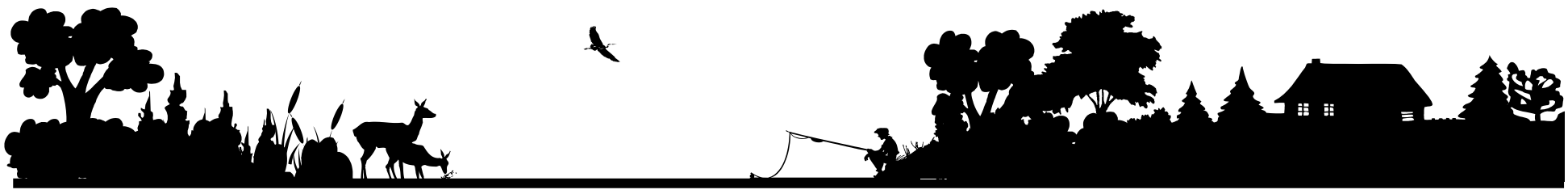

NORTHWOODS JOURNAL – MAY 2022

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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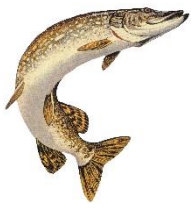
Northwoods Journal Online

Want to read issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for 'Northwoods Journal". We can also send you an e-mail reminder when each new issue is posted online, or you can get a copy mailed to you. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email abartels@marinettecounty.com.

Land Conservation Staff Monitor Pike in Area Streams

https://www.facebook.com/people/Marinette-County-Land-Water-Conservation/100075727761451/



The Marinette County Land & Water Conservation Division recently received a grant through the Natural Resource Damage Assessment and Restoration Program (NRDA) to improve spawning rates for fish species including northern pike, lake sturgeon, walleye, and Great Lakes spotted musky. This includes improving spawning habitat and access to wetlands that are important for spawning pike and other species. The project area includes wetlands, streams, and ditches that drain directly to the Bay of Green Bay. In Marinette County, this includes most of the area east of Highway 41.

Part of the improvement project involves setting Fyke nets (below) to capture Northern Pike as they move upstream to spawn in local wetlands.

Above and below photos: Chuck Druckrey and Brody Devine of the Land Information Department set up the fyke nets. Photos by Sheri Denowski, County Conservationist.

The fish are measured, the sex of the fish is determined, and they are tagged then released (above). This part of the project will continue for several years to identify areas being used by pike, and aid in assessing overall health of the population. If you catch a tagged fish, please call the number on the tag and answer some questions about where you caught it.

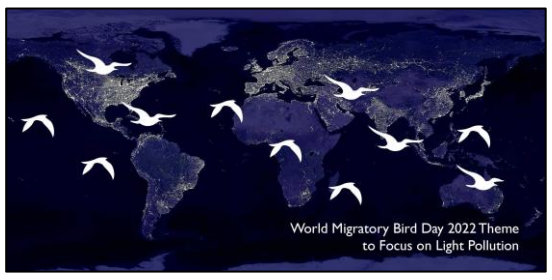
A tagged fish with the long yellow tag near the dorsal fin.

Sheri Denowski, above, from Fri. 4/8 - "One Pike today! Brody was patient in teaching me to measure and tag it. Thanks, Brody! And 6 little creek chubs that we set free. The water is still pretty high but coming down."

If you are interested in participating in wetland habitat improvement projects or are looking for more information on the project please reach out to Chuck Druckrey at (715)-732-7528. For more photos of this project, go to: https://www.facebook.com/people/Marinette-County-Land-Water-Conservation/100075727761451/?sk=photos.

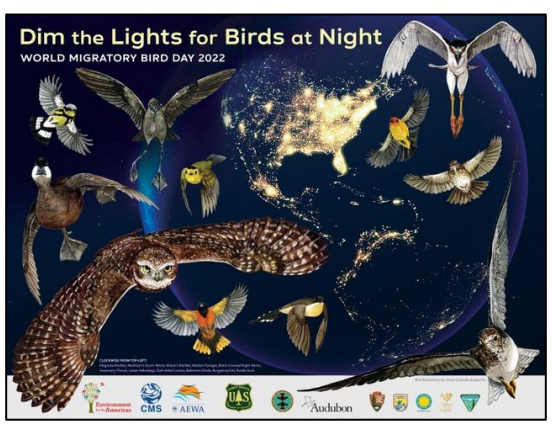
World Migratory Bird Day is May 14th!

Excerpts from https://www.migratorybirdday.org/



World Migratory Bird Day is officially celebrated on the second Saturday in May as migratory birds journey to nesting sites and on the second Saturday in October (October 8th in 2022) as they return to wintering areas. Because birds do not all migrate at the same time and to provide the opportunity to observe birds on stopover sites as they journey, however, we encourage you to celebrate when the timing is best at your location. WMBD programs and events are hosted nearly every month of the year. *Every day is Bird Day!*

In 2022, the impact of light pollution is the focus of World Migratory Bird Day. Throughout the year we will spread the message to "dim the lights for birds at night" and highlight the steps that individuals, communities, and governments can take to reduce the impact of light pollution on our shared birds.



Most birds migrate at night. They have been doing this for eons, as a night sky typically means calmer air space and fewer predators. Nocturnally migrating birds include ducks and geese, plovers and sandpipers, and songbirds of all kinds. These birds may travel thousands of miles between their breeding and non-breeding grounds.

However, the night sky is under threat. Artificial light is increasing globally by at least two percent a year, presenting a problem for birds. Light pollution from homes, businesses, and other infrastructure attracts and disorients migrating birds, making them more likely to land in dangerous areas where they are more vulnerable to collisions and predation. Artificial light also impacts birds in the breeding and winter seasons, disrupting feeding and other vital behaviors.

History of WMBD

In 1993, the Smithsonian Migratory Bird Center created International Migratory Bird Day (IMBD). This educational campaign focused on the Western Hemisphere celebrated its 25th year in 2018. Since 2007, IMBD has been coordinated by Environment for the Americas (EFTA), a non-profit organization that strives to connect people to bird conservation.

In 2018, IMBD joined forces with the Convention on Migratory Species (CMS) and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) to create the global event World Migratory Bird Day (WMBD) to unify our voices around the world for bird conservation.

Continuing our tradition with IMBD, WMBD celebrates and brings attention to one of the most important and spectacular events in the Americas – bird migration.

This new alliance furthers migratory bird conservation around the globe by creating a worldwide campaign organized around the planet's major migratory bird corridors, the African-Eurasian flyway, the East Asian-Australasian flyway, and the Americas flyway. By promoting the same event name, annual conservation theme, and messaging, we combine our voices into a global chorus to boost the urgent need for migratory bird conservation. As many as 700 events and programs are hosted annually to introduce the public to migratory birds and ways to conserve them.

Over the years, EFTA has made changes and improvements to International Migratory Bird Day. We developed the concept of a single conservation theme to help highlight one topic that is important to migratory bird conservation. These educational campaigns have been integrated into numerous programs and events, focusing on topics including the habitats birds need to survive, birds and the ecosystem services they provide, the impacts of climate change on birds, and the laws, acts, and conventions that protect birds, such as the Migratory Bird Treaty Act, the Endangered Species Act, and the Convention on Biodiversity.

World Migratory Bird Day Activities

Go on a nature walk
Get in touch with your local ecosystem and see what birds frequent your area. See if you can spot which birds are native to the area, and which are visitors from far-off places. When the seasons change, see if you can spot which species leave, and which ones arrive to take their place. Keep a journal and see how things change from year to year.

Get involved with the Audubon Society
Since 1905, the National Audubon Society has been dedicated to the conservation, health, and welfare of all different kinds of birds. There are about 500 local chapters nationwide, and each one is fighting the battle to save the birds on several different fronts at once. Find the one nearest to you, and see how you can help our feathered friends thrive. Visit https://www.audubon.org/ for more information.

Set up bird feeders
You could go and find nature on World Migratory Bird Day, or you can bring nature to you! Putting feeders outside your house will attract all kinds of local birds looking for something to nosh. You can put out as many different kinds of food as you like - even sugar water for hummingbirds! Just make sure the local squirrels and cats don't come along to spoil the fun. For ideas and feeder types, visit https://wsobirds.org/images/pdfs/FS_bird_feeding.pdf.

Ideas for Attracting & Feeding Birds in Spring

https://www.birdsandblooms.com/birding/attracting-birds/feeding-birds/5-ideas-to-attract-spring-birds/

Spring migration is an exciting time for backyard birdwatchers. You just never know which species will stop by your feeders for a visit each day. So fill up those bird feeders, grab your binoculars and get ready to be amazed. Follow these tips to feed birds all year long.

Fill Suet Feeders
"I hang a suet cage at the edge of our yard. This attracts suet-eating spring birds like woodpeckers," says Diane Gratton of Knowlton, Quebec.

Put Out Orange Slices for Orioles
Cathy Sell of Imler, Pennsylvania, feeds orioles in spring with oranges. Learn how to attract orioles to your yard.

Help Ground-Feeding Birds
"When worms are scarce in early spring, I leave pieces of suet on the ground for the American robins. They feed on the suet until the weather warms up," says Phyllis Schabacker of Fountain City, Wisconsin. Robins also love to feed on berry bushes.

Attract Finches with Thistle Seed
"To attract goldfinches, I use a large cheesecloth bag and fill it with thistle seed", says Marguerite Debnam of Greensboro, North Carolina.

Serve Grape Jelly
Grape jelly will also attract spring birds, including orioles. "My bird feeding secret is grape jelly," says Julie Oines of Beresford, South Dakota.

Share Live Mealworms for Bluebirds
"Buy live mealworms from a local bait shop and set a few on a tray feeder (below). The bluebird parents will snatch the mealworms up and take them to their chicks," says Jerilyn Veltus of Nellsville, Wisconsin.

Offer Peanuts to Blue Jays
Matt Jabs of DeForest, Wisconsin, says, "I have two words for attracting and feeding spring birds: crushed peanuts." Blue jays and woodpeckers love them.

The More Feeders, the Merrier
Brian Hoblit of Laura, Ohio, puts up multiple sugar water feeders and grape jelly cups. "When the birds finally arrive, you'll be able to feed more of them."

Great Lakes Moment: Historic Great Lakes Agreement Reaches Golden Anniversary

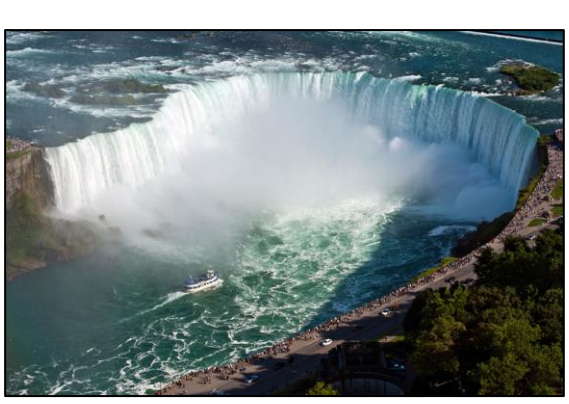
https://www.greatlakesnow.org/2022/04/great-lakes-moment-historic-great-lakes-agreement-anniversary/

The Great Lakes represent one-fifth the standing freshwater on the Earth's surface, provide ecosystem services or benefits to approximately 34 million people living in the basin, and serve as the foundation for the $5 trillion regional economy that would be one of the largest in the world if it stood alone as a country. For five decades, the **U.S.-Canada Great Lakes Water Quality Agreement** has been a model for transboundary environmental protection that is the envy of many throughout the world.

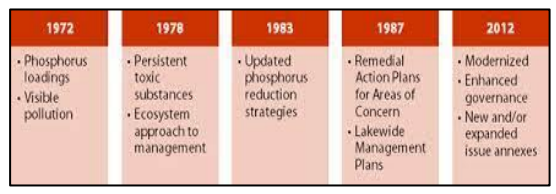
On April 15, 1972, then Canadian Prime Minister Pierre Trudeau and then U.S. President Richard Nixon signed the Great Lakes Water Quality Agreement (below) as an expression of binational commitment to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin ecosystem. The agreement reflected the principle of *binationalism* – two countries collaborating on achieving a set of shared goals – rather than bilateralism, in which two countries negotiate with each other in an attempt to balance interests and protect their own rights.

The governments of the United States and Canada are the implementers of programs to restore and maintain the health of the Great Lakes, with U.S. Environmental Protection Agency and Environment and Climate Change Canada serving as lead agencies. Meanwhile, - the International Joint Commission, established under the 1909 Boundary Waters Treaty, fulfills the role of reviewing and evaluating efforts to restore the Great Lakes ecosystem, assessing the effectiveness of government programs to meet the agreement's goals and objectives, and engaging the public on their perspectives of Great Lakes health.

Beyond binationalism, another strength of the agreement is its flexibility, which includes a requirement for periodic review that allows for modification as problems are solved, conditions change, or scientific research reveals new problems. Indeed, the agreement was updated in 1978, 1987 and most recently in 2012. As such, it has been described as an evolving instrument for ecosystem-based management.



Niagara Falls



1972	1978	1983	1987	2012
• Phosphorus loadings • Visible pollution	• Persistent toxic substances • Ecosystem approach to management	• Updated phosphorus reduction strategies	• Remedial Action Plans for Areas of Concern • Lakewide Management Plans	• Modernized • Enhanced governance • New and/or expanded issue annexes

The 1972 Agreement focused primarily on phosphorus pollution, or what scientists call eutrophication. The 1978 Agreement added toxic chemicals and introduced the concept of the ecosystem approach – which accounts for the interrelationships among air, water, land and all living things, including humans, and involves all user groups in comprehensive management. The 1987 revision focused more attention on lakewide management plans, and cleanup and restoration of pollution hotspots called Areas of Concern. The 2012 version expanded the focus to include invasive species, habitat and climate change.

Through the agreement, Canada and the U.S. have also led the way in incorporating citizen participation into transboundary environmental protection and governance. Citizen participation is critical in achieving compliance with environmental laws and holding governments, industries and other stakeholders accountable. However, some scientists and non-governmental organizations worry about complacency and inadequate review and evaluation.

Internationally, the Great Lakes and the agreement are viewed as a proving ground for restoring ecosystem health and advancing ecosystem-based management. *Continuous and vigorous oversight of the agreement will be needed as climate change has become the most pressing environmental challenge of our time and a threat multiplier, where warmer, wetter and wilder climatic conditions amplify other threats like harmful algal blooms, combined sewer overflow events, species changes, poor air quality effects on vulnerable residents and more.* Stakeholder involvement is critical to ensuring that restoration and protection of the Great Lakes remain priorities of governments.

For more information, visit:

- https://www.epa.gov/glwqa
- https://www.ijc.org/en/what/glwqa-ijc
- https://binational.net/glwqa-aqegl/
- https://canadaalive.wordpress.com/2013/05/29/the-great-lakes/

Share the Trail: Etiquette Tips for a Better Outdoor Experience

https://dnr.wisconsin.gov/topic/Parks

Spring means new trails and new opportunities for adventure in Wisconsin's outdoors. It's also a good time to remember to share the trail and practice caution on muddy or rutted trails.

Here are a handful of good practices to help make everyone's outdoor experience (including your own) more enjoyable.

Muddy and Rutted Trails:

- Try to use hard surface trails like asphalt or stone this time of year rather than native surface or dirt/grass trails.
- Think before you sink; if you leave tracks, turn back and try another trail.
- Seek out upland trails or trails in sandy areas that drain well.
- If you come across a muddy, wet or icy section of trail and cannot turn back, go right down the middle and embrace the mud - do not go around it and widen the trail tread which can damage habitat.
- Avoiding muddy trails now helps to limit closures and repairs later.
- Be mindful of safety issues like slippery areas or areas covered in water - walk your bike and go slowly.

Etiquette Tips for Every Season:

- Know before you go. Learn what types of trail use are permitted at your destination and obey traffic (and other) laws and signs.
- Ride single file. You can ride two or more abreast if you will not block other traffic.
- Walk with no more than two people across to allow others to pass.
- All users should stay right except to pass. Pass on the left of those you're passing.
- When passing, move to single file and announce yourself (verbally or with a bell) before passing. Slow down when maneuvering around other trail users.
- Pets must be on a leash 8 feet or shorter and kept under control. Keep your pet out of the path of oncoming or passing traffic. When possible, walk with your pet on the outer edge of the trail.
- Pack it in, pack it out. Pick up your litter.

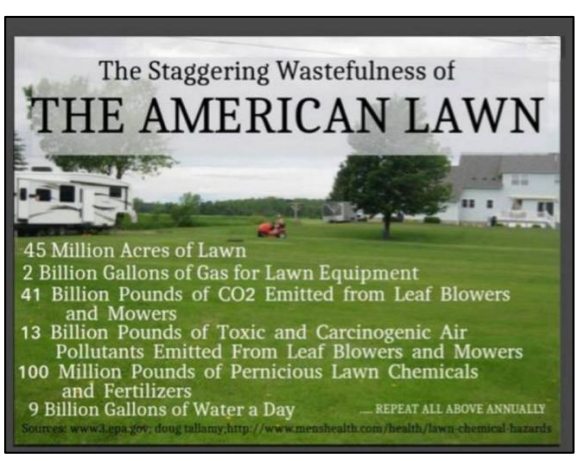
Thank you for helping keep our trails safe for all users. Please be considerate of all trail users and keep a physical distance of 6 feet between yourself and those outside your group. Learn more about safety guidelines and trail etiquette: https://dnr.wi.gov/files/PDF/pubs/pr/PR0472.pdf.

Welcome Pollinators to your Lawn with 'No Mow May'

https://beecityusa.org/welcome-pollinators-to-your-lawn-with-no-mow-may/

A lush, green, weed-free lawn has historically been center stage in American landscaping. It tells the whole neighborhood that you are a competent, hard-working, contributing member of society. Dandelions and an overgrown lawn are a sign of neglect, incompetence, and laziness - or so our culture would have you believe.

Americans have a love affair with lawns - maintaining roughly 40 million acres, or 2% of land in the US, making them the single largest irrigated crop we grow. Lawns require frequent mowing, raking, fertilizing, weeding, chemical treatment, and watering - sucking up time, money, and other resources. Not only are lawns burdensome for the people maintaining them, but they also provide little positive benefit to wildlife, and in fact are often harmful.



The traditional monoculture lawn lacks floral resources or nesting sites for bees and is often treated with large amounts of pesticides that harm bees and other invertebrates. When we think of habitat loss, we tend to imagine bulldozers and rutted dirt, but acres of manicured lawn are as much a loss of habitat as any development site. Re-thinking the American lawn can take a variety of forms from reducing mowing frequency or area mown to permanently converting lawn to a more diverse and natural landscape.

Do More by Doing Less

Mowing your lawn less creates habitat and can increase the abundance and diversity of wildlife including bees and other pollinators. One way to reduce mowing is by participating in **No Mow May**. No Mow May is a conservation initiative first popularized by Plantlife, an organization based in the United Kingdom, but which is gaining traction across North America. The goal of No Mow May is to allow grass to grow unmown for the month of May, creating habitat and forage for early season pollinators. This is particularly important in urban areas where floral resources are often limited.

In 2020, residents of Appleton, Wisconsin, an affiliate of Bee City USA, became energized about No Mow May and the City Council agreed to suspend their weed ordinance for the month of May. Over 435 registered property owners participated in the campaign, and Lawrence University, an affiliate of Bee Campus USA, partnered with Appleton to conduct research on the impact of No Mow May on pollinators. Researchers Israel Del Toro and Relena Ribbons collected data on the abundance (the number of individuals) and species richness (the number of species) of flowers and bees found in unmown yards of a subset of the properties participating in No Mow May. They then compared those numbers to the abundance and richness of flowers and bees found in nearby urban parks that are regularly mowed. The findings were impressive!

Not only were the abundance and richness of bees higher in the yards of properties participating in No Mow May, but they were way higher. Participating yards had three-times higher bee species richness and five-times higher bee abundance than nearby parks that had been mowed. This study was published in 2020 and is available for free download online. Empowered by their success in 2020, Appleton has spread the word and attracted even more participants in 2021.

Other studies have looked into how reducing the frequency of mowing throughout the growing seasons impacts bees. In a recent experiment conducted by Susannah Lerman, a research ecologist with the USDA Forest Service's Northern Research Station, Lerman and her collaborators explored whether different lawn mowing frequencies influenced bee abundance and diversity. The team mowed herbicide-free suburban lawns at different frequencies (every week, every other week, and once every three weeks) in Springfield, Massachusetts. **The results of their study found bee abundance increased when lawns were mown every other week.**

Lerman and her colleagues documented a staggering 93 species of bees, with supplemental observations bringing the total number to 111 bee species - nearly a quarter of all bee species native to the area!

The efficacy of reducing mowing may be expanded upon by altering the composition of your lawn to include more flowering species. A "bee lawn" may include Dutch clover (which captures nitrogen and helps feed the lawn) as well as other low-growing flowering plants such as creeping thyme (*Thymus* spp.), self-heal (*Prunella vulgaris*), and others. Some plants, such as native violets (*Viola* spp.) may already be present and should be encouraged as they are valuable host plants for fritillary butterflies. *For more information about creating a flowering lawn please see the resources at the end of this article.*

In addition to benefiting pollinators, reducing mowing frequency will save water, help your lawn become more resilient to drought, and reduce emissions from gas-powered lawn equipment that often lacks the emission reduction equipment found on larger engines.

Go Lawnless! Lawn certainly has its place. It provides a perfect platform for kicking a ball around, provides "accommodation" for the needs of pets, and can be used to define space in landscape design. But how much lawn do you really need, and to what standard must it be maintained? Do your kids need a perfect, weed-free lawn to play on? Do you really need to measure your lawn in acres rather than feet? In addition to reducing the amount you mow, think about reducing the amount of lawn that needs mowing. In place of that lawn, consider planting a rain garden, pollinator garden, or wildflower meadow - or replacing your turf grass lawn with native lawn alternatives.

The traditional monoculture lawn lacks floral resources or nesting sites for bees and is often treated with large amounts of pesticides that harm bees and other invertebrates.

VERSUS

A lawn converted to pollinator habitat.

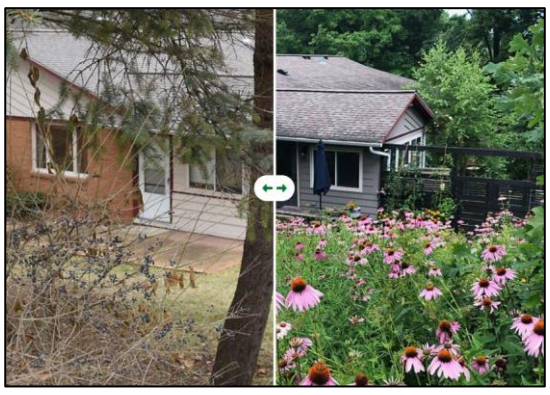
What About Weed Regulations? Most cities and municipalities have some form of weed ordinance that dictates the height and sometimes even the types of plants a homeowner is allowed to grow. While local ordinances will vary greatly from place-to-place, here are a few tips for keeping local officials, and your neighbors happy:

- **Maintain a mowed buffer**. Yes, after spending a considerable amount of time discussing the problems with lawn, we are suggesting you keep some - strategically. Keeping a mowed edge in front of or around a natural planting of a foot or two may be all that's needed to define "lawn" from "garden" and keep you in step with local

Continued next page

Convert Your Yard into a Pollinator Paradise!

https://www.nature.org/en-us/about-us/where-we-work/priority-landscapes/great-lakes/stories-in-the-great-lakes/plant-a-pollinator-paradise

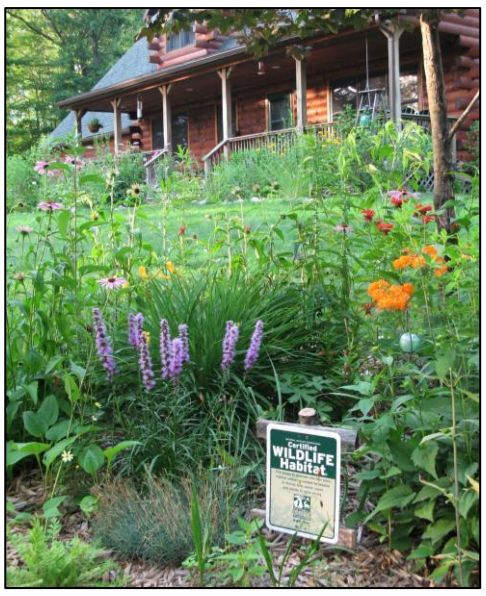


A backyard lawn converted into a prairie habitat.

Grass lawns have become a mainstay of American neighborhoods. We pressure each other to keep our yards perfectly mowed and green. But traditional grass lawns are often ecological disasters, frequently requiring dangerous chemicals and pesticides to maintain. Grass yards require lots of water and are deadly to essential insects and other animals that help keep nature in balance.

Pollinators - species like butterflies, bees, moths, hummingbirds and other birds, beetles, and bats - rely on a diverse mix of native plants to survive and thrive. As a result of overdevelopment, pollution, and habitat destruction, we're facing a dramatic decrease in pollinator populations worldwide, a fact that threatens our food supply and many other vital services. Scientists estimate that three-fourths of the world's flowering plants and about 35 percent of the world's food crops depend on animal pollinators to reproduce. *That's about one out of every three bites of food we eat that exists because of animal pollinators.*

The good news is that we can all play a part in reversing the downward trend by lending a helping hand to our pollinator friends right in our own backyards. Efforts as simple as planting a window box with native plants make a difference. If you have a yard to work with - even a small patch - converting that grass to native flowers and plants is a great way to restore balance to your local ecosystem.



Native gardening is good for our air, our water, wildlife, and us! Once established, native plants save time and money by reducing the need for fertilizers, pesticides, water, and lawn maintenance equipment. It's a win-win for people and nature!

How Do I Get Started on a Pollinator Garden?

Starting a project like this can feel a little daunting at first. Thankfully, there are plenty of experienced teachers ready to offer a helping hand and demystify the process. Stephanie Judge is the Conservation Project Manager for The Nature Conservancy in Wisconsin. Visit this link for step-by-step instructions for how to tackle your own native yard project, including siting, seed selection and sourcing, techniques for removing the old yard and planting the new seed, and learn about the many benefits to you and nature: https://youtu.be/_qRWoBR9nic. Here is a link to a step-by-step guide to help you also: https://www.nature.org/content/dam/tnc/nature/en/documents/Wisconsin_TurfGrassConversionToNativePlantsTutorial_FINAL.pdf.

You may also want to check out this Homeowner's Guide to Landscaping with Native Plants to Ward Off Invasives & Benefit Wildlife from the Midwest Invasive Plants Network. See also their Landscape Alternatives to Woody Invasives. If you're struggling to deal with invasive plants on your property, the Midwest Invasive Plant Network is always an excellent resource for weed identification, control, and native plant replacement options. The Woody Invasives of the Great Lakes Collaborative also provides an excellent guide to controlling problem plants.

What Are Some Native Plant Resources?

If you want to add native plants to your garden but are not sure where to start, here are a few resources that Stephanie recommends for helping you find the right plants for your yard:

- Wisconsin DNR's Native Plant Guide
- Illinois DNR Native Plant & Habitat Guide
- Michigan DNR Native Wildflowers / Grasses and Ground Covers
- Midwest Native Plant and Seed Sources

There are many good sources for native trees, plants, and seeds. Search your state's listings for local municipal native plant programs, county tree and native plant sales, fundraisers for non-profits, state-based nurseries, county conservationists and land and water conservation departments, university extension programs, and reputable private suppliers. Many states' Departments of Natural Resources provide great guides for naturalizing shorelines, creating smaller garden plots, raingardens and window gardens. University extension programs are also typical resources for education and renting needed equipment for larger projects.

An example of a local pollinator habitat project is the "Pollinator Invitation Garden" initiative from 2020-2021, carried out by the Marinette County Land & Water Conservation Division. Staff helped over 30 county residents install or improve pollinator habitats at home. Several non-residential entities participated also, including Good Shepherd Lutheran Church in Peshtigo, UW-Green Bay Marinette campus, and the Menominee YMCA. Several schools in the area also have installed small pollinator gardens in recent years too. The link below shows the installation and ongoing progress of several of the P.I.G. gardens.

https://www.flickr.com/photos/194889855@N02/albums/72177720296237231

Continued from page 4 – *No Mow May*

ordinances or Homeowner Association guidelines.

- **Engage with your city council, health department, or other local officials**. Tell them what you are doing, why, and begin a conversation about how they can support natural landscapes in their community. This fact sheet from Penn State can help arm you with facts to overcome the common myths that have led to overly restrictive weed ordinances.
- **Suggest an "opt-in" program, such as a Natural Lawn Registration program** to sidestep the need to re-write a health code ordinance. Under such a model, a homeowner may register their natural landscape with their local health department.
- **Educate your neighbors and passersby about your landscaping choices.** Displaying a simple sign designating your yard as pollinator habitat can be the difference between it being seen as a neglected area to people viewing it as an important part of a thriving landscape.

Recently the City of Peshtigo passed a resolution to participate in "No Mow May" in 2022 on a one-year trial basis, after hearing about the success of the program in Appleton and other Wisconsin cities.

Resources for lawn alternative ideas, information, etc.:

- ✓ https://bluethumb.org/turf-alternatives/pollinator-lawn/
- ✓ www.beelab.umn.edu/learn-more/beelawn
- ✓ https://www.nrdc.org/stories/more-sustainable-and-beautiful-alternatives-grass-lawn
- ✓ https://www.nrdc.org/resources/toward-sustainable-landscapes-restoring-right-not-mow
- ✓ https://learn.eartheasy.com/guides/lawn-alternatives/
- ✓ https://www.nrs.fs.fed.us/pubs/55816 - lawn mowing frequency & bees study
- ✓ https://www.nytimes.com/2022/04/07/learning/lesson-plans/lesson-of-the-day-in-wisconsin-stowing-mowers-pleasing-bees.html

How to Become a Zero Waste Gardener

https://www.treehugger.com/how-become-zero-waste-gardener-5216222

When we talk about zero waste, many people zero straight in on recycling. But recycling alone is not enough. In fact, recycling is the last of the zero waste steps that we can take to reduce waste and become more sustainable in our homes and gardens. Before recycling, we should think about the four other "Rs": refuse, reduce, reuse, and repair. Here are some tips to help you move beyond the basics and get as close to zero waste in your garden as possible.

Refuse to Contribute to Damaging Systems

Each and every thing we buy and consume comes at a cost. But we can significantly reduce our personal impact by thinking carefully about what we buy and bring into our homes and gardens. As gardeners, we may inadvertently contribute to damaging systems. This happens, for example, when we choose items which come in single-use plastic, and when we use plastic as a temporary solution where other, more eco-friendly materials would work. But we can refuse to buy seeds in plastic or plants in plastic pots - instead collecting our own seeds, propagating our own plants from divisions or cuttings, or choosing to buy from suppliers who package in a more sustainable way.

There's a chance that you use peat in your garden, which contributes to the destruction of peat bogs. Laying waste to these precious carbon sinks and biodiversity hotspots leads to a different but equally problematic type of waste. But we can refuse peat composts and peat-based potting mixes, and instead choose a peat-free alternative for containers. Alternatively, we can make our own composts at home.

As gardeners, we should also all refuse to use any synthetic pesticides, herbicides, or fertilizers. Instead, we can take an entirely organic and natural integrated approach. Knowing what to say "no" to is one of the first steps in becoming a truly zero waste gardener.

Reduce Consumption by Growing Your Own

Becoming a zero-waste gardener is certainly not just about *what* you buy. It is also about buying and consuming less in general. Though we should not think of nature only in terms of the resources it can provide, it is important to recognize how nature plus our own effort and time can provide us with many of the basic things we need.

We can reduce our need to buy food from elsewhere by growing it ourselves. But we should look beyond this at the other things we can grow in our gardens, from medicinal herbs to materials for construction and craft to natural cleaning materials, just to name a few examples. The more we can do ourselves in our gardens, the more we grow and use, and the less we have to rely on systems in a wasteful world.

Reuse Household Items and Reclaim Materials

The next "R" on the list is reuse. Even when we cannot source natural materials to use in the creation and maintenance of our gardens, we still should not rush out and buy something new. We can embrace second-hand items and reclaimed materials and make use of household waste (such as toilet roll tubes or food packaging, for example).

Options for reuse, upcycling, and innovation in a garden are almost endless. We just have to look around at what is available and use our imaginations to keep items out of the waste stream. Avoid the cycle of excessive consumption by keeping the items we already have in use for as long as possible.

Repair People, Items, and Ecosystems

Learning how to repair things like tools or equipment can be a good way to move closer to zero waste in your garden. But in a garden, 'repair' is not just about items, and 'waste' does not just apply to trash. Waste can also apply to people, who are wasting their time, energy, or talents. A garden can help people make the most of all three. When people need "repair", a garden can be a place of solace and healing - and help people live up to their potential.

Gardens can also be places where we repair damage to the natural world around us. By gardening in eco-friendly and sustainable ways, we can halt biodiversity losses, and perhaps even contribute to restoring ecosystems which once flourished in our areas.

A monarch laying eggs on a young milkweed plant.

Recycle Nutrients and Other Resources Within the Garden System

Recycling is important, too - at home, as well as through municipal schemes. We should all be composting food waste and other biodegradable materials in our gardens, mulching, chopping and dropping, making organic liquid plant feeds, etc., to recycle nutrients and create a closed loop system in our spaces. We should also think about recycling in terms of the water cycle - replenishing groundwater sources and taking a long view by using water in our gardens wisely and well.

Just remember, plastic and food waste are key issues, but they are not the only ones. And being a truly 'zero-waste' gardener goes far beyond recycling.

2022 Wisconsin Envirothon Competition Held April 22

https://wisconsinlandwater.org/our-work/youth-education/envirothon

WI Land+Water's Envirothon, sponsored by the Outdoor Heritage Education Center and many other Wisconsin organizations, was held on Earth Day in Rosholt, WI at the Wisconsin Lions Camp on Friday, April 22, 2022.

Founded in 1988, Wisconsin Envirothon is our state's ultimate middle and high school environmental science challenge. Teams of five high school or five middle school students participate in the hands-on, outdoor field challenges designed by natural resources professionals and educators. This day-long event is an excellent opportunity for students to develop leadership and communication skills that champion a more sustainable and environmentally aware community.

The 2022 Current Issue was *Waste to Resources*. This year's WI Envirothon was a hybrid event. Team presentations were held by Zoom prior to April 22 – each team presented a topic related to the theme to a panel of judges. The teams then participated in a hands-on station competition at the WI Lions Camp on April 22, 2022. Teams took exams based on four categories: Aquatic Ecology, Forestry, Soils & Land Use (above), and Wildlife (below). Exams were a combination of a written portion and hands-on stations.

Sun Prairie High School FFA took the title of Overall winner for the High School level, and will represent Wisconsin at the National Conservation Foundation-Envirothon taking place July 24-July 30, 2022 at Miami University in Oxford, Ohio.

***WI Land+Water** is a nonprofit organization that supports the local and statewide efforts of all county land conservation committee supervisors and conservation staff across Wisconsin. Its mission is to protect, conserve, and enhance Wisconsin's natural recourses by advocating for and supporting county conservation efforts, for current and future generations.* Connect with the Wisconsin Envirothon on Facebook: https://www.facebook.com/wienvirothon.

Wisconsin Youth Conservation Camps Back for Summer 2022!

https://wisconsinlandwater.org/our-work/youth-education/conservation-camp

Two unique conservation summer camp opportunities are available for middle and high school students this summer in Wisconsin. *Youth in neighboring states are welcome to attend.* These camps provide fun outdoor experiences, help foster an appreciation for nature, and introduce a variety of opportunities in natural resources and conservation careers. Natural resource professionals present programs on wildlife, habitat, water quality, soils, forestry, outdoor skills, and more. Engaging speakers and interesting topics give campers an opportunity to participate in hands-on activities, learn outdoor skills, make new friends, participate in typical 'summer camp' experiences, and enjoy Wisconsin's beautiful outdoors.

Middle school youth (entering 6-8th grade in fall) are invited to attend the **WI Land+Water Middle School Conservation Camp**, held June 15-June 18, 2022 at Upham Woods Outdoor Learning Center, Wisconsin Dells (Juneau County). The registration fee is $200.00, and registration is due May 31 (fee increases to $250.00 after registration deadline). Fee includes lodging, meals, snacks, t-shirt, and all activities/programs. To learn more, and to register, visit online at https://wisconsinlandwater.org/our-work/youth-education/conservation-camp/middle-school-camp-registration.

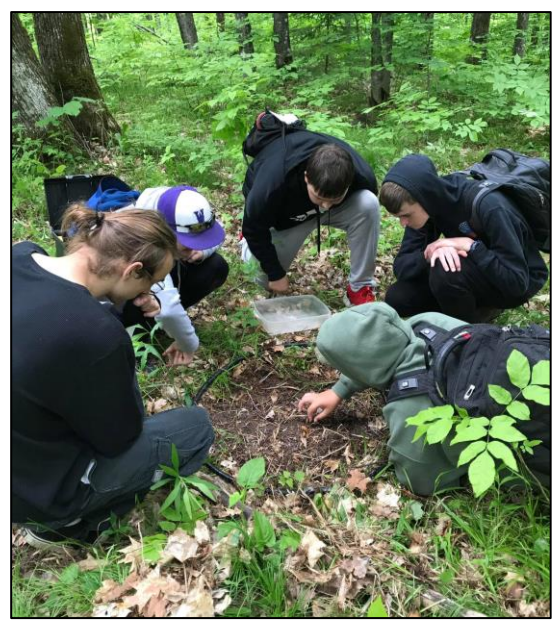
High school youth (entering 9-12th grade in fall; must be 17 or under) are invited to participate in the **WI Land+Water High School Conservation Camp**, June 20-June 23, 2022 at the North Lakeland Discovery Center in Manitowish Waters (Vilas County). Wildlife programs, habitat restoration projects, daily field trips, teambuilding activities, and hands-on activities provide an in-depth look at natural resources management and careers. Registration fee is $350.00, and is due May 31 (fee increases to $400.00 after registration deadline) and includes all programs, meals, snacks, lodging and a t-shirt. To learn more, visit: https://wisconsinlandwater.org/our-work/youth-education/conservation-camp/high-school-camp-registration.

Students are encouraged to apply for the Brad Matson Memorial Conservation Camp Scholarships. Find more information at https://wisconsinlandwater.org/our-work/youth-education/conservation-camp.

Contact your local County Land Conservation Department to see if they offer conservation camp scholarships: https://wisconsinlandwater.org/members-hub/members.

To learn more about both camps, view the camp informational brochures at: https://wisconsinlandwater.org/our-work/youth-education/conservation-camp.

For questions, contact Kim Warkentin at the Wisconsin Land+Water at 608-441-2677 or email kim@wisconsinlandwater.org. *Registrations are first-come, first-served, and space is limited at both camps.*



Above: High school students study forest ecology; below, building bird houses and studying water samples in a bog.

For more about WI Land + Water youth education: www.facebook.com/WILandWaterYouthEd/

Guided Spring Wildflower Walk at the Harmony Arboretum Hardwoods!

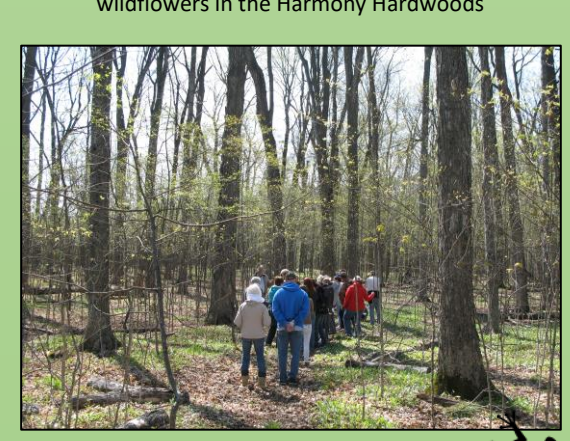
A Spring Wildflower Walk will take place from **9 to 11 a.m. Saturday, May 7**, in the Harmony Hardwoods Memorial Forest. Although they are usually small and subtle, the variety and beauty of native flowers is worth exploring - participants may see such species as trillium, bloodroot (below), bellwort, Dutchman's breeches, spring beauty, and trout lily (above).

Wear good walking shoes or hiking boots and dress for the weather. Insect repellent is also recommended. The walk is about 1.5 miles and there is some uneven terrain, with a few inclines. Please meet at the pavilion by the parking area; if bad weather, event will be cancelled.

Harmony Arboretum and Demonstration Gardens has been developed into a conservation and horticulture education demonstration area. It is located 7 miles west of Marinette on Hwy 64, then ½ mile south on County Hwy E on the east side of the road. (Google Maps: "Harmony Arboretum, Peshtigo, WI).

The arboretum includes the majestic hardwood forest, winding walking trails, a demonstration prairie, a children's garden, a shade house, and demonstration vegetable and flower gardens. It is open to the public year-round, free of charge.

Above: Spring beauty in bloom; below, looking for wildflowers in the Harmony Hardwoods



Invasive Species European Frog-bit in Marinette County

https://dnr.wisconsin.gov/newsroom/release/48136
https://dnr.wisconsin.gov/topic/Invasives/fact/EuropeanFrogbit.html

A new invasive species, European frogbit (*Hydrocharis morsus-ranae*), above, has been found in Marinette County. The Land Information Department will be dedicating specific resources to control the spread of this plant this summer and to monitor any new hotspots. Current known frogbit infestations include Seagull bar and parts of the West Shore Wildlife Area. It was first found in 2021 in Oconto County.

European frogbit, known for its petite lily pad-like leaves and elusive white flower, originally inhabited Europe and parts of Asia and Africa. Wisconsin's invasive species rule, Wis. Admin. Code NR 40, prohibits European frogbit across the state. Prohibited species are illegal to transfer, sell, possess, transport, or introduce into the state.

In late July 2021, a botanist conducting surveys for the Great Lakes Coastal Wetland Monitoring Program funded by the Great Lakes Restoration Initiative (GLRI) observed European frogbit growing in an unnamed stream and throughout the adjacent drainage ditches just north of the City of Oconto. After it was reported to the DNR, staff visited the site to verify the species and collect specimens and photographs.

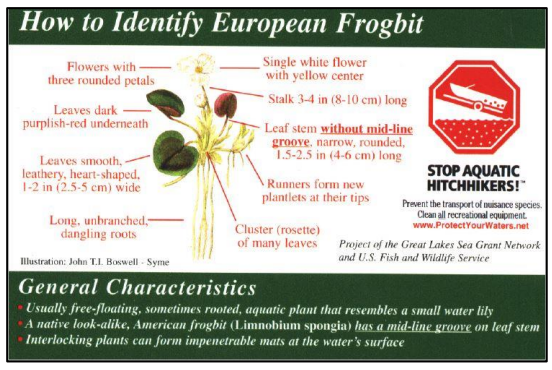
European frogbit is a plant that can form large colonies of dense floating mats that can dramatically affect native aquatic life and recreational activities.

"The streams, wetlands and drainages along the west shore of Green Bay are highly valued ecosystems for many fish species including Northern Pike, Yellow Perch, and many forage fish along with many species of birds, amphibians, and native plants," said Ken Dolata, Department Head for the Oconto County Land Conservation Department.

Large mats of European frogbit can become dense enough to reduce light that native plants need and prohibit movement of large fish and diving ducks.

"There are numerous ways that plants such as this get introduced," said Amanda Smith, a DNR Invasive Species Specialist. "For this population in particular, movement by boats is likely as there is a nearby boat launch that is heavily used by boaters from throughout the Midwest who travel long distances to experience the Green Bay fishery. It is also possible that it was released from a water garden or aquarium since European frogbit was once a popular ornamental plant. Once introduced, natural dispersal is also possible given its ability to overwinter and spread rapidly."

Initial monitoring efforts revealed European frogbit is in numerous marshes and tributaries of Green Bay that are connected by drainage ditches. Removal efforts will begin in the coming days and will continue throughout the summer and subsequent years.



Leaves: Usually floating; resemble tiny water lilies; kidney-shaped with long stems; 0.5-2.25" in diameter; smooth; often dark purple beneath; lateral veins are arching and make a 75-90 degree angle with the midvein; tissue containing air pockets are located mostly along the midvein. Lower leaf surfaces are dark purple in color.

Flowers: White; cup-shaped; three petals with yellow dots at base; bloom mid-summer.

Fruits & seeds: Rarely produces seeds and instead relies on vegetative reproduction.

Roots: Long, cord-like stolons form large floating mats of connected plants. It also forms turions.

Similar species: Often confused with American frog-bit (*Limnobium spongia*), a species whose leaves have lateral veins that make a 30-80 degree angle with the midvein, and whose leaf tissue contains large air pockets throughout.

How to Report it if you see European frogbit: https://dnr.wisconsin.gov/topic/Invasives/report.html

- **Photograph** Take a digital photo(s) of the species in the setting where it was found and include a common object in the photo for size reference.
  - For plants include flowers, leaves, stem arrangement, and fruits.
  - For animals include shells, top and bottom and any identifying characteristics.
- **Collect** up to 5 intact specimens to aid identification.
  - For plants, try to get the root system, stems, leaves, flowers, and seeds. Place plants in a Ziplock bag with a damp paper towel.
  - For animals, try to get the entire animal if possible. Place animals in a jar with water or ethanol. Place on ice and store in a refrigerator as soon as possible.
- **Record** details using:
  - Your planned project data in the Surface Water Integrated Monitoring Systems (SWIMS); OR
  - Aquatic Invasive Species Incident Report [PDF]; OR
  - Just take notes.
- **Submit** the photos, specimen and form/notes to the DNR Aquatic Invasive Species Regional Coordinator/Point of Contact and SWIMS.

More information can be found here:

- https://www.michigan.gov/invasives/id-report/plants/aquatic/european-frog-bit
- https://dnr.wisconsin.gov/topic/Invasives/fact/EuropeanFrogbit.html

Butterfly or Moth? Tips to Help You Distinguish Them

Many people think that moths are the nighttime equivalent of butterflies, but it's not quite that simple - most of these characteristics aren't absolute, as there are many exceptions to the rules.

One thing you can count on: butterflies fly only during the day. But not all moths are strictly nighttime fliers. For example, Hummingbird moths, which include several species of sphinx moths (like the white-lined sphinx moth below), eat nectar at flowers during the day.

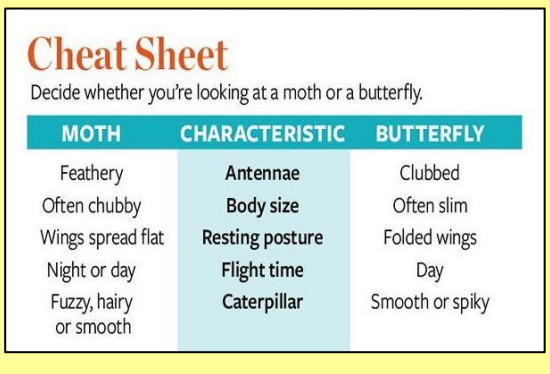
The best way to tell the difference between a moth vs. a butterfly is to look at the antennae. All butterflies have long, thin antennae that end in a thickened tip. But no North American moths sport these "clubbed" antennae. Instead, they have shorter, feathery antennae - especially prominent on males - that are beautifully plumed and designed to catch wafting pheromones released by females. Female moths typically have simple, thin antennae, similar to a butterfly's at first glance but with a tapered tip.

Notice the difference in posture, too. Butterflies usually hold their wings folded up over their bodies when they rest. Nearly all moths rest with their wings flat or folded in a roof-like position over their bodies. **Also, their bodies tend to be chubbier than those of butterflies.**

As larva, several clues can help determine whether that crawling creature will become a butterfly or a moth. **A fuzzy or hairy caterpillar ambling through your garden is a moth-to-be.** Butterfly caterpillars aren't fuzzy or hairy, but they may have spikes. However, if the caterpillar has smooth skin, it could be either. Below at left is a milkweed tussock moth larva; at right, a great spangled frittilary butterfly larva – note the defensive 'spikes'.

All butterfly caterpillars transform into a chrysalis, a stage when they have a hard, smooth covering that hangs from a patch of silk on a plant, twig or other support. On the other hand, moths have cocoons plastered with silk. If you're digging in your garden and uncover a smooth brown cocoon, or pupa, in the soil, it's going to be a moth. *No butterfly spends that stage in the soil.*

Use this cheat sheet and the tips below to help you!



Cheat Sheet

Decide whether you're looking at a moth or a butterfly.

MOTH	CHARACTERISTIC	BUTTERFLY
Feathery	Antennae	Clubbed
Often chubby	Body size	Often slim
Wings spread flat	Resting posture	Folded wings
Night or day	Flight time	Day
Fuzzy, hairy or smooth	Caterpillar	Smooth or spiky

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Outdoor Almanac

3
The distinctive orange-and-black plumage of **Baltimore Orioles**—named for the colors of the coat of arms of Lord Baltimore, the first Proprietor of the Province of Maryland—make these birds easy to spot now.

5
Height of the Eta Aquarids meteor shower. In the northern hemisphere, roughly 30 shooting stars per hour, most prominent after midnight, grace the dark sky.

7
Oak catkins (male flowers) are open. Gray Squirrels eat these flowers, which also support numerous caterpillar species that are important food sources for migrating birds.

13
Bird-a-thon, Mass Audubon's annual fundraiser and 24-hour birding competition, kicks off.

Mass Audubon bird-a-thon 2022

14
World Migratory Bird Day, which highlights the need for global conservation to ensure the continued survival of all our migratory bird species.

15
Full moon and total lunar eclipse. When the moon is in Earth's shadow it will turn reddish—a full blood moon. The total eclipse will be from 11:30 pm to 12:50 am.

17
Height of the **spring warbler migration**. Listen to the dawn chorus and watch the treetops and shrubbery at sunrise and sunset for these beautiful little birds.

19
Look for the large, pink blooms of lady's slipper orchids along upland forest floors.

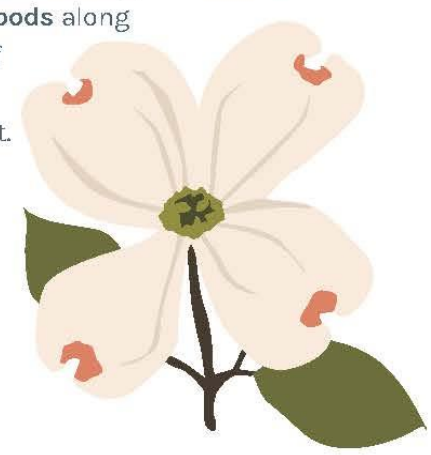
20
World Bee Day! Bumblebee queens have emerged and are looking for good nest sites. They fly in distinctive zigzag patterns close to the ground in scrubby areas and field edges.

23
Tiny, strikingly blue **Spring Azure** butterflies patrol their territories in late afternoon at woodland edges and in forest clearings.

24
Great Horned Owls are not cavity nesters but use old Red-tailed Hawk or Great Blue Heron nests, often at the top of snags. Look for the still-downy heads of Great Horned Owl fledglings sticking up over the edges of these large nests.

26
Keep an eye out for female Painted and Snapping turtles crossing roads as they climb uphill to soft, drier soil to dig nests and lay eggs.

27
Enjoy the beautiful white or occasionally pink blooms of our **native flowering dogwoods** along forest edges, or look for one of our most distinctive forest wildflowers, Jack-in-the-pulpit. Keep an eye out for the 1- to 2-foot-tall spathe (pulpit) that grows up and over the flower stalk (Jack).



Mass Audubon

massaudubon.org

Federal Budget Invests $2.8 Billion to Support Outdoor Recreation Economies, Access to Public Lands

https://www.doi.gov/pressreleases/president-bidens-budget-invests-28-billion-support-outdoor-recreation-economies-access

The Departments of the Interior and Agriculture will invest $2.8 billion in fiscal year 2023 to address critical deferred maintenance projects and improve transportation and recreation infrastructure in national parks, national wildlife refuges and recreation areas, and at Bureau of Indian Education schools. The proposed allocations, authorized by the Great American Outdoors Act (GAOA), will fund projects, grants and programs that support local economies and voluntary national conservation efforts in every U.S. state.

GAOA established the National Parks and Public Land Legacy Restoration Fund (LRF), authorizing up to $1.9 billion per year from Fiscal Year 2021 through Fiscal Year 2025 to address deferred maintenance on public lands and at Indian schools. GAOA also provides permanent, full funding of the Land and Water Conservation Fund (LWCF) at $900 million annually to secure public access and improve recreation opportunities on public lands; protect watersheds and wildlife; and preserve ecosystem benefits for local communities.

"Millions of people each year enjoy our nation's treasured public lands, which creates jobs, stimulates local economies, and connects the public to our great outdoors," said Secretary of the Interior Deb Haaland. "Along with President Biden's Bipartisan Infrastructure Law, the Great American Outdoors Act is making critical investments by funding much-needed repairs and improvements in communities nationwide. Importantly, this funding also honors our commitment to Tribal communities by investing in Bureau of Indian Education-funded schools for current and future generations."

"We have already seen the incredible impact these investments have made toward providing equitable access to public lands and to expand our conservation efforts, all while bringing much-needed opportunity to rural communities around the country," said Agriculture Secretary Tom Vilsack. "Every year, millions of visitors take advantage of the outdoor recreation opportunities offered by our national forests and grasslands, and these continued investments help solidify uninterrupted access to these national treasures for our future generations."

Details of Interior's FY 2023 project funding and distribution are available on the National Parks and Public Land Legacy Restoration Fund and the Land and Water Conservation Fund websites. Details of the USDA Forest Service FY 2023 project funding and distribution are available on the agency's Great American Outdoors Act website.

National Parks and Public Land Legacy Restoration Fund (LRF)
The Interior Department and USDA Forest Service deferred maintenance projects funded by GAOA for Fiscal Year 2023 are projected to support over 18,700 jobs and generate $2 billion in local communities. The investments will advance the administration's goal to create good-paying, union jobs and build back better by addressing critical deferred maintenance needs in America's national parks, national wildlife refuges, recreation areas, national forests, grasslands and Bureau of Indian Education schools (https://www.doi.gov/gaoa/about).

The 63 LRF deferred maintenance bundled projects planned by the Interior Department and 96 LRF planned by USDA Forest Service will improve recreation facilities, water and utility infrastructure, schools and other historic structures. Other projects aim to increase visitor access by restoring and repairing roads, trails, bridges and parking areas.

In FY 2020, Interior bureaus estimate they hosted about 378 million visits to the national parks, national wildlife refuges and hatcheries, recreation areas, and Bureau of Reclamation sites. For FY 2020, Interior's Office of Policy Analysis estimated that recreation on Interior's lands contributed roughly $26.1 billion to the nation's Gross Domestic Product and supported about 347,000 jobs. In 2020, national forest lands hosted more than 168 million visits, supported approximately 161,000 jobs and contributed $13.5 billion to the nation's Gross Domestic Product.

The investments included in the budget request for the LRF will enable the Interior Department and USDA Forest Service to address a combined total of more than $1.8 billion of deferred maintenance across the nation and supports the overall portfolio of infrastructure investment. When combined with the previous years, Fiscal Year 2023 LRF funding will enable the two agencies to pursue deferred maintenance projects in all 50 states and multiple U.S. territories.

Land and Water Conservation Fund (LWCF)
The Land and Water Conservation Fund was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. Today it continues to protect natural and cultural resources; strengthen the resilience and biodiversity of our lands, waters and ecosystems to climate change impacts; increase access to outdoor recreation; engage strong local partnership support; and provide benefits to a broad audience that includes underserved or at-risk communities (https://www.doi.gov/lwcf).

The FY 2023 budget allocates $900 million for LWCF projects and programs managed by the Department of the Interior and the USDA Forest Service. This includes $418.7 million for federal land acquisition programs and projects and $481.3 million for state and local grants. These investments will provide recreation opportunities across America, safeguard important natural areas and cultural heritage sites on public lands, and support locally driven conservation and outdoor recreation projects though grants to states and local governments.

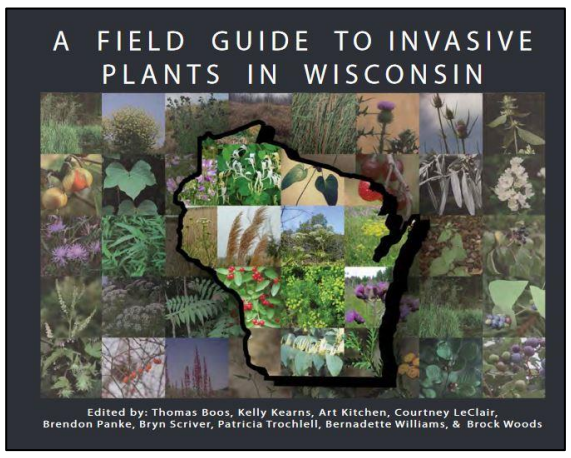
In FY 2023, the Interior Department will allocate $681.9 million for LWCF programs, including $294.8 million for federal land acquisition projects and programs. The Department's LWCF land acquisition projects acquire critical lands or easements from willing sellers to protect at-risk natural, cultural or historic resources including critical habitats and migration corridors, and increase access to outdoor recreation. The Interior Department will invest more than $148 million to fund 47 projects in as many as 35 states across the country, in addition to smaller recreation access projects.

The Interior Department proposes to allocate another $387 million to support conservation and recreation state and local grants, which includes state LWCF formula grants and Competitive Outdoor Recreation Legacy Program (ORLP) grants. The ORLP, established in 2014, enables urban communities to create new outdoor recreation spaces, reinvigorate existing parks, and form connections between people and the outdoors in economically underserved communities.

The USDA Forest Service will invest $94 million to fund 15 Forest Legacy Program projects and $124 million to fund 15 Land Acquisition Program projects, including projects for recreation access and other needs. Funding authorized through GAOA is subject to a 5.7% sequestration reduction, which becomes available for obligation in the next year.

Poisonous, Irritating and Invasive Plants You Should Never Grow

https://www.birdsandblooms.com/gardening/gardening-basics/invasive-poisonous-plants/



https://dnr.wi.gov/topic/invasives/documents/wi%20inv%20plant%20field%20guide%20web%20version.pdf

When you think of unwanted plants, dandelions, quack grass and other common weeds that bully their way into your yard and garden probably come to mind. But occasionally we inadvertently plant a seedy character that either takes over the garden, gets you itching or causes a whopper of a stomachache (or worse) if eaten. Discover the worst irritating, poisonous and invasive plants you should avoid (and here's how to remove invasive plant species for good.)

The Most Common Invasive Plants in North America

- Barberries
- Buckthorn
- Chinese and Japanese wisterias
- English ivy
- Garlic mustard
- Japanese honeysuckle
- Japanese knotweed
- Kudzu
- Oriental bittersweet
- Purple loosestrife
- Queen Anne's lace
- Tree-of-heaven

Purple loosestrife (below) which has taken over many a backyard garden, has now taken to our natural wetlands. A vigorous grower, it crowds out native plants, eliminating cover and essential food sources needed by wetland wildlife.

Purple loosestrife isn't the only invasive plant causing problems in natural landscapes. Norway and Amur maples have joined buckthorn (below) and honeysuckle as woodland invaders. The lesson here? Do a little research before adding new plants to your landscape. Select plants suited for the growing conditions in your backyard. Then, check with your local extension service or an area nursery for a list of invasive plants that plague your region.

Keep in mind, however, that it's possible for invasive plants in one area to struggle to survive in another. Butterfly bush, tamarisk and ivy are a few that are invasive plants in warmer locales but have a hard time making it in cold, wet or less than ideal growing conditions. Check with your local university extension service to see if these plants are considered to be invasive in your area. Check out some alternatives to invasive shrubs.

Plants That Cause Skin Irritation

Gas plant, meadow rue, euphorbia and hyacinths are common landscape plants that can leave some gardeners covered with an itchy, red rash. Though the list of potential irritation-inducing plants is long, not all gardeners will be affected by some - or even any - of these plants. The best tactics to avoid the itch are to be careful about what you plant, be diligent about wearing protective garden garb and learn maintenance strategies that'll keep your landscape looking good…and your skin rash-free.

Start by taking note on how the offending plant causes the rash, and make changes based on that information. For instance, some gardeners with sensitive skin develop a rash after only a few minutes of handling prickly plants. If this is you, be sure to wear heavy clothing and leather gloves, or convince your thicker-skinned gardening friends to help out.

Infamous plants like poison ivy (above) or even some ornamental euphorbias also contain irritants in their saps that result in a painful and itchy rash. Don long sleeves if you plan to garden around or weed these irritants out of your landscape. Immediately wash the irritating oils off your body and clothing to avoid further exposure and expansion of the rash.

Oddly enough, gas plant, wild parsnip (above) and garlic mustard (below) sap cause a rash only when the irritating oils are exposed to sunlight. That's why some gardeners weed at dusk or by their landscape lighting to eliminate the risk. But if you can work around these irritants only by the light of day, wear long sleeves and gloves and wash skin immediately.

Poisonous Plants

Just as we weigh the risk of planting rash and allergy-inducing plants in the landscape, we do the same for poisonous plants. It may surprise you to learn just how many of your favorite plants can cause stomachaches, diarrhea or even death when eaten. But let's take a realistic look at living with potentially poisonous landscape plants before leveling our garden beds and switching to artificial turf and silk flowers.

Those with small children and pets may want to avoid planting the very toxic datura (below), commonly known as Jimson weed, and castor bean.

The seed in the fleshy red fruit of the yew (below) the nuts of horse chestnut trees and all parts of the oleander plant are also toxic. And let's not forget the wild mushrooms Mother Nature sometimes scatters in the yard. Try growing an indoor mushroom kit instead!

That said, perhaps the most important thing we can do for our children is to curb their sense of adventure when it comes to eating wild plants. You should also keep houseplants, seeds and bulbs out of the reach of small children and pets. And store all garden chemicals in their original containers in a secure location. And try natural ways to kill weeds and eliminate insect pests rather than noxious chemicals.

Lastly, reduce the risk by identifying and labeling all your landscape plants. As a gardener, it is great to have a record of what's planted where. But as a parent or pet owner, you never know when this kind of information will be useful in the case of an emergency.

For more information about invasive, irritating, and/or poisonous landscape plants, visit:

- https://hort.extension.wisc.edu/article-topic/weedsinvasive-plants/
- https://dnr.wi.gov/topic/Invasives/photos/index.asp
- https://www.mtu.edu/kisma/mipn-usfs-reveg-homeowner-kisma.pdf
- https://orbisec.com/wp-content/uploads/2017/07/201707018_Poisonous-Plants.pdf
- https://www.wiscontext.org/5-poisonous-plants-avoid-wisconsin
- https://www.webmd.com/skin-problems-and-treatments/ss/slideshow-poison-plants-guide

The Most Littered Object in the World?

https://www.sierraclub.org/sierra/2013-3-may-june/green-life/most-littered-object-world

America's got a 'butt' problem. A *big* one. We're talking about cigarette butts — the shriveled little bits of flicked cigs that are creating a not-so-little problem for our environment. What's that? You just saw a cigarette butt sail from a car window? Lodged in a sidewalk crack? Chances are you're not alone; **cigarette butts are far and away the most littered item in the world**, with roughly 4.5 trillion being tossed each year. And they present a serious hazard to our natural world.

The butt itself is comprised of two parts: A plastic filter and the remnants of the used tobacco. While the leftover tobacco is by definition biodegradable, the filters are made from a plastic called cellulose acetate, a compound that eventually breaks down but never disappears. **Ever.** Combine that with the roughly 4,000 chemicals found in cigarettes, and you've got the recipe for a pretty awful eco-aftertaste.

This doesn't stop our wildlife from sampling the local cuisine. Birds and dogs often pick at the bite-sized waste, and marine animals like fish can ingest cigarette butts that wash into nearby lakes, rivers, and oceans. If the poisons don't claim their lives first, a predator or a commercial fishery might, setting into motion a complexly destructive cycle in our food chain. Toxins: They're what's for dinner.

Bird feeding its chick a cigarette butt – from https://www.audubon.org/news/disturbing-photo-shows-black-skimmer-feeding-cigarette-butt-its-chick

This waste tears at the people-planet relationship in other ways, too; fires caused by cigarettes take the lives of more than 900 people in the U.S. every year. These fires amount to nearly $6 billion in annual human and property costs. So what's a concerned derrière dissenter to do? Fortunately, there are many nonprofit organizations designed to raise public awareness of cigarette butt waste. You can find a local Sierra Club volunteer chapter that's committed to keeping our streets, beaches, and oceans clean.

The easiest way to make a difference? **Don't litter in the first place** — find a designated waste bin for your cigarette. Even better, don a pair of work gloves and organize a trash pick-up day with your friends. Discarded cigarettes might be small, but only our individual efforts will keep the issue from getting any bigger.

Here are excerpts from a story about cigarette litter affecting Lake Superior, from the Superior Watershed Partnership & Land Conservancy (https://superiorwatersheds.org/projects/water-quality/stormwater-cigarette-butts).

Everybody's seen discarded cigarette butts in the street and not thought much of it - a tiny piece of trash. We've all also seen them on the beaches lining Lake Superior, but what do you think when you see that? Maybe that people shouldn't toss their butts on the beach? But in most cases, that's not how the cigarette butts got there. They're actually the same ones from the streets and sidewalks, just days later, after they make their way through the stormwater system to the shores of Lake Superior. In fact, that's what happens to all trash and debris from our streets; **any time it rains or the snow melts, all of that washes into the storm drains, and those empty from outflows that go directly to the lake.** *And it stays there, not only along the beach, but in the lake too.*

That's not just a problem here, either. The international organization Ocean Conservancy lists cigarette butts as the top kind of trash they see in oceans, lakes, rivers and streams around the world. On their annual cleanup day last year, volunteers picked up more than 2 million cigarette butts from beaches, mostly brought there by stormwater systems.

So, that leads us to another thing you might've seen around town: Those red metal pails of sand sitting near businesses, bars and restaurants in Marquette, Escanaba, Houghton and, more recently, Munising. As part of SWP's efforts to help improve water quality in Lake Superior and let smokers know what happens to butts they flick into the street, the red buckets made their debut back in 2009. Besides offering up a place to throw your cigarette or cigar butt that isn't the street, the red buckets also are labeled with information on keeping Lake Superior beaches clean.

While the red buckets help smokers who are walking in downtown areas and frequenting city streets, there's another way cigarette butts end up in Lake Superior; by tossing them out your car window while driving. Yes, even when you're cruising along a highway or in a store parking lot, those butts will eventually end up in the storm drains, and, again, into the lake.

The solution? If you smoke or know people who do, make sure cigarette butts are properly disposed of - in the trash or in a red bucket or a smokers pedestal -- not on the ground, in the street or on the sidewalk. In the car, use an ashtray and then empty it into the trash later -- don't empty it onto a patch of ground or a parking lot.

It's simple - when someone throws a cigarette butt on the road or sidewalk in the U.P., it's going to end up in the Great Lakes. Finding ways to stop that from happening is an ongoing concern for everyone who lives on our beautiful lakes.

Green Bay Demonstration Farm Network

GREEN BAY WEST SHORE
Demonstration Farms Network

The Green Bay West Shore Demonstration Farm Network is a collaborative effort by a group of Northeastern Wisconsin farms dedicated to demonstrating conservation practices within the Peshtigo, Oconto, and Pensaukee Watersheds, with the goal of reducing phosphorus and sediment runoff. They also strive to promote sustainable agriculture, protect water quality, enhance soil health, and develop partnerships within the region.

The Finger Family Farm in Marinette County is a participant, and there were two events held in 2021 at other participating farms in the network. Below are photos from a September field day at Mahoney Farms in Suring.

We are planning "Pop Up Field Days" when there is something new to check out in the fields – such as inter-seeding cover crops or low disturbance manure injections. It is all about how to keep soil on the fields and how to help it produce the best possible food.

TEXT to this number: 920-260-6200 with the message GBWSDemo to be notified of upcoming Pop Up Field Days. Be sure to check out our Green Bay West Shore Demonstration Farm Network online at http://gbwsdemo.info/ or on Facebook at https://www.facebook.com/GBWSDemo/.

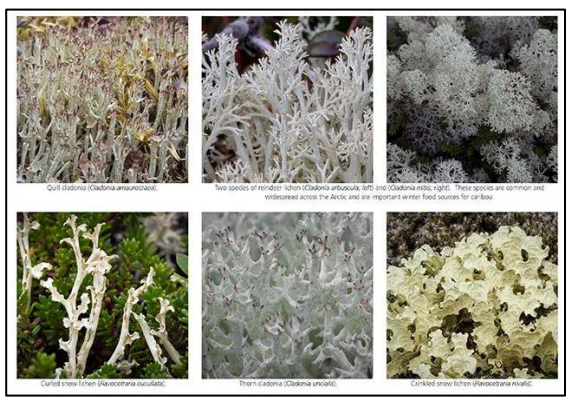
LIKE US ON facebook

The Lowdown on Lichens – and Why We Need Them!

https://www.reconnectwithnature.org/News-Events/Big-Features/Lowdown-on-lichens

What looks like a plant and grows anywhere a plant can — and then some — but is definitely not a plant? A **lichen**. Like fungi, lichens are neither plant nor animal. These common organisms exist virtually everywhere on Earth, but they are unique in how they form and live. Lichens exist as a *symbiotic relationship* between two species: an alga and a fungus. The fungus provides the organism with minerals, shelter and water, while the alga or bacteria provides nutrients it creates through photosynthesis, according to National Geographic.

Diversity among lichens is impressive, both in their physical appearance and their habitats. Because we often think of lichens as being similar to plants, we think of them as green. Many are, but they can also be yellow, orange, red, black, brown, silver and gray, according to the Arizona State University Biodiversity Knowledge Integration Center. And they live almost everywhere, from the coldest corners of the Arctic to the hottest spots in our deserts. One place where lichens do not commonly grow is in aquatic habitats, but they aren't totally absent. They actually have been found growing on barnacles in the water. Compared to many things, lichens seem complicated and aren't well understood, but they are present in our lives in some unexpected ways.



What is a Lichen?

Lichens are often lumped together with mosses, but they are actually distinctly different. Lichens do sometimes look like mosses, and they also sometimes grow on the same surfaces as mosses, but that's where the similarities end. While mosses are non-vascular plants, lichens aren't plants at all, remember? They aren't biologically similar to mosses in any way and are not classified as part of the plant kingdom, according to the U.S. Forest Service.

Essentially, a lichen's structure is composed of layers of its two parts: a fungus and an alga (or, less commonly, a cyanobacteria). The outer layer of a lichen is called the cortex, and this is where most lichens get their color from. It's the part of the organism with the thickest cells and provides it with some protection. Underneath the cortex is the algal layer, then the medulla, which is where the fungal cells of the lichen reside. At the bottom is the structure that connects the organism to what it is growing on.

They typically attach themselves in one of two ways. Some have filaments called *rhizines* that anchor the lichen to its substrate while others have a central peg, called a holdfast, that functions like an umbilical cord.

There are three main kinds of lichens — **crustose, foliose and fruticose** — and they can be distinguished by their appearance. Crustose lichens basically form a crust on the surface they grow on, according to the New York Botanical Garden. Foliose lichens have a leaflike appearance and have a top side and a bottom side that are distinguishable from one another. Fruticose lichens are hairlike or pendant-shaped and grow in strands.

Where can we find them?

Lichens have habitat requirements just like other living things, but their requirements are a bit different. Lichens live on things, and what they grow on — called a substrate — must provide the necessary habitat requirements: air, light, nutrients and water. The substrate itself does not provide these necessities — they grow on plenty of non-living objects — but provides the lichens with a means to acquire them, according to the forest service.

These organisms aren't picky when it comes to substrates. They will grow on pretty much anything that stays in one place long enough for it to attach itself and begin to grow, the forest service reports. The most common substrates include trees, rocks and soil. But they will grow on other objects as well, like benches and dead logs. Sometimes they even grow on our houses and other buildings.

Like all living things, lichens need water, but because they don't have waxy cuticles like plants they cannot conserve water and hold it in reserve for a dry spell. However, because they absorb everything around them, they are able to use water vapor as a reliable source of water. This is why lichens are particularly common in foggy coastal areas, the forest service reports.

Because lichens cannot conserve water, they essentially turn on and off based on the presence of water in their environment. When they are wet and have water, they turn on and undergo photosynthesis and grow. When they are dry, they turn themselves off and go dormant. Dormant lichens will be brittle and dry to the touch, and may be whitish in color. But they aren't dead - when water returns, they will turn on again.

Continued next page

Amphibian Week Is May 1-7

https://www.nps.gov/articles/000/amphibian-week.htm

An eastern American toad, found under leaves in the garden. Toads eat many invertebrates that cause damage to garden plants, like beetles & slugs.

May 1-7 2022, is international Amphibian Week! You may wonder, why do amphibians need this special recognition? For starters, amphibians are unique. They begin their lives in the water, but most of their adult life is on land. And they are *ectothermic*, meaning their body temperature relies on external sources, like a rock heated by the sun or a river or lake. Amphibians are sensitive to invasive species, drought, disease, and other changes where they live. So researchers study amphibians because they often show early signs of stressors, like disease and climate change.

There's another reason to recognize amphibians this week: many are in danger. **About one third of all amphibian species are in danger of extinction.** Many animals rely on amphibians for food, so when they die off, it affects the entire natural area. **Some of the threats amphibians face include disease (like the ranavirus or chytrid fungus), changes in snowpack/rainfall, loss of wetlands, and splitting up their habitats.** We need amphibians, and now they need us.

Join the movement on Facebook, Twitter, and Instagram May 1-7, 2022. All week, Partners in Amphibian and Reptile Conservation (PARC) and other partners will be sharing information about amphibians, how important they are, the threats they face, and how you can help them. Always use #AmphibianWeek, #AmphibianWeek2022 and some other fun hashtags to use include #LeaveTheLeaves, #AmphibianAlly and #AmphibianArt.

The eastern newt (*Notophthalmus viridescens*), common in eastern North America in small lakes, ponds, & streams or near-by wet forests, lives 12-15 yrs in the wild. They're land-dwelling & often known as the 'red eft.' Sometimes this species is called the red-spotted newt or eastern red-spotted newt.

The common mudpuppy (*Necturus maculosus*) is Wisconsin's largest salamander. It is fully aquatic. Visit here for more: https://www.canr.msu.edu/news/the_misunderstood_mudpuppy_bohling15

Lichens, continued from page 13

The presence of lichens on a tree or another living thing should not be cause for concern. They aren't parasitic, so they do not harm these host organisms or interfere with them at all, according to the Michigan State University Extension.

Why do we need lichens?

While lichens may be unsightly in some places, like our homes, their presence is a good thing. **Lichens can't live in areas that are heavily polluted,** so having them nearby means the air supply is clean. In fact, if you pay close attention, you'll notice you won't see many lichens in cities, along highways or near factories. That's because there's too much pollution for many lichens to grow. The ones that do grow in these kinds of habitats have a higher tolerance for toxins and pollutants than most do.

Lichens play important roles in ecosystems. First, they absorb what is in the atmosphere around them, helping to clean the air. In addition, they allow algae to thrive in environments and climates all over the world, even in places where algae alone would have difficulty surviving. This means their presence allows photosynthesis to occur, converting carbon dioxide into necessary oxygen.

Historically, **lichens have been a food source for both humans and animals**. Today lichens are still a normal part of the diet in some countries. They are also eaten by animals including flying squirrels, crustaceans and caribou, which are known to eat reindeer moss — a lichen, not a moss (but like fungi, not all lichens are edible. While most are safe to eat, some are toxic).

Lichens have been used to create **fabric dyes** and, in some cases, have even been directly incorporated into fabrics because some have very strong fibers. **They've been important medicinally as well.** One species has been found to inhibit the growth of HIV, and for centuries they have been used to treat wounds and as a laxative.

Despite their significance and importance in the ecosystem, many lichens are threatened by pollution and changes in land use. As lichen habitat is destroyed, encroaching development can threaten the survival of nearby lichens. In some places, they also face competition from invasive and non-native species. For more about lichens, visit:

- https://herbarium.wiscweb.wisc.edu/wp-content/uploads/sites/205/2017/10/lichens-of-wi-web-20170515.pdf
- http://www.wisconsinmushrooms.com/Lichens.html
- https://dnr.wi.gov/topic/EndangeredResources/Lichens.asp
- https://www.nps.gov/articles/aps-16-1-13.htm

Watch for the International Space Station in the Night Sky

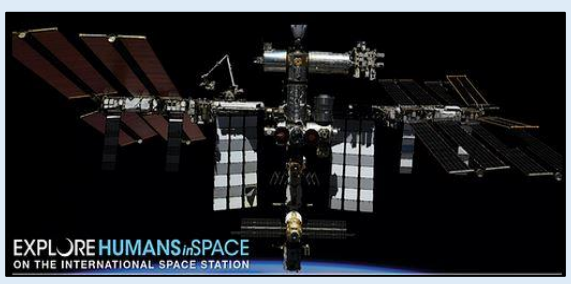
https://spotthestation.nasa.gov/home.cfm

Watch the International Space Station pass overhead from several thousand worldwide locations. It's orbiting 248 miles (400 kilometers) above our heads, and is the third brightest object in the sky and easy to spot if you know when to look up. Visible to the naked eye, it looks like an airplane or a very bright star moving across the sky, except it doesn't have flashing lights or change direction. It will also be moving considerably faster than a typical airplane - airplanes generally fly at about 600 miles (965 km) per hour; the space station flies at 17,500 miles (28,000 km) per hour.

On the website above, you can enter in your ZIP code to see when the space station will be passing overhead your area. The space station is visible because it reflects the light of the Sun – the same reason we can see the Moon. However, unlike the Moon, the space station isn't bright enough to see during the day. It can only be seen when it is dawn or dusk at your location. As such, it can range from one sighting opportunity a month to several a week, since it has to be both dark where you are, and the space station has to happen to be going overhead.

Date	Visible	Max Height*	Appears	Disappears
Sun Apr 24, 5:55 AM	5 min	18°	10° above S	10° above E
Mon Apr 25, 5:08 AM	2 min	11°	10° above SSE	10° above ESE
Tue Apr 26, 5:53 AM	6 min	45°	12° above SW	10° above ENE
Wed Apr 27, 5:07 AM	4 min	27°	22° above S	10° above E
Thu Apr 28, 4:20 AM	1 min	16°	16° above ESE	10° above E
Thu Apr 28, 5:53 AM	6 min	77°	14° above WSW	10° above ENE
Fri Apr 29, 5:06 AM	4 min	68°	39° above SW	10° above ENE
Sat Apr 30, 4:19 AM	2 min	35°	35° above ESE	10° above ENE
Sat Apr 30, 5:52 AM	6 min	40°	10° above W	10° above NE
Sun May 1, 3:32 AM	1 min	13°	13° above E	10° above E
Sun May 1, 5:05 AM	5 min	55°	27° above W	10° above NE
Mon May 2, 4:18 AM	3 min	74°	74° above NE	10° above ENE
Mon May 2, 5:52 AM	6 min	28°	10° above WNW	10° above NE
Tue May 3, 3:31 AM	2 min	25°	25° above ENE	10° above ENE
Tue May 3, 5:04 AM	5 min	33°	17° above WNW	10° above NE
Wed May 4, 4:17 AM	4 min	42°	39° above NW	10° above NE
Wed May 4, 5:52 AM	6 min	25°	10° above WNW	10° above ENE

The space station is Earth's only microgravity laboratory. This football field-sized platform hosts a plethora of science and technology experiments that are continuously being conducted by crew members, or are automated. Research aboard the orbiting laboratory holds benefits for life back on Earth, as well as for future space exploration. The space station serves as a testbed for technologies and allows us to study the impacts of long-term spaceflight to humans, supporting NASA's mission to push human presence farther into space.

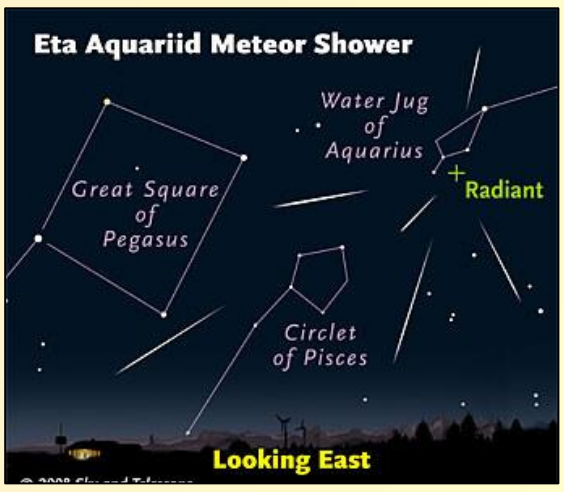


For more information about the International Space Station and its mission, visit its homepage on the NASA website at https://www.nasa.gov/mission_pages/station/main/index.html.

May Nighttime Skies

http://www.seasky.org/astronomy/astronomy-calendar-2022.html

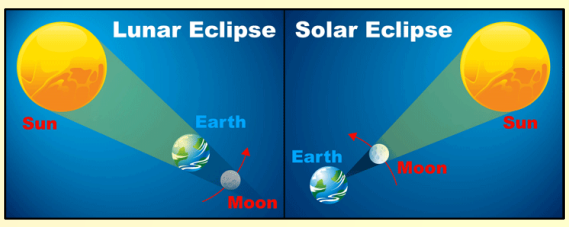
May 6, 7 - Eta Aquarids Meteor Shower. The Eta Aquarids is an above average shower, capable of producing up to 60 meteors per hour at its peak. Most of the activity is seen in the Southern Hemisphere. In the Northern Hemisphere, the rate can reach about 30 meteors per hour. It is produced by dust particles left behind by comet Halley, which has been observed since ancient times. The shower runs annually from April 19 to May 28. It peaks this year on the night of May 6 and the morning of the May 7.



The waxing crescent moon will set early in the evening, leaving dark skies for what should be an excellent show. *Best viewing will be from a dark location after midnight*. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.

May 16 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be will be fully illuminated. This phase occurs at 04:15 UTC. This full moon was known by early Native American tribes as the 'Flower Moon' because this was the time of year when spring flowers appeared in abundance. This moon has also been known as the 'Corn Planting Moon' and the 'Milk Moon'.

May 16 - Total Lunar Eclipse. A total lunar eclipse occurs when the Moon passes completely through the Earth's dark shadow, or *umbra* (see graphic below). During this type of eclipse, the Moon will gradually get darker and then take on a rusty or blood red color. The eclipse will be visible throughout all of North America, Greenland, the Atlantic Ocean, and parts of western Europe and western Africa. (NASA Map and Eclipse Information).



May 30 - New Moon. The Moon will located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 11:32 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.