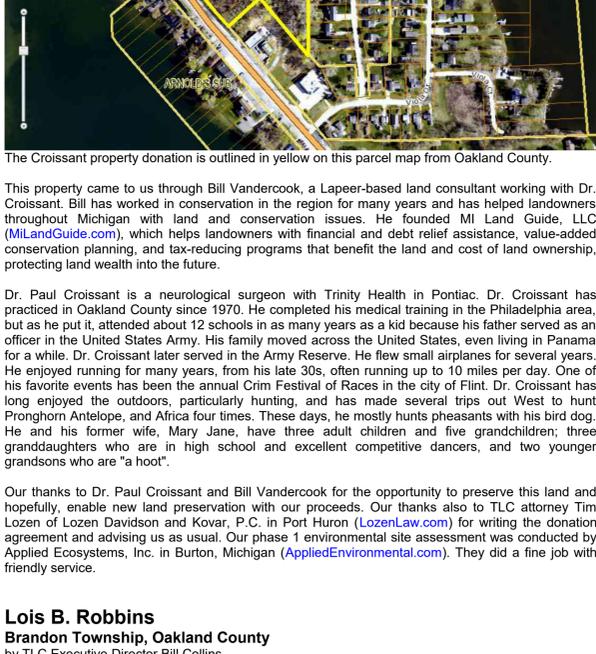


Thumb Land Conservancy News

2023 March 19

Dr. Paul Croissant Land Donation Brandon Township, Oakland County

On February 22, the TLC accepted the donation of about 10 acres of property from Dr. Paul Croissant, located along the east side of M-15 in Brandon Township, Oakland County, just south of Ortonville. This property is outside of our six-county territory but not far from Lapeer County. We are not likely to own it for very long. Because of its location along M-15 and close proximity to Ortonville, the property is surrounded by commercial and residential development. It is partially wooded, but dominated by weedy species like Black Locust, Box-elder, and Eastern Cottonwood. The eastern two-thirds of the property was excavated out decades ago to obtain landfill cover, leaving a wetland depression covered largely by weedy vegetation. Despite this, every natural area has value and now matters with so much having been lost. Our plan is to place a conservation easement on about 7.5 acres of the wooded natural area and sell the approximately 2.5 acres along M-15 to raise funds to purchase other natural areas. The remaining land protected by conservation easement would serve as a nice little preserve for the many residents that border the north and east sides of the property.



The Croissant property donation is outlined in yellow on this parcel map from Oakland County.

This property came to us through Bill Vandercook, a Lapeer-based land consultant working with Dr. Croissant. Bill has worked in conservation in the region for many years and has helped landowners throughout Michigan with land and conservation issues. He founded MI Land Guide, LLC (MILandGuide.com), which helps landowners with financial and debt relief assistance, value-added conservation planning, and tax-reducing programs that benefit the land and cost of land ownership, protecting land wealth into the future.

Dr. Paul Croissant is a neurological surgeon with Trinity Health in Pontiac. Dr. Croissant has practiced in Oakland County since 1970. He completed his medical training in the Philadelphia area, but as he put it, attended about 12 schools in as many years as a kid because his father served as an officer in the United States Army. His family moved across the United States, even living in Panama for a while. Dr. Croissant later served in the Army Reserve. He flew small airplanes for several years. He enjoyed running for many years, from his late 30s, often running up to 10 miles per day. One of his favorite events has been the annual Crim Festival of Races in the city of Flint. Dr. Croissant has enjoyed the outdoors, particularly hiking, and has made several trips out west to flood Plainmont Antelope, and Africa four times. These days, he mostly hunts pheasants with his bird dog. He and his former wife, Mary Jane, have three adult children and five grandchildren; three granddaughters who are in high school and excellent competitive dancers, and two younger grandsons who are "a hoot".

Our thanks to Dr. Paul Croissant and Bill Vandercook for the opportunity to preserve this land and hopefully, enable new land preservation with our proceeds. Our thanks also to TLC attorney Tim Lozen of Lozen Davidson and Kovar, P.C. in Port Huron (LozenLaw.com) for writing the donation agreement and advising us as usual. Our phase 1 environmental site assessment was conducted by Applied Ecosystems, Inc. in Burton, Michigan (AppliedEnvironmental.com). They did a fine job with friendly service.

Lois B. Robbins

Brandon Township, Oakland County

by TLC Executive Director Bill Collins

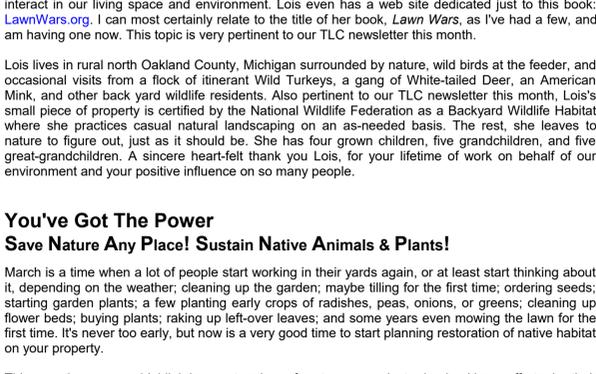
While driving through Ortonville recently to look at our new property donation from Dr. Paul Croissant, I was remembering Lois Robbins of Brandon Township. Back in the late 1990's and early 2000's, it seemed like we ran into Lois at nearly every public hearing or gathering for environmental issues in the north Oakland County area. I remember her always being a positive influence in what is often very contentious work to try to protect our environment. It has been at least 20 years since we last saw Lois, so I looked her up when we got back home.

I'm happy to say that Lois is still with us and has a very informative web site - LoisRobbins.org. I suppose I could have asked Sue Julian, Executive Director of the Blue Heron Headwaters Land Conservancy, (BlueHeronHeadwaters.org), formerly the North Oakland Headwaters Land Conservancy, but Lois worked with them for years. I associated Lois with the Upland Hills Ecological Awareness Center, tucked away in the oak covered hills of Addison Township, not quite 6 miles south of our Tranquil Ridge Sanctuary in Dryden Township. I don't recall knowing that she is a retired adjunct professor of religious studies from University of Detroit, that she is a published author, or some of the other things she has done.



Lois Robbins with her flower bed. Source: LoisRobbins.org.

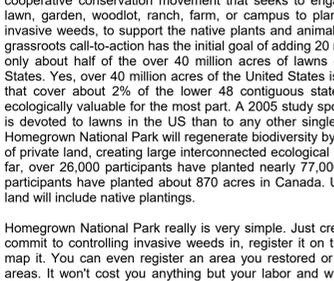
It's good to see that Lois has still been quite active in environmental work in recent years. In 2003, she founded the Village of Ortonville's annual CreekFest, a celebration of her town's trout stream, Kearsley Creek, which I pointed out to the TLC President as we drove over it in Ortonville. Kearsley Creek is one of the few cold-water trout streams remaining in southeast Michigan, a real "cool jewel" as someone said. The headwaters of the creek stretch from the Clarkson area, from southwest Lapeer County, and north through Davison. Kearsley Creek outlets to the Flint River on the east side of the city of Flint. Lois continued working on CreekFest through 2013 when it was handed over to the Ortonville Downtown Development Authority. It appears they last held CreekFest in 2020, which is a shame, but I'm told it may happen again this year.



Kearsley Creek in Ortonville. Source: LoisRobbins.org.

Lois is the recipient of several awards for her work, including the Heritage Partner award of Oakland County in 2009, the Joe Leonard Leadership Award from the Flint River Watershed Coalition in 2008, and the Thomas K. Bullen Achievement Award from the North Oakland Headwaters Land Conservancy in 2004.

Lois has written a few books that I was not aware of. Her first book was, *Waking Up in the Age of Creativity*. Lois says on her web page, "During the five years that I worked at the Institute for Advanced Pastoral Studies (1975-1990) [a program of Christ Church Cranbrook in Bloomfield Hills], I led the volunteers in writing and exercises that I picked up at the Pratt Art Therapy Institute [a program of the Pratt Institute in New York]. I could see the power in these exercises for developing a spiritual life. I started writing *Waking Up in the Age of Creativity* as soon as I'd finished my graduate work at the Institute for Culture and Creation Spirituality [a program of Mundelein College in Chicago]. I alternated between using the Institute for Advanced Pastoral Studies' Lanier Word Processing computer, and one at GM Truck and Bus, where I had a part-time job. That was on Tuesday and Thursday. On Monday, Wednesday and Friday, I taught Religion at the University of Detroit. I was anxious to bring these art exercises to a wider audience, and to link them with principles learned at the Institute for Culture and Creation Spirituality. We finally got it into print in 1985, and the book's publication led to invitations to lead Re-enchantment workshops all over North America, which I did for about 10 years."



Lois Robbins examining her favorite wildflower, Culver's-root - Veronicastrum virginicum, in her wildflower garden. Source: LoisRobbins.org.

In her second book, *Lawn Wars - The Struggle for a New Lawn Ethic*, Lois tells of her experience and the American culture's obsession with lawns. Speaking from a poetic, humorous, personal point of view recounting her experiences, observations, and story, *Lawn Wars* investigates just how and how we interact in our living space and environment. Lois even has a web site dedicated just to this book: LawnWars.org. I can most certainly relate to the title of her book, *Lawn Wars*, as I've had a few, and am having one now. This topic is very pertinent to our TLC newsletter this month.

Lois lives in rural north Oakland County, Michigan surrounded by nature, wild birds at the feeder, and occasional visits from a flock of itinerant Wild Turkeys, a gang of White-tailed Deer, an American Mink, and other back yard wildlife residents. Also pertinent to our TLC newsletter this month, Lois's small piece of property is certified by the National Wildlife Federation as a Backyard Wildlife Habitat where she practices casual natural landscaping on an as-needed basis. The rest, she leaves to nature to figure out, just as it should be. She has four grown children, five grandchildren, and five great-grandchildren. A sincere heart-felt thank you Lois, for your lifetime of work on behalf of our environment and your positive influence on so many people.

You've Got The Power

Save Nature Any Place! Sustain Native Animals & Plants!

March is a time when a lot of people start working in their yards again, or at least start thinking about it, depending on the weather; cleaning up the garden; maybe tilling for the first time; ordering seeds; starting garden plants; a few planting early crops of radishes, peas, onions, or greens; cleaning up flower beds; buying plants; buying up left-over leaves; and some years even mowing the lawn for the first time. It's never too early, but now is a very good time to start planning restoration of native habitat on your property.

This month, we are highlighting restoration of nature on private land, citizen efforts in their neighborhoods, and programs like Homegrown National Park, National Wildlife Federation Certified Wildlife Habitat, and the TLC Naturehood registry. These programs are not complicated at all, and in one way, represent one of the truest expressions 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 the selfish money side of land ownership, there can be a quiet and benevolent aspect of 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, our right where you live. Every little piece of land matters now, 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 even more impact. Even if you don't own land but have a few flower pots or a small patch of dirt at your disposal, you will surely benefit a few of our beleaguered pollinators. Besides that, there is a lot to be said for adding a little beauty to our world.

Homegrown National Park

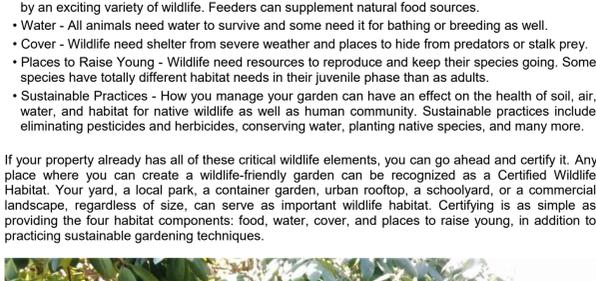
HomeGrownNationalPark.org

In essence, Homegrown National Park is not really a new idea. It is basically the same as other private-land habitat programs like the National Wildlife Federation's Backyard Wildlife Habitat program, now the Certified Wildlife Habitat program, which has been around since 1973. But in terms of scale and need, the Homegrown National Park is certainly an idea whose time has come.



Homegrown National Park is a program co-founded by Dr. Doug Tallamy, Professor of Agriculture in the Department of Entomology and Wildlife Ecology at the University of Delaware, and Michelle Afandari, an entrepreneur and business development strategist. Launched in 2020, it is a massive cooperative conservation movement that seeks to engage and mobilize anyone with a flower pot, lawn, garden, woodlot, ranch, farm, or campus to plant and preserve native species and remove invasive weeds, to support the native plants and animals that are essential for human survival. This grassroots call-to-action has the initial goal of adding 20 million acres of native plantings, representing only about half of the over 40 million acres of lawns on privately-owned properties in the United States. That's over 40 million acres of the United States is covered by lawn, relative biological deserts that cover about 2% of the lower 48 contiguous states. Actually, deserts are more diverse and ecologically valuable for the most part. A 2005 study sponsored by NASA determined that more land is devoted to lawns in the US than to any other single irrigated crop in the country. If successful, Homegrown National Park will regenerate biodiversity by restoring native habitats on millions of acres of private land, creating large interconnected ecological networks outside of parks and preserves. So far, over 26,000 participants have planted nearly 77,000 acres of native habitat in the US and 360 participants have planted about 870 acres in Canada. Ultimately, the target is that all privately held land will include native plantings.

Homegrown National Park really is very simple. Just create a native habitat area, which ideally, you commit to controlling invasive weeds in, register it on the Homegrown National Park web site, and map it. You can even register an area you restored or created previously, but the push is for new areas. It won't cost you anything but your labor and whatever plant stock and other materials you might choose to purchase. Better to propagate native plants for free through locally collected seed and rooted cuttings from natural areas near your property, and use scrap materials to build your own habitat structures. If you look closely at the Homegrown National Park map, you might see that a few personal properties of the TLC Executive Director are mapped in Fort Gratiot and north of Brown City.



Dr. Doug Tallamy is a well known butterfly and moth expert, author of 106 research publications, and has taught insect-related courses for 41 years. One of his primary research goals is to better understand the many ways insects interact with plants and how such interactions determine the diversity of animal communities. His books include *Bringing Nature Home*, *The Living Landscape*, *Nature's Best Hope*, and *The Nature of Oaks*. His awards include recognition from The Garden Writer's Association, Audubon, The National Wildlife Federation, Western Carolina University, The Garden Club of America, and The American Horticultural Association. Some of our members and readers may recall articles we featured last May and July about the negative impacts to native caterpillars from spraying *Bacillus thuringiensis* or Bt and bacterium to control the invasive Spiny or Gypsy Moth. We relied in part on the research of Dr. Tallamy in determining potentially how many native caterpillar species could be killed in our region.

Michelle Afandari is the founder and CEO of MODA Licensing, a pioneer global licensing and marketing agency established in 1988. Afandari developed, executed, and managed innovative brand extension strategies that resulted in new businesses for corporate and not-for-profit clients including The New York Times, National Trust for Historic Preservation, Victoria and Albert Museum, Champion Athleticwear, LYCRA/DuPont, Tour de France, Ritz Hotel - Paris, Mack Trucks, Snap-on Tools, Merrell Corporation, America's VetDogs, Bushnell, The Henry Ford, UNIPAL International Corp, and UNICEF. In 2008, Afandari founded Retirement, a digital platform "about time" for baby boomers who "retire" rather than retire.

An unlikely partnership developed after Afandari heard Dr. Tallamy give a presentation. Thereafter, the two met virtually many times and joined forces to scale Tallamy's bottom-up call-to-action for planting native plants and restoring biodiversity. As quoted on the Homegrown National Park web site, Dr. Tallamy asked, "... what if each American landowner converted half of his or her yard to productive native plant communities? Even moderate success could collectively restore some semblance of ecosystem function to as many as 20 million acres of what is now ecological wasteland." Afandari's goal was "... to make it as easy as possible, to have a great deal of fun in the process, and to celebrate the creation of new ecological networks."

As they take on the Homegrown National Park web site, "Our National Parks, no matter how grand in scale, are too small and separated from one another to preserve species to the levels needed. Thus, the concept for Homegrown National Park, a bottom-up call-to-action to restore habitats where we live, work, and to a lesser extent where we farm and graze, extending national parks to our yards and communities." The world is at a critical point, beginning to lose so many species from local ecosystems that their ability to produce the oxygen, clean water, flood control, pollination, pest control, carbon storage, and other ecosystem services that sustain us and nature in general, will become seriously compromised. As Dr. Tallamy says, "In the past, we have asked one thing of our gardens: that they be pretty. Now they have to support life, sequester carbon, feed pollinators, and manage water."

Homegrown National Park has the unique focus of attempting to reach those unaware of the biodiversity crisis, while also working and collaborating with aligned businesses, nonprofit organizations, and other entities with aligned missions. The program is funded, and anyone with some soil to plant. An affront to all of the bad environmental news these days, Dr. Tallamy's message is a solution-based action - small efforts by many people. Together we can create new ecological networks that will enlarge populations of plants and animals and better enable them to sustain normal population fluctuations indefinitely. While not the perfect end-all solution, achieving the goals of the Homegrown National Park would be a tremendous accomplishment on behalf of nature.

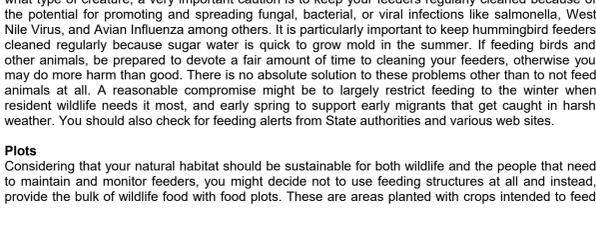
To be a part of the Homegrown National Park, begin by creating an account at this link:

<https://map.homegrownnationalpark.org/Account/Register>

National Wildlife Federation

Nwf.org

Most of our members and readers are likely familiar with the National Wildlife Federation, the largest nonprofit conservation organization in the United States, with over six million members and supporters. The mission of the National Wildlife Federation is to increase fish and wildlife populations, expand their capacity, protect and restore wildlife habitats, promote wildlife management, defend wildlife from impacts such as climate change and diseases, educate Americans about wildlife issues, inspire future generations of conservationists, support wildlife legislation, and advocate for hunting.



The National Wildlife Federation has an impressive history, established in 1936 as the General Wildlife Federation during the first ever North American Wildlife Conference, convened by US President Franklin Roosevelt. Over 1,000 people participated in the conference, representing every US state and parts of Canada and Mexico. Jay Norwood "Ding" Darling, a political cartoonist and environmental activist, was appointed the first President of the General Wildlife Federation. To note a Michigan connection, Darling was born in Darrow, Michigan and lived there until he was 10 years old. In 1934, President Roosevelt appointed Darling as Chief of the US Bureau of Biological Survey, but he resigned from the position in 1935 out of frustration with the lack of interest in funding wildlife protection by the US Congress. During the 1936 North American Wildlife Conference, Darling criticized people who considered themselves conservationists for simply putting up a bird feeder and subscribing to an outdoors magazine. He said that true action was required and encouraged voting against political candidates who did nothing for the environment. So you see, political activism on behalf of our environment dates back at least 88 years, more like 150 years in the US, with origins dating back perhaps over 300 years in Europe.

In 1938, the General Wildlife Federation was renamed the National Wildlife Federation. Action on a national level to protect wildlife has always been the major work of the National Wildlife Federation. In 1973, recognizing the potential for benefiting wildlife in general and for engaging members, the National Wildlife Federation started the Backyard Wildlife Habitat program, which encouraged residential landowners and communities to establish native plantings and wildlife habitat by providing food, water, cover, and places to raise young, the very basics of habitat requirements. Given Darling's earlier criticism of many so-called conservationists, it is kind of ironic that a big part of the National Wildlife Federation's later work became the publishing of a magazine and promotion of backyard wildlife habitat. However, Darling would likely have agreed that everyone can play a part by restoring native habitat wherever they are. His point was that we need to do more than put up a bird feeder and read a magazine.

Now known as the Certified Wildlife Habitat program, the specific goals of the program remain provision of food, water, cover, and places to raise young through the use of native plants and other features such as nest boxes and water gardens. The National Wildlife Federation has since added the use of ecologically sustainable practices to their criteria. According to the National Wildlife Federation web site, here is what your certified wildlife garden should include:

- Food - Native plants provide nectar, seeds, nuts, fruits, berries, foliage, pollen, and insects eaten by an exciting variety of wildlife. Feeders can supplement natural food sources.
- Water - All animals need water to survive and some need it for bathing or breeding as well.
- Cover - Wildlife need shelter from severe weather and places to hide from predators or stalk prey.
- Places to Raise Young - Wildlife need resources to reproduce and keep their species going. Some species have totally different habitat needs in their juvenile phase than as adults.
- Sustainable Practices - How you manage your garden can have an effect on the health of soil, air, water, and habitat for native wildlife as well as human community. Sustainable practices include eliminating pesticides and herbicides, conserving water, planting native species, and many more.

If your property already has all of these critical wildlife elements, you can go ahead and certify it. Any place where you can create a wildlife-friendly garden can be recognized as a Certified Wildlife Habitat. Your yard, a local park, a container garden, urban rooftop, a schoolyard, or a commercial landscape, regardless of size, can serve as important wildlife habitat. Certifying is as simple as providing the four habitat components: food, water, cover, and places to raise young, in addition to practicing sustainable gardening techniques.

For only a \$20 registration fee, a particular area can be certified by the National Wildlife Federation as an official Certified Wildlife Habitat site. There are no specific standards beyond the basic wildlife elements, no verification, and no monitoring or measurement required. The nice part about these types of programs is that they are simple and entrust the landowner with sole responsibility. The program is not a burden, but a positive encouragement. Aside from the rewards of offering wildlife a place to thrive, your certification provides the following benefits: Inclusion in the National Wildlife Federation's Certified Wildlife Habitat national network; Letter of congratulations; Personalized certificate for your wildlife habitat; Optional press release to share your certification with local media; Subscription to the National Wildlife Federation's Garden for Wildlife newsletter; One-year membership to the National Wildlife Federation which includes a subscription to National Wildlife magazine; 10% discount on nesting boxes, feeders, birdbaths and other products from National Wildlife catalog; and Eligibility to purchase and post an attractive yard sign to display your commitment to wildlife and the environment. You also get a rewarding sense of doing your part, and the satisfaction that you may inspire others to follow your example. To get started, go to this web page:

<https://www.nwf.org/garden>

Scroll down and click on Certified Habitats at the far right.

TLC Naturehood Registry

Like the National Wildlife Federation and Homegrown National Park, we have our own habitat or natural area registry: the TLC Naturehood program. The focus of our Naturehood certification is on recognizing natural areas restored using locally endemic seed and plant stock. We can also certify created natural habitats that do not necessitate any repressing of the original native or endemic community, but work still to benefit the life of the environment. We are excited to provide you with advice on restoring, creating, and maintaining native habitats, and by connecting you with information and resources. More information about our Naturehood program will soon be available on our web site. In the meantime, contact us by phone or email if you have any questions or seek certification.

How To Restore Natural Habitat

Now the work. What does it take to convert a lawn or other piece of ground into a native habitat. There are different ways; some difficult, others relatively easy, some that take a long time, and others that yield results fairly quickly. A major consideration is the level of weed control needed, and how much you can commit to. The methods described here are loosely organized according to the wildlife habitat elements as required by the National Wildlife Federation Certified Wildlife Habitat program, which are the basic elements of any habitat. The elements overlap to large extent. For example, food sources, cover, and places to raise young can all be provided through simply providing suitable vegetation or water or woody debris or some other aspect of a larger habitat. The methods presented in this article are not intended to be exhaustive, although reading all of this may be exhausting, but are intended to give general guidance based on years of real-world experience in our region.

Water

Containers
Start with perhaps the most important element and one of the easiest things that should provide almost immediate benefits for wildlife; add a source of shallow open water. Birds and insects will be quick to make use of just a little water. Many native and beneficial insects are attracted to even just a daily spray from a garden hose onto concrete or patch of mud. A bird bath is a good start, although that really doesn't provide enough water, requires almost daily filling, and is out of reach for most ground dwelling animals. The best way to start might be to put out some shallow containers, like old pans or bowls from a garage sale, buried in the ground so that the tops are at ground level. Be sure to add some stones or branches so that small animals can climb out of the water.

There are no easy answers for providing small sources of open water in the winter, unless you use an electric heater, but remember that your habitat needs to be sustainable. Otherwise, you can use a flexible container that won't break when ice expands, or a container that won't break when you break the ice out, or an old sacrificial container of some kind. Just make sure that whatever you use doesn't have any toxic content. And in winter, unless you have a large pond or inundated wetland, you will need to commit to breaking ice almost every day and hauling out at least a jug or bucket of water.

Pools and Ponds

You can buy expensive garden pools and the many accessories, but again, the habitat elements should be sustainable, not only for the environment but for the budget. If you have a high water table, a shallow hole dug in the ground might provide seasonal open water. If not, butterflies and other insects love to feed on minerals in the mud of intermittently saturated soils. You might be able to create some temporary open water by directing your roof runoff and eaves troughs or gutters into a little rain garden. Adding a shallow container should retain some water a little longer.

The next step might be to install plastic sheeting or other repurposed material in a shallow hole. Just remember that the plastic sheeting will break up into an impossible mess after several years. People often get rid of old bathtubs and old hot tubs, free for the taking. Use your imagination. But again, be sure that small animals like toads, shrews, and the many invertebrate creatures have a way of easily getting into, and more importantly, out of the water. At this scale, you need to consider whether your pool or pond could endanger young children. Also, be sure that you don't use toxic materials.

Eventually, you might consider excavating a larger pond or creating a wetland. Just make sure you will have enough water and that you obtain all required permits or approvals. You don't want to do more harm than good in your restoration project. You don't necessarily need to hire an excavator. One or two people can do a lot of digging with hand shovels if you are not in a rush. Keep in mind that work that is better than no work, you are going to create a new level of invasive weed control work for yourself. Invasive weeds like Phragmites Reed - *Phragmites australis* subspecies *australis* and Reed Canary Grass - *Phalaris arundinacea* soon take over freshly exposed soils around ponds and in wetlands.

Food

Feeders

The next thing you can do quite quickly for wildlife is provide food. Of course, you can put out a bird feeder or two and these range from easy and expensive to hard to home-made and free using scrap materials. Here's a cheap cheep and fancy bird feeder tip: 1) Melt a bunch of holes into the sides of a plastic juice bottle with a hot nail; 2) Melt a hole in the center of the bottle bottom plus several holes for drainage; 3) Melt a hole in the center of the bottle cap; 4) Melt a hole in the center of an old plastic plate or shallow plastic tub; 5) Run a thin coat hanger wire up through the center holes in the plate cap, bottle, and tub cap; 6) Bend the wire between the plate cap and tub so that nothing will not slide off; 7) Bend the top of the wire into a hook; 8) Fill the bottle with bird seed; 9) Hang your new feeder outside from a branch or pole; 11) If you have trouble with squirrels, and you will hang the feeder from a line or wire between two trees or poles; 12) For added bird security and a possible squirrel deterrent, add an old plate or pie tin onto the wire above the feeder.

There are many ways to put out food for a variety of wildlife ranging from mammals to birds to insects, and there are all kinds of feeders that you can buy or build. No matter what type of feeder or what type of creature, a very important caution is to keep your feeders regularly cleaned because of the potential for promoting and spreading fungal, bacterial, or viral infections like salmonella, West Nile Virus, and Avian Influenza among others. It is particularly important to keep hummingbird feeders cleaned regularly because sugar water is quick to grow mold in the summer. If feeding birds and other animals, be prepared to devote a fair amount of time to cleaning your feeders, otherwise you may do more harm than good. There is no absolute solution to these problems other than to not feed animals at all. A reasonable compromise might be to largely restrict feedings to the winter when resident wildlife needs it most, and early spring to support early migrants that get caught in harsh weather. You should also check for feeding alerts from State authorities and various web sites.

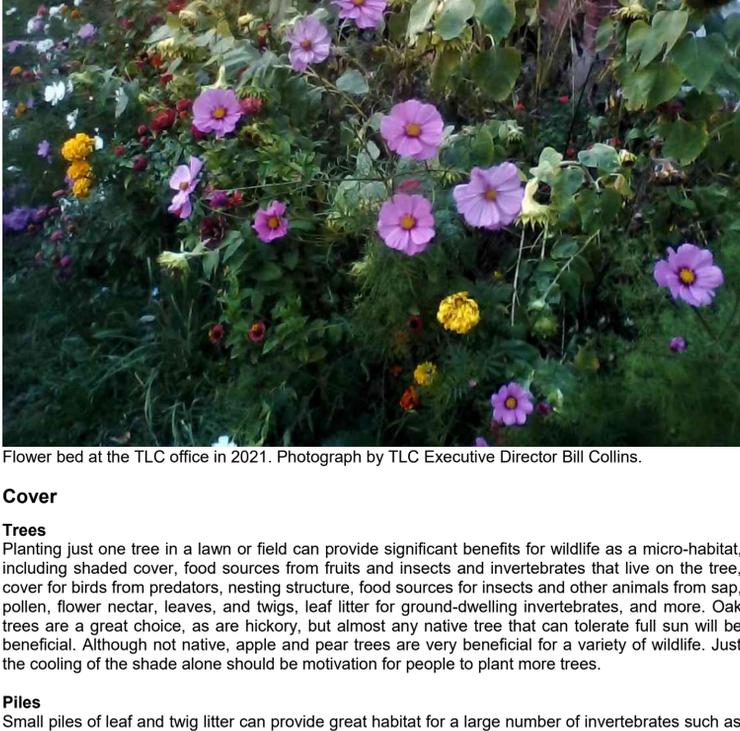
Plots

Considering that your natural habitat should be sustainable for both wildlife and the people that need to maintain and monitor feeders, you might decide not to use feeding structures at all and instead, provide the bulk of wildlife food with food plots. These are areas planted with crops intended to feed

wildlife and could include patches of sunflowers, corn, millet, and various grains and legumes. Similarly, you can place small portions of food around your property without structures that need cleaning; dispersed so that wildlife doesn't congregate all in one spot. This might include bundles of seed still on the stalk like sunflower heads, ears of corn, and pieces of fruit. This method might require a little more work to place the food, but saves cleaning and keeps wildlife more separated.

Gardens

Planting of native vegetation is covered in more detail under the Cover section of this article. A flower garden will provide food for a variety of insects and possibly hummingbirds through the summer in the form of pollen and nectar. Depending on your species mix, the garden can continue to be source of food for birds through the winter by providing seed retained in the flower heads. You might consider starting your flower garden with a lot of taller fast-growing annuals and even non-invasive non-native species to quickly establish flowers for pollinating insects. Sunflowers are a good choice along with zinnia, cosmos, salvia, and lavender. You can also include vegetable garden plants like squash and beans. These annuals are intended to provide a quick source of flowers and fill-out your planting area to displace weeds while giving you the pleasure of colorful blooms and watching the many pollinators at work. As your garden develops, you can gradually fill-in with more perennial native species.



Flower bed at the TLC office in 2021. Photograph by TLC Executive Director Bill Collins.

Cover

Trees

Planting just one tree in a lawn or field can provide significant benefits for wildlife as a micro-habitat, including shaded cover, food sources from fruits and insects and invertebrates that live on the tree, cover for birds from predators, nesting structure, food sources for insects and other animals from sap, pollen, flower nectar, leaves, and twigs, leaf litter for ground-dwelling invertebrates, and more. Oak trees are a great choice, as are hickory, but almost any native tree that can tolerate full sun will be beneficial. Although not native, apple and pear trees are very beneficial for a variety of wildlife. Just the cooling of the shade alone should be motivation for people to plant more trees.

Piles

Small piles of leaf and twig litter can provide great habitat for a large number of invertebrates such as sow bugs, centipedes, millipedes, insect larvae, slugs, worms, snails, and the fungi and other organisms upon which many of them feed. These in turn are sources of food for birds, toads, frogs, snakes, and small mammals.

Brush piles have been promoted for many years as a way to provide cover and nesting habitat for a variety of wildlife, which they can. You do want to be careful however, because brush piles will usually attract rabbits which are likely to eat many of the tree seedlings you planted if you are trying to restore a woodland.

While not really representative of natural communities in our region, rocks and broken concrete can also be used to create micro-habitats for a variety of invertebrate creatures, mosses, lichens, and even liverworts. Make sure you don't use broken asphalt, which discharges toxic compounds into the soil.

Similarly, piles of woody debris and rocks can provide important micro-habitats for fish, amphibians, and reptiles in aquatic or wetland areas. Again, do not use broken asphalt. Piles or accumulations of natural debris in streams not only provides habitat directly, but helps to shape the stream structure into riffles, rapids, and pools, which further diversifies the stream habitat. Woody debris in streams also helps to assimilate nitrates, which helps to reduce excessive algal blooms downstream.

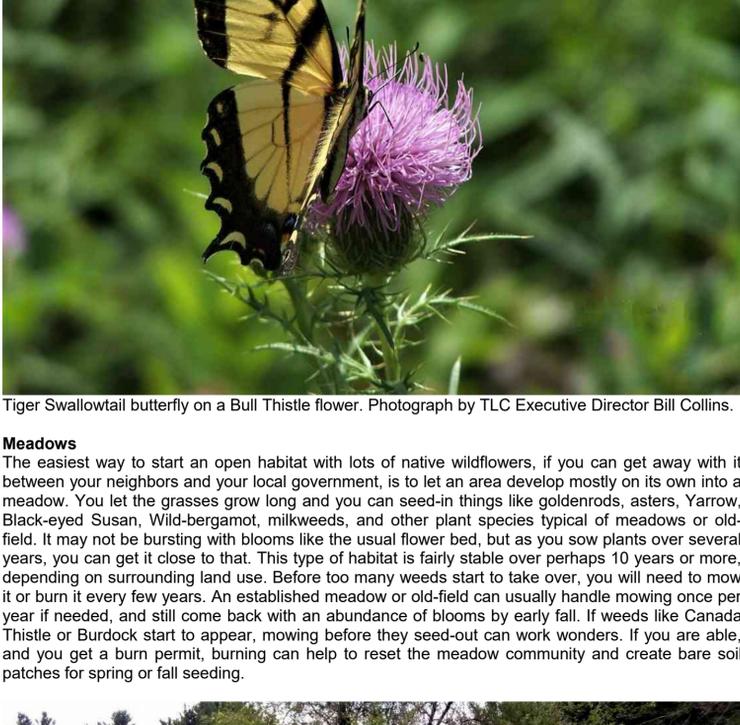
Planting Methods

As mentioned at the beginning of this article, there are different ways to start planting, some relatively difficult and slow, some relatively easy and fast, but all requiring varying levels of weed control. For the sake of not making this article too long, we will stick to those methods that are either slow or fast, but that require the least amount of weed control.

Sunny Wildflower Gardens

For those wanting to create the contemporary wildflower garden bursting with blooms in full sunlight, you've got your work cut out for you. With a lot of soil preparation, a few years of weed control prior to planting, dense plantings of tall plants, and lots of mulch, your garden will probably look great for a few years. But after a while, weeds move in, start to out-compete your plantings, and create a lot of work. In addition to the usual weeds, almost all ground in Michigan eventually defaults to shrubs and trees, most of these weedy unless you are next to a really nice mature forest. Unless these areas are regularly weeded, sprayed (don't do it), cut, burned, hayed, cultivated, or whatever, you are most likely going to get a bunch of weedy tree and shrub seedlings moving in, like Autumn-olive, Multiflora Rose, Box-elder, Siberian Elm, and others. This is what happens to fence rows between farm fields.

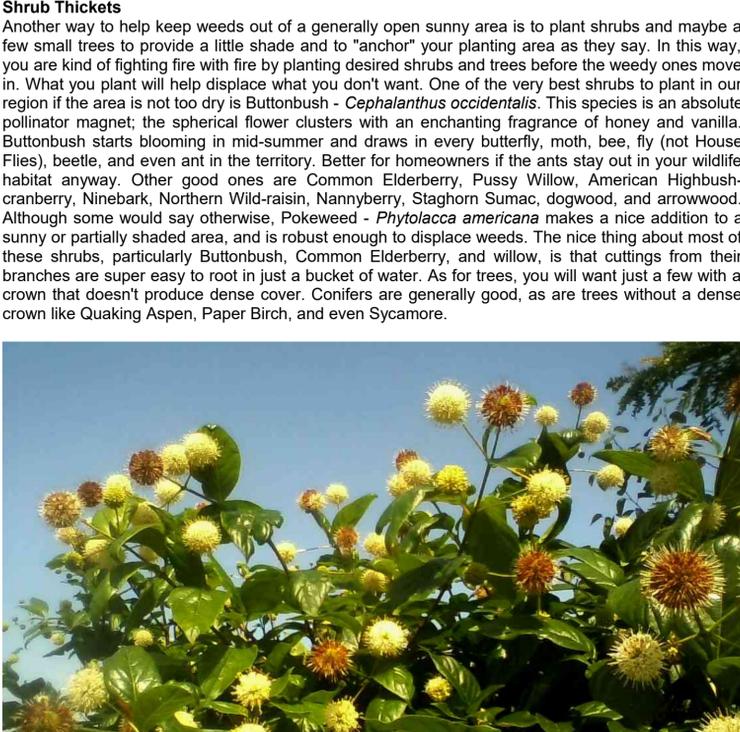
One option for full-sun wildflower beds is to use some helpful domesticated annual species and reconsider your thoughts about what constitutes a weed. Just planting a bunch of sunflowers produces a very nice space and food for pollinators and birds in a short time. The cover and mild allelopathic properties of sunflower, can help limit the growth of weedy plants below them. A species that acts like an invasive weed but is very controllable is Motherwort - *Leonurus cardiaca*, a mint native to Eurasia that spreads rapidly, but doesn't freshly disturbed soil to keep spreading. It's flowers are regular and not flashy, but there are a bunch blooming all summer and it is a bee magnet. Between sunflower and Motherwort filling in, many aggressive weeds are limited. You will probably always have some Lamb's-quarters - *Chenopodium album* and Amaranth - *Amaranthus* to deal with. Let just one of these plants seed out and you can guarantee yourself years of weeding. A more passive way to deal with these is to recognize that both are very much edible for humans and other animals, so use them for greens until they are near seeding and then pull them out. Until then, a few can add some interest to your habitat area. Thistle often get a bad rap, and for Canada Thistle - *Cirsium arvense*, it is deserved. But other thistles like Bull Thistle - *Cirsium vulgare* are not nearly so bad. There can sometimes be a lot in a pasture simply because cows and horses don't like to eat them and they spread more easily on such grazed ground. Otherwise, bees and butterflies really love their flowers which help support them through late summer. It might help to think of such a thistle as a "Michigan cactus". Another well-behaved non-native in the right setting that can help displace invasive weeds while providing beautiful flowers is Hollyhock.



Tiger Swallowtail butterfly on a Bull Thistle flower. Photograph by TLC Executive Director Bill Collins.

Meadows

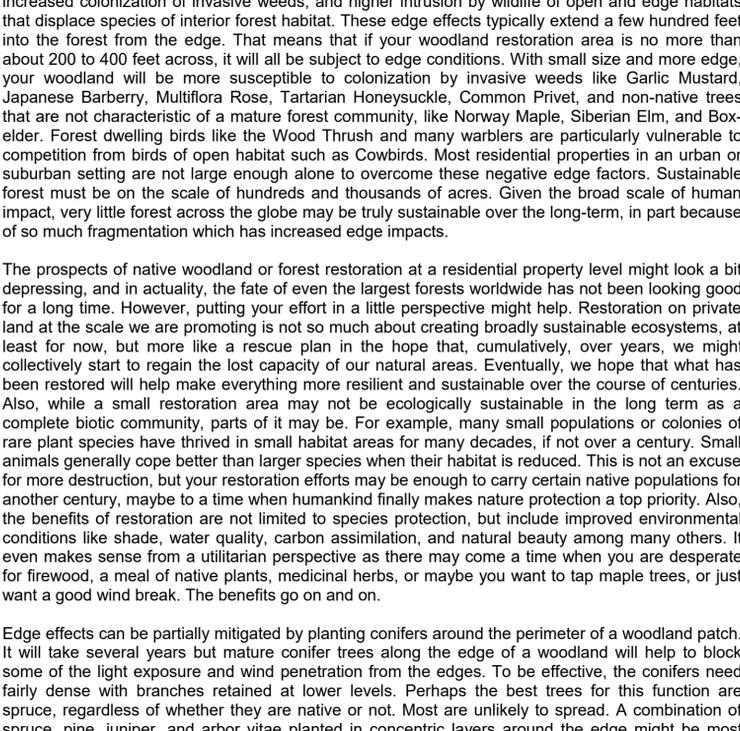
The easiest way to start an open habitat with lots of native wildflowers, if you can get away with it between your neighbors and your local government, is to let an area develop mostly on its own into a meadow. You let the grasses grow long and you can seed-in things like goldenrods, asters, Yarrow, Black-eyed Susan, Wild-bergamot, milkweeds, and other plant species typical of meadows or old-field. It may not be bursting with blooms like the usual flower bed, but as you sow plants over several years, you can get it close to that. This type of habitat is fairly stable over perhaps 10 years or more, depending on surrounding land use. Before too many weeds start to take over, you will need to mow it or burn it every few years. An established meadow or old-field can usually handle mowing once per year if needed, and still come back with an abundance of bloom as early fall. If weeds like Canada Thistle or Burdock start to appear, mowing before they seed-out can work wonders. If you are able, and you get a burn permit, burning can help to reset the meadow community and create bare soil patches for spring or fall seeding.



A beautiful old-field covered by goldenrod north of Marlette, Michigan. Fields like this are now critical for pollinators, but more are destroyed every year. Photograph by TLC Executive Director Bill Collins.

Shrub Thickets

Another way to help keep weeds out of a generally open sunny area is to plant shrubs and maybe a few small trees to provide a little shade and to "anchor" your planting area as they say. In this way, you are kind of fighting fire with fire by planting desired shrubs and trees before the weedy ones move in. What you plant will help displace what you don't want. One of the very best shrubs to plant in our region if the area is not too dry is Buttonbush - *Cephalanthus occidentalis*. This species is an absolute pollinator magnet; the spherical flower clusters with an enchanting fragrance of honey and vanilla. Buttonbush starts blooming in mid-summer and draws in every butterfly, moth, bee, fly (not House Flies), beetle, and even ant in the territory. Better for homeowners if the ants stay out in your wildlife habitat anyway. Other good ones are Common Elderberry, Pussy Willow, American Highbush-cranberry, Ninebark, Northern Wild-raisin, Nannyberry, Staghorn Sumac, Dogwood, and Arrowwood. Although some would say otherwise, Pokeweed - *Phytolacca americana* makes a nice addition to a sunny or partially shaded area, and is robust enough to displace weeds. The nice thing about most of these shrubs, particularly Buttonbush, Common Elderberry, and willow, is that cuttings from their branches are super easy to root in just a bucket of water. As for trees, you will want just a few with a crown that doesn't produce dense cover. Conifers are generally good, as are trees without a dense crown like Quaking Aspen, Paper Birch, and even Sycamore.



Buttonbush shrub in bloom at Bebezland Farm in Sanilac County. Photograph by TLC Executive Director Bill Collins.

Woodland

Better yet for larger areas in the right setting, is to restore the native forest that once covered about 95% of our region until about 200 years ago, prior to Euro-American settlement. Unless you are restoring open dune, marsh, prairie, fen, bog, shrub swamp, grassland, stream, or inland lake communities, all of which were in the Thumb originally but of very little coverage, you most likely will be restoring forest if your target is the originally plant community. Not only will you end up supporting a lot of wildlife and native plants, they will generally be those species that once occupied your land and are in dire need of support. Woodland or forest habitat will ultimately be the most stable and self-sustaining, making it easier to control invasive weeds as long as you are somewhat diligent. But getting started on woodland restoration has challenges, as will be explained.

Woodland Edge Effects

When creating or restoring woodland, you want to make it as large as possible because of the negative impacts of edges which allow higher influx of light and wind. This results in higher light exposure of course, higher air and soil temperatures, higher wind incursion and wind-throw of trees, increased colonization of invasive weeds, and higher intrusion by wildlife of open and edge habitats that displace species of interior forest habitat. These edge effects typically extend a few hundred feet into the forest from the edge. That means that if your woodland restoration area is no more than about 200 to 400 feet across, it will all be subject to edge conditions. With small size and more edge, your woodland will be more susceptible to colonization by invasive weeds like Garlic Mustard, Japanese Barberry, Multiflora Rose, Tartarian Honeysuckle, Common Privet, and non-native trees that are not characteristic of a mature forest community, like Norway Maple, Siberian Elm, and Box-elder. Forest dwelling birds like the Wood Thrush and many warblers are particularly vulnerable to competition from birds of open habitat such as Cowbirds. Most residential properties in an urban or suburban setting are not large enough alone to overcome these negative edge factors. Sustainable forest must be on the scale of hundreds and thousands of acres. Given the broad scale of human impact, very little forest across the globe may be truly sustainable over the long-term, in part because of so much fragmentation which has increased edge impacts.

The prospects of native woodland or forest restoration at a residential property level might look a bit depressing, and in actuality, the fate of even the largest forests worldwide has not been looking good for a long time. However, putting your effort in a little perspective might help. Restoration on private land at the scale we are promoting is not so much about creating broadly sustainable ecosystems, at least for now, but more like a rescue plan in the hope that, cumulatively, over years, we might collectively start to regain the lost capacity of our natural areas. Eventually, we hope that what has been restored will help make everything more resilient and sustainable over the course of centuries. Also, while a small restoration area may not be ecologically sustainable in the long term as a complete biotic community, parts of it may be. For example, many small populations or colonies of rare plant species have thrived in small habitat areas for many decades, if not over a century. Small animals generally cope better than larger species when their habitat is reduced. This is not an excuse for another century, maybe to a time when humankind finally makes nature protection a top priority. Also, the benefits of restoration are not limited to species protection, but include improved environmental conditions like shade, water quality, carbon assimilation, and natural beauty among many others. It even makes sense from a utilitarian perspective as there may come a time when you are desperate for firewood, a meal of native plants, medicinal herbs, or maybe you want to tap maple trees, or just want a good wind break. The benefits go on and on.

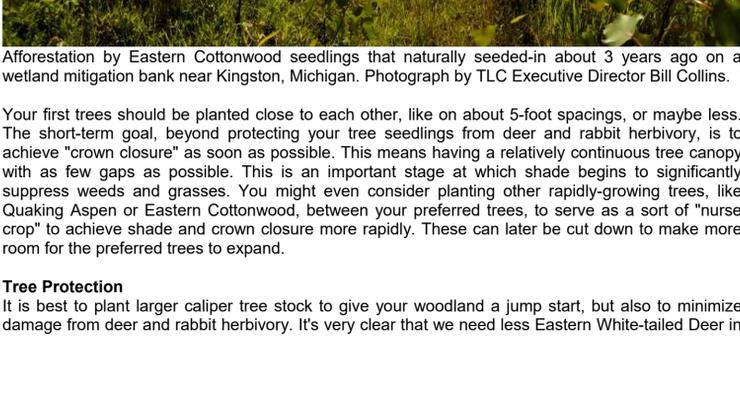
Edge effects can be partially mitigated by planting conifers around the perimeter of a woodland patch. It will take several years but mature conifer trees along the edge of a woodland will help to block some of the light exposure and wind penetration from the edges. To be effective, the conifers need fairly dense with branches retained at lower levels. Perhaps the best trees for this function are spruce, regardless of whether they are native or not. Most are unlikely to spread. A combination of spruce, pine, juniper, and arbor vitae planted in concentric layers around the edge might be most effective.

If space allows, you will further benefit any patch of woodland by extending individual tree plantings as far out from the edge as possible. The important things are shade and blocking wind, so every tree helps, whether it is part of the woodland or has topped lawn below.

Regarding invasive weeds, it may simply take a little more work on your part to control them. The good thing is that, with the shade of a forest canopy, invasive weeds are generally easier to control, although buckthorn is still a nightmare.

Afforestation

"Afforestation" refers to the establishment of new tree cover on land not previously forested, at least for a very long time. At first glance, the word seems to suggest the lack of forest as the prefix "A" in Latin means "without" or "not". But the prefix is actually "A" which means something like "a progression toward". There are basically two ways to accomplish afforestation - slowly and not so slowly, with variations on each theme. There are advantages and disadvantages to each way, but probably the best way is not so slowly, especially if you are feeling old. Start by planting relatively fast-growing species that can tolerate full sun or less than full shade, like Tulip Tree, Sassafras, American Basswood, Paper Birch, Eastern White Pine, Silver Maple, and poplar or aspen. Include some species that are moderately fast-growing like Sycamore, Sugar Maple, Wild Black Cherry, and elm. Include some oak and hickory trees also, which are slower growing, but do very well in full sun and are great for many kinds of wildlife. Be careful with Black Walnut as it often becomes a weed.



Afforestation using Sycamore on a wetland mitigation bank near Kingston, Michigan. These saplings were planted as rooted cuttings only 4 years ago. Photograph by TLC Executive Director Bill Collins.

Afforestation by Eastern Cottonwood seedlings that naturally seeded-in about 3 years ago on a wetland mitigation bank near Kingston, Michigan. Photograph by TLC Executive Director Bill Collins.

Your first trees should be planted close to each other, like on about 5-foot spacings, or maybe less. The short-term goal, beyond protecting your tree seedlings from deer and rabbit herbivory, is to achieve "crown closure" as soon as possible. This means having a relatively continuous tree canopy with as few gaps as possible. This is an important stage at which shade begins to significantly suppress weeds and grasses. You might even consider planting other rapidly-growing trees, like Quaking Aspen or Eastern Cottonwood, between your preferred trees, to serve as a sort of "nurse crop" to achieve shade and crown closure more rapidly. These can later be cut down to make more room for the preferred trees to expand.

Tree Protection

It is best to plant larger caliper tree stock to give your woodland a jump start, but also to minimize damage from deer and rabbit herbivory. It's very clear that we need less Eastern White-tailed Deer in

southern Michigan. They were not historically here in significant numbers and did not begin their population explosion in our region until the 1970s. Deer are not only involved in a great number of vehicle collisions, but eat a lot of tree seedlings, suppressing natural forest regeneration, especially arbor vitae in cedar swamps, and decimate large numbers of native forest wildflowers like trillium and orchids.

If you have a major issue with deer or rabbits herbivory, it may be necessary to try to protect your tree seedlings. There are several methods but success is hard to achieve and the methods are labor-intensive and expensive. Perhaps the most effective protection is the use of plastic tree tubes. This might be in combination with electric fencing and various repellents. However, deer and rabbits will almost always find ways to get through, over, under, or otherwise evade such exclusions. It may be necessary to attract them to a different area by putting out alternative food sources for a few years, until your trees are better established.

Woodland Weed and Grass Control

An important factor in afforestation is control of grasses and weeds under the tree seedlings and saplings. Not having them greatly improves the growth rate of the trees. This is where you need to make an important decision. You can mow around and under your planted trees for a decade or so to keep the grasses and weeds down. Mowing is not perfect, but it helps and if you are in an area where a weed and grass ordinance is strictly enforced, you may need to consider this route as a relatively easy way to deal with that issue. But waiting a decade or more for your trees to achieve crown closure before you start planting all of the other vegetation that makes up a forest community is less desirable the older you get. But on the other hand, if you plant woodland herbs too soon and your area becomes dominated by tall grasses and weeds, you will create an enormous amount of work for yourself to control those while protecting what you planted. It's a conundrum and there are no easy solutions. You can selectively mow, which is a lot of work. You could spray herbicide for grasses, but then it's likely to kill some of your plantings, including especially monocots like trillium, lilies, and orchids. Using herbicide is also not organic, sustainable, preferred, and maybe not safe. You can spend many days hand weeding. Perhaps the best solution for smaller restoration areas is to use a lot of leaves and wood chips as a heavy mulch. They can become your best friends. Get to know your local tree contractors and be prepared to scavenge bagged leaves and grass clippings from roadsides whenever you can.

The recommendation to control grasses during the early development of the woodland is not to suggest that eventually having some native grasses is a bad thing. Woodlands typically do have associated native grasses, sedges, and rushes that are part of the mature forest community. These are probably best seeded-in well after crown closure of the woodland canopy as they will impede tree growth earlier and may get you in trouble with a local grass and weed ordinance if they are too dominant.

Woodland Understory

Once your woodland canopy fills in and you are on top of the grass and weed problem, you can finally relax a little and take pleasure in adding biodiversity to your woodland. Then may be the best time to start planting understory trees and shrubs to recreate natural structure, produce more shade, and increase biodiversity. Good species for this in our region include Ironwood, Hornbeam, Witch-hazel, hawthorn, Flowering Dogwood, Speckled Alder, Ninebark, Bladdernut, Hazelnut, Spicebush, Highbush Blueberry, and Michigan Holly.

Woodland Herbs

At the same time you plant the woodland understory, you can plant the herb layer which typically consists primarily of forbes with some grasses and sedges. Just a few of the many native species characteristic of mature forests in our region include White or Red Trillium, May-apple, Yellow or White Trout-lily, Canada Mayflower, Jack-in-the-pulpit, Wild Geranium, False Solomon-seal, Solomon-seal, Spinulose Woodfern, Sensitive Fern, Red or White Baneberry, Wild Leek, Wood Anemone, Wild Sarsaparilla, Wild-ginger, Marsh-marigold, Blue Cohosh, Spring Cress, Spring-beauty, Wood Nettle, Sharp-lobed Hepatica, Royal Fern, Christmas Fern, Dwarf Raspberry, Bloodroot, Skunk-cabbage, Foamflower, sedges - *Carex bebbii*, *Carex crinita*, *Carex gracillima*, *Carex grayi*, *Carex intumescens*, *Carex lupulina*, *Carex pennsylvanica*, *Carex stricta*, grasses - Bottlebrush Grass, Virginia Wild Rye, Fowl Manna Grass, Canada Brome, and Autumn Bent Grass. Contrary to popular belief, most of these species transplant very well if done at the right time of the year and they are planted in an area with suitable soil, moisture, and light conditions.



Yellow Trout-lily in the TLC Dead End Woods Sanctuary in Fort Gratiot Township, Saint Clair County. Photograph by TLC Executive Director Bill Collins.

Locally Endemic Stock

Many gardeners and landscapers are familiar with the importance of planting regional genotypes that are suited to the regional climate. An increasing number of references suggest that seeds and plants be sourced as locally as possible to maximize the survival and continued growth of planted stock used for restoration. Some of us go a step further to suggest that it is important to retain the very populations that once occupied the specific locality for the sake of maintaining the local natural heritage. This level of concern, admittedly, is mostly an unseen aesthetic, but as our awareness increases, is likely to be verified by science as being more important. For one thing, huge advances in genetic analysis have been made in recent years, making it increasingly possible to track the ancient migrations of plant and animal populations. Unfortunately, the introduction of outside genotypes to an area, let alone even native species that never occurred there, obscures the true genetic and natural history of the area. Anyone who has read through a botanical guide like *Michigan Flora* knows that regional variations of plant species are often mentioned. Some of these variations are so strong that a species is divided into varieties and subspecies. But with the introduction of plants from other regions, as they cross with original populations, these small differences are likely to disappear or completely change such that the descriptions in the flora guides may one day be useless. Although these small natural variations of plant species might be thought of as unimportant, probably most were some reaction to something in the local environment. With the loss or obscuring of these variations, we probably lose some insight into the past. Regardless, some of us just want the satisfaction of knowing that the natural areas around us contain the original populations that established after the last glacial period. This is generally far more of a concern for slow-spreading native species of forests with seeds that tend not to be broadly dispersed, versus wind-dispersed species of open communities.

With this in mind, try to collect seeds, spores, cuttings, and transplants from local natural areas for your restoration area. Be careful not to collect rare species or from small colonies that may be further impaired. Typically, just a few shrubs and trees can provide plenty of cuttings for a small restoration area. Depending on species, the same is often true for seeds, and definitely for spores. Keep transplants to a minimum for uncommon forest species. The best policy is to rescue native plants and other organisms from land that is to be developed because developers will simply pile it all up and eventually haul it away as topsoil for some new lawn.

Perhaps the ultimate guide for producing rooted cuttings of woody plant species in North America, with some imports, is *The Reference Manual of Woody Plant Propagation: From Seed to Tissue Culture, Second Edition*, by Michael A. Dirr and Charles W. Heuser, first published in 1987. To purchase the book, visit the following link, but there are many sources on the internet:

<https://www.goodreads.com/book/show/5945407-the-reference-manual-of-woody-plant-propagation>

Other helpful books by Michael Dirr can be viewed at this link:

https://www.goodreads.com/author/list/50551.Michael_A_Dirr

Another helpful reference for handling and propagating seeds of woody plants is *The Woody Plant Seed Manual*, United States Department of Agriculture, Forest Service, Agriculture Handbook 727, July 2008, available only at this link: https://www.fs.usda.gov/rm/pubs_series/wo/wo_ah727.pdf

Woody Debris

After your tree canopy expands and you have grasses and weeds under control, you can also start adding woody debris to provide substrate for the growth of fungi, lichens, mosses, and homes for insects and other invertebrates like slugs, snails, grubs that are the base of the food chain. Woody debris like logs, stumps, limbs, and whole trees also serve as cover and homes for salamanders, toads, frogs, snakes, small mammals, and some birds. If you add the woody debris under the trees too soon, before you have everything under control, you will have a near impossible mess to deal with. You will no longer have the option of mowing, although you could maybe weed-whip most of the area. So, adding woody debris is also a step that you need to think about and plan for.

Woodland Carbon

Once you are past that critical weed and grass control stage, and you have added woody debris and other organic material, your woodland should increase in wildlife value and native forest plant habitat almost exponentially. As invertebrate communities become established, you will not only provide a stable food chain base, but the soil and trees will be storing increasing amounts of carbon. It's surprising how fast topsoil will redevelop on ground that had almost none originally. You can scavenge lots of free materials from the roadside to bolster the food sources for wildlife and build the soil. Materials are available most of the year, like bagged leaves and grass clippings, bundles of brush, cut tree limbs, cut landscape shrubs, old pumpkins, straw bales, corn stalks, and on it goes. It is amazing the precious resources that people throw out. All the while, you can take further satisfaction in knowing that these things are not taking up space in a landfill or increasing the burden of a composting facility. Just make sure you don't spread anything invasive from someone's yard. If unsure of invasive content, sometimes it's better just to leave it. As you gain confidence, you can process potentially invasive materials without seeds by drying, or with seeds by burning, making the material safe for your habitat, or safer yet for your vegetable garden. You can even add kitchen scraps or compost to your natural area. Your established forest community will break down these materials rapidly.

Woodland Productivity

As your woodland matures, you should see a great increase in wildlife food sources from seeds, berries, nuts, pollen, flower nectar, and even sap. The continued growth of the woodland should have enough momentum to begin helping you exclude weeds and undesired grasses, and to counter some of the major edge effects. Eventually, you want to get your restoration area as close to self-perpetuating as possible. At some point, you will have established your own source for seeds, cuttings, and transplants to further expand your restoration efforts.

Woodland Weeds

Beware though. As your woodland develops, you need to be ready for a new phase of invasive weeds. Now instead of Canada Thistle, Burdock, and Autumn-olive, it will be Garlic Mustard, Common Buckthorn, Glossy Buckthorn, and Asiatic Bittersweet, among many others. You will need to be diligent in controlling these very invasive forest weeds. Unfortunately, especially for small woodlands, birds like Robins, Starlings, and others are of no help. They bring in all kinds of invasive seed. Robins are especially notorious for spreading buckthorn.

Habitat Structures

In any natural habitat, whether a sunny meadow, partially shaded shrub thicket, or heavily shaded woodland, biodiversity will almost always benefit from the addition of micro-habitat variations and structures. A pit and mound micro-topography can be excavated across an area before planting, which mimics the effects of uprooted soil by large wind-thrown trees in mature forest. Mounds are typically 1 to 2 feet high, and pits equally deep, while each is typically 4 to 5 feet across. The pit is where a mature tree would have been, and the mound is where dirt, still clinging to the uprooted tree roots, eventually falls off. These small ground level variations result in a range of soil moisture conditions that diversify the plant and animal community. Some pits are deep enough to contain seasonal surface water for wildlife, and may be inundated long enough in the spring to serve as small breeding areas for invertebrates.



Pit and mound surface on sandy ground in second-growth northern forest (with Painted Trillium) in Port Huron Township, Saint Clair County. Photograph by TLC Executive Director Bill Collins.

Other habitat structures typically include logs, stumps, whole trees, and piles of woody debris, the benefits of which have already been described. Just the addition of some partially rotted wood can help support butterflies, bees, and many other invertebrates. Standing dead trees or "snags" are particularly beneficial for nesting birds or as perches for raptors.

Boulders and rock piles are not characteristic of natural communities in our region, but can be added to diversify the habitat. Scrap material is definitely not characteristic, but maybe in some areas. Snakes, toads, frogs, mice, shrews, and other animals are sometimes found nesting under boards, sheet metal, old rubber mats, old farm equipment, and other junk. Adding these kinds of materials to a restoration area would be rather uncouth, but if kept to a minimum and as a way to add visual interest, you might consider it. Any manufactured material that might be considered for this purpose should not be toxic and the break-down products should not be a problem, such as pieces of paint or plastic.

Places To Raise Young

Nesting and Shelter Structures

There are all kinds of structures that can be installed to provide cover and nesting places for many different kinds of wildlife. Bird houses or nest boxes have been popular for decades. Most important is installing the right structure in the right place for the birds you want to attract. It is kind of hit or miss, but the entry hole size on boxes is very important. Height and setting of a box also makes a big difference. The ability to easily clean out the box each year is also important to attract certain birds. Otherwise, you often end up with House Sparrows or other non-native species that we need less of. Of course there are all kinds of commercial sources and plans to build your own. Over the past few decades, bat houses have been popular. But again, design, height, and setting are very important to

attract bats. Butterfly houses and "bug hotels" for bees, hover flies, lady bugs and other beetles, have become increasingly popular. Yet again, design and location are important, especially for butterflies. Butterfly houses are meant to provide them nightly or even over-wintering shelter, but it is very difficult to attract them. The close proximity of host plants may be the most critical factor. Houses can be made for just about any creature including Eastern Fox Squirrels, Northern Flying Squirrels, and if you feel it necessary, Raccoons and North American Opossums. If you want Red Foxes or Coyotes you could even start a burrow for them, but like Raccoons and Opossums, they do quite well on their own. Reintroducing Beaver in Europe has been popular in recent years, but you need a lot of property and it will probably get you in trouble with a county drain commissioner here.

This habitat element overlaps with all of the other wildlife habitat elements, so most of the comments on provision of water, food, and cover can also be considered as part of the requirements for places to raise young. Further emphasis should be placed on selecting specific host plants for certain insect species, particularly for butterflies and moths whose larvae feed and over-winter on only a few certain species. Monarch butterflies and milkweed are a very good example. Woody debris in various stages of decomposition is important for reproduction of most invertebrates. For wetland and aquatic species, typically, very specific hydrology conditions and habitat elements are required for reproduction.

Sustainable Practices

The subject of sustainable practices is a broad topic, but can be simplified to mean that your restored habitat should not require inputs of labor, materials, and other resources that cause more environmental harm than the benefits provided by the restored habitat. That's still not simple as it could require a lot of data and complex calculations to determine with certainty. Even then, there are a lot of intangible aspects to consider. However, there are some general principles.

The input of fossil fuel energy should be minimized. Even the input of renewable energy, unless it is photosynthesis, is not really sustainable given that the restoration area should be able to sustain itself without human input over the long term, just as most of the natural world did long ago. So, this means that maybe you want to forego mowing to control grasses and weeds in the initial stages of the restoration and jump right to heavily mulching the area. Of course, you need to balance this decision with your abilities, available resources, and how strict the local government is with their ordinances.

For water features such as garden pools, you probably should forego the fancy waterfalls and fountains that require a significant amount of electricity to operate. You might consider something that is solar powered, but plan on a sustainable pool or pond design should the provision of power someday not be an option. Keep in mind also that solar panels, batteries, wire, and other equipment contain metals and other materials that need to be mined, processed, and manufactured.

Try not to create a habitat that requires excessive amounts of water input that can only be provided from a well or municipal water source. For us here in Michigan, water availability has mostly not been a problem, but unless you rely just on precipitation, runoff, and ground water, it does require input of energy. If you need more water than is naturally available, rather than using a pumped source, consider capturing runoff from roofs and other impermeable surfaces. Besides, most municipal water sources are treated with chlorine and additives include fluoride. These compounds may not be good for animals, plants, and other organisms.

Regardless of your attitude toward herbicides, pesticides, and commercial fertilizers, if your restored or created habitat depends on the continuous application of these materials, it is clearly not sustainable. Again, it is best to create natural habitat that is more or less self-sustaining. Another consideration is that manufactured chemical products are made of various extracted or mined substances and require inputs of energy during production and transport. Obviously, there is a lot of debate on the subject of toxicity and safety of herbicides and pesticides. It's safe to assume that because these products are effective at some level as biocides, that there must be some potential risk to other organisms. Like almost everything that affects our environment, remember that it's not only what you do, but collectively, what many people do that increases the damage done.

A consideration with using commercially sourced feed for wildlife is whether you are contributing to the use of valuable farm land for the purpose of feeding wild animals at the expense of feeding humans. The answer is obviously "yes", but there are some possible mitigating factors. You can rest assured that far more farm land is used to feed pets, and way more to fatten livestock and also produce ethanol fuel. Another considerable portion is used to produce alcohol for human consumption. So, you might consider starving your pets (just kidding) or eating less meat, or none at all, not drinking certain types of alcohol, or not drinking alcohol at all, and driving less. It seems like a minor issue when considered on an individual basis, but again, cumulatively, it is a big deal.

Of course you can avoid some of the potentially negative issues of feeding wildlife with commercially sourced feed by growing your own. The dilemma might be whether to use part of your garden space for wildlife feed versus produce for your own consumption. This is the point at which it makes most sense to start planting feed plots and wildflower gardens specifically for wildlife and get right into creating or restoring wildlife habitat as is the ultimate goal.

Gardening for Life By Doug Tallamy

<https://homegrownnationalpark.org/tallamy/not-in-our-yard-doug-tallamy>

God, Saint Francis, and The Suburbanites

This little exchange between God and Saint Francis has circulated on the internet for several years and likely predates it. On first read, it may seem a little cute or silly, but the sentiment actually gets to the root of the nonsense of people's obsession with manicured lawns. Yes, there are places for lawns in the developed environment, but it has gone way too far. Like a good essay, short story, play, or film, this conversation alters our perspective and makes a convincing case to turn from the absurdity.

GOD: Frank, you know all about gardens and nature. What in the world is going on down there on the planet? What happened to the dandelions, violets, milkweeds, and stuff I started eons ago? I had a perfect no-maintenance garden plan. Those plants grow in any type of soil, withstand drought and multiply with abandon. The nectar from the long-lasting blossoms attracts butterflies, honey bees, and flocks of songbirds. I expected to see a vast garden of colors by now. But, all I see are these green rectangles.

SAINT FRANCIS: It's the tribes that settled there, Lord, The Suburbanites. They started calling your flowers "weeds" and went to great lengths to kill them and replace them with grass.

GOD: Grass? But it's so boring. It's not colorful. It doesn't attract butterflies, birds and bees, only grubs and sod worms. It's sensitive to temperatures. Do these Suburbanites really want all that grass growing there?

SAINT FRANCIS: Apparently so, Lord. They go to great pains to grow it and keep it green. They begin each spring by fertilizing grass and poisoning any other plant that crops up in the lawn.

GOD: The spring rains and warm weather probably make grass grow really fast. That must make the Suburbanites happy.

SAINT FRANCIS: Apparently not, Lord. As soon as it grows a little, they cut it – sometimes twice a week.

GOD: They cut it? Do they then bale it like hay?

SAINT FRANCIS: Not exactly, Lord. Most of them rake it up and put it in bags.

GOD: They bag it? Why? Is it a cash crop? Do they sell it?

SAINT FRANCIS: No sir, just the opposite: They pay to throw it away.

GOD: Now, let me get this straight. They fertilize grass so it will grow. And, when it does grow, they cut it and pay to throw it away?

SAINT FRANCIS: Yes, sir.

GOD: These suburbanites must be relieved in the summer when we cut back on the rain and turn up the heat. That surely slows the growth and saves them a lot of work.

SAINT FRANCIS: You aren't going to believe this, Lord. When the grass stops growing so fast, they drag out hoses and pay more money to water it, so they can continue to mow it and pay to get rid of it.

GOD: What nonsense. At least they kept some of the trees. That was a sheer stroke of genius, if I do say so myself. The trees grow leaves in the spring to provide beauty and shade in the summer. In the autumn, they fall to the ground and form a natural blanket to keep moisture in the soil and protect the trees and bushes. It's a natural cycle of life.

SAINT FRANCIS: You better sit down, Lord. The Suburbanites have drawn a new circle. As soon as the leaves fall, they rake them into great piles and pay to have them hauled away.

GOD: No!? What do they do to protect the shrub and tree roots in the winter to keep the soil moist and loose?

SAINT FRANCIS: After throwing away the leaves, they go out and buy something which they call "mulch". They haul it home and spread it around in place of the leaves.

GOD: And where do they get this mulch?

SAINT FRANCIS: They cut down trees and grind them up to make the mulch.

GOD: Enough! I don't want to think about this anymore. Saint Catherine, you're in charge of the arts. What movie have you scheduled for us tonight?

SAINT CATHERINE: *Dumb and Dumber*, Lord. It's a story about . . .

GOD: Never mind. I think I just heard the whole story from Saint Francis.

Hargila Army Assam, India

One of the ultimate examples of saving nature in your own neighborhood is the work of Purnima Devi Barman, a wildlife biologist from Assam, a far eastern state in India that juts out north of Bangladesh and Myanmar and borders China. Barman has devoted herself to protection of the Greater Adjutant Stork - *Leptoptilos dubius*, an Endangered bird known locally as the "Hargila", meaning "bone swallower" in Sanskrit. Barman founded the Hargila Army, a very successful conservation initiative to protect the Hargila storks with humble beginnings.

Hargila storks grow up to about 5 feet tall and have almost bare heads, a long bill that looks a bit like two narrow dugout canoes clamped together, a dangling throat pouch, long skinny legs, and striking pale eyes. They feed primarily on carrion and produce foul-smelling droppings. Since their natural habitat has been so widely destroyed, they now feed regularly at garbage dumps. Because of their feeding habits and bad smell, Hargila storks have not only been reviled by villagers, but considered bad omens and carriers of disease. Villagers have attacked them with stones, cut down their nest trees, killed their young, and burned their nests.

Once widely distributed across southern and southeast Asia, the Hargila is now restricted to only three breeding populations; two in India and one in Cambodia. The total world population of Hargila storks is estimated at less than 1,200 adult birds. The majority of Hargila, up to about 800, live in Assam where they are in close contact with urban areas, nest in trees on private land, and scavenge for food at garbage dumps. As a result, they are threatened by pollution, habitat loss, and felling of nesting trees.



Hargila stork family in their nest. Source: Deutsche Welle at <https://www.dw.com/en/the-stork-army-women-fighting-for-the-hargila/video-62986469>

As a child, Purnima Devi Barman learned about the wildlife of Assam, especially birds, from her grandmother, who took her into the paddy fields where she worked. Barman said, "*She didn't know how to write but she had a feeling for nature and taught me lots of songs and stories about the birds*". Barman later attended Gauhati University in Assam where she earned a Masters in Zoology, with a specialization in Ecology and Wildlife Biology. In 2007, she began studying Hargila storks while working on her doctorate degree.

While conducting field research in a remote village of Assam, she was notified of a land owner cutting down a large Kadma or Burflower tree with several Hargila stork nests. She arrived to find the ground covered by broken nests and dead and injured Hargila chicks. Barman said her mothering instinct impelled her to protect the innocent creatures. She was very upset and confronted the tree cutter, but was chastised for being concerned about birds that the villagers considered repulsive scavengers with foul-smelling nests. She tried to teach the villagers that the Hargila storks are part of nature's cleaning crew and that their nests should not be cut down, but Barman was further taunted and told that she should clean up their foul mess herself. She was so struck by the senseless killing of these birds and the hostility of the villagers that she decided to postpone her doctorate work in order to focus on educating local communities about the ecological importance of the Hargila. It was not until 2019, 12 years after she started, that she finished her doctorate work.

Barman began by organizing public meetings where she honored the owners of Hargila nesting trees, mostly men, and instilled in them a sense of pride in their role as guardians of the Hargila storks. However, she believed that women of the villages really held the key to a sustainable, community-led protection effort. The problem was that women were confined to their homes and household chores. Barman found creative ways to bring them out where she could talk with them, like organizing cooking competitions where she befriended the women and talked about the Hargila. Barman further built her protection efforts for the Hargila by integrating the culture and traditions of the local villagers, with messages presented during religious functions, street plays, and community dances. Education techniques also included film celebrities to spread conservation awareness, throwing celebrations for owners of nesting trees used by the Hargila, games for children and young adults, and school field trips to visit Hargila habitats. Scholarships were provided for the children of nest tree owners. Barman gained support from the district government by inviting government officials to visit Hargila habitats and by engaging local forestry and police departments to participate in conservation actions.

In 2014, Barman founded the Hargila Army, an all female grassroots group of homemakers turned conservationists, now with over 10,000 members and 400 local volunteers. The Hargila Army not only has protected many of the birds and their habitat, but has empowered marginalized women and given them a voice in local conservation issues. The Hargila Army rescues and rehabilitates injured nestlings that have fallen from their nests. Villagers place nets around trees to catch the nestlings if they fall on windy days, especially during monsoons. The nestlings are given medical treatment, rehabilitated at a local zoo, and then released by the community. They also built a nesting platform for the Hargila which was successfully used to hatch a nestling in 2019.



Dr. Purnima Devi Barman with the Hargila Army wearing their now well known Hargila hats in Assam, India. Source: Rewilding Academy at [Rewilding.Academy](https://www.rewilding.academy/)

Since the onset of Dr. Barman's conservation efforts, local populations of the Hargila stork have increased significantly. When her efforts began in 2007, only 28 nests were found in the Kamrup district colony, but now total more than 250 nests, making this the largest Hargila stork colony in the world. As of 2010, no nesting trees have been cut down. At last count, Dr. Barman said there are now over 1,000 Hargila storks in Assam.

Efforts to change the image of the birds from bad omens or pests into one worthy of representation in celebrated human traditions like marriage and childbirth, have been very successful. The Hargila stork has been incorporated into local folk songs, traditions, and cultural festivals. The once maligned bird is now a cultural symbol, appearing on everything from towels to road-safety campaigns.



Release of a rehabilitated Hargila stork to its local marsh habitat. Source: Deutsche Welle at <https://www.dw.com/en/the-stork-army-women-fighting-for-the-hargila/video-62986469>

Not only have the efforts of Dr. Barman and the Hargila Army improved the conservation status of the Hargila stork, but have transformed the lives of women participating in the Hargila Army. Assam has a rich tradition of weaving, so Dr. Barman secured funding for 30 looms and provided training in weaving the Hargila motif into fabrics, providing women with an independent income. Eighty women were also given sewing machines to make bags, cushion covers, saris, and other items from the handwoven fabrics. Village women weave images of the Hargila and other wildlife of Assam into their fabrics, spreading awareness while generating income for their families. A young widow from a marginalized fishing community, who has been a member for five years, said the Hargila Army gave her a chance to do something meaningful with her life.

Release of a rehabilitated Hargila stork to its local marsh habitat. Source: Deutsche Welle at <https://www.dw.com/en/the-stork-army-women-fighting-for-the-hargila/video-62986469>

Dr. Barman has continued to expand her work on behalf of the Hargila stork and people of Assam. In 2021, she established the Hargila Learning and Conservation Centre, where Hargila Army members use songs, art, and games to encourage children to protect the birds. More recently, the Hargila Army has expanded into other districts of Assam, and they are planning a nursery for Kadam trees, used by the Hargila storks for nesting, which will be in addition to the 45,000 saplings they have already distributed and planted. She says, "This will help improve the back-yard biodiversity. My intention is to involve everyone. If people are concerned about the conservation of the Hargila and its habitat, it will help other species as well." By the way, the Kadma tree - *Neolamarckia cadamba* is in the Rubiaceae or Coffee Family and based on the flowers, general appearance, and description, seems to be closely related to our Buttonbush - *Cephalanthus occidentalis*.

There are at least two very good video documentaries about the work of Dr. Purnima Devi Barman and the Hargila Army:

DW - Deutsche Welle
The Stork Army - Women Fighting For The Hargila
<https://www.dw.com/en/the-stork-army-women-fighting-for-the-hargila/video-62986469>

Cornell Lab of Ornithology
Hargila Film Documents India's Grassroots Effort To Save The Endangered Greater Adjutant Stork
<https://www.birds.cornell.edu/home/hargila-film-save-greater-adjutant/>

To donate directly to the Hargila Army, visit their page on the Rewilding Academy web site:

Hargila Army Of Women Saving The Greater Adjutant Stork In Assam, India
<https://rewilding.academy/projects/hargila-army-of-women-saving-the-greater-adjutant-stork-in-assam-india/>

This page has a link to another film about the work of Dr. Purnima Devi Barman.
<https://rewilding.academy/events/purnima-devi-barman-honoured-with-champions-of-the-earth-award/>

To buy the hand-made woven products of the Hargila Army, visit their on-line store at PashooPakshee: <https://www.pashoopakshee.com/hargila-army>

Their products are very reasonably priced. It's too bad they need to be shipped all the way from Mumbai, India, which adds a significant shipping cost, but still inexpensive considering that the proceeds are going to a great cause. The Executive Director of the TLC bought several items which arrived in just over 3 weeks in very good shape.



Hand-woven Hargila Army cushion and bag. Photograph by TLC Executive Director Bill Collins.

State Budget Letter

By TLC Executive Director Bill Collins

For better or worse I sent the following letter regarding the proposed fiscal year 2024 State budget to Governor Whitmer and 56 Michigan legislators including all of those on Budget Appropriations Committee, Appropriations subcommittees, and a few other committees related to the issue including Energy and Environment, Natural Resources and Agriculture, and Natural Resources, Environment, Tourism and Outdoor Recreation. So far, I received a response acknowledging my message from the office of just one legislator, Representative Amos O'Neal, Democrat, District 94, Majority Vice Chair of the Appropriations Committee.

As I explain in the letter, the State has a funding surplus exceeding \$9 billion and yet, here in the Thumb, we are losing semi-public camps, public recreation land, and access to Lake Huron. Think the 24-acre Catholic Youth Organization Camp near Forester with over 1,000 feet of beach, 280-acre Silver Trails Scout Reservation along the Black River near Jeddo, and albeit small, the two parcels that the TLC acquired in the State land auction last August that were formerly part of the Port Huron State Game Area. If you know of other sales, I would like to know. This while in the heat of summer, more people in the Port Huron area are stuffed into Lakeside Park, Fort Gratiot County Park, and a few public road ends along Lake Huron. To make matters worse, as of 2020, the already limited and highly competitive grant money available from the Michigan Natural Resources Trust Fund has been directed to more park development projects, leaving less funding available for new land acquisition, which is hard to come by. In 2022, the Trust Fund awarded just over \$26 million each for development and acquisition projects equally. However, in the Thumb, \$1.23 million was awarded for development projects while only \$75,000 was awarded for land acquisition, just 6% of the total awarded to projects in our region.

I want to thank TLC Member Karen Willard and the Office of Senator Kevin Hertel for assisting me in identifying committee members and using the functions of the Michigan Legislature web site ([Legislature.mi.gov](https://legislature.mi.gov)). While I have used the site many times to search for statutes and bills, I had not made use of most of the links at the left side of the site under "Legislature". This is an impressive site and potentially helpful to many of our members and readers.

Letter To Governor Whitmer and Michigan Legislators:

2023 March 03

Subject: Fiscal Year 2024 Budget - State of Michigan Should Use Surplus To Buy Camps, More Public Recreation Land, And More Great Lakes Access

The proposed fiscal year 2024 budget of \$79 billion is the largest ever for Michigan. Given a funding surplus exceeding \$9 billion, the huge investments proposed, and the budget objectives, I want to highly recommend three budget priorities that are glaringly absent:

- State of Michigan should Buy Camps
- State of Michigan should Buy More Public Recreation Land
- State of Michigan should Buy More Great Lakes Access

Michigan should be increasing opportunities for youth camps, outdoor recreation, and Great Lakes access, especially in Southeast Michigan. Instead, these have decreased here in the Thumb region. In 2019, we lost 280-acre Silver Trails Scout Reservation along the Black River to a gravel company. The Boy Scouts of America sold off 11 of its 15 camps across Michigan since 2013. More recently, the 24-acre Catholic Youth Organization Camp near Forester, with over 1,000 feet of beach frontage on Lake Huron, was sold to a private buyer. Many organizations have been on a camp selling spree for the past few decades, certainly in the case of the Boy Scouts of America, to support overly-compensated executive staff. The wonderful camp community and programs we had at Silver Trails Scout camp as youth in the 1970's and 1980's fostered in many of us life-long inspiration and ambition, just what seems to be lacking for many young people today.

There is relatively little public land in Southeast Michigan dedicated to passive outdoor recreation and camping, particularly in the Thumb. Most public land here is intended for hunting. The few public beaches on Lake Huron in the Thumb already overflow with people in the summer. This will get worse as the climate warms. Many are projecting that Michigan will become a major climate haven in the US. The State really ought to prepare by expanding beach access and other public outdoor recreation areas where people can escape urban heat in the summer.

Michigan Is Haven from Climate Change. Officials Must Prepare

<https://www.governing.com/next/michigan-is-haven-from-climate-change-officials-must-prepare>

Can Michigan Become A Climate Haven? Duluth Is Already Planning

<https://www.bridgemi.com/michigan-environment-watch/can-michigan-become-climate-haven-duluth-already-planning>

Several goals outlined in the proposed 2024 budget would be supported by acquisition of more camps, public land, and Great Lakes access, particularly near population centers and in Southeast Michigan:

Lowering Costs

- Lower cost of driving, wear on roads, and time away from work, home, and school.
- Promote health, decreasing need for diabetic and other health care.

Education – Getting Kids Back on Track

- Improve student mental health with nearby accessible natural settings.
- Reduce barriers to outdoors, especially for children of low-income families.
- Provide more places for children to discover and appreciate nature year-round, not just a one-time visit for fourth graders to a distant State Park.
- Encourage active and healthy lifestyles.
- Educate future generations about the importance of protecting our natural resources.

Public Health – Strengthening Families

- Improve physical and mental health.
- Reduce need for diabetic and other medications.
- Decrease racial disparities to outdoor and Great Lakes access, particularly in Southeast Michigan.
- Make neighborhoods healthier and more stable by providing the many benefits described.

Public Safety – Keeping Communities Safe

- Reduce root causes of violence caused by stresses of the developed urban and suburban environment.
- Provide better alternatives for outdoor activities.
- Inspire youth in education, interests, career ambitions, and sense of larger community.

Rebuilding Infrastructure

Housing

- Reduce demand for air conditioning as residents cool off at beaches or in forested parks.
- Provide foundation of community development and placemaking efforts. Studies consistently show attraction of higher paying employers and skilled employees to communities with good parks and natural areas.

The Benefits of Parks: Why America Needs More City Parks and Open Space

https://conservationtools.org/library_items/729

The Economic Benefits of Open Space, Recreation Facilities and Walkable Community Design

https://conservationtools.org/library_items/1063

Water, Parks, Agriculture, Environment

- Help maintain the climate and the environment.
- Reduce use intensity of existing State parks by providing new parks.
- Reduce the work-load of park rangers and demand on essential resources at each State park.
- Shorten travel distance to parks, recreation areas, and beach access.
- Reduce demand for energy and road maintenance with shorter travel to nearby parks.

Economic Development

- Studies consistently show attraction of higher paying employers and skilled employees to communities with good parks and natural areas.
- Attract better jobs, more businesses, and more workers to Michigan, as is the goal of the Strategic Outreach and Attraction Reserve Fund.
- New workers will create new families with new kids that should have good camps and lots of outdoor opportunities as so many of us did in previous decades.
- Help fulfill Pure Michigan promotion of the State as a great place to live, work, and play.
- Support outdoor recreation businesses, including outdoor retailers, supply base companies, and outdoor recreation service providers. As a side note, the Thumb Land Conservancy has contacted outdoor recreation service providers and the Michigan Office of Outdoor Recreation Industry to help fund our projects here in the Thumb and we've either been ignored or no interest was expressed.
- Help fulfill promotion of Michigan as a destination for special events and national conventions.

William Collins, Executive Director, Thumb Land Conservancy

Michigan Air National Guard Airspace Expansion Update

As of last month, 44 counties and townships had opposed the expansion, with the number continuing to increase. Tuscola County is the latest county to join the opposition, claiming harmful effects on natural resources and livestock including watersheds, tourism, and pollution. In addition, Huron County commissioners are in talks of opposing the expansion as well, writing a resolution at the next board meeting. For more information, see the following article:

Tuscola, Huron County Commissioners Oppose Camp Grayling Expansion

<https://www.michiganstumb.com/news/article/tuscola-county-commissioners-oppose-camp-grayling-17838532.php>

TLC Spring Stewardship

Details will be sent in future e-mails. If you want to work on your own on any of these, let us know.

Date	Activity	Location
March - May	Japanese Barberry control	Deerfield Wind Energy Preserve
March - May	clean-up and restoration	Tranquil Ridge Sanctuary
March - May	trail and park entrance work	Bidwell Sanctuary
March - May	clean-up and sign installation	Full Circle Nature Sanctuary
March - May	clean-up and sign installation	Charles Dodge Nature Sanctuary
May - June	invasive weed control	Dead End Woods Sanctuary

Clyde Historical Society

The Clyde Historical Society meets on the third Thursday of each month. The next meeting is April 20 at 6:30 pm at the Ruby Lions Hall at 4535 Brott Road in Ruby. The Clyde Historical Society promotes history education and preservation in Clyde Township, including restoration of the historic Clyde Township Hall near the corner of M-136 and Wildcat Road, next to Bill Bearss Park. As usual, old maps and other historical items will be on display at the meeting.

Upcoming CHS events this year include:

- Veterans Picnic on May 21
- Pioneer Day on June 17

Both events will be held at the historic Clyde Township Hall. More details will be provided in future newsletters. For more information, see the Clyde Historical Society Facebook page at:

<https://www.facebook.com/groups/1481890455361159/>

Spring Migration: Who's Staying, Who's Going?

By Tom Dennis



An "Extraordinary" Common Grackle. Photograph by Lisa M. Ca of Macomb, Michigan.

"Beware the Ides of March" is fast upon us and as sure as the soothsayer's warning to Julius Caesar of his pending demise; local bird populations are on migration high-alert. We're already seeing the return of short-distance travelers such as American Robins, Common Grackles (which Lisa Ca of Macomb thinks "should be called Extraordinary Grackles") and Red-winged Blackbirds (males only for now), along with flocks of Tundra Swans, Sandhill Cranes and more heading to their summer

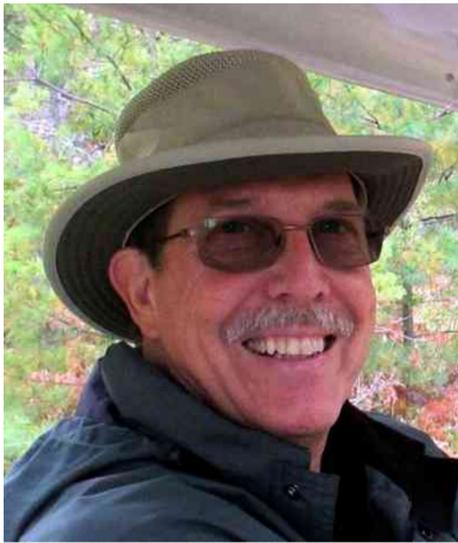
breeding grounds so, "what's coming next?" is the obvious question. We'll look at the obvious, as well as the not so obvious such as, who's leaving, who's staying but gets a new spring outfit and what this means to you, me, and our bird friends. Don't be a Julius Caesar; heed the warning lest you miss out on this fabulous springtime event!

The next migratory wave will include Red-winged Blackbird females that typically follow the males after a few weeks. There is an old birder saying that once the female Red-winged Blackbirds arrive, there will be no more ice on ponds or ditches and being an old birder, I find this to be true. We will also be seeing the sparrow species changing as they move out of, through and into the Blue Water Area. Sparrows that are leaving include Fox Sparrow, American Tree Sparrow and Dark-eyed Junco while those passing through in March and April include White-throated and White-crowned Sparrow. Sparrows moving back for the summer will arrive in late-April and early-May and include Chipping, Lincoln's, Savannah, Vesper, and Field Sparrow.

Early raptor migration has already started with numbers of Turkey Vulture, Red-tailed Hawks, and Sharp-shinned Hawks passing through. April is the peak month for raptors and we will see even higher numbers of these birds with big numbers of the crow-sized Broad-winged Hawk and smaller number of several more species that will include Eagles, Osprey, and three members of the falcon family; Peregrine Falcon, Merlin, and American Kestrel. We see an interesting phenomenon termed "reverse migration" in our area and it involves mainly raptors but also Blue Jays. The raptors, in particular, depend on rising warm air currents to soar to high altitude and then coast long distances to conserve energy. They need to avoid large bodies of water like Lake Huron as it lacks these warm thermals. While migrating north large numbers enter Michigan's thumb area and finding themselves surrounded by big water, they reverse direction south following the shoreline until they can cross the at the southern tip of the lake between Port Huron and Sarnia.

The neo-tropic migration is the event that gets birders most excited. That's when birds that winter in Central and South America make their way back north to summer breeding grounds. These birds start showing up in late April through mid-May and include Ruby-throated Hummingbirds, Baltimore Orioles, Rose-breasted Grosbeaks, Scarlet Tanagers and a host of little gems known as warblers. These creatures know instinctively when, where, and how to find their way "home". They almost always return to where they were born so you may be right if you think you see the same bird returning to your yard each year, often on the same day each year! Our hummingbirds and orioles return without fail on May 5th year after year. Oh, the bird with the new outfit; it's the American Goldfinch. They've been here all winter but in camouflage. You will soon see the males dressed in bright yellow with a black cap, singing a spring song for their ladies!

So, this is spring cleaning time. Keep your feeders full and clean, hummingbird feeders should be out by mid-April. Also, let the insects live, the birds need them for high-protein nutrition. Habitat is also a critical requirement and many birds succumb to habitat loss. You can easily make your property a bird-friendly environment and you too will experience the health benefits and joy of the creation!



You can learn more about birds and nature by attending Blue Water Audubon meetings held at The Point, 5085 Lakeshore Road, in Fort Gratiot. Our next meeting will be held on Monday, April 6, starting at 6:45 PM. You are also encouraged to visit the Blue Water Audubon Society Facebook page for local bird sightings, discussions, and events. Be sure to "friend" us!

Tom Dennis is a resident of Fort Gratiot where he and Laurie Melms Dennis, his wife of 47 years, 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.

Ecology News

This month our Ecology News is all about lawn and the benefits of converting lawn back to native habitat. If you have any ecologically oriented news articles you'd like to share, please e-mail them to us and they could be included in a future newsletter.

The American Lawn Is Now The Largest Single 'Crop' In The U.S.

https://www.huffpost.com/entry/lawn-largest-crop-america_n_55d0dc06e4b07addcb43435d

Everyone Loves Their Lawn ... Except Mother Nature

<https://www.rd.com/article/are-lawns-bad-for-the-environment/>

Ditching Grass Could Help Your Backyard Thrive

<https://www.washingtonpost.com/climate-solutions/2021/06/30/climate-friendly-backyard/>

The American Obsession With Lawns

<https://blogs.scientificamerican.com/anthropology-in-practice/the-american-obsession-with-lawns/>

Love Nature? Your Lawn Says Otherwise.

<https://www.outsideonline.com/outdoor-adventure/environment/pollinator-pathway-native-gardening/>

Is Your Lush, Green Lawn Killing Mother Nature?

<https://www.creators.com/read/jim-hightower/01/23/is-your-lush-green-lawn-killing-mother-nature>

The Dark Side Of The Perfectly Manicured American Lawn: Is It Giving You Cancer?

<https://www.rd.com/article/lawn-fertilizer-dangers/>

Help Fund The TLC With CARS

Like many non-profit organizations these days, you can now support the TLC by donating old vehicles through CARS - Charitable Adult Rides and Services. CARS donates 70% of the net income from all vehicle donations to their non-profit partners such as the TLC.



Depending on your tax situation, your vehicle may be more valuable as an itemized deduction than the income you might get by selling it. Not only do you avoid the hassle of advertising and dealing with potential buyers, but you don't need to get the vehicle in running condition. CARS accepts any vehicle, driveable or not.

To donate, see our donation page at: <https://careasy.org/nonprofit/thumb-land-conservancy>

Or call 855-500-7433

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 checks and forms 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



**Some Ask How Little Nature We Need.
We Ask How Much Can We Protect.**



**Thumb
Land
Conservancy**

Thumb Land Conservancy

4975 Maple Valley Road
Marlette, Michigan 48453

810-346-2584
mail@ThumbLand.org
ThumbLand.org

We work in 6 counties of the Thumb - Saint Clair, Sanilac, Huron, Tuscola, Lapeer, and Macomb.
We protect natural areas, native species, and places for public outdoor recreation.
We believe children should have natural places nearby where they can play, learn, and be inspired.

TLC Properties and Projects

- 9 Public Nature Preserves - 134 Acres in 2023
- Southern Lake Huron Coastal Park and Trail
- North Street Historic Rail Station
- 2 Conservation Easements - 87 Acres in 2023

TLC Benefits Everyone

- We protect your environment - water, air, climate, nature
- Our preserves increase property values and quality of life

TLC Can Help You

- Protect your land in perpetuity
- Reduce your property tax
- Reduce your income tax
- Improve native habitat
- Control invasive weeds
- Connect you with resources
- Learn about your land
- Enjoy nature

The Thumb is a great place with so much worth protecting

Lake Huron • Saginaw Bay • Saint Clair River & delta • Lake Saint Clair • Black River • Mill Creek • Cass River • Flint River • Clinton River • Pine River • Belle River • Salt River • Sebawaing River • Pigeon River • Pinnebog River • Rush Lake • New River • Willow Creek • 29 State Game & Wildlife Areas • 6 State Park & Recreation Areas • Minden Bog • Post-glacial lakeplain, till plain, hills & pothole lakes • Port Huron Moraine • Deanville Mountain • Lake Huron ravines & bluffs • Sandstone outcrops • Beaches & dunes • Sand Point • Great Lakes marsh • Dune & swale forest • Lakeplain prairie & oak openings • Hardwood & conifer swamp forests • Flatwoods • Bogs & fens • Northern & southern upland forests • Floodplain forest • Over 200 imperiled species - Lake Sturgeon • Eastern Sand Darter • Northern Riffleshell mussel • Rayed Bean mussel • Eastern Fox Snake • King Rail • Cerulean Warbler • Prairie White-fringed Orchid • Painted Trillium

Every plant, animal, woods, field, wetland, creek, ... even your yard, now matters.