



Wild Ones[®]

NATIVE PLANTS, NATURAL LANDSCAPES

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*A voice for the natural landscaping movement.
Working toward the next four decades of growing native plants
and restoring natural landscapes.*

New Chapter Guidebook takes roadblocks out of finding Wild Ones information

I bet you live in a state like mine, known for having just two seasons – construction and winter. During the past five months, it seemed like each and every trip I made involved dodging, waiting or stopping for construction work. The worst was the main road leading to my house, which was completely closed. That meant I had to get pretty creative in finding back roads as alternatives. It would have been great if someone had provided me with a guide titled “The Best Way to Get Where You Want to Go.”

In Wild Ones, I see a clear parallel to my construction-necessitated exploration – the newly updated and just released *Wild Ones Chapter Guidebook*. In it, you will find much, if not all, the information you need to navigate Wild Ones. As you may recall, 2018 is The Year of the Chapter. A good part of the year’s focus is to significantly improve the membership experience. First, rejuvenate our old, neglected *Chapter Guidebook*, and then provide online officer and committee chair training. These two steps will make navigating Wild Ones far less mysterious, easier and perhaps even pleasant!

From late spring through the summer, staff reviewed the old Guidebook, then updated and re-formatted it for better logic and to ensure that you can find accurate answers much more easily. After re-writing, each of the 23 sections was distributed to reviewers – 36 of you helped. (*I want to add my own thanks to those of you who reviewed chapters – there’s no way this huge task could have been accomplished in just a few months without “many eyes making light work!” Thank you!*)

I think you’ll be pleased with the end result, a more than 620-page *Chapter Guidebook* containing topics ranging from Annual Meeting to Webpages. Consider it to be a sort of encyclopedia with its purpose being to answer most

of your questions about the world of Wild Ones.

To illustrate, here are some questions whose answers are found within the Guidebook:

- “We’re thinking of organizing a plant rescue, but I don’t know how to get started.” (See *Plant Rescue Procedure* for best practices, a sample schedule and permission letter and the plant collection code of ethics)



- “A few of us were debating local ecotypes; does Wild Ones have a stated policy we should follow?” (Yes – see *Position Statements*)

• “I don’t understand how chapter dues reimbursements are calculated.” (See *Membership Procedures*)

- “Where do I find a *Wild Ones Journal* article I remember from 3 or 4 years ago?” (Look at “*How to Use the Online Journal Archive*”)
- “One of our local nurseries may agree to be a *Journal* sponsor – what’s involved?” (See *Journal*)
- “Is this something our chapter does, or is it national’s responsibility?” (See *National Services – Tools Provided to Chapters*)

If you sense quite a bit of personal satisfaction with completion of this rather large step – you are quite right. Certainly, the *Wild Ones Chapter Guidebook* isn’t all that has been done for members in this Year of the Chapter, but it is one of the most visible. I only wish that review drafts had been released earlier so I could have looked at them while I sat (and sat) waiting for the construction flagger to let my lane of traffic go forward.

Happy reading!



Promoting environmentally sound landscaping practices to preserve biodiversity through the preservation, restoration and establishment of native plant communities

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Established in 1977, Wild Ones is a national not-for-profit organization of members who teach the benefits of growing native plants and work together to grow and restore natural landscapes.

Wild Ones’ definition of a native plant:

A native plant is a species that occurs naturally in a particular region, ecosystem and/or habitat and was present prior to European settlement.

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Member Garden

Kay MacNeil

DuPage County Wild Ones Chapter

All photos courtesy Kay MacNeil



Editor's Note

We'd like to feature native gardens, large or small, in upcoming issues. If you're interested in sharing your garden, send four to six high-resolution photos, as well as a brief description, to barbara.a.benish@gmail.com. Please include your contact information so we can get in touch with you.

A male monarch nectars on swamp milkweed (*Asclepias incarnata*). Below Left: The transparency of the chrysalis tells viewers that the monarch inside is about to emerge.

By Kay MacNeil

I grew up in a small town of retired farmers in Freeport, Illinois, west of Rockford. My parents' yard included many native plants, but we didn't think of them that way. Instead, we looked at it we liked them when they bloomed. When I grew up and moved away, I realized I had a pretty comprehensive native plant education just living on my short little street. My mother's favorite plant was Queen-of-the-Prairie (*Filipendula rubra*) and her front yard was one lovely sea of pink. She had many woodland varieties of shade plants. We hunted morel mushrooms. We incessantly bird watched and did Audubon bird counts. We were constantly part of nature and outside.

All this plant and animal information was available for a little kid to learn, or at least absorb. We did many family garden walks, which continued to increase my plant knowledge. Grandma came to visit, and we did the Garden Walk. When we visited Grandma, the visit started with the Garden Walk. We visited my mother's sister. Yup, we got out of the car and proceeded to the Garden Walk.

Fast forward to finishing college, getting married, having children, getting them settled in their adult lives – all things that took a lot of my attention.

Finally, I had time and I joined a garden club. It turned out I knew a lot about plants, native and otherwise. I soon realized I was developing a passion for native plants, garden design, wildlife and teaching all of that to others.

In 1975, my husband and I moved to a 1-acre lot with a giant hickory tree, a huge wild cherry tree, and a beautiful woodland area of native hawthorns trees. Our big tree subdivision was just being developed. I watched as beautiful spring flowers – Jacob's ladder (*Polemonium reptans*), Virginia bluebells (*Mertensia virginica*), trilliums (*Trillium*), prairie phlox (*Phlox pilosa*), wild geranium (*Geranium maculatum*), Jack-in-the-pulpit (*Arisaema triphyllum*), Dutchman's breeches (*Dicentra cucullaria*) and many more – were all being bulldozed away. What to do? Well, bring them home to my yard, of course. I would go into lots that had been staked for development and helped myself. No one cared. I bought plants to add to my collection — and soon I had seven pages of native plants on my property.

The people who built our house loved putting white landscaping rock around the bases of all the trees. What to do? I got my grass guy to start saving me bags of leaves from his mulching mower, and I threw them, as well as chopped leaves from the neighbors, on the gravel. Today

all of my woodland plants grow in soil I've created. So if I buy a gallon-sized plant, I must dig down through the soil I've created, through the gravel, then landscaping plastic, then sometimes more gravel and more plastic, before I finally get to God's good earth to plant it.

Covering all the gravel really dictated the design of the yard and that is what makes it look a little planned yet so very natural. I've also learned that having edges on your beds makes the beds look tidy and that no one will notice the little wilder, weedy look in the middle. I do my own hand weeding and know it's easier to pull out things like tree sprouts after a good rain.

I started showing my yard to groups to educate them about what you need to do to garden for wildlife. I specialize in Girl Scout troops getting their gardening badges. I host garden clubs and home schoolers. Everyone goes home with milkweed seeds and information.

I wanted to live in a suburban yard that emulated native woods. So I dug trees out of vacant lots (Always try to get permission first): walnut, catalpa, tulip, Osage orange, and my new favorites, pawpaws (*Asimina triloba*) and American persimmon (*Diospyros virginiana*). Somewhere along the line I joined Wild Ones. Loved the group. Loved the name.

Below: Blue Moon Wisteria (*Wisteria macrostachya*) hangs from a trellis. Right: Many birds visit the unfiltered pond with native lilies in bloom.



Member Garden

Kay MacNeil
DuPage County Wild Ones Chapter

And I continued to add native perennials with a fury. My tours got more and more expansive. In fact, I had to quit listing my plants for visitors because it took too much paper. Instead, I used yard signs to educate people about the plants. Wild Ones, National Wildlife, Illinois Audubon, Monarch Watch, The Conservation Foundation, and Leave That Trunk For Wildlife certified my yard. I was queen of dead tree advocates since we had redheaded woodpeckers in the neighborhood and I wanted to keep them.

I also had to design my yard and garden so it didn't look like a wild field and so I could keep my neighbors happy. I do have groomed areas in my yard, as well as some nonnatives. Du Page Wild Ones members have toured my yard and there might have been some snickering at my tree peonies, but you have to remember that right underneath the tree peonies are nodding onions (*Allium cernuum*) and prairie smoke (*Geum triflorum*) with prairie dropseed

About the Yard

- The MacNeil's 1-acre property backs up to a golf course in Frankfort, Illinois, south of Chicago.
- The front yard includes a natural, unfiltered pond with a liner, where goldfish control mosquitoes and where hybrid and native water lilies thrive. A brick wall that shields the pond from public view has prairie dropseed on one side and Kay's mother's favorite, Queen-of-the-prairie, as well as coneflowers, black-eyed Susans, little bluestem and milkweeds.
- A variety of trees line the property, including linden, cannonball Osage orange, wild plum, wild cherry, dogwood and others.
- The property is also home to some heirloom plants, such as orange poppies and a Japanese peony from Kay's grandmother, as well as elderberry, spiderwort, cardinal flower, phlox, blazing star and others.
- In the back of the home is a rock garden with turk's cap lilies, carrion ball vine and ferns from Kay's grandmother.



Start your own Milkweed for Monarchs program

By Kay MacNeil

I have been the bee, bird and butterfly chairwoman on the board of Garden Clubs of Illinois for 38 years. Three years ago, I suggested we embrace helping monarchs and Milkweed for Monarchs was born. You know how it is — if it's your idea, you become the chair!

My first thought was that I needed milkweed to show at programs. So I drove south past the suburbs into the cornfields. No milkweed; only beautiful Roundup® ready fields of soybeans. Finally, I called a friend in Indiana, but by the time we got around to it, we were picking milkweed in the first November snow.

I designed our program to cover everything. If you understand what monarchs need, and have plants and seed, share those with friends and neighbors. Need seed? Send me a small donation and a stamped self-addressed envelope and I will send you samples of three kinds of milkweed and lots of literature. Have lots of milkweed pods? Bring them to me. Need milkweed for big acreage? I will give you free milkweed in pods; I gauge the size of the box to fit your acreage. Just send a check for the amount on the postage meter to cover my postage. The Illinois Department of Transportation, townships, park districts and others have all

received my bulk milkweed.

For Earth Day events, weddings, parties, garden club activities, Wild Ones events and plant sales, I sell packets of milkweed seed, charging just enough to cover my costs. I have an award-winning 45-minute [YouTube video](#) that shows caterpillars splitting and butterflies hatching. I include information on how to raise monarchs, and describe what various milkweeds look like, as well as what good pollinator habitat should look like. I designed the video to be used as a free program for any civic groups.

I send copies of all my handouts with every seed order. These are to be copied and distributed to keep the ripple of information moving out. I also have offered my handouts to all the states that are part of National Garden Clubs Inc.'s Central Region. Use my handouts. Change the names on them. Follow my advice on how to establish a Milkweed for Monarchs program for your state.

Finding Wild Ones and creating a volunteer career around the yard, plants and animals that I enjoy has been fabulously gratifying. I love educating people and sharing my hobby, and spend lots of weekends a year spreading my monarch evangelism.

Am I having fun? You bet!

(*Sporobolus heterolepis*) and little blue-stem (*Schizachyrium scoparium*) not far from my mom's 70-year-old Jackman clematis and her Queen-of-the-Prairie.

One year I embraced Moon Gardening — everything was white. I designed a natural pond with a liner and no filter that encompassed the entire front yard. The occasional great blue heron would visit, as well as a plethora of frogs and a pair of mallard ducks. Now one of my featured gardens is a fairy/moss garden with lots of conifers and moss.

My big focus today is butterfly gardening. In my yard, I have spicebush (*Lindera benzoin*) for spicebush swallowtails, a tulip tree (*Liriodendron tulipifera*) for tiger swallowtails and pawpaw trees (*Asimina triloba*) for zebra swallowtails. You'll also find pussy-toes (*Antennaria dioica*) for American painted lady butterflies and Dutchman's pipe (*Aristolochia tomentosa*) for pipevine swallowtail caterpillars. We've only had Dutchman's pipe caterpillars once and they are a riot since they are the ugliest critter on Earth. In addition, I have dill, fennel and curly parsley edging my borders for black swallowtails. I also like purple cabbage in my borders for

weird plant selection, but the cabbage butterflies prefer white cabbage.

For people new to native landscaping, one of the best ways to get lots of free woodland plants is to go to a new

subdivision under development and ask if you can help yourself. It takes a little nerve, but the lots will be cleared of these plants eventually, so why not make a rescue? And so it begins!

Kay MacNeil releases a male monarch that just eclosed in her yard. In the background are cone-flower, nodding onion and cardinal flower.



MICHIGAN

Rising carbon dioxide levels pose a previously unrecognized threat to monarch butterflies, research from the [University of Michigan](#) shows. The study found that mounting levels of atmospheric CO₂ reduce the medicinal properties of milkweed plants that protect the insects from disease.

In a multi-year experiment at the U-M Biological Station, researchers grew four milkweed species with varying levels of those protective compounds, called cardenolides. Half the plants were grown under normal carbon dioxide levels, and half of them were bathed in nearly twice that amount. Then the plants were fed to hundreds of monarch caterpillars.

The study showed that the most protective of the four milkweed species lost its medicinal properties when grown under elevated CO₂, resulting in a steep decline in the monarch's ability to tolerate a common parasite, as well as a lifespan reduction of one week.

University of Michigan ecologist Mark Hunter, lead author Leslie Decker's dissertation adviser and co-author of the paper, said findings of the monarch study have broad implications. "If elevated carbon dioxide reduces the concentration of medicines in plants that monarchs use, it could be changing the concentration of drugs for all animals that self-medicate, including humans," he said. "When we play Russian roulette with the concentration of atmospheric gases, we are playing Russian roulette with our ability to find new medicines in nature."

MINNESOTA

Minnesota is getting wetter, and it's causing big problems. According to [FiveThirtyEight](#), the state has seen more storms that produce heavy rainfall in the last 100 years, and its strongest storms have grown more intense.

In fact, one of the more dramatic changes has been the increasing number of "mega-rain" events, or rainstorms during which at least 6 inches of rain falls over at least 1,000 square miles and the center of the storm drops more than 8 inches of rain. Minnesota has had 11 mega-rains since 1973, and eight of them have come since 2000.

Experts suspect climate change is behind this, but Minnesota and other Midwestern states are confronting an uncertain, flood-prone future, one where changes in precipitation patterns could get even more dramatic.

Erin Wenz, a Minneapolis-based engineer, uses precipitation models to help municipalities decide where and how to build while taking into account the possibility of extreme precipitation. While the design standard has been to build roads, buildings and other infrastructure in a way that can withstand a 100-year storm, Wenz said some engineers are considering whether it's time to build for a 500-year storm, with the expectation that soon it might no longer be such a remote possibility.

"We need to change people's expectations of what is normal," she said.

OKLAHOMA

The Oklahoma Department of Transportation is limiting its mowing of roadsides to encourage milkweed to grow and increase monarch butterfly habitat.

[Tulsa World](#) reported that ODOT used to mow roadsides four times a season, but in many places has cut back to doing only "safety mows" early in the season and then again in late fall to get ready for next year's growth. "Safety mows" include mowing grass and weeds close to the roadway to help prevent fires and provide safe places for vehicles to pull off the road in emergencies.

The department also worked with the Oklahoma Monarch and Pollinators Collaborative to expand a large butterfly garden at the state visitor center on I-35 in Oklahoma City. The 20-by-40-foot plot is a designated Monarch Watch Waystation.

A few species of milkweed are native to Oklahoma, but the most common is *Asclepias viridis*.

NEWS

ACROSS THE NATION

VIRGINIA

Lincoln Brower, 86, one of the foremost experts on the monarch butterfly and a scientist who advocated for protection for the declining species, died July 17 at his home in Nelson County, Virginia.

He earned a biology degree from Princeton University and a doctorate in zoology from Yale University. At the time of his death, he was a professor at Sweet Briar College in Virginia and an emeritus professor at the University of Florida.

"If the monarch butterfly migration is to survive, it will be in large part thanks to Dr. Lincoln Brower's dedication and work during the past half century," Homero Aridjis, a former Mexican diplomat and environmentalist, said in a statement.

WASHINGTON

Transplanting fungi may be the key to restoring the tall grass plants in prairies that are becoming increasingly endangered, a Washington State University researcher said.

"A lot of times in restorations, people focus on the seeds," said Assistant Biology Professor Tanya Cheeke in an interview with [R&D Magazine](#). "What happens is only a subset of those actually establish and grow."

Some native plants are more dependent on mycorrhizal fungi, so when the fungi is disturbed, the plants do not compete as well with invasive species, ultimately disrupting the natural ecosystem and inhibiting many natural processes, she said.

Mycorrhizal fungi form a symbiotic relationship with many plant roots, which helps stabilize the soil, conserve water and improve nutrition for their plant partners. "By using mycorrhizal fungi to help establish a greater variety of native plants in disturbed ecosystems, we're hoping to improve habitat for native and/or imperiled pollinators," Cheeke said.



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Planting 'local-ish' reduces the likelihood that we will inadvertently introduce an invasive species and also helps to expand the ranges of native species, thus helping them keep up with climate change.

By Bethany Bradley

When I moved back to Massachusetts several years ago and started planning my garden, my mother dug out an old backyard planting guide published sometime in the 1970s and sent it to me. Reading it later, I was chagrined to discover that the guide was a “who’s who” of northeast invasive plants. Oriental bittersweet, Japanese barberry, autumn olive and buckthorn all made an appearance. I was not surprised.

Before I began studying invasive plants, or nonnative species that spread and have negative impacts on native species and ecosystems, I thought that most species arrived accidentally – inadvertently stuck to a sock or passing through the stomach of a woolly sheep. A series of unfortunate events, but nothing to do with me. It turns out that’s not the case. In our enthusiasm for variety, color and beauty, gardeners and property owners have become the major vectors of introduction and dispersal of invasive plants. More than 1,300 plants are identified as invasive in the United States, and by far the most prominent pathway to their introduction is the ornamental plant trade. Of those species with known introduction histories, 53 percent were introduced and spread as ornamentals, according to a [2013 study](#) published in *The American Journal of Botany*.

It would be nice to imagine that our unfortunate planting decisions went out with polyester in the '70s, but it's likely that we're continuing to make similar mistakes. A challenge for controlling

invasive plants stems from something invasion ecologists refer to as the invasion “lag phase.” For many species, the time between when a plant is initially introduced and when it is identified as invasive can be upward of 50 years! By the time a label like “problematic invasive” can be applied to a plant, it's far too late to eradicate it and often barely possible to control it. Our grandkids may well have my same chagrined reaction when looking at planting guides from the 2010s.

Not only are we good at introducing new invasive plants, we also do an excellent job of spreading them around the country. Usually the spreading around

happens early in the “lag phase,” which is before we recognize a plant as invasive. A [2015 study](#) published in *Global Ecology and Biogeography* analyzed the distribution of native vs. invasive plants in the lower 48 U.S. states and found that invasives were far more widespread. The median latitudinal range for an invasive plant was 14 degrees (for reference, the lower 48 states span 25 degrees of latitude) vs. only 7 degrees for native plants. Longitudinal extent differences are similarly striking (50 degrees for invasives vs. 9 degrees for natives). Introduced as ornamentals, invasive plants easily overcome distance as well as dispersal barriers (like mountains) that otherwise restrict native plants.

Our widespread introduction of invasive plants relative to native plants is particularly alarming in the context of climate change. The current rate of climate change is unprecedented in Earth's history. The closest analogy to our current rate of change happened about

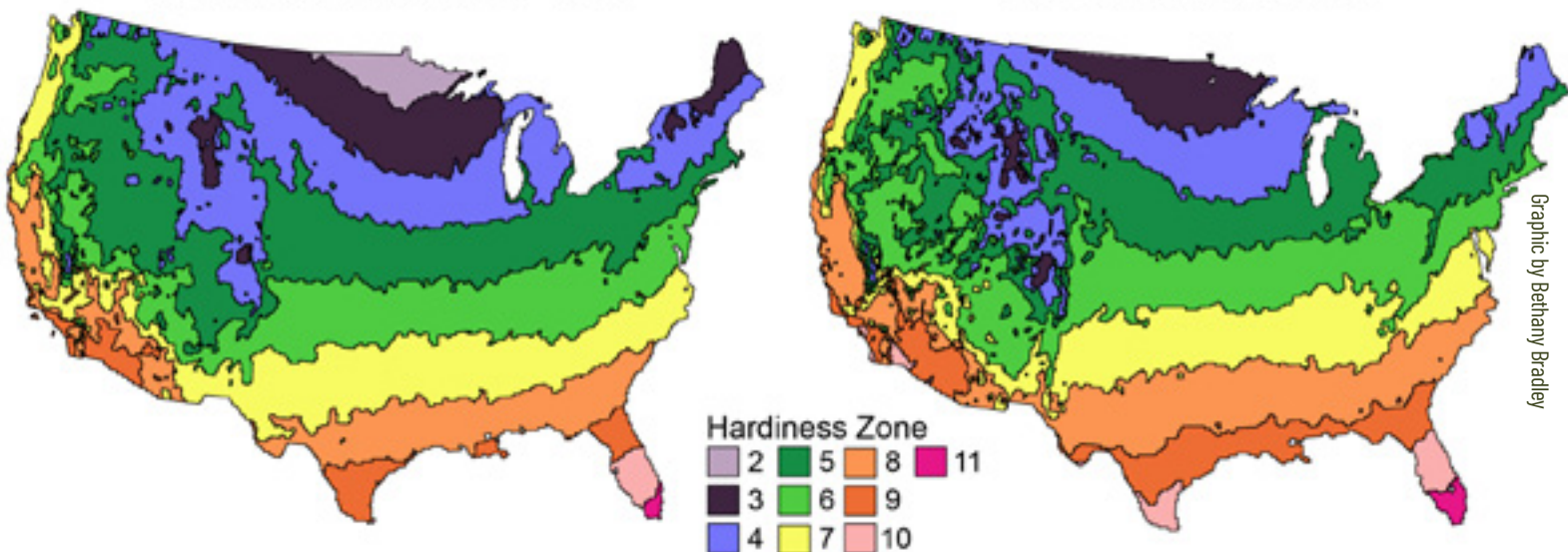
Dwarf red Japanese barberry (*Berberis thunbergii* 'Bagatelle') was a popular shrub in the 1970s, but now it is known as an invasive plant.



Photo by David J. Stang/Wikimedia.

Hardiness Zones 1960-1990

Hardiness Zones 2050



55 million years ago, during the Paleocene-Eocene thermal maximum, when temperatures rose by about 6 degrees C (10.8 degrees F), over a span of 20,000 years. If emissions continue on our current trajectory, it is likely that temperatures will rise by 6 degrees C in less than 200 years. Current change is incredibly fast. Put another way, my home state of Massachusetts could have a climate more akin to today's North Carolina.

feet during that time period. To keep up with climate change, those same trees would need to move 300 miles over the next 40 years. For the vast majority of species, natural dispersal is just not enough.

Ironically, human dispersal of invasive plants means that they will have little trouble keeping up with climate change. Scientists have been debating

the merits and perils of “assisted migration,” which would involve transplanting native species to help ranges shift with climate change. Species transplanted between continents are 40 times more likely to become invasive than ‘natives’ transplanted within a continent, a [2012 study](#) found. Transplanting natives is not risk free, but it's far less risky than the status quo of importing and introduc-

If species are going to survive through this massive and rapid change, they need to move. Many studies have already observed ranges of species shifting poleward and upward in elevation in response to climate change. But, plants have a hard time keeping up. Not surprisingly, plants tend to stay rooted in place and are slow dispersers on their own. One [study](#) in southern Vermont analyzed forest composition change over 40 years and found that northern hardwoods had migrated up into formerly boreal forests by about 600





Native plants are like magnets for monarchs and other pollinators.

ing new species from other continents. Nonetheless, very few native species have yet been assisted due to concerns about risks to ecosystems on the receiving end. Yet, most homeowners have few qualms about introducing species from far and wide into our yards. It is these species that will seed ecosystems of the future.

But, is it worth the effort of trying to expand the ranges of native species when we don't know whether they'll be able to persist in cooler climates? One trait of invasive plants is that they tend to have broad ranges and therefore broad climatic tolerances. Until recently, many narrow ranged native plants were thought to have correspondingly narrow climatic tolerances. But, recent studies of plant biogeography have cast doubt on that assumption. For example, a [2007 study](#) of trees in Europe showed that their distributions are more closely aligned to the extents of the last glacial maximum some 21,000 years ago than

they are to current climate. Assumptions we make about the climatic tolerance of European trees based on their distributions are biased by this ancient barrier to northward dispersal. Similarly, a [2016 study](#) of plants endemic to the U.S. that have been introduced as ornamentals showed that these species thrive well outside the climate conditions found in their native range. The typical species was found in climates 3°C (5°F) warmer than their native range. Thus, even narrowly distributed native species are likely to establish successfully in cooler zones, ultimately providing that much needed head start on climate change.

Planting “local-ish” reduces the likelihood that we will inadvertently introduce an invasive species and also helps to expand the ranges of native species, thus helping them keep up with climate change. A win-win!

If you haven't seen it already, a great resource for identifying nurseries that specialize in native plants in your area is

www.plantnative.org. If you don't have a specialty nursery nearby, this website also lists plants native to your region that are commonly found in most nurseries.

If you're interested in “assisted migration” of native species, try looking at native plant lists from states that are slightly warmer than your current locale for ideas. Encourage specialty nurseries to consider expanding their stock of native plants to test out greater varieties from the region. Planting local-ish reduces the likelihood that we'll accidentally introduce an invasive species, supports native birds and other wildlife, and will give a much-needed assist to native species in light of climate change.

Bethany Bradley is an associate professor of biogeography and spatial ecology at the University of Massachusetts Amherst, and an investigator with the Northeast Climate Science Center. Learn more about her research at <https://people.umass.edu/bethanyb/people.html>.

Limited quantities of anti-buckthorn shirts are for sale through the WILD Center Store. Email info@wildones.org for more information.



Photo by Wikimedia

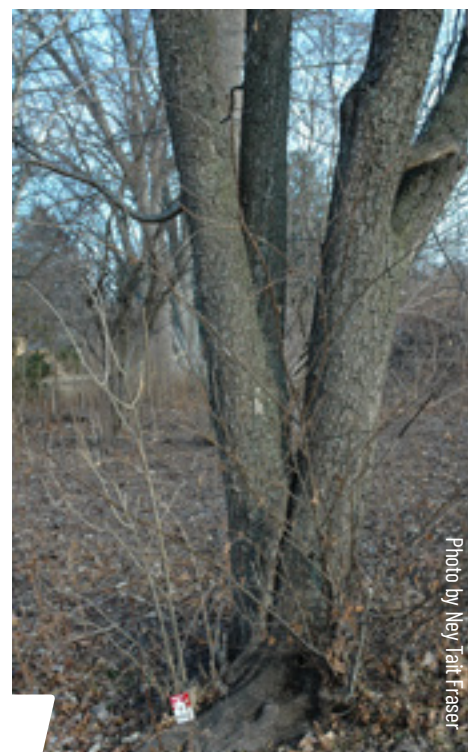


Photo by Ney Tait Fraser

Die buckthorn!

By Ney Tait Fraser

There are several methods to get rid of invasive buckthorns on your property if you want to help forests regenerate, and to avoid scratched eyeballs, pierced eardrums and septic wounds. Common or European buckthorn (*Rhamnus cathartica*) and glossy buckthorn (*R. frangula*) are highly invasive. Whether you have a large or small property, you need to first identify female buckthorn plants, which bear abundant fruit, and cut them down to get rid of the seed source. At the Schlitz Audubon Nature Center in Milwaukee, Wisconsin, berries were beaten off female plants onto paths where seedlings would be mowed regularly.

To avoid cutting down native plum and cherry trees, identify and mark with flagging tape. It takes a seasoned professional to tell the difference between buckthorn and native plums except in the spring. The bark of buckthorn has prominent horizontal lenticels, appearing scratched, and bright orange sap. Buckthorn leaves also remain green in the fall. Verify, too, that they are not native buckthorns before removal begins. Native species include alder-leaved (*Rhamnus alnifolia*), lance-leaved (*R. lanceolata*) and Carolina buckthorns (*R. caroliniana*).

Hand removal

Since young buckthorns have shallow roots, taking them out by hand avoids

Left: Female buckthorn plants bear abundant fruit, which spreads the invasive plant. Above: A large female buckthorn tree near Milwaukee, Wisconsin. The cigarette package gives you some idea of its size.

using poisonous chemicals. Pullerbear™ weed wrenches are terrific. Made in Canada, they come in different sizes and are available online. Buckthorn plants with stems up to 3 inches in diameter can be levered out of the ground with relative ease. Sometimes it is necessary to chop off large, anchoring roots. Smaller buckthorn seedlings can be dug up using a pickaxe, grub hoe or sharp shovels. Disturbed areas should be seeded or planted with appropriate native plants. Native understory shrubs are good replacements for buckthorn. For example, in wet areas where glossy buckthorn is removed, plant shrubs like spicebush, willow, buttonbush, elderberry and dogwoods.

Hand removal and replacement can be done throughout the growing season, but try not to disturb any bird nests.

Loppers and treatment

Lopping buckthorn with stems up to 2 inches in diameter is quicker and easier than using saws. Veteran weeder Ken

Solis recommends Fiskars® PowerGear2 loppers. By staying with one company and model line, blades can be replaced when they are damaged. The 32-inch model cuts the largest specimens. There are also 18- and 25-inch loppers.

Using herbicides on buckthorn is not effective and herbicides are extremely harmful to the soil since they destroy entire populations of useful microorganisms. Repeated mowing of young buckthorn with a brush cutter or burning re-sprouts and seedlings in spring using a propane torch is much more effective.

However, painting cut stumps with the woody, oil-based herbicide with active ingredient 12.5 percent Tricolopryl is the *only* sure way to kill buckthorn. Use sparingly on the cambium, however, and be sure the herbicide you purchase has the correct percentage: 12.5 percent active ingredient of Tricolopryl. Be sure to also wear Personal Protective Equipment and read the Material Safety Data Sheet, which contains key information on the

potential health effects of exposure for you and the environment. In many states, a pesticide applicator license is required if not on your own property. Follow strict safety and clean up guidelines.

Tip: Put the chemical in a small jar inside a bucket to prevent spilling. Wear rubber gloves and bring a gallon of clean water in case you accidentally touch the herbicide. Do not use too much herbicide because it will kill the stump; this will prevent the translocation of herbicide to the buckthorn roots. Roots can be left to rot in the ground.

Lopping and painting the stumps should be done during late summer to early fall before leaf drop.

Saws

The “cut stump” method is labor intensive, but effective. The Silky brand of handsaws is superb. They enable you to cut through the stems of buckthorn close to the ground. For medium-sized buckthorn specimens, the Silky Bigboy 2000 6.5 folding saw would be a good choice. To cut large specimens, the Silky Katanaboy 500 is effective. It can be slung across one’s back in a nylon bag. When folded, it is only 26 inches long, converting to over 4 feet long when the blade is exposed.

Razor-toothed pruning saws cut a little better than bow saws, especially when the bark is wet. Chain saws are powerful, but they can be dangerous. Felled buckthorn can be piled up, chipped, or burned if permitted. Goggles and hard hats are suggested during the removal process.

All cut stems should be treated with herbicide containing 12.5 percent Tricolopyr formulated for oil dilution.

Girdling

If having a dead tree on your property is not an aesthetic issue, there are several ways to kill buckthorn by girdling mature specimens. You can use an axe, a saw or a professional girdling tool to remove a 2- to 5-inch strip of bark from the circumference of the base of the tree. Cut through the bark slightly deeper than the cambium, and then paint the exposed area with herbicide to prevent it from healing.

Girdles should be checked after a few weeks to make sure that bark does not develop over the cut area.

Girdled trees take time to die. The results may not be seen until a year later. Basically, the tree is slowly starving to death. All suckers should be cut and treated with herbicide.

It is also possible to kill buckthorn right where it stands by applying Tricolopyr herbicide to the bark at the base of the trunk of trees 6-inch or less in diameter. But this ‘basal-bark’ treatment has disadvantages if you have hundreds of small trees to deal with. Basal bark application of 6 percent Tricolopyr is effective.

Girdling can be done all year long.

Fire

Buckthorn seedlings are susceptible to fire. Prescribed burns can also kill buckthorn seedlings. Propane torches have the same effect. Buckthorn leafs out earlier than most native shrubs. Burning shortly after leaf out using a propane tool may reduce re-sprouting since root reserves will be low at that time.

sin, hired a contractor with a forestry mower to destroy dense infestations of buckthorn greater than an acre or so. These machines quickly cut and shred buckthorn leaving only wood mulch behind.

Afterward, the cleared area looked like a war zone. When and if buckthorn resprouts, it should be treated. This method results in a dramatic and fast reduction of buckthorn density.

The Nature Conservancy in Wisconsin used consultant crews from Applied Ecological Services to help restore and remove large tracts of buckthorn with forestry mowers. Spring ephemerals such as shooting stars from the seed bank have returned after many years of dormancy under the buckthorn canopies.

During the winter months when the ground is frozen, Schlitz Audubon Nature Center also uses forestry mowers to cut down buckthorn.

Goats rid cemetery of buckthorn

One Wisconsin cemetery has found an innovative way to remove buckthorn from its property: goats.

According to [WLUK-TV](#), the goats at the De Pere Greenwood Cemetery aren’t there for leisure; they’re on the job, eating buckthorn from the steep banks that lead from the cemetery to the Fox River.

Ben Robel, owner of Vegetation Solutions, rented the cemetery his goats for the project. “Buckthorn is more nutritious than the grass,” he said, adding that goats will “go after what’s the most nutritious plant first.”

Burns should be carried out in the spring.

Forestry mowers

Forestry mowers are powerful, heavy machines. The best time to use them is winter when the ground is frozen.

John Mariani, PLA, who has restored 60 acres of land near Kenosha, Wisconsin,

Hiring a professional

If you do not have the time, stamina or the tools to eliminate buckthorn on your own property, reputable tree or landscaping contractors do a thorough job.

Grants and weeding parties

The U.S. Forest Service and the South-eastern Wisconsin Invasive Consortium have grants available to pay for buckthorn removal. Check with your local community to see if similar grants exist.

When it’s time to do the work, group weedouts are uplifting and rewarding events, especially with good picnics and refreshments.

Ney Trait Fraser is a member of the Milwaukee Chapter of Wild Ones and author of “Mending the Earth in Milwaukee.”

Learn more about buckthorn or its control techniques

- <https://sewisc.org/invasive-plants/167-buckthorn>
- <https://dnr.wi.gov/topic/Invasives/fact/CommonBuckthorn.html>

Creating healthy habitats for endangered bumblebees

By Fayette Aurelia Nichols

Bumblebees require four habitats: nesting, foraging, mating and hibernating. Each phase carries risks. If there is a break in healthy foraging during any phase, the colony may die prematurely or fail to reproduce.

Species survival depends on colony production of new queens, called gynes, which can endure roughly 30 weeks of hibernation and establish successive colonies the following spring. The number of healthy gynes produced is directly related to the availability of high-quality pollen and nectar, and how much food a colony provisions before mid-summer.

Rusty patched bumblebees (*B. affinis*) queens live up to a year, but colonies last only one growing season. Female worker bees, especially those that forage, have a grueling life, sometimes living just 5-14 days. Males may survive 2-4 months.

During the mating season, foraging flight distance is $\frac{1}{2}$ –1 mile from the nest because males and gynes from the same colony must seek mates from other colonies if they are to spawn fertile offspring. During the rest of the lifecycle, the foraging flight distance is within $\frac{1}{2}$ mile from the nest.

However, the less time and energy bumblebees spend traveling back and forth to food sources, the greater the resources available for colony development. Consequently, condensed plantings on smaller landscapes contribute enormously to *B. affinis* recovery.

Nesting habitat: Early to mid-spring

B. affinis prefers nesting in abandoned burrows of small mammals. Allowing healthy populations of ground-nesting mammals to persist in landscapes ensures plentiful future bumblebee nesting sites.

Other possible nesting sites include tree hollows and stumps, brush piles and abandoned bird nests and birdhouses. Occasionally, *B. affinis* nests abo-



Photo by Heather Holm

A *Bombus affinis* gyne or queen can live up to a year.

veground in tussocks of dried grasses or sedges molded with wax secretions.

Nesting habitat is found in open woodlands, on high ground above the floodplain, but near water sources. Just as bumblebees assess the sugar content in nectar, they also evaluate water for its mineral supply and collect specific nutrients to complement protein availability in floral pollen.

Choose shady, protected spots for nesting habitat. Plant lots of spring ephemerals and early blooming understory trees and shrubs in wooded areas, along hedgerows, and in unmown, brushy places under canopy trees. If there isn't a hedgerow, consider planting one.

Hedgerows that bees and butterflies recognize as habitat contain a variety of shrubs and understory trees of different textures, shapes and heights, with scalloped spacing or niches, within which they can weave their flight to avoid predation.

Plants that nourish *B. affinis*

In the Summer 2018 issue of *Wild Ones Journal*, we learned why healthy bumblebee nutrition is vital to the survival of *Bombus affinis*, the first bumblebee listed as federally endangered. In this issue, we'll learn how its lifecycle shapes habitat requirements, and why how we create landscapes affects what pollinators can recognize as habitat and flourish. Click [here](#) and [here](#) to see what plants nourish the rusty patched bumblebee.

Founding queens emerge from hibernation in late March to mid-April. They are hungry and homeless. Their immediate need is for nectar so they fly in search of pollen sources and potential nests. Given recent phenological shifts, plant spring ephemerals that will be in bloom *before* queens may emerge, such



Foxglove beardtongue (*Penstemon digitalis*) is heavily foraged for immune-boosting nutrients.

Bee monitors wanted

The U.S. Fish & Wildlife Service needs the public to assist in its effort to help the endangered rusty patched bumblebee recover. Active, consistent bee monitoring programs are vital to that effort. Verify bee sightings through [Bumble Bee Watch](#), [Bee Spotter](#), [BugGuide](#) and [iNaturalist](#), as confirmed identification data is uploaded into the USFWS's [interactive map](#). Pocket identification guides are available from the [USFWS](#) and [Xerces Society](#).

as cutleaf toothwort (*Dentaria lacianata*). Dutchman's breeches (*Dicentra cucullaria*) is highly valued for its copious, high-quality nectar. Two other ephemeral nectar sources are squirrel corn (*D. canadensis*) and white trout lily (*Erythronium albidum*).

Queens require protein, fats and vitamins to gain weight, build strength and bolster their immune system. They find this in the pollen of many early blooming trees and shrubs, such as red maple (*Acer rubrum*) and silver maple (*A. saccharinum*); the willows (*Salix spp.*); and fruit-bearing woody plants such as American plum (*Prunus americana*) and serviceberries (*Amelanchier spp.*). Early blooming blueberries are very important for their chemical compounds that strengthen queen immune systems.

Nearby water offers minerals and keeps queens hydrated so they can make bee bread, a mixture of nectar, pollen and saliva that nourishes their larvae.

Colonies are never more at risk than during this period because success depends solely on a queen's survival. In early spring, there are not as many plants in bloom as in summer, and what's blooming is more affected by weather.

Without abundant resources, queens may fail to provision new nests with several days' supply of nectar stored in wax honeypots. This enables queens to regulate the incubation temperature of brood clumps, and ensures they are well fed on days when bad weather keeps them grounded.

If queens cannot find nectar and keep their eggs incubated, or if they



Photo by Wikimedia

B. affinis highly values Dutchman's breeches (*Dicentra cucullaria*) for its high-quality nectar.

run out of energy while foraging and cannot keep their flight muscles warm enough to fly home, queens and their colonies may die. If queens cannot find adequate sources of protein, they cannot produce eggs or feed their larvae. Larvae thrive solely on protein for about 3 weeks until they emerge from pupation, after which newly minted worker bees survive on nectar.

So, locating early blooming food sources and water near nesting sites has a direct impact on the health, sexual development and survival rate of founding queens and their colonies.

Foraging habitat: Mid-spring to late summer

By mid-May, the first and second broods of worker bees are now foraging for the colony while the queen continues laying eggs. Ephemerals fade as canopy trees leaf out, and understory trees and shrubs, as well as spring prairie flowers such as shooting star (*Dodecatheon meadia*) and prairie smoke (*Geum triflorum*), bloom.

As more workers emerge, their tasks become diversified. Some guard or clean the nest; some make pollen or honeypots, some regulate nest temperature; some nurse larvae, and foragers become specialized to more effectively provision food.

Establish planting beds near nesting sites for both sun-loving and shade-loving plants that maintain bloom succession throughout the season. Plant a diverse offering (10+ species in flower simultaneously), each species in large, individual swaths. Anchor plant communities with a ground layer of sedges,

like *Carex pensylvanica*, and native grasses. This keeps soil moist, retards weed growth, and gives pollinators cover, keeping them cool when they need to rest.

Spring legumes provide nutritious, high-protein pollen. These include wild lupine (*Lupine perennis*), cream indigo (*Baptisia leucophaea*), wild white indigo (*B. lactea*), and leadplant (*Amorpha canescens*). Lupine offers no nectar, but is avidly visited by pollinators because its pollen protein content is 34 percent.

Foxglove beardtongue (*Penstemon digitalis*) is heavily foraged for immune-boosting nutrients. It blooms just as colony populations are expanding, keeping them disease-resistant.

Other flowers preferred by *B. affinis* are coneflowers (*Echinacea spp.*), mountain mints (*Pycnanthemum spp.*), Joe-pye weeds (*Eutrochium spp.*), jewelweed (*Impatiens capensis*), clovers (*Dalea spp.*), native woody shrubs in the *Spirea* genus (meadowsweets), and the linden tree (*Tilia americana*).

Two nectar sources noted for immune-boosting properties are cranberry (*Vaccinium macrocarpon*) and beebalm (*Monarda fistulosa*).

Mating habitat: Late summer to early autumn

By late July, first the males and then the gynes begin to emerge. When the founding queen lays male eggs, she stops emitting scent pheromones that keep female workers from sexually developing. This marks the beginning of the end of the colony as hierarchical order slowly degenerates.

Once males leave the nest, they usu-

ally do not return. They establish mating circuits along hedgerows about ½ to 1 mile away, marking them with scent pheromones every morning and after rain. Males patrol their circuits during the day, and sleep cradled in flowers at night.

Gynes stay in the nest longer, foraging to accumulate fat reserves. If there is not enough high-quality protein available with fatty acids, gynes may not survive the winter, as starvation poses a greater risk for hibernating queens than the cold. Gynes enter hibernation after mating.

Asters (*Symphyotrichum spp.*) and goldenrods (*Solidago spp.* and *Oligoneuron spp.*) are the powerhouse, late-season superfoods. Other superfoods are yellow coneflower (*Ratibida pinnata*), hyssops (*Agastache spp.*) and thistles (*Cirsium spp.*). Late-season, immune-boosting plants are sunflowers (*Helianthus spp.*) and white turtlehead (*Chelone glabra*).

Hibernating habitat: Early autumn to mid-spring

New queens often hibernate near their natal nest in soft soil with a sunny, southern exposure, above the water table, where they burrow 3-18 inches into the soil. Insulated, warm, open-air compost bins and abandoned molehills make good hibernacula, as do leaf litter, fallen logs and unmown grasses and sedges.

In autumn, it is important that gynes and overwintering butterflies ingest fermented sugar alcohols, found in rotting fruit, which convert into glycerol in their blood stream, and prevent ice crystals from forming in their cells. If a gyne cannot produce sufficient glycerol throughout hibernation, she may freeze. It is essential to leave fallen fruit, such as apples, pears, and berries, in your landscape — even rotting pumpkins, logs, and compost — as these all provide fermented sugar alcohols.

In the end, it's a numbers game. Colonies produce as many new queens as possible because only a few, or even just one, will survive the winter. This was true 500 years ago when the natural world flourished. The stakes are much higher today.

Fayette Aurelia Nichols holds a bachelor's degree from the University of Chicago and a MBA from Northwestern University. Currently, she's working on a degree in horticulture.



Achenes from *Bidens frondosa*, Devil's Beggar-ticks.

Stick Tights

By Laurie Yahr

If you are outside a lot, you learn pretty quickly to wear slippery fabrics once you pass into mid-summer or you'll spend quality time pulling stick tights off wool, cotton or denim. This is true for hikes in woods as well as wetlands and prairies. These plants use barbs and hooks as an adaptation for seed dispersal, especially on the fur of wild and domestic mammals.

Sometimes our avoidance is so strong when the plants are in seed that we forget to appreciate the beautiful or interesting flowers they come from. In the Midwest, these hitchhikers may come from at least seven different plant families.

In the *Asteraceae* family, the genus *Bidens* has six native species, commonly called beggar-ticks. They have barbed awns on flat seeds that cling. (OK, some of these flowers are not showy; several don't even have ray "petals.") Also in this family are three non-native burdock species. Their round burs attach by robust hooked spines, which inspired the invention of Velcro.

Hooks and thorns are well known in

Hackelia virginiana flower and fruit (with four nutlets) above and the top of the plant.



the *Rose* family. There are six species of *Avens* (*Geum spp.*), and four species of *Agrimony* (*Agrimonia*). Basal leaves overwinter so some may be seen very early in the spring. The leaves are arranged in a very pleasing pattern: toothed, pinnate leaflets alternating with leaf-like bracts and also leaf-like petioles.

In the *Apiaceae* or Carrot family, there are four species of black snakeroot (*Sanicula spp.*) that have small round bristly seeds, but I don't remember ever accidentally collecting them on clothing. The fruits of invasive Japanese hedgeparsley (*Torilis japonica*) are larger, egg-shaped and so densely covered with hooked hairs, that they are reminiscent of tiny barrel cacti. The dissected, triangular leaves are fern-like. So too, are the leaves of the spring blooming native sweet cicely (*Osmorhiza*). All four species have thin cylindrical fruits that taper at both ends with upturned hairs that can stick easily to clothing or your dog's fur.

From the *Boraginaceae* or Forget-me-not family, Beggar's lice or stickseed (*Hackelia*) may grow up to 3 feet tall with arching branches. At first, only a few tiny pale blue or white flowers bloom into fabric fastener-like fruits. These stems elongate and quickly develop numerous prickly fruits, poised to grab onto anything that comes near. Growing nearby, some of the bedstraws, especially the annual Cleavers or Sticky-willy (*Galium aparine*), have prickles on their seed, with tangles of whole branches likely to cling to you. They are in the *Coffee* (*Rubiaceae*) family. And then there is a most inappropriately named plant, Enchanter's Nightshade, with its small oval fruits covered in sticky hairs. They belong to the Evening Primrose family (*Onagraceae*). These fight it out

They may be annoying, but they come from beautiful flowers



Side view of flower with reddish calyx

with violets for dominance in our shady front yard.

At this time of year, we should focus on members of the *Fabaceae* or Legume family, the Tick-trefoils (*Desmodium spp.*). These species have jointed or constricted seed pods (loment) that break into segments, allowing each section to break free to spread its seeds. They are covered with minute hooked bristles and become "annoying little freeloaders" hitching a ride on anything they touch (T. Cochrane).

The common name Tick-trefoil, is from its three leaflets and the way the seeds attach. Their flowers are usually pinkish-purple (rarely white), but those blooming in direct sun seem to quickly fade to blue along the edges. Flowers are butterfly shaped with a large top petal, two smaller side wings and two fused petals called a keel (like in a boat).

Sometimes the wings appear to enclose the keel, looking like there are

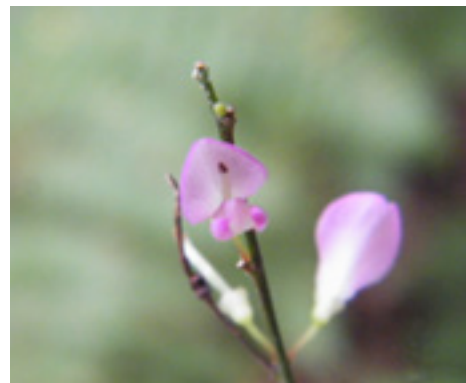
All photos by Laurie Yahr unless otherwise noted.



Naked-flower Tick-trefoil *Desmodium nudiflorum*. Its flowers are usually pale pink.



Early spring basal rosette of white avens, *Geum canadense*.



Desmodium glutinosum, pointed- or cluster-leaved Tick-trefoil. Above the leaves is a single long wand of pale pink flowers, each with a short pedicel.

fewer petals. The top petal is called the banner or standard.

There are seven *Desmodium* species in Wisconsin. Two are found in rich woods or shaded locations. Of these, the Bare-stemmed or Naked-flower Tick-trefoil (*D. nudiflorum*) has flowers and leaves on separate stems. The other species, *D. glutinosum*, Pointed-leaved Tick-trefoil has a very distinctive end leaflet that is large, broadly rounded coming to a long tapered point. Another

characteristic is the whorled appearance at the top of the stem where several trifoliate leaves meet. A rare species, Hoary Tick-trefoil (*D. canescens*) is of special concern and occurs only in two southwestern Wisconsin counties. In other Wild Ones member states, there are typically between eight to 14 different tick-trefoil species.

Laurie Yahr is a member of the Madison, Wisconsin chapter of Wild Ones and has been writing the chapter's monthly



newsletter since 2001. She and her husband, Rich Kahl, spend most of their free time exploring and photographing the nearby arboretum, or state parks and natural areas in Wisconsin and wherever else their travels take them. As a child, she remembers her mother taking her and her siblings on spring walks in the woods where she taught them the names of wildflowers. She also recalls finding her first gold-spotted monarch chrysalis hanging from the bottom of an apple at one of her grandfather's orchards.

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Familiar plant provides monarchs' sole food source and place to lay eggs.

How to harvest and sow milkweed

By Vijai Pandian

Fall is a great time to harvest and sow milkweed seeds. For the monarch butterfly, milkweeds are essential for survival. Monarch caterpillars feed solely on milkweed leaves, while adults lay eggs on the plant and renew the cycle. Moreover, milkweed flowers produce pollen and nectar for monarchs and other pollinators. The available habitat for milkweeds has declined in the past decade, though, largely due to urbanization and changes in agricultural practices.

To support monarch butterflies, people can help the milkweed population rebound by planting more of these plants in communal open spaces, urban gardens and backyards. An easy and quick way to repopulate milkweeds is by collecting seeds from mature plants.

Common milkweed plants are easy to spot in suburban and countryside areas — their distinctive seed pods make them easy to identify. People looking for seeds can scout roadsides, ditches, meadows and field edges because milkweed can persist in disturbed habitats.

Anyone wanting to search on private or public property for seed pods should get permission from property owners. In mid to late fall, the mature seed pods



Photo by Barbara A. Schmitz

Only dry, mature seed pods that are brown and split or about to crack open when gently squeezed should be harvested.

of the milkweed plant split and release a plume of white fluffy floss attached to brown flat seeds. The silky parachutes carry the seeds into the air and are noticeable from a distance. Only dry, mature seed pods that are brown and split or about to crack open when gently squeezed should be harvested. Immature pods are greenish white or yellow, and they should be left for a later time.

Seed pods should be gathered from different areas to get a diversity of milkweed species. Wisconsin has 14 native milkweed species — common milkweed (*Asclepias syriaca*), swamp milkweed (*Asclepias incarnata*) and butterfly weed (*Asclepias tuberosa*) are typical species found in many regions east of the Mississippi River. However, there are 72 milkweed species native to the U.S.



Photo by Vijai Pandian/University of Wisconsin-Extension Brown County

Milkweed seeds can be sown in the fall or spring.

and Canada, according to the Western Monarch Milkweed Mapper.

Separating the seeds from their surrounding white fluff can be a little messy, but there is an easy way to sort it out. The pod's contents can be placed in a paper bag with a few pennies. The closed bag can be shaken vigorously for a couple of minutes, which will separate the seeds so they rest on its bottom, under the lighter-weight fluff. A small hole can be torn in the bottom of the bag to remove the heavier seeds, leaving the fluff behind.

Milkweed seeds can be sown in fall or stored in the refrigerator until spring. For fall seeding, the seeds should be planted in a sunny bare spot after rainfall or after moistening the ground. A finger

or pencil can be used to poke a hole about 1-inch deep, into which a seed can be dropped and then covered with the original soil. The planting site can be marked with a label to determine germination success in spring and to differentiate the milkweed from weeds. Seeds also can be planted in a container filled with potting mix and placed in a protected spot like the north side of a landscaped area or building.

If spring seeding, milkweed seeds need to be stratified in cold, moist conditions to trigger germination. To stratify, the seeds must be wrapped in a moist paper towel, placed in a perforated plastic bag and refrigerated for up to three months. Do not store in the freezer. The paper towel should be checked every other week, and water sprinkled on it

to keep the seeds moist. When spring arrives, the seeds can be started indoors four to six weeks prior to transplanting outdoors, or they can be directly seeded outside after the last spring frost.

Vijai Pandian is a horticultural agent and educator for the University of Wisconsin-Extension Brown County. "Seeding milkweed can help patch up monarch butterfly habitat" was originally published on [WisContext](#), which produced the article in a partnership between Wisconsin Public Radio, Wisconsin Public Television and Cooperative Extension.

For more information on how to harvest and sow milkweed, visit [Monarch Joint Venture](#) or [The Missouri Conservationist](#).

Simple ways to prevent birds from colliding with your windows

By Charles Hagner

Few sounds are as disheartening to a homeowner as that of a bird colliding with a window. And with good reason, since studies show not only that such collisions are frequently fatal — one in two results in the death of the bird — but that they are also all too common.

In the United States, no fewer than 264 different bird species are known to strike windows. That's almost 27 percent of the 990 species that American birdwatchers have reported to [eBird](#), Cornell Lab's real-time online database of bird sightings. Sadly, species as tiny as the ruby-throated hummingbird and as imposing as the golden eagle made the list.

The number of individual birds involved in fatal window collisions is even more shocking. According to an estimate published in 2014 by scientists with the U.S. Fish and Wildlife Service and the Smithsonian's [Conservation Biology Institute](#), the toll in the United States alone could be as high as 988 million — every year.

Join nature lovers and help celebrate 2018 as [Year of the Bird](#), and commemorate the 100th anniversary of the signing of the Migratory Bird Treaty Act.

Windows pose a deadly threat to birds because birds don't perceive sheet glass as a barrier. When they look through clear glass, they see an apparent passageway that they can move through to reach whatever is visible on the other side. When they see trees, shrubs or other attractive greenery reflected in a window, they frequently decide to fly toward the reflection.

As you might expect, glass-covered skyscrapers are the site of many collisions, but high-rises account for less than 1 percent of the mortality rate. The overwhelming majority occurs at structures under 12 stories tall, and 44 percent occurs close to home — at buildings one to three stories high, including residences.

This means that homeowners who take steps to decrease the number of window strikes around their home, even by a little, can have a big impact, and doing so is pretty easy. There are two main strategies you can employ, and both are highly effective.

The first is making your otherwise-invisible glass visible to birds. Accomplishing this can be as simple as dangling feathers, Mylar strips, old CD-ROMs,

or other objects in front of a problem window or dabbing tempera paint on its exterior — any type of pattern will do — or you can give one of the following readily available products a try:

- [WindowAlert](#) and other window decals: Made of translucent vinyl and available in a variety of shapes, including leaves, snowflakes, hummingbirds and dragonflies, the decals adhere to a window's exterior and reflect bright ultraviolet light, visible to many birds, while breaking up any reflections that birds might see in the glass.

- [ABC BirdTape](#): Simple, practical and developed by experts at the American Bird Conservancy, a leading nonprofit bird-conservation organization, translucent ABC BirdTape comes in 50-foot rolls and in two widths, three-quarters of an inch and three inches, so you can cover the exterior of a problem window with orderly stripes or squares, making the glass visible from the outside while still permitting you to see out from the inside.

Feathers on Windows: Dangling feathers or other products in front of a window can significantly lower the number of bird strikes to your home.

Photos by Rick Sanders



Tape on Window: Applying tape to your windows is also an effective way to tell birds that the space does not provide passage to wherever they want to go.



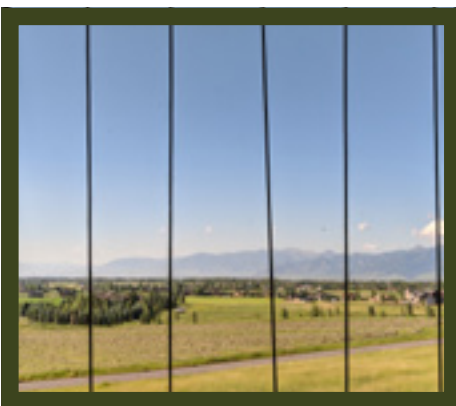
Can't See Plastic Netting: Square plastic netting can't be seen from more than 25 feet from a window.



Square Plastic Netting:

Birds can also easily see square plastic netting. Be sure to use the square netting, however,

since the diamond shape always wants to go back to its original shape, won't stay in place and is extremely difficult to hang.



Parachute cord on windows: Parachute cords affixed near the top of a window are effective because birds see the cords and try to avoid them. You can order them pre-assembled or make your own.

- **Acopian BirdSavers:** Acopian Bird-Savers consist of a curtain of dark-colored nylon parachute cords that can be affixed near the top of a window and, spaced about 4 inches apart, dangle in front of its outer surface. They work because birds see the cords and try to avoid them. Homeowners who install them love the way they look. You can order them pre-assembled or make your own. Instructions are on the website.

- **CollidEscape film:** If you've ever ridden a city bus covered from bumper to bumper in advertisements, you've already seen self-adhesive window film in action. CollidEscape works the same way. Applied to the exterior of a problem window, it will keep birds from seeing deceiving reflections and make the glass plainly visible, while tiny perforations in the film will allow you, indoors, to take in the sights outdoors.

The second strategy to employ to prevent bird-window collisions is placing a barrier between the bird and the window. Two products do this well: the Bird Crash Preventer and the Bird Screen.

- The **Bird Crash Preventer** is a pre-assembled curtain of monofilament lines that cover the exterior of a problem window. Brackets that you attach above and below hold the lines taut 3 inches apart and a safe 5 inches from the surface of the glass. The lines won't obstruct your view at all, but birds have no trouble seeing them and steer clear.

- The **Bird Screen**, a soft, flexible, dark fiberglass screen, hangs several inches in front of a window. Anchored above and below using hooks screwed into the window frame or brackets attached to the pane with suction cups, it provides a gentle cushion for birds that fly into it, preventing injury, while still allowing you to look out.

Both the Bird Crash Preventer and the Bird Screen are available in a variety of sizes, allowing you to cover sunroom windows and sliding glass doors as well as most windows, so don't assume your problem window is too wide or too tall.

And don't fall into the trap of thinking that you need to treat every window in your home. Because you don't. If you've noticed that birds seem to hit only one or two windows, concentrate your efforts on those one or two first. Treating them may be all it takes to solve your collision problem.

One final tip: If you worry about window collisions but like to feed birds in your yard, consider switching to a window-mounted feeder. You'll find many styles and sizes online or at your local nature center. Most yard birds will like them just as much as other feeder styles, and you'll have a front-row seat from inside the house. Plus, placing the feeder close to the window will keep your guests from building the momentum needed to cause injury in a window collision.

Charles Hagner is the state director of Bird City Wisconsin and the board chair of the Western Great Lakes Bird and Bat Observatory, Inc. For over 15 years, he also managed, planned and produced BirdWatching, a bimonthly nationally distributed magazine about wild birds and bird watching.

Wild Ones member, chapter transforming retired landfill to natural area

A black swallowtail enjoys the *Monarda fistulosa*.

All photos courtesy Robert Dumke

By Barbara A. Schmitz

Robert Dumke wasn't even a member of Wild Ones when he came up with the idea. But after becoming aware of the plight of pollinators in our country, he knew he had to do something.

And something it is.

Dumke, as well as other members of the Wolf River (Wisconsin) Chapter of Wild Ones, are slowly adding native plants to a retired landfill in Shawano, Wisconsin, and converting the acres of grass to flowers that provide nectar and pollen to birds, butterflies, insects and other pollinators.

Dumke says a speech at a local library by Doug Tallamy, author of *Bringing Nature Home* and lifetime Wild Ones honorary director, is what convinced him he could make a difference. "I felt driven to try and do my part," he says.

He and his wife live near a 9.5-acre abandoned landfill, and had walked past it many times. "But on this one circuit, I stopped and said, 'Here is the opportunity to make a difference.'"

Dumke admits he didn't know a thing about natural landscaping then. So he joined the Wild Ones chapter, explained what he wanted to do, and asked for their help. "They welcomed me with open arms," he recalls.

Next, he contacted the Westcott Town Board and the Wisconsin DNR, which



Robert Dumke and Mary Kuester, past president of the Wolf River (Wisconsin) Chapter of Wild Ones, plant perennials at the retired Shawano landfill.

have administrative authority over the property. He toured the landfill with representatives of both agencies and got their blessing, as well as a list of things he had to do to meet their guidelines. Dumke and others began planting in 2014, and in 2015, Dumke was named Wolf River Chapter president. It's a position he still holds.

So how do you start a project of such magnitude? "Little by little," Dumke says. "The biggest mistake people make is to

go beyond the scope of their abilities. We do a little bit every year at the landfill, and don't expect to finish anytime soon."

In fact, Dumke says the landfill restoration project will likely last another 10 years or so, as each year they plant new areas and learn from what they have done in the past. By the end of summer, Dumke estimates that they will have about 34 planted areas, comprising of nearly 40 species and 6,000 plants. And those numbers don't include the plants



This smaller planting was bright with color in 2016 and attracted many pollinators.



This photo was taken July 29, 2016, after just planting the fall before.

that have been added the old-fashioned way — through seed dispersal.

“What we are trying to do is establish different areas throughout the landfill with various plants that can then evolve and start to reproduce on their own,” he says.

Other chapters interested in similar projects should first contact their local government and state officials to get their approval. But then they need to approach the project from a long-term,

pragmatic and focused perspective. “Get things done in small areas first. Start by completing 10- or 20-foot planted areas, and then those areas can reproduce on their own.”

Dumke says he has been pleasantly surprised by the number of people, even from other states, who want to help after they learn about the project.

“As soon as you educate people about what you are doing and why, they support you,” he says. “One of the most

encouraging aspects of this project is that they get it and help.”

In fact, when they started this project, Dumke mentioned it to his sister who lives in Minneapolis, and then visited her one or two months later. “She brought to our hotel room a 2-pound box of native flower seeds and told me it was from her neighbor who lived a half block away. She had told them what we were doing, and understanding the value of it, they wanted to help. I was just amazed.”

Wild Ones Lifetime Honorary Director Neil Diboll, of Prairie Nursery, has also been supportive and donated thousands of plants, Dumke says. And one of Dumke’s neighbors allows him to use his tractor and other gardening equipment. “People want to help anyway they can.”

In fact, Dumke says the entire project has been funded by private donations of money, seeds and plants. “Some people give a few plants. Some harvest seeds in the fall and give them to me, saying they are for the landfill. We’ve helped inspire people to make a difference.”

When most landfills are retired, they are first covered with 2-feet of clay, and then about 6-8 inches of black soil, which is seeded with highway grass, Dumke says. “And then they walk away. But why just cover it with grass? Why not cover it with wildflowers instead? Instead of just throwing away the land, as well as the garbage in it, why not turn it into productive use? The focus of our project is to create a safe habitat of flowering plants that produce nectar and pollen.”

With Wild Ones’ help and knowledge, Dumke also hopes to establish protocols that other chapters and community groups can use to change areas like landfills, right-of-ways or other abandoned public areas, into productive habitat instead of wasteland.

There are thousands of similar landfills throughout the country, Dumke says. He hopes other chapters will take up similar projects at their retired landfills. “If you take Dr. Tallamy at his word, these are all opportunities for safe habitat in the future. This is where we need to start. Wild Ones is the organization that has the expertise to educate and motivate people and to get things done.”

Members join 1st Annual Meeting webinar

The Annual Meeting took place on Aug. 18 via webinar, and nearly 100 members joined us live to hear what Wild Ones has done in the past year and to see where we are headed next.

2018 is the “Year of the Chapter” and Wild Ones’ focus has been on growing strong roots to support healthy future growth. The national board and staff focused resources on improving member services. Two “Chapter Confabs” were held in January to learn directly from chapters what they need to grow and succeed. From that feedback, Wild Ones plotted a course of actions to both solve immediate needs and set the stage for future improvements. Some examples include:

- Transition from all-volunteer technical support to a local IT firm to support office hardware and software
- Create a self-test Chapter Checkup Tool to help chapters evaluate their current situation and identify areas for improvement
- Open an updated online store, with fun new merchandise and cheaper shipping and handling charges
- Resume full dues reimbursements via direct deposit into chapter bank accounts so it’s faster and easier for chapters to receive the funds

During the meeting the new national board members were introduced, as well as the newly elected national officers. (The listing of board members and national officers can be found on Page 2.) Many thanks to outgoing board members Jan Hunter, Ohio; Janis Solomon, Connecticut; and Laura Zigmanth, Michigan; as well as Interim Executive Director Pam Wilcox, who spent time far above her contract and also donated money and goods to the office during her tenure.

Key statistics were recapped to showcase Wild Ones’ current health and growth. We currently have 3,579 members, 52 chartered chapters and three seedling chapters in 13 states, and Partners-At-Large located across the country. Our newest chapter is Southeast



The webinar format for the Annual Meeting allowed members to attend without the expense of traveling.

Missouri, and our seedlings are Keweenaw (Michigan), Louisville (Kentucky), and South Shore MA (Massachusetts).

Like all nonprofits, Wild Ones cannot exist on dues alone. We depend on extra support from our members and other supporters to run the organization. This support comes in the form of time, talent and money. Wild Ones is deeply grateful for every type of donation. Our 2017 Annual Appeal raised \$28,210.

Over the past year, some made exceptional investments in the organization. Individuals giving \$800 or more include Darcy Adams, Kathie Ayres and Ted Ross/Ross & Ayres Foundation, Lisa and David Beckwith (Lifetime membership), Daniel and Barb Benish (matched by Illinois Tool Works), Denise Gehring, Janice Hand and Rick Sanders, Cecelia Jokerst, Roger Miller, Mariette and David Nowak (matched by GE Foundation), Bill and Sherrie Snyder (matched by State Farm), and Janis Solomon. Chapters that led the way are Fox Valley Area Chapter (\$2,500), Illinois Prairie Chapter (\$1,000), Northern Kane County Chapter (\$800), St. Louis Chap-

ter (\$1,500), and Twin Cities Chapter (\$1,000). Thank you all for your generous support!

Now that our deep roots have been established, we expect 2019 to be one of Wild Ones’ best. Next year, we will revamp our technology platform based on the specifications developed in 2018. We have learned that we can’t live with our current, outdated technology; we have also learned that we can’t function with no technology at all. Upgrading our systems takes research, planning and considerable resources. Wild Ones will be undertaking both grant writing and a special fundraising campaign to help with the financial cost of a strong public website, Members-Only site and membership database. Once we have our new systems in place, we will be able to truly succeed in spreading the Wild Ones mission via chapters and PALs across the country.

If you were unable to attend the live session, you can listen to the recording available in the Members-Only site under [National Reports](#).



Students from Willard Alternative High School helped to decide where to plant and how to structure the space in the new garden.

The Montana Nature History Center in Missoula, Montana, added a Nature Adventure Garden, thanks to a Wild Ones Seeds for Education grant.

Project coordinator Lisa Bickell wrote in the first-year report that they planted a wide range of native flowers, shrubs and grasses. "We partnered with Blackfoot Native Plants who toured our site and helped select species that would do well in our space and meet our program needs," she wrote. "We also partnered with students from Willard Alternative High School to ultimately choose where to plant and how to structure the space with new plantings."

Many of the high school students they worked with had challenging home lives, and they responded well to working with adults who were interested

in their opinions, ideas and suggestions, Bickell wrote. "They also were able to engage with the outdoors on a deeper level, making their own connections."

Bickell said they spent the full Wild Ones grant on native plants; but they also matched the SFE grant with another \$500 grant for garden materials and collected \$1,200 from a community fundraiser to pay for more plants, seeds and staff time.

They are now working with Native Ideals Seed Farm to source wildflower seeds. "We are going to focus our garden work energy on planting seeds in the fall," she wrote. "The space has a good foundation of shrubs and play spaces now. Because the garden is designed to encourage children to play, we want to plant hardy native plants that will self seed and spread. Our goal is to fill in

most spaces that aren't trails or activity areas with flowers and grasses."

Bickell said they are also providing training to staff members so they learn how to use the garden space. "We will continue to host community educational workshops in the space and will ensure that it stays open for neighborhood use and use by schools visiting our center on field trips," she wrote. "We will continue to work with our staff to identify improvements to the space. This includes removing elements that are not successful, adding elements that are missing, or making modifications to the plant communities."

The Montana Nature History Center views the space as an ongoing project and has committed staff time to ensuring that it successfully supports its programs, mission and the people who visit the center, she said.

Considerations of larger-scale restoration design



Penstemon digitalis flowers in a shortgrass prairie/grassland bird restoration.

By Nick Fuller

When beginning a new project, several things should be considered as you determine the scope: wildlife and vegetation enhancement, soil stabilization, instream habitat improvements, flood water storage, nutrient and chemical capture and budget. Obviously, this is not an exhaustive list because we cannot guess every land manager's objectives, but it does give you a glimpse into considerations for larger scale restorations. For this article, let's focus on one consideration, vegetation.

Vegetation seems to be easy on its face value, right? But it is a bit more complicated than simply restoring to native vegetation. You could say I want to create or restore an ecosystem to pre-settlement conditions. Realize it

took Mother Nature thousands of years to develop that complex prairie system or mature oak savanna. Remember it took us hundreds of years in most cases to sully these majestic natural systems into a degraded shadow of their former selves. It will likely take somewhere between those two timelines to get it back.

Likewise, realize that today's environment is different from our forefathers' so we need to take educated guesses of what may be functional in conditions today and in the future. We can get back to a vibrant functional ecosystem, but it will take some planning, elbow grease and time. But most importantly, realize that we cannot create complex and functional ecosystems; we are merely sowing the seeds for Mother Nature to work her magic.

Start by determining your site's ecological attributes and deciding how to save and enhance those. An example would be a remnant plant community, a native seed bank, or even consider that a Eurasian meadow may be providing structure for grassland bird nesting. Look at historic aerial photographs to see if you may have remnant woodland or wetland by viewing land use over time. If your site has beneficial attributes, protect and enhance those qualities. In these cases, avoid aggressive tactics such as killing the vegetation, broadcast tilling or mass grading. Rather, bolstering the existing ecosystem through overseeding, planting, controlled burning, and selective weed management are some of the most effective measures. Remember you're bringing nature back, so let it breathe. It will take some time,



Above: *Lobelia siphilitica* and *Lobelia cardinalis* release from a seed bank in a remnant wet prairie post reed canary control.



Left: A monarch nectars off *Eryngium yuccifolium* in a pollinator recreation.

but coaxing a dilapidated remnant back can be very rewarding.

In recreating a natural area from the ground up, such as a recently active agricultural field or manicured turf, you have a bit more latitude and responsibility in guiding the outcome. Set the goal of the site: Is it grassland bird habitat with open fields and short grass prairie, stream bank stabilization with sedge's tight roots to lock up the soil and defend against invasive species, or pollinator habitat with season long bloom time and grasses to restore soil organics and regulate temperature and moisture for conservative insects? Don't forget the basics. Yours could be as simple as pure habitat recreation.

A common thread between remnant restoration and natural area recreation are ecosystem threats. These threats

could be erosion, nutrient loading, hydrological alteration, or invasive species, anything that will lay waste to your natural area. These threats must be recognized and addressed up front with impunity; if you don't, they will ruin your new partnership with Mother Nature. How to address these can depend on the severity of a threat, your management ethic, budget, ability and commitment, timeline and many other considerations. Whatever your methodology, ensure an ongoing monitoring and management effort is initiated. As the old saying goes, a stitch in time saves nine.

Another common thread is the ever-intimidating species list and plant selection. A properly selected ecosystem species list can provide the building blocks for a resilient and thriving ecosystem, and even be a keystone

species to an entire ecosystem such as an oak in oak woodlands. In large-scale restorations we typically are attempting to mimic an ecosystem or mimic functions that a thriving ecosystem provides. So, before you start, find a remnant community to reference, one that you would like to emulate. Go to it, observe and get a feel for what you are trying to accomplish. At minimum, look at the structure and composition of the plant species, and again look at historic aerial photographs that are often available at your soil and water conservation district or county engineer office. Many professionals even fail at this elementary planning step and they base their recreation project off a human created native landscape, when we really need to seek inspiration from Mother Nature's master planning.

If you do not have a remnant readily available or you would like some additional guidance, certain books can help. One of the things I find most interesting and helpful in these books are identified plant associates, groupings of plant species that are commonly found together in nature. These are the initial building blocks for your species list and an excellent check against an off-the-shelf mix if you have nothing else or no one else to draw from.

The goal of native landscaping or larger scale restoration is the same: stitching our worn and torn ecosystem patchwork blanket back together. To that end, these are design considerations, a launching point into your restoration endeavor, not a be all and end all. More importantly, learn from nature itself, sit in it for long periods to see, feel and listen to Mother Nature. Have fun in your research; meet up with your local native plant geeks and restoration nerd groups, tell stories over libations, and borrow some ideas, too. Put all that love into your small (or larger) piece of heaven on earth. And lastly, consider permanently saving your gem by placing a conservation easement on it though a local conservation agency.

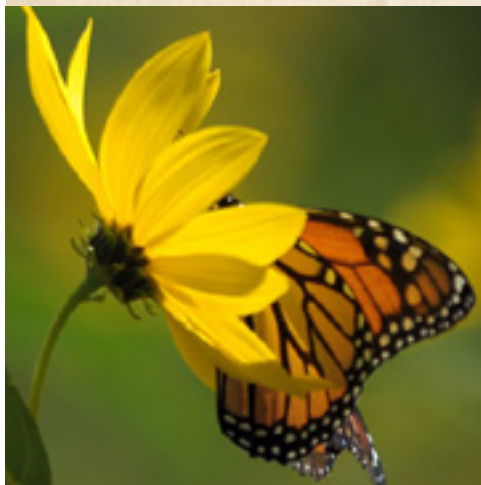
Nick Fuller is owner of Natural Communities Native Plants in Batavia, Illinois. He has a bachelor's degree in geography and natural environmental systems from Northern Illinois University, and has worked in ecological restoration for both public and private agencies.



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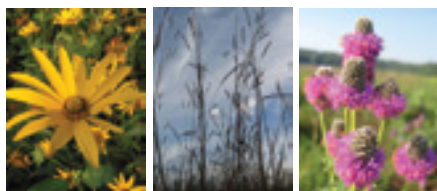
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Mark Your Calendar

SEPTEMBER

September 22

National Public Lands Day

September 26 – October 2

National Fall Foliage Week

September 29

Gibson Woods Chapter

7th Biennial *Native Plant Symposium*
“Partners with Nature – Time to Take Action”

8 a.m. – 3 p.m., St. John Township Community Center

1515 W. Lincoln Highway, Schererville, IN 46375

OCTOBER

Bat Appreciation Month

NOVEMBER

November 17

National Take A Hike Day
Get out and enjoy your garden, or local park or nature preserve.

November 27

National Day of Giving
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Chapter News

The **Habitat Gardening Central New York** Chapter has a plethora of programs and speakers set for fall, including David Weinstein, a visiting scientist from Cornell, who will talk about the Mundy Wildflower Garden at Cornell and the effects of climate change on gardens on Sept. 30; Rhiannon Crain, from Cornell's Habitat Network, who will discuss how to get more people gardening for wildlife on Oct. 28; and a recorded video presentation by Annie White, an ecological landscape designer and University of Vermont adjunct professor, on how native plant cultivars affect pollinators. All presentations will be held at the Liverpool Public Library.

The **Kalamazoo Area** (Michigan) Chapter is planning a field trip to view mosses and ferns on Sept. 8 and a fall plant exchange on Sept. 16. Its fall meetings include Mike Klug, professor emeritus at Michigan State University, speaking on "Restoring our Vanishing Soil Communities on Sept. 26; Rebekah Kik, director of community planning and development

for Kalamazoo, speaking on "City Planning and the Environment" on Oct. 24; and David Karowe, professor of biological sciences at Western Michigan University, talking about "Climate Change and Plant Communities" on Nov. 28.

Wild Ones would like to welcome a new chapter, **Southeast Missouri**, which will be serving Farmington, Ste. Genevieve, Cape Girardeau, Arcadia Valley and all areas in between. Officers include Linda Bennett, president and member chair, who can be reached at 573-546-070 or wbennett301@sbcglobal.net; Mariah Fabry, vice president, who can be reached at 573-546-4433 or dancinmariah@hotmail.com; Debra Macaulay, treasurer, who can be reached at 573-734-6370 or dscaggsmacaulay@outlook.com; and Peggy Lefarth, secretary, who can be reached at 573-330-6064 or peggy.lefarth@att.net.

The **Tennessee Valley** Chapter will feature Doug Tallamy, author of "Bringing Nature Home," at 7 p.m. Sept. 7 at the UTC University Center Auditorium. Tallamy will present, "Creating Living Landscapes." On the following day from 10 a.m. – 6 p.m., the chapter is offering a home garden tour that spotlights native plant gardens. Chapter volunteers at each garden will help visitors learn the "whys" and "how tos" of native plant gardening.

The **Twin Cities** (Minnesota) Chapter is taking part in the 10th annual Monarch Festival, scheduled from 10 a.m. – 4 p.m. Sept. 8 at Lake Nomis Community Center in Minneapolis. Learn more at <http://monarchfestival.org/>.

Chapter Anniversaries

- 4 years . . . Blue Ridge, Virginia
- 5 years . . . Tennessee Valley, Tennessee
- 11 years . . Mountain Laurel, Connecticut
- 13 years . . Habitat Gardening in Central New York
- 16 years . . Door Peninsula, Wisconsin
- 17 years . . Gibson Woods, Indiana
- 17 years . . Southeast Michigan, Michigan
- 21 years . . Ann Arbor, Michigan
- 23 years . . Columbus, Ohio
- 23 years . . Rock River Valley, Illinois
- 39 years . . Milwaukee North, Wisconsin

New Lifetime member

Michael Brandino, Milwaukee North

In Memoriam

Barbara Mader, Gresham
Wolf River (Wisconsin) Chapter

Dr. E. Douglas Newton, Signal Mountain
Tennessee Valley (Tennessee) Chapter

Maria Talin, Oshkosh
Fox Valley Area (Wisconsin) Chapter

Please email Elaine Krizenesky at elaine@wildones.org to report the death of a member.



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WILD Center Update



Fox Valley Area (Wisconsin) Chapter President Barb Cattani checks for monarch activities at the WILD Center as part of Monarch Joint Venture's monitoring project.

Monarch monitoring

The monarchs play in the gardens every day, and now the WILD Center will be part of a Monarch Joint Venture monitoring project, Integrated Monarch Monitoring Program (IMMP). Barb Cattani, Fox Valley Area (Wisconsin) Chapter president, is monitoring milkweed plants in the prairie weekly for monarch eggs and caterpillars, as well as the number of monarchs seen in the area.

The project's goal is to collect data on monarch density across different types of sites such as gardens, right-of-ways and agricultural fields. Long-term, IMMP will track the numbers from year to year and compare the quality of habitat among these sites. Cattani will also take a monthly plant survey to catalog plant species available as nectar sources throughout the season.

Denise Gehring, national board member and former Oak Openings (Ohio) Chapter president, has also participated in the IMMP in Ohio. To take part in the 2019 training workshops or monitoring program, contact MJV at <https://monarchjointventure.org/get-involved/mcsp-monitoring>. It may also be possible to participate without attending the formal training sessions.

Volunteer projects and thank yous

Neenah resident Rick Marquardt kindly built a replacement mailbox after one at the Center was destroyed by a snowplow. Marquardt painted the wooden box and post and hand-stenciled the Wild Ones address, resulting in an

eye-catching piece of artwork that announces the Center's presence to passers-by and lets visitors know they have arrived at their destination! Our staff is thrilled with the additional exposure the new mailbox gives the center and is working on converting Marquardt from an interested resident to an active Wild Ones member.

If you're not familiar with Venture Crew, this Scouting program promotes volunteering and high adventure activities and consists of both young men and women ages 13-20. The program has just introduced a new award, which is the equivalent of a Boy Scout Eagle Scout Award or a Girl Scout Gold Award. Crew member Melissa Frieze, of Appleton, selected the WILD Center as the site of her Venturing Award project.

A junior at the University of Minnesota majoring in engineering, Frieze is designing and installing steps leading from the upper rain gardens to the lower shrub-carr area at the WILD Center. These steps will enable visitors to safely and easily visit the lower level of the Center grounds. Frieze is also installing a permanent path in the lower level to connect the steps to the wooden bridge, which is a previous Eagle Scout project of her crewmate, Chad Seidl. The combination of these two projects will allow more people to explore the lower level of the Center property during the rainy and snowy seasons when it's currently difficult to access this area. Work on the project took place in mid-August.

As a separate Venture volunteer project, Frieze has revised the WILD Center trail map to incorporate the signage system created by Delaney Diamond as her Girl Scout Gold Award project. Melissa is also making "You are here" reproductions of the new map to mark the trails on the existing signposts.

Lastly, the Agropur plant in Little Chute donated a first aid kit to the WILD Center, to keep the staff and its visitors safe and unstoppable. Thanks to Thom VanDehei, plant manager, for approving the donation.



Photos by Elaine Krizesky

A small monarch egg is hardly visible on milkweed at the WILD Center.