Forest Leaves

Volume 33, Number 3 • Spring 2024

Read about five common ticks found in Pennsylvania, including the blacklegged tick pictured above, in our featured article. Photo by Erika Machtinger.

Inside this issue...

Common Ticks and Tick-borne Diseases in Pennsylvania

Adapted from an article by Michael J. Skvarla, Assistant Research Professor of Arthropod Identification, Penn State Extension, and Erika Machtinger, Assistant Professor of Entomology, Penn State Department of Entomology

Ticks are parasitic arthropods that feed on the blood of vertebrates, particularly mammals (including humans) but also birds, reptiles, and amphibians. Many species of ticks can transmit pathogens between animals and to humans, including various parasitic worms, viruses, and bacteria. The most important of these in Pennsylvania are the bacteria that cause Lyme disease and Rocky Mountain spotted fever.

There are more than 900 species of ticks worldwide, at least 25 of which occur in Pennsylvania. Of these, two species account for more than 90 percent of identification requests submitted to Penn State: blacklegged tick (*Ixodes scapularis*) and American dog tick (*Dermacentor variablis*). Three other species that may be encountered are also covered in this article: lone star tick (*Amblyomma americanum*), groundhog (woodchuck) tick (*Ixodes cookei*), and Asian longhorn tick (*Haemaphysalis longicornis*).

Blacklegged tick
(Ixodes scapularis)

Distribution: *Ixodes scapularis* is found throughout the eastern United States and in parts of the northern midwest in wooded, brushy locations as well as grassy edge habitat. While it was less widespread historically, the range of this species has been expanding in recent years, and it can now be found throughout Pennsylvania.

Hosts: Blacklegged tick larvae preferentially feed on small mammals such as mice and chipmunks and occasionally birds; nymphs also feed on small mammals and birds, as well as a range of medium and large mammals like raccoons, deer, and black bears. Adult blacklegged ticks feed on larger mammals with some preference for white-tailed deer. However, any stage is capable of feeding on humans, livestock, and companion animals.

Activity period: The life cycle typically lasts two years. Adult ticks are present in the fall, throughout the winter, and in early spring. During the winter, adult ticks can be active and seek hosts any day when temperatures are above freezing. Larval ticks are typically present during the late summer and nymphs during the late spring and through the summer.

Diseases: Blacklegged ticks are best known as the vector of the pathogens that cause Lyme disease but have also been known to vector other pathogens, including *Anaplasma* spp. and *Babesia* spp. which can cause anaplasmosis and babesiosis, respectively. While there is still some debate, blacklegged ticks typically need to feed for 24 hours before *Borrelia burgdorferi*, the causative agent of Lyme

Ticks, *continued on page 2*

Blacklegged tick, Ixodes scapularis*.* Photo by Erika Machtinger.

PennState College of Agricultural Sciences

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Ticks, *continued from page 1*

disease, is transmitted. However, another pathogen, Powassan virus, can be transmitted in as little as 15 minutes. Because ticks need to feed from a host infected with pathogens to be able to transmit those pathogens to humans or other animals, only nymphs and adult ticks spread the pathogen. In Pennsylvania, 20 to 40% of blacklegged ticks test positive for the Lyme-causing bacterium *B. burgdorferi*, depending on location.

Notes: This tick is often called the "deer tick." However, because deer have been historically considered the preferred host only during the adult stage, blacklegged tick is the preferred common name.

American dog tick
(Dermacentor variabilis)

Distribution: *Dermacentor variabilis* is found in the eastern two-thirds of the United States from Nova Scotia to the Gulf Coast, including all of Pennsylvania. They prefer open locations with little or no tree cover, such as grassy fields and scrublands.

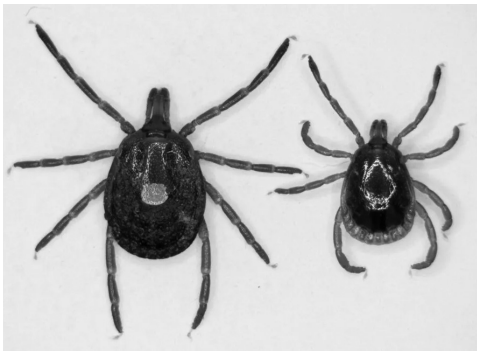
Activity period: Larvae are most common during the spring and fall while nymphs and adults are found throughout the summer. However, unfed individuals of all life stages can survive for more than a year between hosts (larvae: 15 months; nymphs: 20 months; adults: 30 months), so all life stages may be encountered year-round.

Hosts: Larvae and nymphs prefer to feed on small rodents. Adults are frequently found on dogs (hence the common name) but also feed on other medium and large mammals such as squirrels, raccoons, rabbits, ground hogs, fox, deer, domestic livestock, and humans. They can be extremely aggressive biters.

Diseases: American dog ticks are the main vector of the pathogens that cause Rocky Mountain spotted fever in Pennsylvania, which is less common than Lyme disease but a potentially more serious illness. They have also been known to transmit tularemia and to cause canine tick paralysis. They do not vector the causative agent of Lyme disease.

Notes: American dog ticks are much larger than blacklegged ticks and engorged female ticks may be the size of a grape.

American dog tick, Dermacentor variabilis. Photo by Erika Machtinger.



Lone star tick, Amblyomma americanum. Photo by Erika Machtinger.

Lone star tick
(Amblyomma americanum)

Distribution: *Amblyomma americanum* is widely distributed in the United States from Texas north to Missouri and eastward to the Atlantic coast. It is found most often in the southern counties of Pennsylvania near urbanized areas.

Activity period: Larval lone star ticks are active during the late summer and fall while nymphs and adults are active during the spring and summer. Lone star tick larvae are often encountered in large numbers.

Hosts: This tick has a broad host range. The larvae feed on a variety of small to medium-sized animals, while the nymphs feed on many medium and large animals. Adults prefer to feed on larger animals. All stages are aggressive biters that will readily feed on humans, livestock, and companion animals.

Diseases: Lone star ticks can vector the causative agents of Rocky Mountain spotted fever, ehrlichiosis, tularemia, and STARI (southern tick-associated rash illness), as well as Heartland virus and Bourbon virus. Lone star tick bites are also associated with alpha-gal (red meat) allergy.

Notes: Adult females are easily identified by the presence of a single white dot in the center of a reddish-brown body.

Groundhog (Woodchuck) tick
(Ixodes cookei)

Distribution: *Ixodes cookei* is found east of the Rockies from Texas to South Dakota and northeastward through Maine. Groundhog ticks were the most commonly encountered tick species in Pennsylvania prior to 1990 but have since declined in prevalence compared to blacklegged ticks and American dog ticks.

Hosts: Groundhog ticks are host-specific on groundhogs, but are occasionally found on birds, small animals, or humans.

Diseases: Groundhog ticks can vector Powassan virus, which causes Powassan virus encephalitis. They are not an important vector of the pathogen that causes Lyme disease because of their tendency to feed only on groundhogs, which do not harbor the pathogen.

Asian longhorned tick
(Haemaphysalis longicornis)

Distribution: *Haemaphysalis longicornis* is an invasive tick native to East and Central Asia. It has spread throughout Oceania and was first reported publicly from New Jersey in 2013, but it appears this tick may have been present in the United States as early as 2010. A large population was discovered on a New Jersey sheep farm in 2017, and it has since been detected in eight states. As of May 2019, only three samples of Asian longhorned tick have been found in Pennsylvania, although this number is expected to rise as the tick becomes established.

Hosts: Because Asian longhorned tick is new to North America, it is unknown what its preferred hosts will be. In other areas of the world, larvae and nymphs prefer small mammals and birds while adults prefer large animals, such as cattle, horses, deer, and sheep. A single instance of *H. longicornis* biting a person has been reported in the US thus far.

Diseases: Asian longhorned tick is not known to vector any pathogens in North America. However, in its native range it is known to vector *Anaplasma* spp., *Ehrlichia* spp., and Powassan virus, so the potential exists that it will vector those pathogens in the US as well.

Notes: For more information, see the Penn State fact sheet about Asian longhorned ticks.

Read the full article at **https://extension.psu.edu/common-ticks-and-tick-borne-diseases-in-pennsylvania**.

What's to Like about Lichens?

By Mary Jane Busch, Pennsylvania Forest Steward, Class of '22

If you have crusty, scaly, blue-green patches on your trees, should you be thankful or concerned about their presence? If you consider this fungal-algal organism unsightly, should you remove it?

Those colorful splotches are lichens (pronounced "lie-kens"). These organisms are thallophytes, plantlike forms that lack true roots, stems, or leaves. The body is called a thallus and is two species living together in a symbiotic relationship. The major partner (80%), a fungus, determines its classification as a fungus. The secondary partner is either an alga or cyanobacteria (formerly called blue-green alga).

Because each of the partners benefits in the arrangement, the specific symbiotic term is mutualism. In the case of lichens, the relationship is obligate—neither the fungus nor the alga could survive without the other. The fungus cannot make its own food, so the alga photosynthesizes food for its partner. In return, the fungus provides protective housing and support for the alga.

Rhizines of the fungus attach the lichen to the outer surface of the tree, but these "roots" do not take nutrients from the tree or harm their host. As an epiphyte, also known as an "air plant," the fungal outer coat absorbs moisture from rain, dew, or fog and collects minerals from the air. These photosynthetic ingredients are then transported to the alga to make food using sunlight.

There are at least 18,000 species of lichens, and they are found on every continent, including Antarctica. Some species have a narrow habitat range while others can colonize a variety of substates. They can be found on tree bark, dead wood, rock, rusty metal, plastic, cloth, glass, bare soil—even sand dunes—just about any surface on which a fungus can survive. Colors can range from bright red to yellow, gray, green, blue, brown, or black.

In the northern tundra, lichens (a.k.a. reindeer moss or caribou moss) begin many food chains and are eaten by invertebrates and vertebrates, including lemmings, voles, mice, marmots, squirrels, polar bears, musk oxen, elk, and caribou. As much as 25% of the diet of caribou can be provided by these organisms. Indigenous peoples harvest and store the crop for winter feed for their reindeer (domesticated caribou) herds.

Lichens on your trees can indicate good air quality. They can also be a red flag indicating poor tree health, not caused by them, but responding to foliage loss. Photo by Mary Jane Busch.

Hundreds of species of lichens colonize trees. The organisms live on healthy as well as unhealthy trees. Larger colonies are often found on stressed or older trees, and, because of this, lichens are often blamed for the tree's decline. However, a "sick" tree generally loses foliage, and this thinning of the tree's leaves allows more sunlight to reach the trunk. The algae is then able to make more food, and the lichen grows and becomes more noticeable. By this explanation, the cause-and-effect presence of lichens causing tree deterioration is debunked.

Each lichen species has its specific requirements. On tree trunks, pH is often a limiting factor; all species have an optimum range of bark acidity. As bark becomes less acidic with age, lichens move onto the older trunks with a "sweeter" habitat. Ash trees have a very high alkalinity and are hosts to over 500 different species of lichens. On the other end of the scale, acid rain lowers the pH and makes a tree's trunk less suitable for lichens.

Although found around the world, lichens are not found where the air contains a lot of ozone, sulfur dioxide, fluoride, ammonia, or acid rain. Most lichens are very sensitive to air pollutants and are one of the first organisms to die when pollution increases.

In the 1860s, scientists discovered lichens thriving in areas with clean air but declining in areas with dirty air. Like canaries in the coal mine, various species have been used to monitor air quality. Because lichens have no protective epidermis, they imbibe both beneficial and detrimental airborne elements. Their deterioration can indicate sulfur dioxide emissions from industrial operations and drifting ammonia and nitrates from agricultural activities. Lichens also accumulate mercury from power plant emissions, lead and zinc from mining ore smelters, and radioactive metals. Elemental analysis of lichens can then be used to measure these health-impacting discharges.

What has been described as a lichen zone pattern occurs in urban areas and near industrial complexes. Where there are no lichens, there is poor air quality. Since the enactment of the Clean Air Act, sulfur dioxide levels fell from the 1970s to the 1990s, and lichens have reestablished in areas where they had perished.

Lichen presence on a tree trunk can be a double-edged sword. The fungal body can act as a natural sunscreen, protect tree trunks from physical damage, and seal off the entrance for pathogens into the bark. On the other hand, the cloak retains moisture and creates a humid microenvironment on tree bark. This additional moisture can mitigate drought periods for the host and lichen, but it can also create habitat for negative bacterial and fungal growth which could be harmful to the tree. However, dendrologists agree that removing lichens from a tree is destructive as it damages the bark and creates entryways for diseases and pathogens.

Lichens get a thumbs up as natural sentinels for the air that we breathe. Their number and diversity are a bioindicator of good or poor air quality. If you have lichens on your trees, your air quality is probably very good. You must also remember that lichens can be a red flag indicating poor tree health, not caused by them, but caused by other factors. As Scott Weikert, Penn State Extension Educator, says, "If you see a tree that appears to be in poor health or dying, don't blame the lichens. The only thing they are killing is time."

SFI® Logger Training...It's Not Just for Loggers!

By Chuck Coup, PA SFI Implementation Committee Program Manager

For almost three decades, the Pennsylvania SFI Implementation Committee has offered professional training designed to equip loggers throughout the state with the knowledge and skills necessary to safely and sustainably manage our forests while harvesting timber products. The training courses we provide span a variety of subjects, covering everything from practical operational techniques such as chainsaw felling to critical resource management issues like identifying and protecting threatened and endangered species and their habitat. Although primarily aimed at professional loggers, enrollment in these training programs is open to anyone with an interest in the course topic. Last year, we welcomed nearly 650 training participants, including foresters, landowners, fish biologists, engineers, firefighters, office personnel, municipal workers, and trail maintenance volunteers.

For those who wield a chainsaw, whether casually as a forest landowner or firewood cutter, or in a more professional capacity, our "Game of Logging" series is a valuable curriculum. These courses cover the essentials: from chainsaw maintenance and sharpening to the art of tree felling, bucking, and limbing. Divided into four progressive levels, each day-long, hands-on session is guided by instructors with experience teaching both novice operators and seasoned loggers. With a structure that encourages building on the foundation laid in previous levels, participants gain comprehensive insights into the safest and most efficient logging techniques.

SFI's Sustainable Timber Harvesting workshop provides participants with a science-based approach for evaluating the sustainability of a harvest. Photo by Chuck Coup.

Our training program offers several half-day continuing education courses that delve into specific aspects of forest stewardship. "Intro to Reptiles and Amphibians and Their Habitats within PA" helps participants better understand the diverse array of over 70 species of reptiles and amphibians native to Pennsylvania and covers management practices that help sustain them. Similarly, "PA Wildlife Species of Greatest Conservation Need" identifies and provides crucial insights into at-risk wildlife species in our forests and efforts aimed at restoring their populations. Our "Vegetation Management" course focuses on identifying and controlling the most common invasive plant species that threaten the health and vitality of forests across Pennsylvania.

For those considering a timber sale, our "Sustainable Timber Harvesting" workshop can equip them with important considerations and a science-based approach for evaluating the sustainability of a harvest. This comprehensive full-day training includes both classroom instruction and practical, in-woods analysis. The training discusses how Pennsylvania's forests grow and how various management objectives can be achieved through sustainable timber harvesting practices that emulate natural disturbances.

The Pennsylvania SFI spring training schedule has already started, with courses being offered at locations across the state through the beginning of June. To review course offerings and register, go to **www.sfiofpa.org/register**.

For more information about the PA SFI® Implementation Committee, visit their website at **www.sfiofpa.org** or call 888-734-9366.

PA Tree Farm: Seeking Nominations for Tree Farmer, Inspector of the Year

By Susan Benedict, PA Tree Farm Committee Chair

As I write this, I am in Vancouver, WA finishing up the American Forest Foundation's National Leadership Conference. It has been several years since I have attended, and it has been great to see old friends and make new ones from across the country.

As I have chatted with folks and attended sessions, several things have become clear to me. We are all fighting many of the same battles: shortage of funds and hands to do labor, invasive plants and insects, and, of course, climate change. Our approach to these issues may differ across regions of the country, but our basic desire to do the best we can on our land is universal.

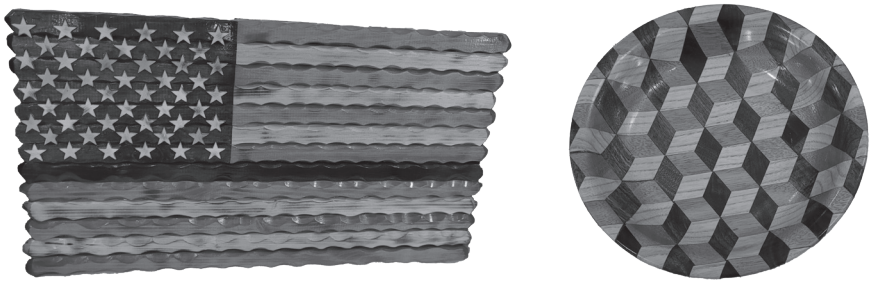
Speaking of our desire to do the best on our land, in Pennsylvania we have many outstanding examples of exceptional Tree Farmers doing exceptional work on their land. And, we have exceptional Tree Farm inspectors doing exceptional work advising these landowners. Let's make sure we give appropriate recognition to these landowners and inspectors. Please send me nominations for Pennsylvania Tree Farmer of the Year and Inspector of the Year. You can email me your nominations at ssb4295@gmail.com, or call me at 814-360-3035.

Thank you to everyone who is working to keep Penn's Woods healthy and prosperous.

For more information about the PA Tree Farm program, visit their webpage at **www.paforestry.org/treefarm**.

Pennsylvania Forestry Association Holds Annual Conservation Banquet

The Pennsylvania Forestry Association (PFA) held their annual conservation banquet to raise funds to support forestry education within the Commonwealth on March 2. Over 225 PFA members, friends, forest landowners, foresters, forest products enthusiasts, and longtime supporters united at the Ramada Conference Center in State College for the festivities. To start things off, the Brush Mountain Band brought their guitar, bass, violin, banjo, harmonica, and voices to delight the crowd, especially with their rendition of "The Devil Went Down to Georgia." In the silent auction room, dozens of tables overflowed with forestry-themed products to bid on. There were edible forest products, rough-cut lumber packs of interesting tree species, small, finished wood products, and many other items. And, the live auction was certainly lively! Enthusiastic bidders raised their hands again and again in hopes of securing many great items. Below are two examples of donated items. The bowl with the geometric theme commanded over $400.



These handmade wood items, an American flag placemat (left) and geometric themed bowl (right), brought high bids at PFA's annual conservation banquet. Photo by Jeff Osborne.

After the auctions, old and new friends enjoyed a great dinner and settled in for the $10,000 draw-down. When 10 of the 350 tickets remained in the running for the grand prize, those ticket holders assembled in chairs at the front of the banquet hall. All 10 finalists won at least $100 cash and a ticket for next year's event. The excitement was palpable, especially when they drew the second-to-last ticket. The remaining ticket holder, who had just won $10,000, leaped to her feet and rejoiced with several of her friends.

It was a great night for forestry conservation through networking of the attendees, and the raising of over $20,000 to support our education programs. We greatly appreciate your attendance and donations of auctions items and look forward to both at next year's event.

For more information about PFA, visit their website at **www.paforestry.org** or call 800-835-8065.

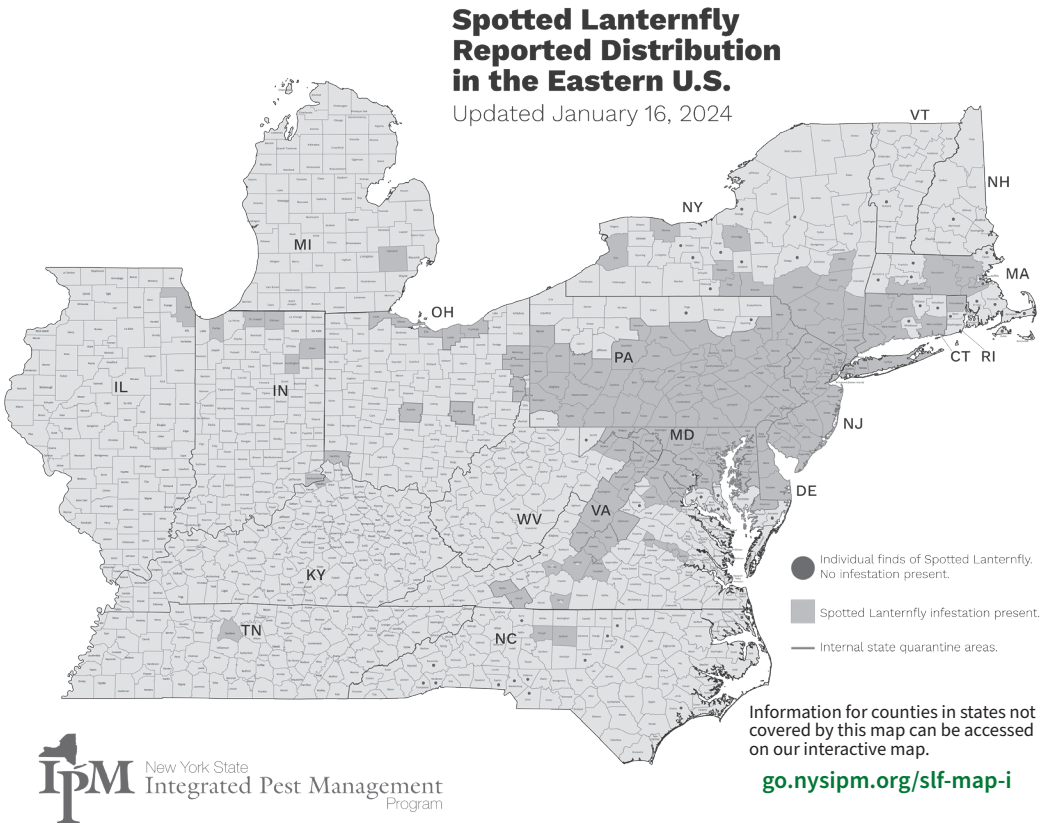
Invasive Pest Update: Spotted Lanternfly

This year marks 10 years since the spotted lanternfly was first detected in Berks County, PA. As we enter April and May, spotted lanternfly (SLF) nymphs will begin hatching. If you find egg masses that have not hatched, you can scrape and destroy them. Once they hatch, management options include traps and insecticides.

As shown in the New York State Integrated Pest Management map (right), SLF invasion now covers all but the northern tier counties in Pennsylvania. These voracious plant hoppers feed on a large variety of plant species, including those in the agricultural, timber, and ornamental industries, and backyard plants. SLF is a plant stressor that, in combination with other stressors (e.g., other insects, diseases, weather), can cause significant damage to its host. SLF alone may not kill a tree.

For more information on SLF and what you can do to slow the spread and manage this pest on your property, check out Penn State Extension's *Spotted Lanternfly Management Guide* at: **https://extension.psu.edu/spotted-lanternfly-management-guide**.

Adapted from Spotted Lanternfly Management Guide, *Penn State Extension.*



At the Finley Center: Ongoing and Upcoming Research Projects

By Allyson Muth, Director, James C. Finley Center for Private Forests at Penn State

One of the hallmarks of the research of the Finley Center is that it is rooted in addressing applied issues and challenges facing forests and the people who own and care for them. We want our work to help people take good care of the woods and ensure it meets the needs and values of those who own woodland and that their woodland continues to exist as forest, sustainable and healthy, into the future.

In this quarter, we have been in the throes of compiling the body of work from last year into our 2023 Annual Report, but we've also been hard at it sharing results of other research and starting new projects. Here are some highlights:

2021 Forest Landowners Survey—presentations of our findings are dominant in our work as we share results of the most recent statewide survey of woodland owners. With workshops offered so far this year for Bureau of Forestry service foresters and others who support private woodland owners, we are looking ahead to new opportunities to share with other partners and stakeholders. Our work uncovered landowner values, attitudes, and behaviors, as well as how people access resources and assistance, and what might be barriers to that access. We're hopeful our insights will help inform approaches to educating and supporting the owners of the majority of woodlands in the state.

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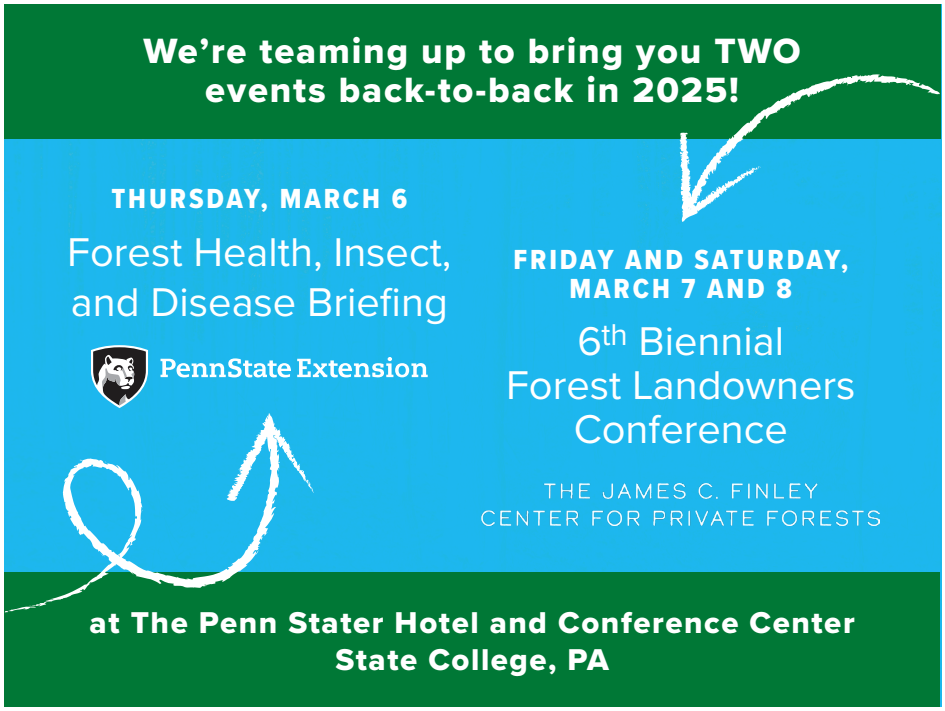
CENTER FOR PRIVATE FORESTS

Forest Landowners Panel Survey—in the field right now is a survey of past participants in previous iterations of the statewide forest landowners survey who still own forestland. We seek to understand how individual landowners' values, attitudes, behaviors, and access to resources may have changed over time.

Social and Ecological Capacity of Small and Medium Forests for Ecosystem Services—forest modeling of different harvest practices and their outcomes on carbon, wildlife habitat, and biodiversty and work on non-timber forest products' success under different light conditions are ongoing through the lab of Dr. Margot Kaye. In the next few months, the Finley Center will convene groups of landowners from around the state to participate in focus groups to understand how woodland owners are viewing and addressing changing conditions in their forests. This fall, we anticipate a graduate student joining our team to undertake a project on landowner willingness to adopt different practices that may lead to improved ecosystem services within the landscape.

Baseline Forest Condition Documentation Project—in the next few months, the Finley Center will be convening members of the wider forestry community to undertake a project to use USDA Forest Service Forest Inventory and Analysis (FIA) data to understand the current condition of our woodlands across the state, and to look at historical data to understand the processes that led to the current condition. The project will model the outcomes of changing competition, deer impacts, and light conditions from forest health challenges and management activities on the landscape to determine a methodology for continued and regular assessment of our forests' condition, and the complex system and drivers of that system, over time.

Stay tuned for results of all of these efforts!



SAVE THE DATES IN 2025!

THURSDAY, MARCH 6
Penn State Extension's full-day Forest Health Briefing, evening reception, and Exhibit Hall.

FRIDAY, MARCH 7
The 6th Biennial Forest Landowners Conference featuring multiple concurrent learning sessions, lunch with keynote, Exhibit Hall, and an evening banquet with keynote.

SATURDAY, MARCH 8
Morning in-depth tours and workshops, family-friendly activities.

Upcoming PA Forests Webinars

PA FORESTS WEB SEMINAR CENTER

https://extension.psu.edu

The Pennsylvania Forests Online Web Seminar series is held September through June on the second Tuesday of each month, at 12 p.m. and 7 p.m. Webinar topics are geared toward private forest landowners as well as the general public. Webinars are free; registration is required.

Upcoming webinar topics:

May 14, 12 p.m. and 7 p.m.:
Intro to Wild Mushroom Foraging (**https://extension.psu.edu/pennsylvania-forest-seminar-intro-to-wild-mushroom-foraging**)

June 11, 12 p.m. and 7 p.m.:
Pollinators in Pennsylvania's Forests (**https://extension.psu.edu/pennsylvania-forest-seminar-pollinators-in-pennsylvanias-forests**)

Woods and Wildlife News and Notes: The Latest News from the Forestry and Wildlife Extension Team

Penn State Extension's team of Forestry and Wildlife experts publishes an *e*-newsletter, *Woods and Wildlife News and Notes*, containing the most recent information, events, demonstrations, partnerships, and activities coming from the team. *Forest Leaves* shares the titles and thumbnails of select articles and videos with you each quarter.

If you want to check out any of these articles and videos, it's easy! Go to **https://extension.psu.edu** and type the title listed below in the search bar.

This issue's articles:

Forest Snapshot March 2024

This bi-monthly article is a collection of forest health observations, plant and animal phenology, important upcoming dates, and hunting season changes.

Remember to Look Up

Upon entering a forest, remember to look up! You might catch a glimpse of wildlife, but hopefully you will also see potential dangers that exist within the woodlot from above.

Pennsylvania Timber Market Report, Fourth Quarter, 2023

Stumpage prices as reported by Pennsylvania timber and logging companies, forestry consultants, and state land management agencies to the Pennsylvania State University.

The Invasive Amur Corktree

The Amur Corktree is a species native to Asia that is considered an invasive species in Pennsylvania.

This issue's article with video:

Silent Survivors: The Winter Life of Trees

Trees have many enemies. Insects, diseases, wildlife, and fungi are among the cast of characters that harm them throughout their lives. Trees also face climatic challenges.

This issue's videos:

Backpack Sprayer Calibration for Spot Applications

Learn how to properly spray herbicide for a spot application with a backpack sprayer, and how to determine the application rate for calculating the amount of herbicide to mix.

Backpack Sprayer Calibration for Broadcast Applications

Learn how to properly spray for a broadcast herbicide application with a backpack sprayer, and how to determine the application rate for calculating the amount of herbicide to mix.

Backpack Sprayer Calibration: Single-seedling Plot Applications

Learn how to properly apply herbicide around a planted tree seedling with a backpack sprayer and how to determine the application rate for calculating the amount of herbicide to mix in your sprayer.

Requesting the *Woods and Wildlife News and Notes* newsletter's delivery to your personal inbox involves the same opt-in process you may have already used to communicate your areas of interest among the full suite of Penn State Extension offerings. To make sure you are on the distribution list, visit the Penn State Extension website to manage your email preferences (**https://extension.psu.edu/forestry-team-sign-up**), and select any of the "Forest and Wildlife" topic areas of interest.

FOREST LEAVES
Spring 2024

Editors:

Allyson Brownlee Muth
Jeff Osborne
Barb Sellers

Calendar contributions and news items are welcome. Submissions for the next hardcopy issue of *Forest Leaves* are due:

June 15, 2024

***Forest Leaves* Publication Partners include:**

- **The Pennsylvania Forest Stewardship Program** administered nationally by the USDA Forest Service under the direction of the PA DCNR Bureau of Forestry in conjunction with the Center for Private Forests and Penn State Forestry and Wildlife Extension.
- **PA DCNR Bureau of Forestry** **www.dcnr.pa.gov/about/Pages/Forestry.aspx**
- **The PA Tree Farm® Program** **www.paforestry.org/treefarm**
- **The PA Forestry Association** **www.paforestry.org**
- **The PA SFI Implementation Committee** **www.sfiofpa.org**
- **Penn State College of Agricultural Sciences** research and cooperative extension programs funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the US Department of Agriculture.
- **The James C. Finley Center for Private Forests** **ecosystems.psu.edu/research/centers/private-forests**
- **Penn State Extension** **extension.psu.edu**

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PennState Extension

We welcome your letters, ideas, and contributions! Send them to the address shown above.

NEXT DEADLINE:
June 15, 2024

Got Invasive Plants? Check Out these Resources!

It's that time of year when the invasive plants in your woodlot are leafing out all over. We want to remind you of Penn State Extension resources you can use to identify the plant pests on your property and ways to control them.

You can find fact sheets on common invasive plants in Pennsylvania's forests, recorded webinars, videos, and articles at:

https://extension.psu.edu/forests-and-wildlife/forest-management/invasive-and-competing-plants

Check out the over 70 resources available and share the link with fellow landowners.

For more information, call 814-863-0401 or email your questions to PrivateForests@psu.edu.

Forest Leaves Calendar of Events

Sunday, May 5, 1:00 - 4:00 PM. Lynn Firth Wildflower Walk. Fisherman's Cove Boat Launch, Polk, PA 16342. **www.foundationforsustainableforests.org/events**

Friday, May 17, 5:30-7:00 PM; Saturday, May 18, 9:00 - 10:30 AM. Chicory Lane Farm: Native Plant Walks with Cathryn Pugh, Glen Bupp, and Amber Stilwell. Chicory Lane Farm, Spring Mills, PA.

Friday, June 7, 8:30 AM - 3:30 PM. Sustainable Forest Management for Private Landowners Northcentral Region Tour: SGL 100 (Centre County). State Game Lands 100, Centre County.

Saturday, June 15, 9:30 AM - 2:30 PM. Chicory Lane Farm: Ecological Enhancement with John Smith and James Lesher. Chicory Lane Farm, Spring Mills, PA.

Friday, June 21, 8:30 AM - 3:30 PM. Sustainable Forest Management for Private Landowners Northcentral Region Tour: SGL 183 (Pike County). State Game Lands 183, Pike County.

Sunday-Wednesday, July 21-24. Joint Conference of the Northerrn Nut Growers Association and the Chestnut Growers of America. State University of New York (SUNY) College of Environmental Science and Forestry, Syracuse, NY. **https://nutgrowing.org**

For the most up-to-date listing and to learn more about events listed here, visit:

ecosystems.psu.edu/research/centers/private-forests/events

If you have an event to share, send information to Jeff Osborne, jao5194@psu.edu.