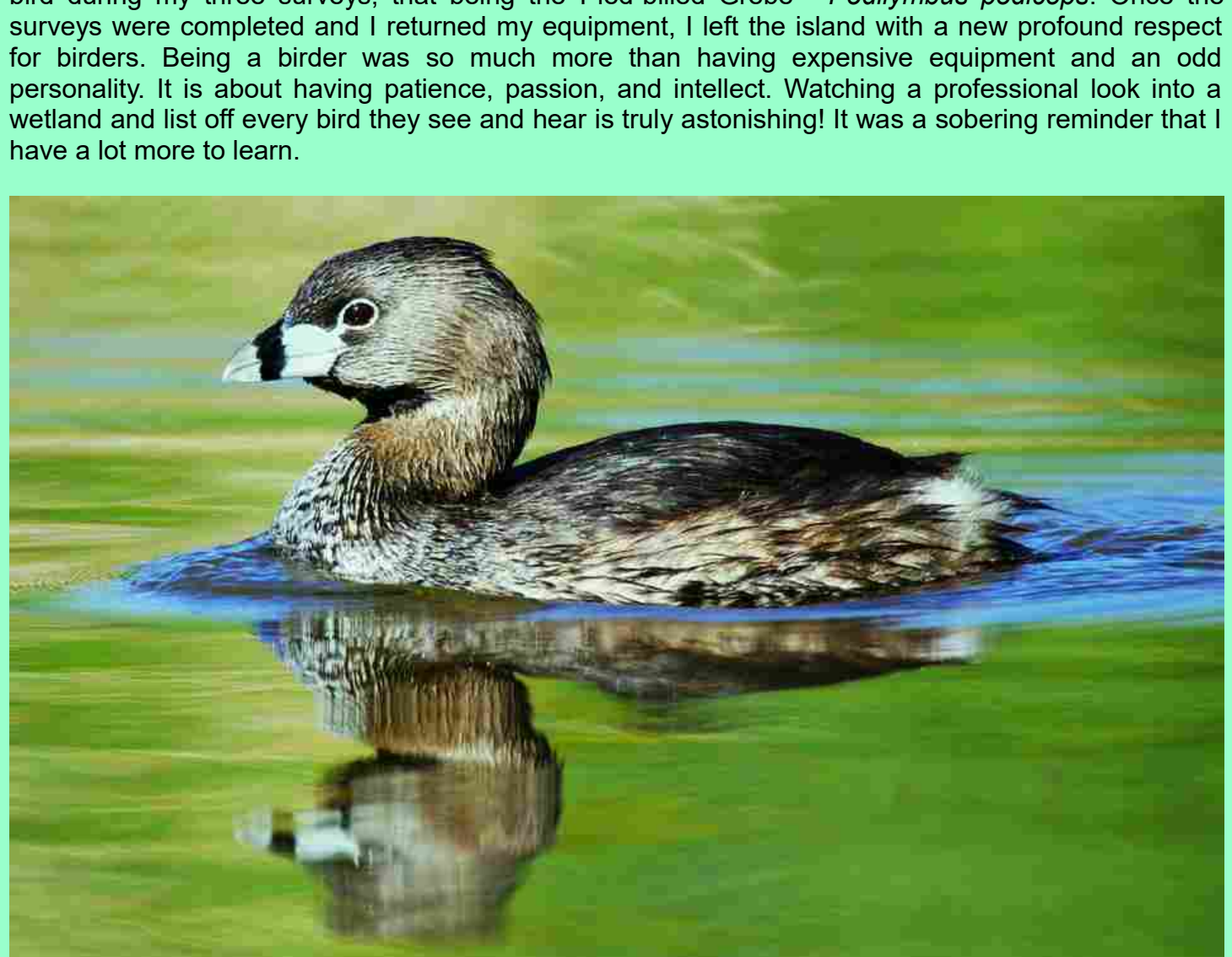
Since joining the Thumb Land Conservancy, I have become further aware of the natural environment that surrounds us. Visiting landscapes like lakeplain prairies in the past, I would only take notice of the abundant Canada Bluejoint – *Calamagrostis canadensis* and Tussock Sedge. To the untrained eye, the prairie lacked its iconic biodiversity. Walking in that same prairie today, I felt as if I were a city slicker finally viewing an unpolluted night sky for the first time. This experience emboldened me to take up an effort to find rare plants in our preserves and the surrounding Blue Water Area. This led me to find Emerald Ash Borer-resistant ash trees, hybrid Bitternut trees, and Hill's Oak – *Quercus ellipsoidalis*. My ultimate plan is to collect seeds from these incredible trees and propagate them in our preserves to hopefully increase their overall biodiversity and climate resilience.



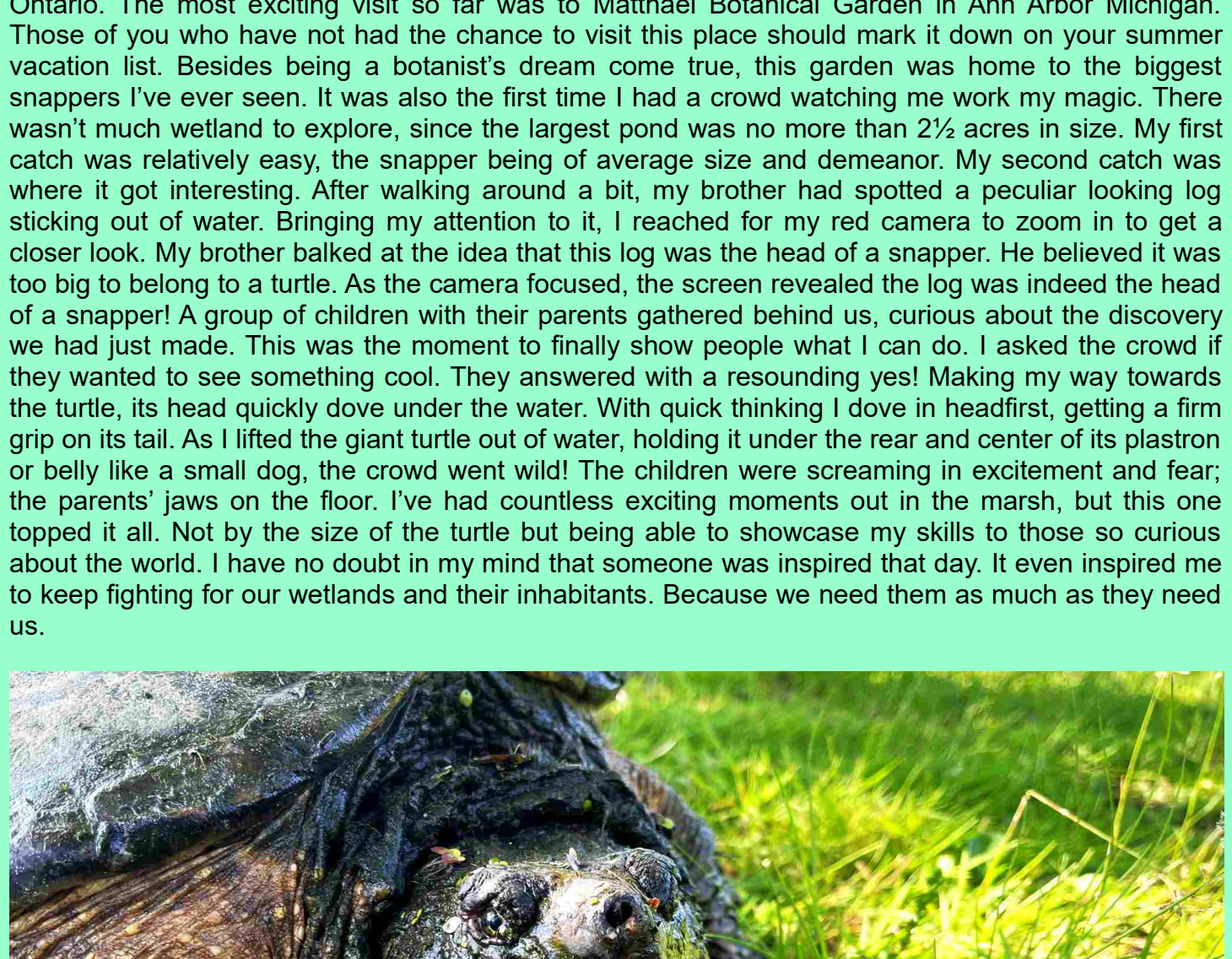
Bitternut trees on the Bidwell Sanctuary. Photograph by Teddy Wiley.



Leaf scar of probable hybrid of Bitternut and Japanese Heartnut on the Bidwell Sanctuary. Bitternut and Black Walnut leaf scars look like little owl or monkey faces. Photograph by Teddy Wiley.



A healthy Emerald Ash Borer-resistant White Ash – *Fraxinus americana* on the Shorewood Forrest Southeast Sanctuary. Photograph by Teddy Wiley's camera.



Oak leaves collected from the forest north of the Super Kmart and Sam's Club in Port Huron Township. These appear to be from Hill's Oak, a hybrid complex of Black, Northern Pin, and Sharlot oaks unique to the area. Photograph by Teddy Wiley.

You would think I wouldn't be able to miss any sort of plant. Well, some plants can still slip through the cracks. Blake Short decided one day to visit the Shorewood Forrest Southeast Sanctuary and walk the trail Connie and Jake had been working on. During his excursion he found a large Tamarack tree. The tree wasn't found in some isolated area of the preserve, but right next to the trail. I, Connie, and Jake walked this trail countless times, passing the Tamarack each time without notice. What made this discovery interesting is this Tamarack was most likely left over from the pre-settlement vegetation. Before Europeans had settled across the Blue Water Area, the wetland swales of Shorewood Forrest were dominated by Tamarack and Northern White-cedar. To house and feed an ever-growing European population and industry, many of the Tamarack and White-cedar were logged. Due to the trees' low regeneration rate, the swales transformed into a maple dominated swamp, known as southern hardwood swamp. Although small patches of White-cedar exist in Shorewood Forrest today, it was to our knowledge that Tamarack had all disappeared. Unlike the cedars, this Tamarack was in very rough shape. The combination of age, shaded understorey, and a warmer climate has put this tree on its last limb (pun intended). With the help of Bill and Jake, we were able to put a tall fence around the tree to reduce deer browsing. We are still working on a plan of action to hopefully keep this tree alive enough to produce seed.

Jake Defrain by the fenced-off Tamarack and supporting Arbor Vitae. Photograph by Teddy Wiley.

I couldn't get over how such a tree could go unnoticed, especially as it was close to the trail. For all I knew, I could be missing an American Chestnut back there. That's when I decided I would dedicate an entire week in exploring all of Shorewood Forrest. It took me about four days to explore the whole parcel. Although I didn't come across any American Chestnuts, I did however, find a plant that would end up being a remarkable discovery. I was on the eastern dune ridge, coming across Yellow Lady-slippers, Wild Sarsaparilla, and Purple Flowering Raspberry. Traversing the dune was difficult, due to the extensive growth of invasive shrubs. At some point the understorey had opened, allowing ample sunlight to reach the forest floor. A strange plant was taking advantage of this opportunity and seemed to establish itself quite well. Looking at it closely, it looked like something straight from Europe. I took a couple of photos to identify this strange looking flower. Using my iNaturalist app, I identified the plant as Canadian Lousewort or Wood-betony. I concluded this was a non-native plant with a North American name, like the non-native Canada Thistle. After about a week, I had forgotten about the discovery. It wasn't until Bill Collins had called asking me to collect seeds from a rare plant. Turns out, the rare plant he had sent me to find was none other than the Canadian Lousewort. Unlike most native plants, Canadian Lousewort scores a coefficient of conservatism (C-value) of 10. When conducting a Floristic Quality Assessment, plants are given a C-value rating ranging from 0 to 10. Species that score a high C-value are highly selective, typically found in undisturbed, high quality natural communities, and are sensitive to habitat changes. Already having a near-complete list of Shorewood Forrest, this tiny little flower is the highest scoring plant within the whole preserve!

Wood-betony or Canadian Lousewort – *Pedicularis canadensis*. Photograph by Teddy Wiley.

To broaden my skills outside of identifying plants I decided to take part in a secretive marsh bird survey on Harsens Island. This was by far the most challenging for me. When conducting a marsh bird survey, not only do they ask of you to identify which marsh bird is which, but what call it is using, direction, and distance. Being out on a survey site with several target birds calling off and flying in whichever direction can be very overwhelming. I was lucky enough to have spotted one target marsh bird during my three surveys, that being the Pied-billed Grebe - *Podilymbus podiceps*. Once the surveys were completed and I returned my equipment, I left the island with a new profound respect for birders. Being a birder was so much more than having expensive equipment and an odd personality. It is about having patience, passion, and intellect. Watching a professional look into a wetland and list off every bird they see and hear is truly astonishing! It was a sobering reminder that I have a lot more to learn.

Pied-billed Grebe, Lake Patagonia, Arizona, USA, 2005, Bindentaucher

Conducting the marsh bird surveys reminded me I had old friends to visit. Usually around this time of year, I spend most of my hours in the marsh looking for Snapping Turtles. Being inundated with work led me to spend a lot of time away from these turtles. The few days that I had, I made sure to visit new places "lit up" with observations on iNaturalist, like Canatara Park and Bickford Oak Woods in Ontario. The most exciting visit so far was to Matthaei Botanical Garden in Ann Arbor Michigan. Those of you who have not had the chance to visit this place should mark it down on your summer vacation list. Besides being a botanist's dream come true, this garden was home to the biggest snappers I've ever seen. It was also the first time I had a crowd watching me work my magic. There wasn't much wetland to explore, since the largest pond was no more than 2½ acres in size. My first catch was relatively easy, the snapper being of average size and demeanor. My second catch was where it got interesting. After walking around a bit, my brother had spotted a peculiar looking log sticking out of water. Bringing my attention to it, I reached for my red camera to zoom in to get a closer look. My brother balked at the idea that this log was the head of a snapper. He believed it was too big to belong to a turtle. As the camera focused, the screen revealed the log was indeed the head of a snapper! A group of children with their parents gathered behind us, curious about the discovery we had just made. This was the moment to finally show people what I can do. I asked the crowd if they wanted to see something cool. They answered with a resounding yes! Making my way towards the turtle, its head quickly dove under the water. With quick thinking I dove in headfirst, getting a firm grip on its tail. As I lifted the giant turtle out of water, holding it under the rear and center of its plastron or belly like a small dog, the crowd went wild! The children were screaming in excitement and fear; the parents' jaws on the floor. I've had countless exciting moments out in the marsh, but this one topped it all. Not by the size of the turtle but being able to showcase my skills to those so curious about the world. I have no doubt in my mind that someone was inspired that day. It even inspired me to keep fighting for our wetlands and their inhabitants. Because we need them as much as they need us.

Snapping Turtle "Bill". Photograph by Teddy Wiley.



Snapping Turtle 2 "Conquest". Photograph by Teddy Wiley.

Botanizing With Blake

By TLC Board Member Blake Short

Over the spring and early summer, I have been exploring the Shorewood Forest Southeast Sanctuary, 80 acres of wooded dune and swale forest in Fort Gratiot Township. While enjoying the trail (of course meandering away), I have been compiling an inventory of plant species encountered while observing the change from our beloved spring ephemerals into the early-summer blooming understory species that prefer more dappled light. The list of species I'm collecting will eventually be the floristic inventory of the sanctuary: all the plants that exist in this defined area. Aside from an obsession with plants and a curiosity to know what is growing out there, I'm essentially collecting a snapshot of the sanctuary's flora, much like a photograph captures a moment. While this is a rather enjoyable task, it provides important data that can be used in many ways such as determining forest quality and management practices, prioritizing areas for land conservation, and documenting Michigan's natural heritage.

I intend to use this information to conduct a Floristic Quality Assessment, or FQA, a method that manipulates data with algebra to measure the ecological integrity of a natural area based on its plant species composition. Fair warning, I'm about to go down a bit of a rabbit hole. The core of the FQA is identifying all the plant species in a defined area, usually a specific habitat or plant community, and obtaining each species' coefficient of conservatism (C-value), or just "C" as it is commonly referred to by plant enthusiasts. Fortunately, people much smarter than me have already assigned a numerical value between 0 and 10 for each plant species that is native to Michigan according to its tolerance for disturbance. These values and additional information are readily available on Michigan Flora online (<https://www.michiganflora.net>). Species that prefer disturbance are assigned a C-value between 0 and 3, those that tolerate it between 4 and 6, and those that are generally intolerant between 7 and 10. Disturbance can be natural, such as beaver flooding, fire, storms, disease, etc., but typically we associate it with anthropogenic activities like deforestation, removing hydrology, development, and so on. In summary, plant communities can and do shift when disturbance is introduced or removed; it goes both ways. Back to the FQA, once the number of plant species (n) is determined and the mean C-value is calculated, one can perform this FQA wizardry. After a bit of fancy math (insert boring math equation here), a final number, or score, is compared to a range of scores to determine if a site's floristic quality is exemplary, poor, or somewhere in between.

Beach Ridge and Swale Complex																	
6/28/2025																	
Shorewood Complex																	
Fort Gratiot Twp																	
St. Clair																	
Michigan																	
FQA DB Region:		Michigan															
FQA DB Publication Year:		2024															
FQA DB Description:		Merjent															
Practionier:		Thumb Land Conservancy															
Latitude:																	
Duration Notes:																	
Community Type Notes:																	
Other Notes:																	
Private/Public:		Public															
Conservatism-Based Metrics:																	
Total Mean C:		3.8															
Native Mean C:		3.8															
Total FQI:		36.4															
Native FQI:		36.4															
Adjusted FQI:		38															
% C value 1-3:		3.3															
% C value 4-6:		40.2															
% C value 7-10:		50															
Native Tree Mean C:		6.5															
Native Shrub Mean C:		3.6															
Native Herbaceous Mean C:		4.7															
		3.7															
Species Richness:																	
Total Species:		92															
Native Species:		92															
Non-native Species:		0															
Species Wetness:																	
Mean Wetness:		-0.2															
Native Mean Wetness:		-0.2															
Physiognomy Metrics:																	
Tree:		21 22.80%															
Shrub:		10 10.96%															
Vine:		5 5.40%															
Forb:		34 37%															
Grass:		4 4.30%															
Sedge:		15 14.13%															
Rush:		0 0%															
Fern:		5 5.40%															
Bryophyte:		0 0%															
Duration Metrics:																	
Annual:		2 2.20%															
Perennial:		89 96.70%															
Biennial:		1 1.10%															
Native Annual:		2 2.20%															
Native Perennial:		89 96.70%															
Native Biennial:		1 1.10%															
Species:																	
Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name									
Acer rubrum	Sapindaceae	ACERUB	native	1	0	tree	perennial	red maple									
Acer saccharinum	Sapindaceae	ACESAI	native	2	-3	tree	perennial	silver maple									
Acer glabrum	Sapindaceae	ACESAI	native	5	3	tree	perennial	sugar maple									
Actaea pachyphoda	Ranunculaceae	ACTPAC	native	7	5	forb	perennial	doll's-eyes									
Actaea rubra	Ranunculaceae	ACTRUB	native	7	3	forb	perennial	red baneberry									
Agropyron grygossopala	Rosaceae	AGGRGY	native	5	3	forb	perennial	tail agrimony									
Alnus incana s. rugosa	Betulaceae	ALINNC	native	5	-3	shrub	perennial	speckled alder									
Anemone virginiana	Ranunculaceae	ANENVIR	native	3	3	forb	perennial	thimbleweed									
Aralia nudicaulis	Araliaceae	ARANUD	native	5	3	forb	perennial	wild sarsaparilla									
Artemisia virginiana	Asteraceae	ARTVIR	native	5	0	forb	perennial	jack-in-the-pulpit									
Athyrium filix-femina	Athyriaceae	ATHFIL	native	4	0	fern	perennial	lady fern									
Betula papyrifera	Betulaceae	BETPAP	native	2	3	tree	perennial	paper birch									
Boehmeria cylindrica	Urticaceae	BOCYCL	native	5	-5	forb	perennial	false nettle									
Brachypodium erectum	Rosaceae	BRAERB	native	7	5	grass	perennial	long-awned wood grass									
Cardamine bulbosa	Brassicaceae	CARBUL	native	4	-5	forb	perennial	spring cress									
Carex aurea	Cyperaceae	CXAURE	native	3	-3	sedge	perennial	sedge									
Carex blanda	Cyperaceae	CXBLAN	native	1	0	sedge	perennial	sedge									
Carex canadensis	Cyperaceae	CXCANA	native	4	-5	sedge	perennial	sedge									
Carex cristata	Cyperaceae	CXCRIS	native	3	-3	sedge	perennial	sedge									
Carex deweyana	Cyperaceae	CXDWEY	native	3	3	sedge	perennial	sedge									
Carex gracillima	Cyperaceae	CXGRAC	native	3	3	sedge	perennial	sedge									
Carex hystericina	Cyperaceae	CXHYSI	native	2	-5	sedge	perennial	sedge									
Carex intumescens	Cyperaceae	CXINTU	native	3	-3	sedge	perennial	sedge									
Carex lupulina	Cyperaceae	CXLUPA	native	4	-5	sedge	perennial	sedge									
Carex lasiocarpa	Cyperaceae	CXLASI	native	5	-5	sedge	perennial	sedge									
Carex radiata	Cyperaceae	CXRADI	native	2	0	sedge	perennial	straight-styled wood sedge									
Carex retrosa	Cyperaceae	CXRETR	native	3	-5	sedge	perennial	sedge									
Carex stipata	Cyperaceae	CXSTIP	native	1	-5	sedge	perennial	sedge									
Caryophyllus	Caryophyllaceae	CARCAR	native	6	0	tree	perennial	bitter-sweet									
Carya cordifolia	Juglandaceae	CACORD	native	5	3	tree	perennial	bitternut hickory									
Cicuta bulbifera	Apiaceae	CICBUL	native	5	-5	forb	perennial	water hemlock									
Cicuta maculata	Apiaceae	CICMAC	native	4	-3	forb	biennial	water hemlock									
Claytonia virginica	Montiaceae	CLVIRI	native	4	3	forb	perennial	spring beauty									
Clematis virginiana	Ranunculaceae	CLVIRI	native	4	0	vine	perennial	virginian bitters									
Cornus alternifolia	Cornaceae	CORALT	native	5	3	tree	perennial	alternate-leaved dogwood									
Cornus foemina	Cornaceae	CORFOE	native	1	0	shrub	perennial	gray dogwood									
Cornus rugosa	Cornaceae	CORRUG	native	6	5	shrub	perennial	round-leaved dogwood									
Cypripedium parviflorum; c. calceolus	Cypripidaeae	CYPPAR	native	5	3	forb	perennial	yellow lady-slipper									
Dryopteris carthusiana	Dryopteridaceae	DRYCAR	native	5	-3	fern	perennial	spinulose woodfern									
Equisetum arvense	Equisetaceae	EQUARV	native	0	0	fern	perennial	common horsetail									
Fagus grandifolia	Fagaceae	FAGGRA	native	6	3	tree	perennial	american beech									
Festuca subverticillata; f. obtusa	Poaceae	FESUBV	native	5	3	grass	perennial	coddling fescue									
Fragaria virginiana	Rosaceae	FRVIRI	native	2	3	forb	perennial	wild strawberry									
Fraxinus pennsylvanica	Oleaceae	FRAPEN	native	2	-3	tree	perennial	red ash									
Galium aparine	Rubiaceae	GAPAAP	native	0	3	forb	annual	annual bedstraw									
Galium palustre	Rubiaceae	GAPALU	native	3	-5	forb	perennial	marsh bedstraw									
Geranium maculatum	Geraniaceae	GERMAC	native	4	3	forb	perennial	wild geranium									
Geum canadense	Rosaceae	GEUCAN	native	1	0	forb	perennial	white avens									
Glyceria striata	Cyperaceae	GLYSTR	native	4	-5	grass	perennial	spike manna grass									
Hebe verticillata	Aquifoliaceae	HELVIR	native	5	-3	shrub	perennial	black oak									
Impatiens capensis	Balsaminaceae	IMPCAP	native	2	-3	forb	annual	spotted touch-me-not									
Larix laricina	Pinaceae	LELARI	native	5	-3	tree	perennial	tamarack									
Lierisia ozorides	Poaceae	LIEORI	native	3	-5	grass	perennial	cut grass									
Lonicera canadensis	Loniceraeae	LONCAN	native	5	3	shrub	perennial	canadian fly honeysuckle									
Lonicera dioica	Caprifoliaceae	LONDIO	native	5	3	vine	perennial	red honeysuckle									
Lycopus uniflorus	Lamiaceae	LYCUNI	native	2	-5	forb	perennial	northern bugle weed									
Lysimachia thyrsiflora	Myrsinaceae	LYSTHR	native	6	-3	forb	perennial	tufted loosestrife									
Marianthemum canadense	Menyanthes	MACANA	native	4	3	forb	perennial	canada mayflower									
Michxanthus canadensis	Menyanthes	MCNACA	native	3	-3	forb	perennial	stink mint									
Oenothera sensibilis	Orobanchaceae	ONSENS	native	2	-3	fern	perennial	sensitive fern									
Osmorhiza longistylis	Apiaceae	OSMLON	native	4	3	forb	perennial	smooth sweet-cicely									
Parthenocissus quinquefolia	Vitaceae	PAQUIN	native	5	3	vine	perennial	viney creeper									
Peucedanum canadense	Umbelliferae	PECANA	native	10	3	forb	perennial	wood history									
Pentstemon virginicus	Plantaginaceae	PENVIR	native	4	0	forb	perennial	jumpseed									
Polypogon polifolius	Polygalaceae	POLPAU	native	7	3	forb	perennial	gay-wings									
Populus deltoides	Salicaceae	PODEL	native	1	0	tree	perennial	cottonwood									
Populus grandidentata	Salicaceae	POGRAN	native	1	0	tree	perennial	black ash									
Populus tremuloides	Salicaceae	POPRE	native	1	0	tree	perennial	quaking aspen									
Prunus serotina	Rosaceae	PRUSER	native	2	3	tree	perennial	wild black cherry									
Prunus pennsylvanica	Rosaceae	PPENSA	native	5	3	tree	perennial	black cherry									
Pyrola elliptica	Rosaceae	PRELL	native	6	3	forb	perennial	large-leaved shinleaf									
Quercus alba	Fagaceae	QUEALB	native	5	3	tree	perennial	white oak									
Quercus rubra	Fagaceae	QURUB	native	5	3	tree	perennial	red oak									
Quercus prinus	Fagaceae	QUPRIN	native	5	3	tree	perennial	black oak									
Ranunculus abortivus	Ranunculaceae	RANABO	native	5	0	forb	perennial	swamp buttercup									
Ranunculus hispidus	Ranunculaceae	RANHIS	native	8	-5	shrub	perennial	alter-leaved buttercup									
Rubus americanus	Grossulariaceae	RUBAME	native	6	-3	shrub	perennial	wild black currant									
Rubus odoratus	Grossulariaceae	RUBODR	native	4	3	shrub	perennial	strawberry wild-ginger									
Rubus alleghensis	Grossulariaceae	RUBALL	native	1	3	shrub	perennial	common blackberry									

Rafinesque became a professor of botany at Transylvania University in Lexington, Kentucky, in 1819, but he left the university in 1826 after quarreling with its president. While at the university, Rafinesque made important discoveries about American prehistory by studying the ancient earthworks of the Adena and Hopewell cultures (the Moundbuilders) in the Ohio River Valley. He was the first to identify these as the "Ancient Monuments of America," and he cataloged more than 500 such sites. He didn't excavate them, but measured, sketched, and described them in manuscripts that became a basis for later archaeological studies. He also studied the linguistics of Mesoamerica and made advances in deciphering ancient Mayan script.

In 1836, Rafinesque published the controversial Walam Olum, which contained creation myths and migration narratives of the Lenape people (also known as the Delaware Indians). Rafinesque claimed he had obtained cedar wood tablets and birch bark bearing Indigenous pictographs, together with a transcription in the Lenape language. Based on this, he produced an English translation of the stories. Rafinesque later said the original materials were lost, leaving his notes and transcribed copy as the only record. The Walam Olum remains controversial to this day. As early as 1849, Henry Rowe Schoolcraft, an ethnologist who worked extensively in Michigan, wrote that he believed the document might be fraudulent. Many scholars today believe it was a hoax, either by Rafinesque or upon him. But other scholars and many of the Lenape people believe the stories are authentic.

Rafinesque was brilliant, but undisciplined and unsociable. He was criticized by other scientists for what seemed like outlandish ideas and mistakes of overreaching. During his lifetime, he was a virtual outcast in the scientific community, and so was little recognized. But more and more in recent years, scholars are realizing how farsighted many of his ideas were.

One of Rafinesque's theories was that ancestors of Native Americans had migrated by the Bering Sea from Asia to North America. This was part of the narrative in the Walam Olum.

He was also one of the first scientists to use the term "evolution" in the context of biological speciation. He described a version of the theory in a letter in 1832 and in a journal in 1833. Charles Darwin's On the Origin of Species was not published until 1859. Darwin acknowledged the influence of Rafinesque's ideas in the third edition of On the Origin of Species.

Rafinesque was also a poet. In 1836, he published a 248-page book entitled: The world, or, Instability. A poem. In twenty parts, with notes and illustrations. It can be read on the Internet Archive website. It is a tour de force about nature and philosophy that reminds me of Walt Whitman's Leaves of Grass, which was first published in 1855, nineteen years after Rafinesque's poem.

Rafinesque died in Philadelphia in 1840, at the age of 57, from stomach and liver cancer. It has been theorized that the cancer may have been caused by his self-medicating for an illness with an herbal mixture that may have contained one or more species of ferns related to one now known to induce human gastric carcinoma.

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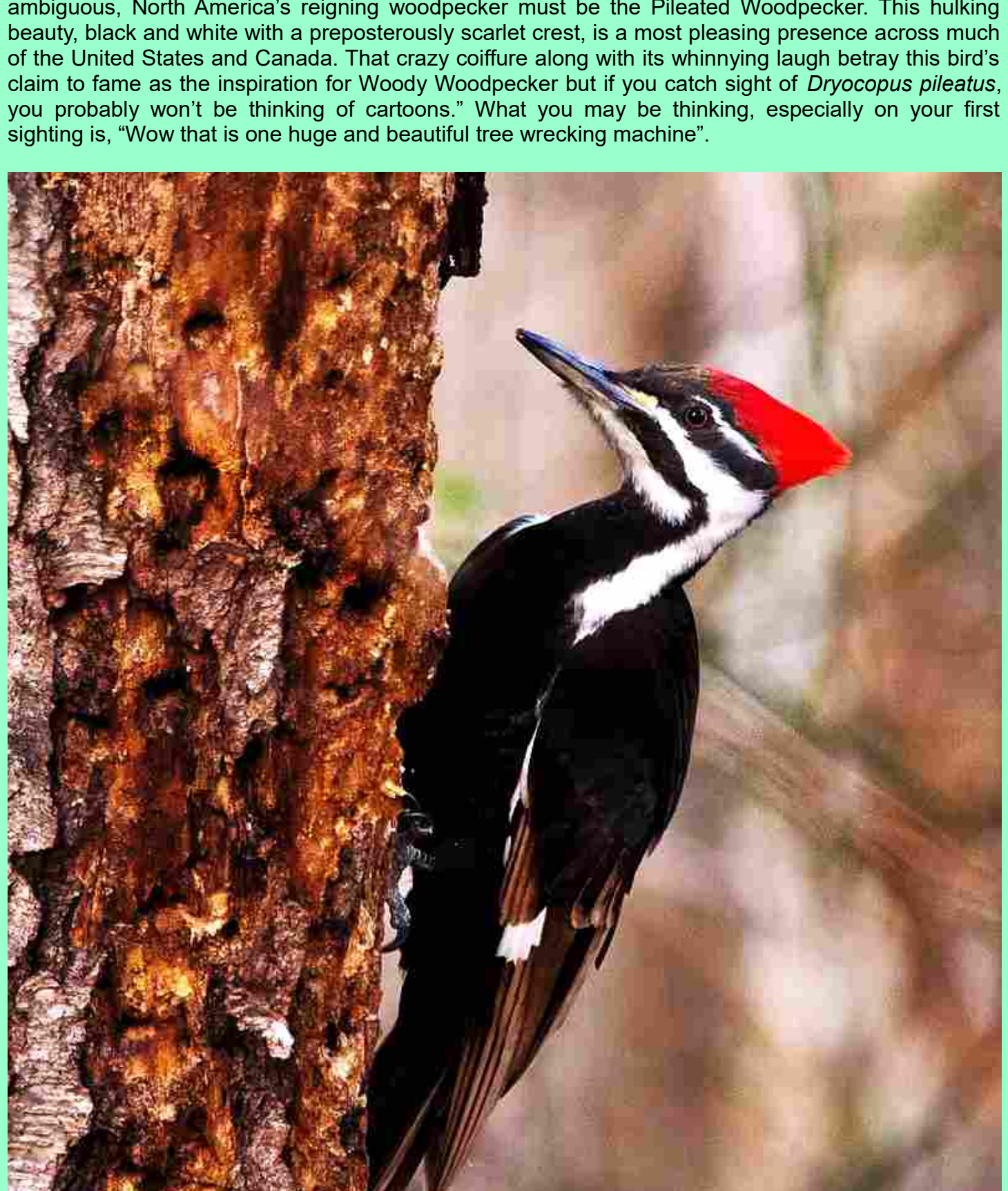
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C. S. Rafinesque, The world, or, Instability. A poem. In twenty parts, with notes and illustrations (Philadelphia, J. Dobson and in London, O. Rich, 1836) (https://archive.org/details/worldinstability00rfin/page/n3)

Note from TLC Executive Director Bill Collins: Some of the many plant species that Constantine Samuel Rafinesque named that occur in the Thumb region include Willow-herb - *Epilobium ciliatum*, Dwarf Raspberry - *Rubus pubescens*, Common Blue-eyed Grass - *Sisyrinchium albidum*, Bristly Greenbrier - *Smilax hispida*, and Star-flower - *Lysimachia* (formerly *Trientalis*) *borealis*. It is fascinating to know that while looking at a particular plant species, a botanist like Rafinesque, of decades and centuries gone by, not only laid eyes on the same species, but named it.



Star-flower – *Lysimachia* (formerly *Trientalis*) *borealis*. Photograph by Blake Short.

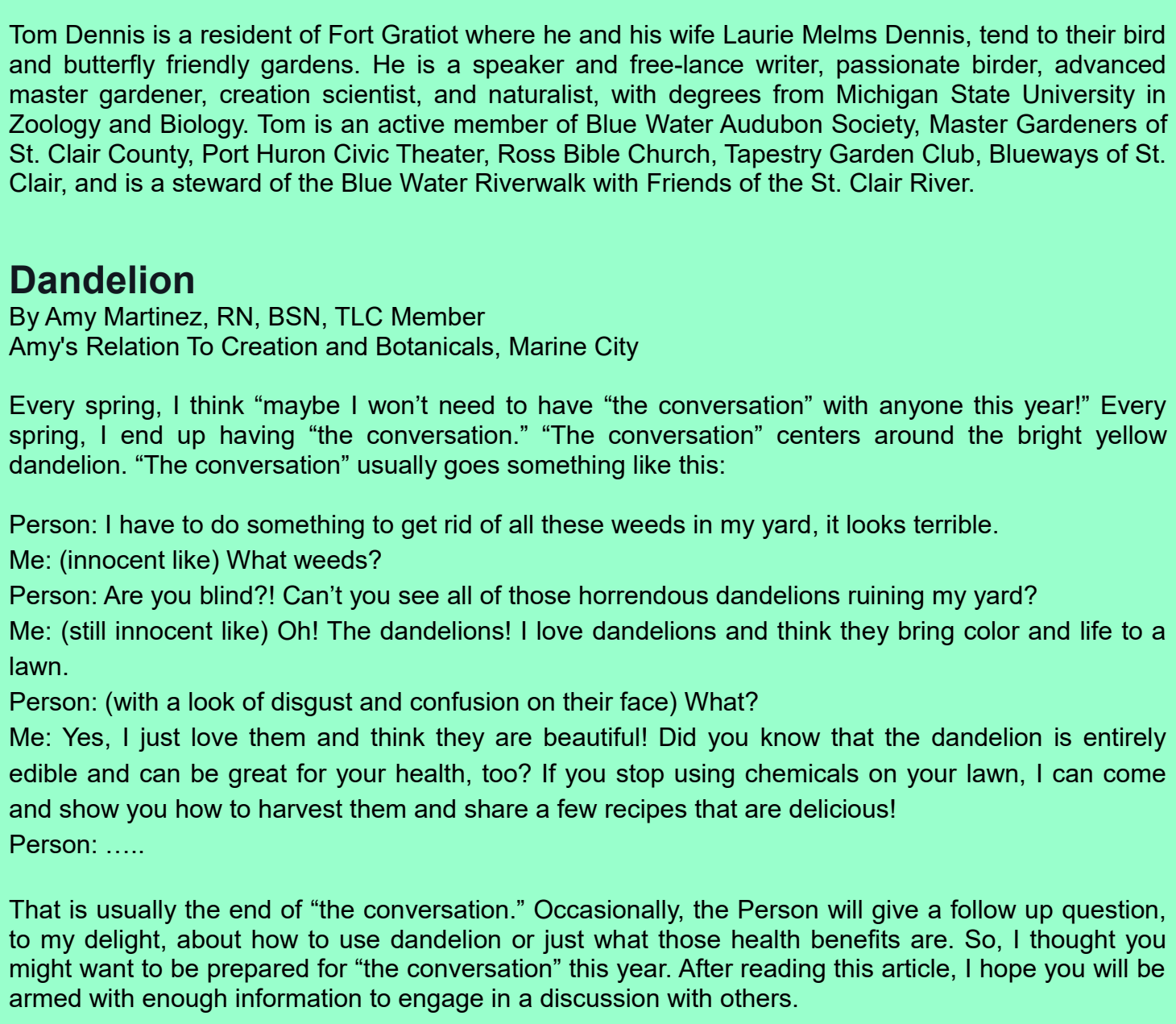
The Inspiration for Woody Woodpecker

Pileated Woodpecker - *Dryocopus pileatus*

By Tom Dennis, TLC Member and Stewardship Volunteer

When a friend recently asked me to write an article on the Pileated Woodpecker, I checked my records and discovered I hadn't written any articles on our various woodpecker species! I repent of this oversight with the first of several articles on this wonderful family of birds. I'm not going to explain why Picidae (pronounced Pick-a-dee) was chosen as the family name.

An old article from the [10,000 BIRDS website](#) states, "As long as the ivory-bill's existence remains ambiguous, North America's reigning woodpecker must be the Pileated Woodpecker. This hulking beauty, black and white with a preposterously scarlet crest, is a most pleasing presence across much of the United States and Canada. That crazy coiffure along with its whinnying laugh betray this bird's claim to fame as the inspiration for Woody Woodpecker but if you catch sight of *Dryocopus pileatus*, you probably won't be thinking of cartoons." What you may be thinking, especially on your first sighting is, "Wow that is one huge and beautiful tree wrecking machine".



Female Pileated Woodpecker. Shenandoah National Park Service, Virginia, US: https://flickr.com/photos/67015038@N06/9597212081

Pileated Woodpeckers are the second largest woodpecker on the continent, after the possibly extinct Ivory-billed Woodpecker. They are 16 to 19 inches long, have a wingspan of 26 to 30 inches and weigh an average of 11 ounces. They have a mostly black body with large white under-wing patches that are conspicuous during flight. The male's head has a prominent red cap and crest, white face and neck stripes, red moustache stripe, and a dark gray bill. The female is similar but has a black moustache stripe and forehead.

These birds are found in forested areas across Canada, the eastern United States, and parts of the Pacific coast. They prefer mature, hardwood forests and heavily wooded parks, often in large stands of forest. They have experienced an increase in population since 1966, largely due to habitat protection and restoration, and removal of invasive honeysuckle and buckthorn which seem to interfere with their foraging on the ground and lower tree levels. They are known to inhabit smaller woodlots as long as there is a scattering of tall trees. They excavate rectangular holes while feeding for ants and wood boring beetles and also for nest building. Nesting site trees are known to have as many as sixteen holes to facilitate an escape should a predator enter the tree. They will also peck holes around the entrances to allow sap to flow and discourage some predators from entering. Although they eat mainly insects they supplement their diet with fruits, nuts, and berries including poison ivy berries. When dining on ants they lap them up from deep crevices with their long tongue.

Abandoned Pileated Woodpecker homes are used by a variety of other animals including several species of tree nesting ducks. They are non-migratory birds but are still protected under the U.S. Migratory Bird Act. This is important to note as they can cause damage to homes and trees on private property (they love insects inside wood and they can't read no trespassing signs...or any signs for that matter!) Keep your eyes open for large, crow-sized birds with white wing patches flying overhead and you may sight your first Pileated Woodpecker. As for proper pronunciation of the common name; I recommend you look it up in the dictionary to get an educated opinion.

You can learn more about birds and nature by attending Blue Water Audubon meetings. Check the Blue Water Audubon Society Facebook page for the latest meeting details, local bird sightings, discussions, and events. Be sure to "friend" us!

Tom Dennis is a resident of Fort Gratiot where he and his wife Laurie Melms Dennis, tend to their bird and butterfly friendly gardens. He is a speaker and free-lance writer, passionate birder, advanced master gardener, creation scientist, and naturalist, with degrees from Michigan State University in Zoology and Biology. Tom is an active member of Blue Water Audubon Society, Master Gardeners of St. Clair County, Port Huron Civic Theater, Ross Bible Church, Tapestry Garden Club, Blueways of St. Clair, and is a steward of the Blue Water Riverwalk with Friends of the St. Clair River.

Dandelion

By Amy Martinez, RN, BSN, TLC Member
Amy's Relation To Creation and Botanicals, Marine City

Every spring, I think "maybe I won't need to have "the conversation" with anyone this year!" Every spring, I end up having "the conversation." "The conversation" centers around the bright yellow dandelion. "The conversation" usually gets something like this:

Person: I have to do something to get rid of all these weeds in my yard, it looks terrible.

Me: (innocent like) What weeds?

Person: Are you blind?! Can't you see all of those horrendous dandelions ruining my yard?

Me: (still innocent like) Oh! The dandelions! I love dandelions and think they bring color and life to a lawn.

Person: (with a look of disgust and confusion on their face) What?

Me: Yes, I just love them and think they are beautiful! Did you know that the dandelion is entirely edible and can be great for your health, too? If you stop using chemicals on your lawn, I can come and show you how to harvest them and share a few recipes that are delicious!

Person:

That is usually the end of "the conversation." Occasionally, the Person will give a follow up question, to my delight, about how to use dandelion or just what these health benefits are. So, I thought you might want to be prepared for "the conversation" this year. After reading this article, I hope you will be armed with enough information to engage in a discussion with others.

Dandelion, *Taraxacum officinale*, is a perennial that belongs to the Asteraceae family and is found throughout the northern hemisphere in areas with moist soil and sun. They are even cultivated in many areas. The name "dandelion" is an English version of the French name "dent de lion" meaning tooth of the lion because of long "teeth" on the leaves, which are only like sharp teeth in shape. The genus name "Taraxacum" is derived from the Arabic name "tarakhshaqun" meaning bitter herb, and possibly of Persian origin, relating to dandelion, chicory, and endives.



Michigan State University, Plant & Pest Diagnostics, Dandelion – *Taraxacum officinale*
https://www.canr.msu.edu/resources/dandelion-taraxacum-officinale/

Dandelion has a single, long taproot with a basal rosette of simple, deep lobed leaves just above it. The leaves are 5 to 10 inches long with sharp teeth and white, milky latex exudate that appears when broken. One or more leafless and hollow stems arise from the rosette of leaves that are 2 to 18 inches tall and have the same white, milky latex exudate when broken. Each stem has one yellow flower head with ray florets that opens during the day and closes at night. The flower heads are 1.5 inches in diameter and bloom in spring, summer and fall. The flower heads will mature into spherical seed heads that are olive or brown.

As mentioned earlier, the entire plant can be beneficial and eaten. The root tastes similar to a turnip, leaves are bitter but pleasant, and flowers are sweet like honey. Harvest stems in the spring for the best taste, flowers when in bloom, and roots that are at least 2 years old in the autumn for the highest therapeutic value.

The use of the dandelion for its therapeutic benefits dates back to the 7th century in China. It also has a strong history in Arabian medicine, Vales, Germany, India and Mexico among others. Dandelion roots contain constituents that can help to relieve constipation, aid in digestion, stimulate bile flow, protect and detox the liver, lower blood glucose, act as a prebiotic, lower cholesterol, provide dietary fiber, fight inflammation, provide antioxidants, fight cancer, and fight depression. The leaves have constituents that also aid in digestion, act as a diuretic, are nutritious, protect the liver, detox kidneys, are antibacterial, and fight cancer, depression, cholesterol and inflammation. The flowers have several antioxidants in them. Other constituents throughout the dandelion aid in pain relief, fighting rheumatism, weight loss, kidney repair, protecting the lungs, improving fatigue, and immune system and bone disease prevention.

Specifically, dandelion may help the body in dealing with coughs, headaches including migraines, maintaining healthy eyes, blood pressure, inflammation, high cholesterol, thick blood, iron deficiency anemia (fresh greens), poor digestion, liver hemorrhages, non-alcoholic fatty liver disease, cirrhosis, hepatitis, constipation, stomachache, toothache, gallbladder, and pancreas health, peptic ulcers, poor appetite, bloating, metabolic syndrome, type 2 diabetes, obesity, osteoporosis and arthritis prevention, muscle cramps and spasms, fluid retention, gynecological diseases, breast hyperplasia, pelvic inflammatory disease, kidney stones, urinary tract infection prevention, low potassium levels, tumors, fever, and immune regulation. Juice from stems and leaves can be used for dyshydrotic hand eczema, wounds, blisters, rashes, ringworm, warts, corns, and acne.

As with any plant, someone may be allergic to it especially if they have an allergy to other plants in the daisy family. Caution should be used with the root if gallstones are present. This plant is generally regarded as safe for those who are pregnant or breastfeeding. As always, you should consult your healthcare provider before using this or other herbs for therapeutic purposes.

In the kitchen with dandelion, you can cook the roots as you do other root vegetables, roast and grind them as a coffee substitute, or make a tea from them. The leaves make a delicious and nutritious addition to a garden salad. They may also be steamed, fried with rice, added to soup, cooked with bacon and served with an egg sauce, wilted as with other greens, used for tea, dried and used as a spice or seasoning, extracted and used in alcoholic and soft drinks, frozen dairy desserts, candies, baked goods, pudding and cheese. The flowers can be used for wine, jelly or syrups, cooked for fritters, raw in salads or tea, boiled and served with butter, or add buds in pancakes or omelets or preserved in vinegar and used like a caper.

This is how I make dandelion jelly: 4 cups of boiling water poured over about 4 cups of yellow flower petals and steep for about 24 hours. Strain. Add the tea to a heavy pan and add 2 tablespoons of lemon juice and a box of pectin. Bring to a rapid boil then add 4 cups of sugar. Bring back to a boil and boil 1 to 2 minutes. Pour into prepared jelly jars and leave ¼ inch headspace before putting lid on with ring. Process in water bath for 10 minutes then cool on the counter for 24 hours making sure seals are set. If they did not seal, put in fridge and use straight away.

Please remember that nothing in this article is meant to replace the advice of your healthcare provider, nor is it meant to treat, diagnose, or cure any diseases. The information here is for informational purposes only and has not been approved by the FDA.

At our store, we carry dried dandelion leaves and roots as well as extracts from the leaves and roots. If you mention this article, receive 10% off of your dandelion products through the end of July 2025. Our store, Amy's Relation to Creation & Botanicals, is located at 256 South Water Street, Marine City, Michigan 48039 and we are open Tuesday through Saturday. Stop in and tell me what you are doing with dandelions this year!

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Amy's Relation to Creation & Botanicals, LLC is a family-owned and operated botanical store located at 256 South Water Street in Marine City. A variety of natural products are available including teas, coffees, utensils, dried herbs, live plants, herbal tinctures, essential oils, salves, and other medicinal, wellness, personal care, and cleaning products. Owner, Amy Martinez, is focused on offering locally sourced, natural, unprocessed, and eco-friendly products. The store is open from 9 am to 6 pm Tuesday through Saturday, but open until 8 pm on Thursdays from April 4 through December. In addition to the store, Amy offers a meeting room available for rent for small groups, for health presentations, wellness consultations, tutoring for nursing students, and bible studies. For more information or to reserve the meeting room, see: [Amy'sRelationCreation.com](#) or call 810-335-4622.

For a calendar of events see: <https://amysrelationcreation.com/upcoming-events/>

You Got The Power

To Diversify and Revive in 2025

Save Nature Any Place! Sustain Native Plants!

How Human Development Fueled the Spread of Lyme Disease

We've been led to believe that the neat and tidy manicured residential lawns and landscaping of suburbia are safe places where infectious diseases like Lyme Disease don't spread. However, the experience of the last few decades in southern New England suggests otherwise. Turns out that diverse native plant communities actually help limit the spread of diseases by providing the vectors like ticks. Here's an article from the Homegrown National Park blog that explains more: [Homegrown Diversity and Infectious Diseases - Homegrown National Park](#)

In 2025, we are continuing to highlight restoration of natural habitat on private land, neighborhood efforts, and programs like Homegrown National Park: [Homegrown National Park](#), National Wildlife Federation Certified Wildlife Habitat: [Create & Certify](#), and the TLC Naturehood registry.

Restoration doesn't need to be complicated. In one way, it represents the truest expression of private land ownership and democratic ideals. As a landowner, you are vested with a great deal of power and responsibility. While the world is distracted by money and appearance, there can be a benevolent and unresentful aspect to owning land. You have the power to help restore nature, to support native species, to improve our air, water, soil, and climate, and to benefit all of humankind now and for generations to come, all right where you live. Every little piece of land now matters, whether it serves as habitat for native species year-round or is just a stop-over for transients. If you have a lot of land, you can have a lot of impact. If you only have a few flower pots or a small patch of dirt to your disposal, you will surely benefit a few of our beleaguered pollinators. Regardless, there is a lot to be said for adding a little beauty to our world. For a basic guide on restoring or creating natural habitat on your property, see our [2023 March 19 TLC News](#).

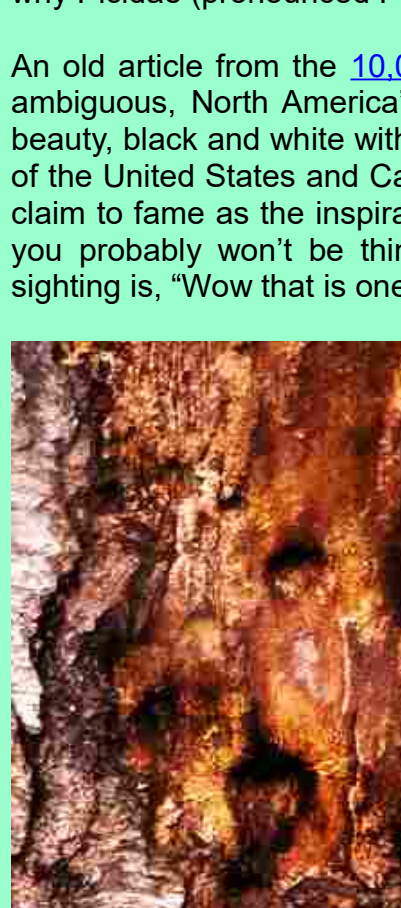
TLC Summer Stewardship

If you want to work on any of these projects, let us know.

Date	Activity	Location
July - September	invasive shrub removal	Shorewood Forest Sanctuary
July - September	invasive shrub removal	Bidwell Sanctuary
July - September	invasive weed control, trail clearing	Cunningham Connector Sanctuary
July - September	invasive weed control	Loznak Sanctuary
July - September	invasive weed control, native seeding	Morley Sanctuary

Friends of the St. Clair River Events

Summer Events



Friends of the St. Clair River has several summer programs and invite the public to participate.

Cottleville Shoreline Project

July 24, 6-8pm

Help us remove invasive species at the Cottleville Shoreline Project, July 24, 6pm to 8pm, at Cottleville Shoreline Park, 8559 River Road, Cottleville, Michigan.

Monarch Mondays

Join us to care for the Thumb Coast Watershed Center Gardens in St. Clair! These gardens serve as a pollinator hotspot and a collection source for our native seed library program. Volunteers of all ages and abilities are welcome to work in these gardens as their schedule permits, and we offer drop-in gardening hours on Mondays from 10am - 3pm when staff will be onsite to provide instructions, gardening supplies, and education on native plants and pollinators. Contact [Brooke@scriver.org](#) for more information. Master Gardeners may earn volunteer hours for these workdays.

Monarch Mondays: Drop-in Gardening Every Monday through October 20, with the option to work in the gardens on your own schedule once training has been completed.

Tuesday Treks

This weekly workday takes place at the Blue Water River Walk along the St. Clair River in Port Huron. For over a decade, we've been working at this park to remove invasive plants, maintain the native plant gardens, monitor pollinators, birds and other wildlife, and collect native seeds for our seed libraries and restoration projects. All ages and abilities welcome. Contact [Brooke@scriver.org](#) for more information. Master Gardeners may earn volunteer hours for these workdays.

Tuesday Trek Workdays: Tuesdays from 10am - 12pm, through October 28

Safeguarding a Sanborn: Stewardship in Heart

Sanborn Park is a 40-acre forested gem in the heart of Port Huron. A new series of trails were created through the park last summer to invite park users to enjoy more of the wooded landscape. Join us as we hike the trails old and new, identify native and invasive species, and learn how to protect this special natural resource. Wear sturdy shoes and wool gloves in case we find an opportunity to manage invasive species. We have gloves to share, too! Master Gardeners may earn volunteer hours for these workdays. Contact [Lynnea@scriver.org](#) with questions.

Stewardship Days: Wednesdays from 10am -12pm, July 30 and September 24

Located at the northeast corner of Pine Grove Avenue and Sanborn Street, Port Huron

Pine Grove Park Pollinator Project

We are excited to announce the launch of our fourth season of stewardship at Pine Grove Park in Port Huron. Join us to learn how to incorporate native plants into your garden beds without having to say goodbye to your traditional flowering favorites! Learn about native plants and sustainable gardening practices that support wildlife, pollinator habitat and water quality. These workdays are part of Friends' ongoing efforts to preserve and restore pollinator habitats in urban areas. This year we will also be helping maintain Port Huron's first Edible Park, across from Cleveland Elementary School! Contact [Brooke@scriver.org](#) for more information. Master Gardeners may earn volunteer hours for these workdays.

Garden Maintenance Days: Every other Thursday from 10am – 12pm, through October 30, with the option to work in the gardens on your own schedule once training is completed (Edible Park workday schedule TBD).

Port Huron Township Rain Garden Workdays

Help keep these Port Huron Township Community Rain Gardens in tip top shape! These gardens help absorb rainwater, prevent flooding, and create a beautiful habitat for birds and pollinators. All ages and levels of experience welcome. We'll provide guidance and tools if you need to borrow some. Just bring your enthusiasm and willingness to get your hands a little dirty! Master Gardeners may earn volunteer hours for these workdays.

Contact [Lynnea@scriver.org](#) with questions. All workdays take place on Friday, 7/25, 8/22, and 9/26

Wexford Garden

Monthly Gardening from 10 – 11:30am

Located across the street from 3059 Wexford Circle, Port Huron Township

Huntington Garden

Monthly Gardening 12 – 1:30pm

located across the street from 4607 Huntington Drive, Port Huron Township

Buckingham Garden

Monthly Gardening 2 – 3pm

4602 Buckingham Drive, Port Huron Township

Clyde Historical Society Events



The Clyde Historical Society meets on the third Thursday of each month. Their next meeting is July 17 at 6:30 pm at the historic Clyde Township Hall and Museum located at 5080 Wildcat Road and M-136, next to Bill Bears Memorial Park. The Clyde Historical Society brings together people interested in the history of the area and local genealogy. They promote an appreciation for the local history and its people; and collection, protection, and preservation of significant historical items. Their next events include:

September 13, Saturday

Rural School Reunion and Pulled Pork Fundraiser

Bill Bears Park, 1pm

We cordially invite you to an afternoon of reminiscing, fun, and good food. To make the occasion even more memorable, please bring photos and/or share them with CHS to display on our photo video player for all to enjoy and reminisce about their school days.

For more information, see the Clyde Historical Society Facebook page at: <https://www.facebook.com/groups/1481890455361159/>

TLC Membership

With your membership, the TLC is better enabled to protect important natural areas in our region. We offer two membership levels: Individual and Family \$40, and Business \$200. Members will receive our e-mail news. Membership is also available in trade for volunteer help. You can also make donations in honor or memory of someone or something. For donations of \$100 or more, your name will be listed on our web site. For larger donations, please contact us for details. Make checks payable to "Thumb Land Conservancy". Mail payment to: Thumb Land Conservancy, 4975 Maple Valley Road, Marlette, Michigan 48453. Make sure you provide us with your mailing address and e-mail address. Providing a phone number is optional but helpful. You can also make donations through the Square link on our web site at: [ThumbLand.org](#) but keep in mind that they take a percentage of the donation as a fee.

TLC Fundraising

Please consider a generous donation to help us match The Carls Foundation \$100,000 challenge grant. The Carls Foundation will match every dollar you give.

We are still fundraising to repay an acquisition loan of \$195,000 for the 113-acre Morley Sanctuary north of Bay City. Your donations help us move on to the next new preserve.

The TLC is all about land acquisition and preservation in a region where very few groups are. As a 501(c)(3) non-profit charity, all donations to the TLC are tax-deductible. Please contact us if you have any questions.