Volume 6 Issue 3 Spring 2024

# Illinois Forests

Illinois Forestry Association

"Healthy Forests, Today and Tomorrow"

## Inside this Issue...

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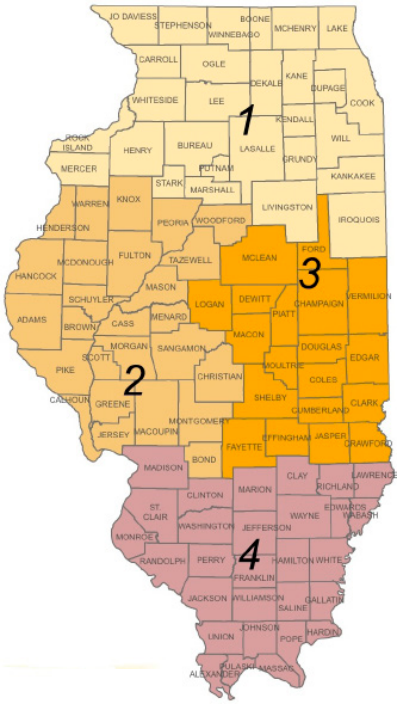


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ILLINOIS Forestry Association

**https://ilforestry.org**

## *Our Mission...*

***"To inspire and empower landowners to create healthy, beautiful, and productive forests."***

## *Our Vision...*

***"To become the most trusted advocate and comprehensive resource for Illinois forest owners."***

# Message From the IFA President

by Paul Deizman

***Letter to IFA membership -***

A warm hello to Spring and to all the Illinois Forestry Association members past, present and future who are reading. I intended to write this column dedicated to partnerships because over the years I have seen that conservation of natural resources does not entertain much success without partnerships. I will save for the next issue what I believe to be the 25 most important IFA partners.

Instead of embracing the existing and potential partners to IFA moving forward - I feel it is important to dedicate this space to one special partnership that has positively affected the continued success of the IFA. In the background behind this significant partner lies an organization as old as land grant colleges themselves which we all know as University of Illinois Extension. The University of Illinois Extension employs experts within various agriculture, consumer, and environmental science specialties to outreach, share and deliver sound, current natural resource information, research, and facts. Historically, Extension helps homeowners, landowners, farmers, conservationists, students, peers and others learn. Our IFA Program Coordinator is from Extension and was hired by the lead extension forester.

This column is dedicated to Zach Devillez, our current Program Coordinator. We are very lucky to have Zach due in part to the partnership with the university's extension forestry program and their lead forester.

Years ago, the university extension partnered with IFA to split salary time for the hiring of a professional to serve as an extension forestry technician and Zach was hired. Zach has a track record of success yet recently announced he is resigning his role as a forestry technician and our IFA Program Coordinator to continue to pursue his education and continue his forestry career in the larger sense. The leadership at IFA could not be happier for Zach and wish him a long, fruitful pursuit of his professional and personal ambitions.

Since becoming IFA Program Coordinator, Zach has led the organization to success with many different presidents, executive staff members and board members. Zach has led the annual meeting committee for years and each year the meetings were interesting, fun and successful. Zach has been the sole editor and publisher of this quarterly newsletter. It remains one of the best newsletters that forestry associations anywhere in the country publish. Thank you, Zach, for such great work on the newsletters. Publishing the newsletter and pulling off the annual meeting is some of the shiny work. Behind the romance is the real work … and Zach apparently is not afraid of hard work.

Zach has led our organization to becoming more organized and more effective with the volunteer time of the individuals serving as leaders and all the families, businesses and individuals who are members of IFA. We now as a result have a good committee structure and committees that meet on their own. Zach is a key member on half of those committees! Organized and effective are a big challenge for a philanthropist-driven, volunteer organization such as ours when officers and board members are usually limited in contributing their time. Despite all challenges the IFA now owns, thanks to our leadership, two, 80 acre timber properties donated by IFA members to be forever managed for forestry, education and demonstration.

I believe I speak for all members in sincerely saying Thank you Zach Devillez for your outstanding work and service as the Illinois Forestry Association Program Coordinator.

ILLINOIS Forestry Association

# Healthy Forests Today and Tomorrow

by Zach DeVillez

As you have just read from the kind article Paul Deizman wrote for this issue of the newsletter, I have made the difficult decision to resign from my role as University of Illinois Extension Foestry Technician and IFA Program Coordinator. This decision was based solely on my personal ambitions. While I will miss serving in this role, I look forward to the next chapter.

The strength of the Illinois Forestry Association is undoubtedly its members. I have met so many members who have inspired me through their dedication and passion. To all members, I say thank you for allowing me to be part of such an amazing community.

Any credit I receive for my IFA-related acheivements should be shared with the IFA board of directors and committee members. To all past and present board members, I believe it takes a special individual to dedicate as much time and hard work as you all do to the IFA's mission. The organization is in excellent hands as long as you, and future board members like you are advocating for our forests. Additionally, I would like to thank IFA partner organizations and agencies who contributed to multiple great projects over the years.

From Left: Chris Evans, Mike McMahan, Guy Sternberg, Brad Petersburg, Stan Sipp, Debbie Fluegel, Bill Buechel, Gary Hake, Dave Gillespie, Paul Deizman, Zach DeVillez.

Photo: IFA directors taking part in strategic planning at Starhill Arboretum.

## Looking Towards the Future:

I have stated this in multiple issues of the newsletter, but I truly think this is an exciting time for the Illinois Forestry Association. Thanks to extraordinary donations from the Lovetts and Gerrishes, IFA now owns two forested properties that will be stewarded with the objective of forest landowner education in mind. Additionally, the IFA has mutliple projects planned for 2024. If you are reading this and would like to get more involved with IFA, please email IFA President, Paul Deizman at: paulmdeizman1@gmail.com.

## Final Thoughts

While I move on to my next chapter, I will continue to support the Illinois Forestry Association and maintain my status as a member. I also hope to keep in touch with many of the friends I've made along the way throughout my work here. Since this will be the last issue of the IFA newsletter I organize, I just want to say that I hope IFA members have enjoyed my stewardship of the IFA newsletter. I know that in the future, the IFA will continue to provide excellent publications and forestry events for those who care for Illinois forests.

# Spring Family Forestry Field Day

Earlier this spring, the Illinois Forestry Association and Illinois Tree Farm assisted the Illinois Walnut Council to organize a Spring Family Forestry Field Day. This event was held at Bob and Pacie Trimble's beautiful property in Hindsboro, IL. This is the third year that IFA has contributed to a field event with these organizations and we plan to continue this trend in the future.

This year, we wanted to build an event that was more geared towards families. However, we had less youth attendance than we had hoped. This will be a big priority for these events moving forward. The IFA, Illinois Walnut Council, and the Illinois Tree Farm all agree, that educating our youth should be a major objective for future events.

We would like to thank all the speakers who led discussions at the Spring Family Forestry Field Day. Additionally, thank you to Bob and Pacie Trimble for being excellent hosts for the program!

ILLINOIS Forestry Association

### This Year's Program

***Timber Stand Improvement*** - Chris Evans, U of I Extension Forester

***Forest Soils Discussion*** - Steve Felt, Retired District Forester

***Timber Harvest Improvement Cut Vs. High Grading*** - Lenny Farley, Purdue Extension Forester

***Live Raptor Presentation*** - The Illinois Raptor Center

***Forest Health*** - Tricia Bethke, Forest Pest Outreach Coordinator

***Managing for Native Plants vs Invasives*** - Chris Evans, U of I Extension Forester

Photo 1: The Illinois Raptor Center showing an American Barn Owl

Photo 2: Steve Felt leading a discussion on forest soils

Photo 3: Lenny Farley discussing a black walnut on the Trimble property

Photo 4: Chris Evans speaking on invasive plant control

# IFA Timber Harvest Field Tour


On April 20th, the IFA held a timber harvest field tour at a private property in Makanda, Illinois! Attendees got to enjoy a walk in the woods with Forester and Timber Buyer, Landon Satterfield and University of Illinois Extension Forester, Chris Evans as they discussed the process of harvesting timber on private forests. Discussions centered around the decision making process of selecting trees for harvest, expectations during and post-harvest, as well as management strategies post-harvest.

# IDNR Forestry Division Update - Welcoming New Forestry Division Chief / Illinois State Forester, Kenneth Jolly

Kenneth has a BS in Forest Management from North Carolina State University and a MS in Applied Management from the University of Maryland. He also participated in a Forestry Executive Training Course at Yale University sponsored by the National Association of State Foresters. His forestry career started with the US Peace Corps, where he worked on a joint forestry project in Honduras with Finland to develop the export of Honduran pine to the Caribbean. He worked seasonally in California on the Tahoe National Forest serving on a wildland fire Engine Crew and a Timber Marking Crew. He also worked in Colorado on a traveling Survey Crew with the National Park Service. Next he moved to a permanent Forest Technician position with the Maryland Forest Service. He progressed through a variety of positions with the Maryland Forest Service, serving as Director of Field Operations for 20 years, and finally serving as the Director of the Maryland Forest Service / Maryland State Forester in both an Acting/Permanent capacity for 3-1/2 years.

In addition to his experience in forest management, Kenneth has also participated in interagency wildfire assignments for 17 years. He was a Firefighter on a crew mobilized to the 1988 Yellowstone National Park fires and was involved in the protection efforts for the Old Faithful Lodge. Ten years later he served as the Task Force Leader for the largest Maryland Emergency Management Agency (MEMA) wildfire deployment ever mobilized by Maryland, involving 120 firefighters and multiple engines dispatched to the State of Florida. The MEMA Mobilization was involved in suppression support for the 1998 "Florida Firestorm" that burned nearly half a million acres in Florida. President Bill Clinton visited the fire crews at Daytona, and Kenneth had the opportunity to shake the President's hand as part of the Presidential visit. Kenneth will be serving on the National Association of State Foresters (NASF) National Fire Committee in his role as Illinois State Forester. He has previously participated in five Annual Meetings of the National Association of State Foresters (NASF), and served as the Incident Commander for the 2011 NASF Annual Meeting.

Kenneth has also been actively involved with the Society of American Foresters throughout his career, serving as the Chair of the House of Society Delegates and representing District VII (Washington DC and the 5-State Allegheny Section) on the SAF National Board of Directors from 2009-2011. He has participated in various Planning Committees for three National SAF Conventions (Washington, DC, Pittsburgh, and Baltimore), and was recognized as a SAF Fellow in 2006.

Kenneth began his new position as Forestry Division Chief / Illinois State Forester On January 1st. He has had the opportunity to meet with IDNR staff along with several individuals in the Illinois forestry community, and is looking forward to continuing to meet with those he hasn't met yet who are interested advancing Illinois forestry in the future. Kenneth works out of the Springfield IDNR Headquarters Office, and can be reached via email at Kenneth.jolly@illinois.gov. He is looking forward to providing regular updates to IFA members in future newsletters.

"Learn Character From Trees, Values From Roots, and Change From the Leaves"
- Tasneem Hameed

# White Oak Genetics and Tree Improvement Program at Year 5

Zachary J. Hackworth, Research Forester
Laura E. DeWald, Adjunct Faculty and Tree Improvement Specialist
Department of Forestry and Natural Resources, University of Kentucky

White oak is a critically important species in eastern hardwood forests as both a source of ecological benefits and an economic resource. Over the past several decades, the evidence is clear that white oaks are growing into the forest canopy at insufficient rates to maintain their historical dominance. The possibility of a future with a reduced supply of white oak has prompted many initiatives to seek solutions to this problem. In 2019, the University of Kentucky (UK) began a collaborative genetics and tree improvement program to develop high quality white oak seedlings. While the tree improvement program can breed for traits desirable for many uses (aesthetics, wildlife, wood, etc.), the initial objective was to identify and crossbreed genetic families that will yield seedlings that grow faster and will be more competitive when out-planted in regenerating forests.

## The Past and Present

In the Fall 2020 issue of Illinois Forests (p. 11-12), we provided a general overview of the tree improvement project's objectives and work plan which, at the time was during year 2 of the project. Now, at year 5, we are pleased to report that much progress has been made toward completing all three phases of the project. In Phase 1, our goal was to collect and archive white oak genetic material from across the species' large geographic range. We accomplished this by engaging volunteers from a variety of backgrounds (among many, federal and state agency personnel, K-12 and college students, NGO groups, Master Naturalists, citizen-scientists) in collecting white oak acorns. Since the study's inception, volunteers have made over 800 acorn collections that resulted in 336,430 acorns that were planted in the Kentucky Division of Forestry's tree nursery and grown into one-year-old seedlings. Acorn collections came from nearly every state in the species' range (Figure 1). From Illinois, we received 50 collections that well sampled the state's distribution of white oak forests.

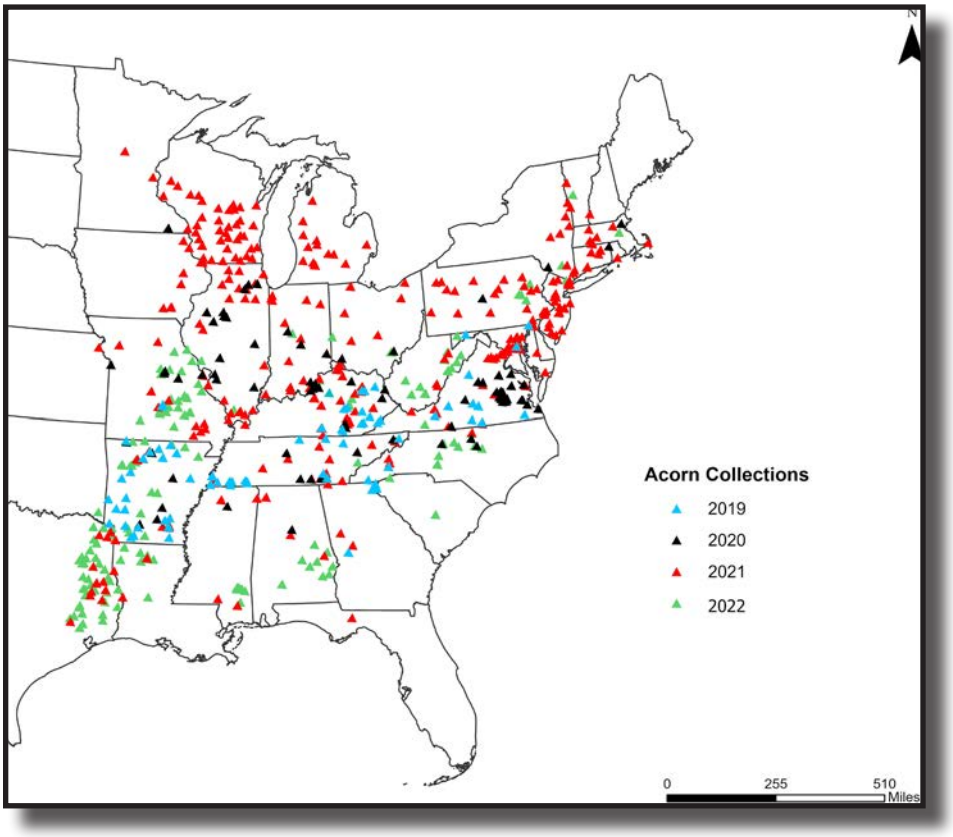


Figure 1: Distribution of acorn collections received for white oak progeny tests between 2019 and 2022.

## To all those in Illinois who helped collect acorns… thank you!

With such an extensive collection of genetic material, we were well-positioned to begin Phase 2 of the program – establishing progeny tests. A progeny test evaluates the offspring of known parent trees by growing the offspring together in a common environment. Since environmental conditions are the same for all the offspring, we know that any observed differences are due to genetics. Between 2021 and

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2024, we established 23 progeny tests, containing more than 40,000 planted seedlings. Progeny tests were established in 18 states (Figure 2). In Kentucky, we established a range-wide test (red star in Figure 2) that contains seedlings from 500 white oak mother trees from across the species' geographic range. All other tests (yellow circles in Figure 2) contained seedlings from locally adapted mother trees from the region surrounding the progeny test. At each test site, we engaged local collaborators from academic institutions, federal/state agencies, NGOs, and community organizations to assist with tree planting and initial data collection. Over 1,000 people have contributed to establishment and caretaking of the progeny tests. In March 2023, 1,000 seedlings were planted into the Illinois regional progeny test at Dixon Springs Agricultural Center in southern IL, and an additional 400 seedlings were added to complete the test in March 2024. During both planting events, over 50 different people from the U.S. Forest Service, University of Illinois Extension, Illinois Forestry Association, and the Southern Illinois Beginning Forest Landowner Program came together to plant and water seedlings and collect data.

***Establishing a progeny test is no easy feat. Thank you to each one who helped find and prepare test sites, plant seedlings, maintain the sites, and collect data…this project was impossible without your support!***

## The Future

With the final establishment of the progeny tests in 2024, personnel from research institutions, including university faculty/staff, graduate students, and agency professionals have begun to analyze data on survival, growth, and other traits to assess trends in seedling performance. With the accumulation of data from progeny tests over the next 3-5 years, we can begin to identify superior white oak mother trees and their offspring, which will permit Phase 3 of the project – establishment of seed orchards. Armed with the identities of superior white oak trees, clonal grafted seed orchards will be created which will begin producing acorns with superior genetic material at 5-7 years. In about 15 years, inferior trees in the progeny tests will be removed and the progeny tests will be converted to seed orchards that will also produce acorns with superior genetic material. With a consistent supply of acorns from these orchards, nurseries can grow seedlings of superior quality that will compete better when out-planted in forests. The nurseries can also conduct controlled breeding in the orchards for specific traits, such as disease resistance. Although the project is still in its early stages, findings from the Illinois regional progeny test illustrate the importance of local seedling adaptation. In addition to regional trees, seedlings from Alabama, Florida, Mississippi, and Texas mother trees were planted in the test to understand potential climate influences on performance. Seedlings from these lower latitudes possessed green leaves in early December and had stems damaged by cold temperatures, which indicates a lack of adaptation to the Illinois climate. Trees that are not well-adapted to local climates will become stressed, experience reduced performance, attract pests (insects and disease), and eventually die. Therefore, all the non-local sources in the IL progeny test will be removed prior to acorn production. In contrast to the non-local sources, seedlings with IL origins were among the tallest and highest quality in the test. Thus, before planting white oak, be sure to ask your supplier about the origin of the seedlings and never plant non-locally adapted seedlings.

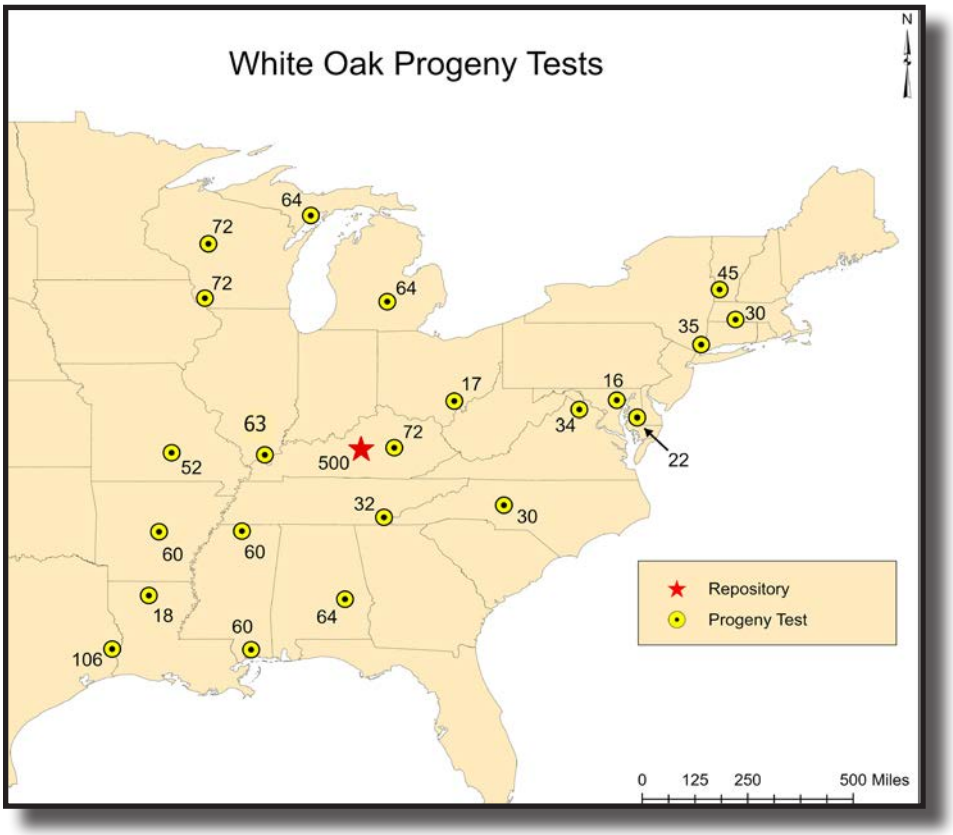


Figure 2: Distribution of white oak progeny tests established by the tree improvement program between 2021 and 2024. The number adjacent to the test location is the number of different white oak mother trees whose offspring were planted in the test.

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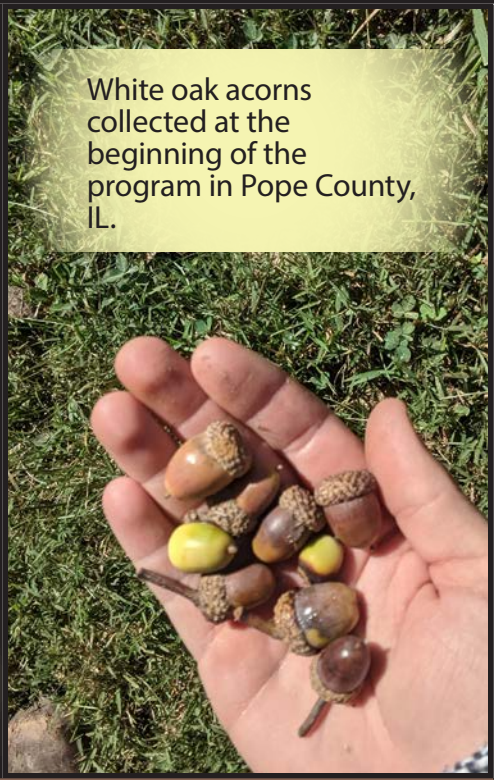
# The White Oak Test Site at Dixon Springs Agricultural Center in Pope County, Illinois

Shawnee National Forest staff help to build an 8 ft tall fence to keep deer out of the planting.

Shawnee National Forest staff, U of I Extension Forestry staff, and volunteers from the Illinois Forestry Association and Beginning Forest Landowner Program plant white oak seedlings with dibble bars.


A seedling planted from an acorn collected in Arkansas.



White oak acorns collected at the beginning of the program in Pope County, IL.

IFA Director, Gary Hake pulling weeds around a seedling.

# Pests and Plants to Avoid in the Woods

by Zach DeVillez

Spring is a wonderful time of year to enjoy the forest. There are so many recreational opportunities this time of year, including turkey hunting, fishing, morel mushroom hunting, woodland wildflowers, and bird watching. While I encourage readers to take some time to play in the woods, I also encourage you to take precautions to avoid ticks, chiggers, and certain plants that can be harmful or irritating to the human body.

## Tick Prevention

One significant threat that should be taken seriously by anyone who frequents forests is ticks. As you likely well know, ticks are vectors for diseases that can harm humans, such as:

***Anaplasmosis:*** A disease cause by the bacterium *Anaplasma phagocytophilum,* sometimes transmitted by the blacklegged tick. Early symptoms may include fever, chills, aches, throbbing headaches, or nausea.

***Ehrlichiosis:*** A disease caused by *Ehrlichia chaffeensis* bacteria, sometimes carried by the lone star tick. Early symptoms may include fever, chills, aches, throbbing headaches, nausea, or confusion. Additionally, some patients report a rash that looks like red splotches.

***Lyme Disease:*** According to the CDC, Lyme disease is the most common vector-borne disease in the United States. It is often caused by the bacterium *Borrelia mayonii,* sometimes carried by the blacklegged tick. One very import early sign of this disease is the characteristic "bull's eye rash". This rash, not present in all cases but present in most, is called Erythema migrans. The rash starts at the site of the tick bite and expands outward. If you discover this near a tick bite, seek medical treatment. Other symptoms may include fever, chills, aches, and fatigue. Later stage symptoms may include arthritis with severe joint pain, facial palsy, irregular heart beat, dizziness, shortness of breath, nerve pain, or shooting pains in the hands and feet.

***Spotted Fever:*** A group of diseases caused by related bacteria in the group *rickettsiae*. This disease is known to be carried by blacklegged ticks and dog ticks. One of the earliest signs of this disease is a dark scab over the site of the tick bite. Symptoms often include a fever, developement of a rash, a headache, or muscle aches. In cases of Rocky Mountain Spotted Fever, medical treatment should be seeked out. This disease could be fatal if left untreated.

***Alpha-gal Syndrome:*** An allergic condition that can make those impacted allergic to red meat or dairy products. This condition is linked to lone star tick bites. The severity of the allergic reaction varies widely from person to person. The symptoms of this condition generally occur 2-6 hours after consumption of red meat or dairy products. The symptoms may include hives or rash, nausea, heartburn, diarrhea, shortness of breath, a drop in blood pressure, swelling, stomach pain, or dizziness.

## Tick Identification


Photo 1: Gulf Coast tick (*Amblyomma maculatum*)


Photo 2: American dog tick (*Dermacentor variabilis*)


Photo 3: Lone star tick (*Amblyomma americanum*)

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Photo 4: Blacklegged tick (*Ixodes scapularis)*)

## Tick Prevention

If you frequently spend time in the forest, I view ticks as unavoidable. However, there are common sense steps you can take to avoid ticks. Take these steps to mitigate the risk.

- ***Stay on trails as much as possible***
- ***Wear EPA-approved repellants, such as permethrin (treat clothes, don't apply to skin)***
- ***Long socks can be worn over your pant legs and duct taped to help keep ticks off of skin***
- ***Check yourself for ticks once your hike or work is finished***
- ***Pay attention to any developing skin rashes or irritations***
- ***Take significant symptoms seriously and seek medical attention if you suspect tickborne illness***
- ***A lint roller or duct tape can be very useful for removing nymphal stage ticks that are tiny and often challenging to remove.***

## Chiggers

Like ticks, chiggers aren't insects they are arachnids. They are barely visible to the naked eye. If you've spent a lot of time in the outdoors, it is likely that you've experienced the severe itching that follows chigger bites. I have heard the myth that chiggers burrow under human skin. This is simply not the case. Chiggers use a piercing mouth part to inject saliva that contains enzymes that can break down the top layer of skin cells at the site of the bite. These cells are what chiggers feed on. Your body's reaction to the saliva is what causes bumps and the itching sensation. Chiggers can't really harm you, but they can make you very itchy for several days..


Photo 5: Chigger mites (*Trombicula sp.*)

## Chigger Prevention & Treatment

- ***Avoid tall grass and brush when possible***
- ***Use EPA-approved repellants***
- ***Wear long socks, pants, and closed toed shoes***
- ***Shower after being in the woods***
- ***Apply an anti-itch cream***

## Poison-ivy

Identifying poison-ivy may be obvious to some but I am always surprised at the amount of hikers that are unfamiliar with this plant. Posion-ivy has a compound leaf comprised of three leaflets. It can grow as a sprawling vine or a small shrub along the forest floor. The issue with posion-ivy is that it contains an oily substance called urushiol. This substance often causes an allergic reaction to occur when unsuspecting hikers rub against the plant. Like most allergic reactions, the degree of the reaction varies from person to person. Personally, I am one of the lucky ones that does not react to poison-ivy, but that could change as increased exposure occurs. People that do react to poison ivy will likely experience redness, itching, and swelling. Since this is an oily substance, it can spread acros the skin quite easily. While minor to moderate reactions can often be treated from home, more severe reactions should seek medical treatment. There have been occurences where people have unknowingly inhaled urishiol through smoke. This may cause respiratory issues and should be considered a medical emergency.


Photo 5: Poison-ivy (*Toxicodendron radicans*), the vine form

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Photo 6: Poison-ivy (*Toxicodendron radicans*), the small shrub form

## Poison-ivy Prevention

- ***Become familiar with the plant and avoid contact.***
- ***Shower after being in the woods. If exposed, this should help wash off the oily substance.***

## Poison Sumac

Poison sumac is a less common, large shrub that contains the same oily substance that poison-ivy has. For this reason, it can cause the same allergic reaction that is experienced in poison-ivy.


Photo 7: Poison-sumac (*Toxicodendron vernix*)

## Poison Hemlock

Poison hemlock is a widespread, non-native invasive shrub that is extremely poisonous. The plant contains a toxin called coniine, which acts on the nervous system. Ingesting even a small amount can be fatal. Poisoning may also occur via inhalation of smoke or contact with cuts or abrasions. This plant does not prefer shaded, forested areas, but it can often be found in pastures, roadsides, and disturbed areas. The best strategy to avoid this plant is to familiarize yourself with it and keep a safe distance.

For more in-depth information on poison hemlock, check out this article by University of Illinois Extension Forester, Chris Evans. https://extension.illinois.edu/sites/default/files/poison_hemlock_fact_sheet.pdf

Photo 7 & 8: Poison hemlock (*Conium maculatum*)

## Stinging Nettle & Wood Nettle

Stinging nettle (*Urtica dioica*) and wood nettle (*Laportea canadensis*) are two different perennial herb species that are in the *Urticaceae* family (nettle family). These plants have a similar appearance, both growing up to 2 - 4 ft. tall and having similar ovate, coarsely serrated leaves. Leaf arrangement is one of the better ways to distinguish between the two species. The stinging nettle has opposite leaf arrangement, while the wood nettle has some alternate leaves. Both of these plants have small hairs that if brushed against can cause an intense stinging itch. However, the itch is generally short-lived and should subside in minutes. There have been some reports of experiencing a rash that can last up to 24 hours. I have typically encountered these plants in floodplain forests. They are certainly irritating but not known to be dangerous. I have found that cold water can help alleviate the itching sensation. While irritating to human skin, these plants are beneficial to butterflies and moths.


Photo 9 & 10: Stinging nettle (*Urtica dioica*)

# DIY Corner
# Creating a Pollinator Prairie

By Chris Evans University of Illinois Extension Forester

The term 'pollinators' includes butterflies, moths, bees, wasps, beetles, flies, and other insects that visit flowers and potentially carry pollen from flower to flower, helping with pollination and seed creation. Even some bird species, like hummingbirds, are pollinators. Pollinators provide important ecological services and help sustain our ecosystems and natural resources. According to the Pollinator Partnership (pollinator.org), somewhere between 75%-95% of all flowering plants on earth rely on pollinators, including many of our agricultural crops. Unfortunately, populations are in decline for many of our pollinator species, including the iconic monarch butterfly. The good news is that it is easy to help provide habitat for pollinators. That is exactly what my family did a few years ago when we decided to take a portion of our land out of pasture and yard and plant it in pollinator-friendly native plants.

The results have been amazing for us, we now have a prairie full of beautiful native flowers and tons of wildlife. This article outlines the steps we took to make this a success.

The first step is choosing the right location. In general, most pollinator plantings use sun-loving species, so find a spot with minimal shade. Ideally, you will manage the site using prescribed burning, so select a spot where you can burn safely and easily. Avoid sites next to structures or anywhere you cannot easily place a firebreak around. If burning is not an option for you, you can manage a pollinator prairie through mowing, but it is less effective as most of the sun-loving pollinator-friendly species are fire adapted and thrive with regular burning. We chose a portion of our property that was in full sun, was easy to burn, and had a mix of drier side slope and low, wet soils.

Photo 1: Burning a pollinator planting at the Dixon Springs Agricultural Center.

Photo 2: A red-spotted purple butterfly (*Limenitis arthemis*).

The next step is to prepare the site by controlling the existing vegetation. We sprayed our site with glyphosate in late summer, burned the dead thatch off after a few weeks, then sprayed again to control and weed seeds that germinated. You can also disk or till the land to prepare it for planting or use a combination of herbicide and disking. Weed control is vital for the success of your planting. Competition from existing plants, especially turf or pasture grasses can greatly reduce the survivorship of newly germinated seedlings. Doing several rounds of spraying, tilling, or disking will help make sure the grasses are controlled as well as any weed seeds that are in the soil. Regardless of how you control the weeds on the site, it is beneficial to likely disk the site right before planting to increase the opportunity for seed-to-soil contact.

Before moving to the next step of sowing seed, you need to choose which seeds to use. The Illinois Department of Natural Resources sells native seed packets produced at their Mason State Tree Nursery and Pheasants Forever has Illinois-specific seed mixes, but there are a lot of other nurseries and vendors that sell seed as well. The important thing to consider when selecting seed mixes is diversity. Ideally, you will want a mix of species that provides floral resources throughout the growing season. Seed mixes should include species that bloom in the early season (like foxglove), mid-season (mountain mint and bee balm) and late season (sunflowers and goldenrods). The species in the mix should be native to Illinois, ideally sourced from local genetics, and tailored to the habitat type of your planting (wet or dry sites for example).

I would recommend planting a mix of at least 20 species. Make sure to include multiple species from the bean (Fabaceae), aster (Asteraceae), and mint (Lamiaceae) families. Also, go very light on the grasses. In fact, when we planted our pollinator prairie, we did not include any grass species. Native warm season grasses are great plants, but they do have a tendency to dominate a planting over time and exclude other species. This is especially true if you manage your prairie exclusively through spring mowing or burning.

Photo 4: Round-headed bush clover (*Lespedeza capitata*) in the *Fabaceae* family.


Photo 4: Compass Plant (*Silphium laciniatum*), a plant in the Aster family.

Most native seed will benefit from cold stratification to increase germination. This is most easily done through late fall or early winter sowing of seed. We sowed out prairie in early December.

For small areas, using a hand seed spreader works great. Larger sites can use a push or tractor-mounted spreader. You can mix in some kitty litter, wood pellets, or even sawdust to act as a carrier to help disperse the seed evenly and avoid the seed landing in clumps. Seeding rates will depend on the mix you use. Planting the seed with a seed drill is a great option if you have access to a drill and a tractor and are planting a larger site. Many county Soil and Water Conservation Districts have seed drills available for loan. Check with your county if that is a route you would like to take.

Once your seed is planting, you will likely still get a lot of weed pressure that first year. Mid-season mowing the first growing season can help reduce weed pressure. Mowing at 8-10 inches high will avoid many of the young seedlings but lower the weeds, reducing competition. For the first few years, you will want to annual mow or burn the prairie in the dormant season. Once your prairie is well established, then burn or mow every 2-4 years, but vary the seasonality of the treatments with some fall burns and some spring burns. You may need to occasionally control competing vegetation. I am having trouble now with Canada goldenrod taking over portions of my prairie and am planning on treating it this year to knock it back.


Photo 5: Canada goldenrod (*Solidago canadensis*), a potential competitor in a pollinator planting.

Watching the prairie change from year to year has been a lot of fun. Species can vary greatly year to year in numbers and the prairie is constantly changing. Best of all, all growing season long, there is an audible 'buzz' coming from our prairie from the wealth of pollinators that are using it.

*Continued on the next page -*

# Easy to Grow Pollinator-friendly Native Forbs

| Name | *Scientific Name* | Family |
|---|---|---|
| Ashy Sunflower | *Helianthus mollis* | Aster (*Asteraceae*) |
| Prairie blazingstar | *Liatris pycnostachya* | Aster (*Asteraceae*) |
| Stiff goldenrod | *Oligoneuron rigidum* | Aster (*Asteraceae*) |
| Gray-headed coneflower | *Ratibida pinnata* | Aster (*Asteraceae*) |
| Black-eyed susan | *Rudbeckia hirta* | Aster (*Asteraceae*) |
| Compass plant | *Silphium laciniatum* | Aster (*Asteraceae*) |
| Prairie Dock | *Silphium terebinthinaceum* | Aster (*Asteraceae*) |
| Showy goldenrod | *Solidago speciosa* | Aster (*Asteraceae*) |
| Leadplant | *Amorpha canescens* | Bean (*Fabaceae*) |
| White wild indigo | *Baptisia alba* | Bean (*Fabaceae*) |
| Patridge pea | *Chamaecrista fasciculata* | Bean (*Fabaceae*) |
| Round-headed bush clover | *Lespedeza capitata* | Bean (*Fabaceae*) |
| Rattlesnake master | *Eryngium yuccifolium* | Carrot (*Apiaceae*) |
| Golden Alexander | *Zizia aurea* | Carrot (*Apiaceae*) |
| Swamp milkweed | *Asclepias incarnata* | Dogbane (*Apocynaceae*) |
| Common milkweed | *Asclepias syriaca* | Dogbane (*Apocynaceae*) |
| Butterfly milkweed | *Asclepias tuberosa* | Dogbane (*Apocynaceae*) |
| Wild bergamot | *Monarda fitulosa* | Mint (*Lamiaceae*) |
| Slender mountain mint | *Pycnanthemum tenuifolium* | Mint (*Lamiaceae*) |
| Foxglove beardtongue | *Penstemon digitalis* | Plantain (*Plantaginaceae*) |

Prairie blazingstar
*Liatris pycnostachya*


Black-eyed susan
*Rudbeckia hirta*


Showy goldenrod
*Solidago speciosa*

*Continued on the next page -*


White wild indigo
*Baptisia lactea*


Partridge pea
*Chamaecrista fasciculata*


Rattlesnake master
*Eryngium yuccifolium*

Swamp milkweed
*Asclepius incarnata*


Common milkweed
*Asclepias syriaca*

Butterfly milkweed
*Asclepias tuberosa*

Wild bergamont
*Monarda fitulosa*

Slender mountain mint
*Pycnanthemum tenuifolium*


Foxglove beardtongue
*Penstemon digitalis*

Questions about creating a pollinator prairie? Email University of Illinois Extension Forester, Chris Evans at cwevans@illinois.edu.

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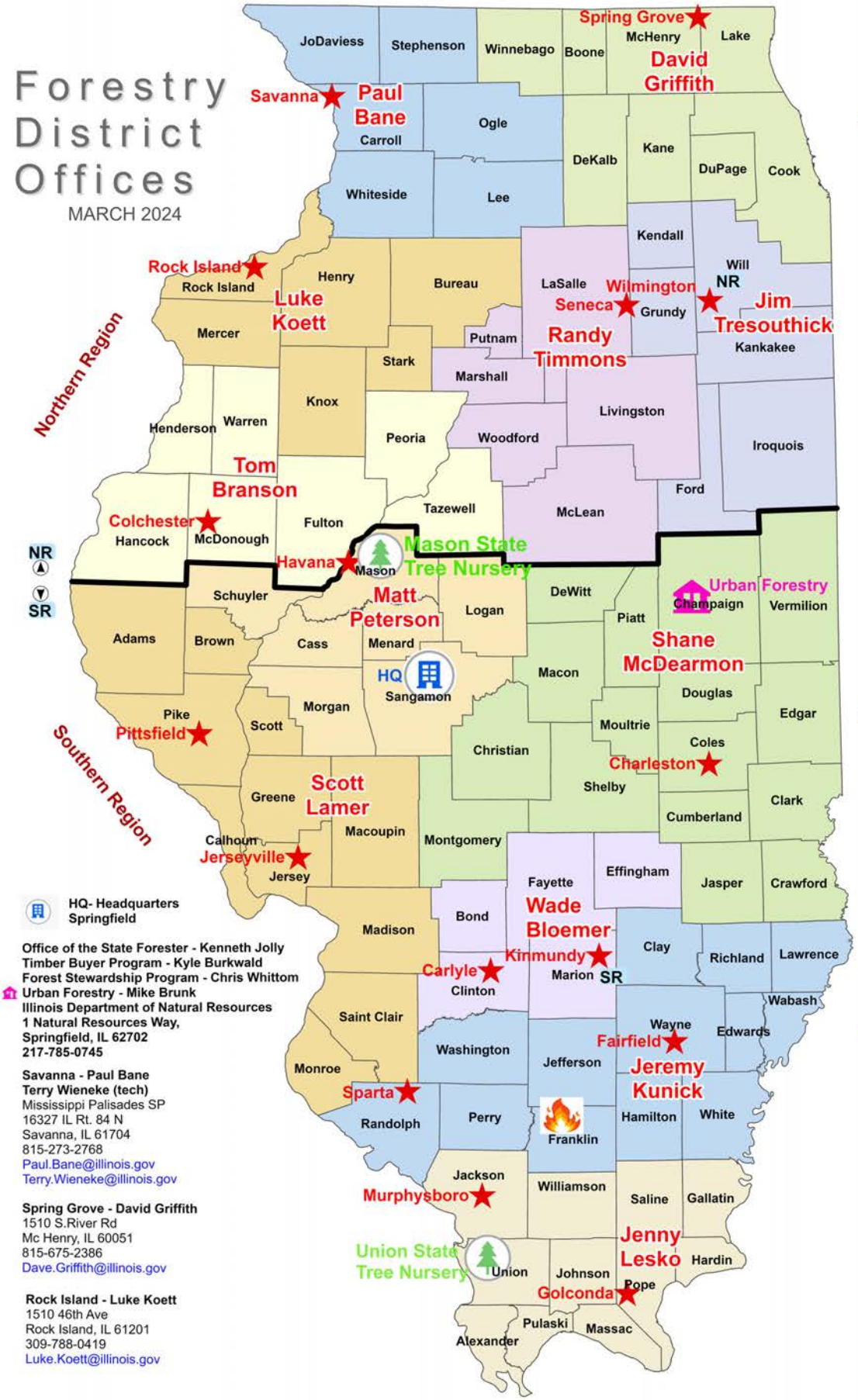


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