



Forest Leaves

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Considerations for Collecting Tree Seeds for Plantings

By Jeff Osborne, Forest Stewardship Program Associate,
James C. Finley Center for Private Forests at Penn State



Members of the Allegheny Plateau Audubon Society and the Beaverdale Sportsmen's Association worked together to build a 12-foot Chimney Swift tower to provide housing for this threatened species (page 2). Photo by Adam Katrancha.

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If you have been walking under oaks or hickories in recent weeks, you may have been struck by discarded pieces of acorns or hickory nuts as squirrels feed; and hopefully you were reminded that it is time to collect many types of seeds for planting. Collecting seeds for planting on your own property or to help benefit someone else's planting project can be a great way to connect with the forest.

Many seeds commonly used in tree plantings are collected in late summer through fall, although some are collected from spring into summer. Many trees and shrubs drop their seeds, or animals pull them off, over the course of a few weeks, so it is important to know when to be on the lookout for target species. Some species, like those in the white oak group and some maples, begin to germinate shortly after falling, so they should be planted shortly after gathering. Many species wait until the following spring to germinate. These may require being held at a certain cold temperature for a period of time such

as would occur over winter, also known as stratification. These species of seed can be planted in the ground in the fall, but they are often kept in refrigerated storage to reduce losses from animals eating them or from issues caused by too much or too little moisture that could occur from fall to spring. In the spring, late frosts can also kill seedlings that have just emerged. There are some other species that germinate only after their hard seed coat has been scarified (openings in the seed coat created) by chemical or mechanical means, allowing the seeds to absorb water. Scarification can naturally occur as the seeds pass through the digestive system of animals or can be simulated by artificial means such as by sanding. The table below shows considerations for collecting seeds from several species, including collecting and planting season as well as whether seeds need to be stratified or scarified before they will germinate and grow.

Seeds, continued on page 4

Common Name	Genus & Species	Time Seeds Fall				Time to Plant	
		Spring	Early Summer	Late Summer	Autumn	When They Fall	In Spring After They Fall
Red oak and others in red oak group	<i>Quercus rubra</i>			X	X		X (with stratification)
White oak and others in white oak group	<i>Quercus alba</i>			X	X	X	
Eastern white pine	<i>Pinus strobus</i>			X	X		X (with stratification)
American mountain ash	<i>Sorbus americana</i>				X		X (with stratification)
Kentucky coffee tree	<i>Gymnocladus dioicus</i>				X		X (with scarification)
Honey locust	<i>Gleditsia triacanthos</i>				X		X (with scarification)
Sugar maple	<i>Acer saccharum</i>			X	X		X (with stratification)
Black walnut	<i>Juglans nigra</i>				X		X (with stratification)
Butternut	<i>Juglans cinerea</i>				X		X (with stratification)
Silver maple	<i>Acer saccharinum</i>	X	X			X	
Red maple	<i>Acer rubrum</i>	X	X			X	



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Backyard Chimney Swift Conservation

By Adam Katrancha, Pennsylvania Forest Steward, Class of '09

Dunlo and Llanfair, two villages located along a stream formerly known as Yellow Run and now identified as Sulfur Creek in Adams Township, southeast Cambria County, PA, were established by enterprising timber and coal industrialists. These communities, once home to over 3,200 hard-working and often grizzled eastern European immigrants, developed into bustling communities of their own and offered public services and amenities, including an electric light plant, rail service, the commercial enterprises of any respectable town, and, of course, public schools. The Dunlo-Llanfair Public School located along Llanfair Road, once having several hundred students, now sits abandoned by the school district consolidation process. Even in its dilapidated state—with partial collapse in recent years—it is not entirely vacant. Since shortly after the school's formal closure, migratory residents, traveling from South America, arrived each spring following the seasonal emergence of insects. These summer residents, Chimney Swifts (*Chaetura pelagica*), have entertained onlookers with aerial acrobatics and served as insect control agents for the neighborhood for years. They have also made the chimneys of the old Dunlo school their roost throughout the breeding and migratory seasons. Fortunately for this scream of swifts, they found members of the Allegheny Plateau Audubon Society (APAS), renowned for raptor monitoring at the Allegheny Front Hawk Watch, and the Beaverdale Sportsmen's Association (BSA), experienced with woodland warbler habitat development, as adoring neighbors to their currently deteriorating abode.

Prior to European colonization, Chimney Swifts roosted in hollow trees and caves, and on cliff faces. With expanding human settlements, forests were cleared of the old growth nesting sites, but ready replacements were found in the stone and masonry chimneys that supported the growing populations of both humans and the accompanying birds. Unfortunately, recent shifts in human behavior are now having detrimental effects on the swifts. In addition to climate change, pesticide use, and plummeting insect populations, recent cultural and technological changes in residential and commercial heating methods are reducing available roost sites due to the transition toward covered, narrow flues that are unsuitable for nesting. In an effort to ensure the annual return

of their summer visitors, the neighbors in Dunlo began their investigation into the swifts and potential means to support their livelihood.

Typically insectivores, Chimney Swifts feed on the wing, taking insects in flight or snagging them from branch tips, with the reported occasional consumption of an elderberry or two, but never feeding from a stationary position. The Chimney Swift will never sit on a perch like most birds. Their long claws are suited only for clinging to the walls of chimneys and other vertical surfaces and are supplemented with spines on the end of their tail feathers to stabilize them. They forage mostly over open terrain but also over forests, ponds, and residential areas—anywhere with an adequate insect population. Wintering in Amazonian South America, they again roost in chimneys, caves, and similar vertically surfaced buildings.

Fortunately, the needs of the swifts are few. Vast acreages of woodlands, expansive wetlands, or complicated management plans are not requirements for their neighborliness. They only desire a safe roost and adequate insect population and often acclimate to man-made structures. As overseer of a vacant lot about 500 feet away from the school building, BSA member Adam Katrancha offered the 1/3-acre site, now a coal mine refuse dump reclaimed to an urban meadow with warm-season grasses and a collection of young trees, as an available location for a Chimney Swift tower. The towers, usually wood or masonry structures, provide protection and mimic the vertical faces provided by hollow trees and chimneys. With a firm place and purpose, in-depth investigations into tower construction were required. A brief search yielded



Chimney Swift taking flight in Dunlo; note the stiff tail feather spines.

Photo by APAS photographer David Poder.

Chimney Swift Towers: New Habitat for America's Mysterious Birds (Kyle and Kyle, 2005), which offered a variety of designs with detailed construction drawings. Now with a plan, and hoping to attract summer tenants with luxury accommodations, the human builders decided on the construction of a masonry tower to serve as shelter for the foreseeable future. To ensure acceptance by the community and adherence to local ordinances, Adam attended the township planning commission meeting where the proposed project was explained and received by the commission. With a few modifications to provide a footer below the frost line, construction drawings from the Chimney Swift towers book were submitted and a construction permit issued.

Adult Chimney Swifts are most commonly observed in flight. Scythe-shaped, their wings span slightly over a foot, supporting a proportionally short, cigar-shaped body. Sooty-gray to black, the “flying cigars” exhibit a flickering bat-like flight accompanied by “chipping” or “ticking” vocalizations. Their annual migrations bring them to the U.S. in late March, and they are quick to depart, returning south again by November, with a later arrival and earlier departure in the northern states. Nesting begins in May and continues through August in the warmer climates. In cooler seasons, an aggregation of swifts will roost together to share in the warmth of numbers. Even in summer, unmated swifts will roost together. Other nonbreeding residents may be tolerated, but there will only ever be one mating pair nesting in a chimney.

Recognizing the limited flexibility in the bird's spring flight schedule, Adam solicited construction help from BSA and APAS colleagues while still seeking a masonry contractor willing to undertake such a unique project. Wayne Berkey (BSA) graciously offered an evening of backhoe services to dig the footer. With a hole of satisfactory dimensions, Daniel Omasta, proprietor of Concrete & Masonry Unlimited, Inc. of Johnstown, began construction of the footer and masonry block walls. He quickly completed the footer and began laying concrete blocks. As blocks were placed, Adam offered limited assistance by backfilling around the rising tower and infilling with gravel for drainage. The tower soon rose above ground-based

Chimney Swift, *continued on page 3*

Chimney Swift, *continued from page 2*

access and scaffolding was erected. As Dan continued his Saturday morning work schedule from the scaffolding, Adam kept him supplied with blocks and mortar. With winter temperatures fast approaching, the tower achieved the 12-foot height, and 4-inch solid blocks were placed as the cap to exclude winter precipitation from the block cavities. The solid cap would also serve as a durable anchor for the planned wood framed roof.

As winter arrived, construction of the tower's wood components—an access door and roof—commenced indoors. With the intent of creating a long-term, low-maintenance structure, weather-resistant hemlock, salvaged from a windfall, was milled to various thicknesses by hobbyist sawyer Rich Strayer. Adam then petitioned woodworking neighbor Ed Paluch for assistance with fabrication. Working in Ed's woodshop, a slightly pitched roof was constructed to shed water and, more importantly, to shade the tower interior. The thick masonry walls help regulate temperature, but direct sun can still overheat the interior, so a roof covering most of the tower throat was provided, with only a 16"x16" opening on the northern edge for avian access. A scaled-down access door was also provided at ground level. This door serves a dual purpose of providing access for maintenance as well as containing screen-covered ventilation holes to, again, aid in temperature control. With lengthening daylight and warmer temperatures returning, Adam called on BSA/APAS members Bob Stewart and Greg Gdula to help with carpentry work and the final assembly of the tower's components. Understanding the swift's modest tastes, 5/8" T1-11 sheathing was installed on the interior walls to mimic the natural material of the hollow trees used where man-made homes are not available. The T1-11 is left untreated, cut and installed with the textured grooves oriented horizontally to offer a slight ledge for nest building. With the roof now anchored in place and the door and interior finished in a rustic décor, the tower was now available, offering vacancy to the early spring arrivals.

The Chimney Swift's courtship display—two birds flying close together while calling, then with the snap of wings into a V-shape, gliding together in downward curve—typically begins within two weeks of their return to the northern breeding grounds. Once mated, only for the season, the pair will scout nest locations until a suitable site is found. Shallow, half-saucer shaped nests are built from loosely woven



The completed Chimney Swift tower is ready to welcome its first pair of inhabitants.

Photo by Adam Katrancha.

twigs. The nests are attached to vertical surfaces with the birds' glue-like saliva. Both parents share in the incubation and, after about 18 days, the catching of insects for the young. At times, unmated adults will also contribute to the rearing of another's young. At one month, young Chimney Swifts will leave the nest for their first flight. The young return to the nest for a few days, but are eventually pushed out by the parents to begin their adult lives. After the breeding season, Chimney Swifts join larger flocks in migration to South America. During migration, as many as 10,000 swifts may circle in a tornado-like flock at dusk and funnel into a roosting colony to spend the night. Surprisingly, the lives of these widespread urban adapted birds are unstudied due to their inaccessible nesting and roosting sites and their aerial lifestyle.

The swifts did return to Dunlo after completion of the tower, with eight regularly counted. However, instead of using the tower, they returned to the comfort and protection of the old school's venerable chimneys. Even without first-year occupancy, the builders of the tower are proud of their project and enjoyed the camaraderie of working toward a common conservation goal. As Chimney Swift populations decline, the robust, nearly maintenance-free nature of this tower will ensure a safe summer roost for a

young, mated pair or as alternate lodging should the school's ongoing deterioration or demolition render it uninhabitable. Adding a final complement to the whimsical structure, Greg, Bob, Ed Gowarty, Sr. (APAS), and Tom Kakabar (BSA), joined efforts in late fall to plant a variety of trees and shrubs on the formerly vacant site.

While not everyone has the means to construct a Chimney Swift tower, conserving this threatened species is something anyone can support. As migratory birds, they and their nest sites are protected under the Migratory Bird Treaty Act. It is illegal to harass, remove, or in any way disturb a nesting pair of Chimney Swifts. A proactive supporter can help identify roost sites and, as old chimneys are lost to modernization, share information and campaign for their conservation. The Audubon Society of Western Pennsylvania has a Chimney Swift Tower Initiative, and numerous other websites and Audubon chapters offer ideas and resources to help inform and protect this species.

As a predictor of warmer days, the residents of Dunlo and Llanfair eagerly look forward to the swift's seasonal return. While there is some doubt as to whether a "vacancy" sign will entice residency in the newly constructed tower, there is always enjoyment in watching the acrobatic displays and the satisfaction of contributing to the conservation of an important species.

June 2023 Update: Upon hearing rumors of the impending demolition of the Dunlo School, Adam contacted the current owner and shared the Chimney Swift's story. While preserving the school's chimneys was not practical, the owner recognized the swift's migratory schedule and worked to complete demolition prior to their return. The school was demolished in April 2023. The swifts did return on schedule and have been observed entering three neighboring house chimneys, with the tower still appearing unoccupied. The Chimney Swifts, undeterred by the new roosts, still provide daily entertainment and insect control. It is hoped that with time, the tower will be accepted, and the supporting community can boast of successful conservation efforts.

Resources:

<http://www.chimneyswifts.org>

<http://aswp.org/pages/audubon-s-chimney-swift-tower-program>

https://www.allaboutbirds.org/guide/Chimney_Swift/overview

PA SFI® Implementation Committee, Game Commission Enter Cooperative Agreement

By Chuck Coup, PA SFI Implementation Committee Program Manager

The Pennsylvania SFI Implementation Committee (PA SIC) is excited to announce a new partnership with the Pennsylvania Game Commission (PGC). On July 25 the two parties entered into a three-year cooperative agreement that provides support and recognition to the Implementation Committee's efforts that bolster the PGC's mission and programming.



PA SIC and PGC representatives recently signed a three-year cooperative agreement.

The PGC partnership recognizes the valuable education and outreach that PA SIC provides to the professional loggers that are integral to completing forest habitat management work on State Game Lands. The Commission also recognizes the PA SIC's sustainable forestry outreach to Pennsylvania citizens who utilize PGC forest lands or who own private forestlands that host critical wildlife habitat.

Through the agreement, the PGC will make PGC facilities and State Game Land areas that are suitable for training or organizational meetings available to PA SFI and will provide funding support to conduct training and outreach.

Regarding the agreement, Bryan Burhans, PGC Executive Director, stated, "Forestry is our primary tool for enhancing wildlife habitat on Pennsylvania's State Game Lands. Logging is a dangerous career, and the work that Pennsylvania's SFI Implementation Committee does within their Qualified Logging Professional train-

ing is important, and the Pennsylvania Game Commission wants to do our part in ensuring the safety of not only loggers on State Game Lands, but across the Commonwealth of Pennsylvania."

"In many aspects, the objectives of the Pennsylvania Game Commission and the Pennsylvania SFI Implementation Committee are indistinguishable, and our efforts absolutely complement one another," said Doty McDowell, Outreach and Development Director for the PA SIC. "We have been very fortunate to have the Pennsylvania Game Commission represented on our Implementation Committee for several years now, and we welcome the concrete recognition, support, and collaboration this new agreement provides."

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

Pennsylvania Tree Farm: Committee Meeting News

By Susan Benedict, PA Tree Farm Committee Chair

In our August committee meeting, we began to look at how the PA Tree Farm Program can support the PA Department of Conservation and Natural Resources (DCNR) in their statewide forestry goals. The PA Forestry Association's November Symposium will feature presentations and discussion of the PA DCNR Bureau of Forestry's Strategic Plan, including their forestry goals for private landowners. This is very timely for our committee's efforts and I encourage ALL to attend and ask questions so we can be clear on where we can focus efforts to help them meet their goals.

Monte Kapec made an excellent point during our meeting: in encouraging landowner engagement, especially in completing on-the-ground projects, mentorship is a key factor. This is where joint effort with the Pennsylvania Forest Stewards could be an exciting way to achieve the mentorship needed to begin to see real on-the-ground successes. Nancy Baker, PA Forest Stewards Steering Committee Chair, and I have had discussions on this and agreed to look at how we can increase mentorship among private landowners.

Committee members also discussed how the Tree Farm Program in Pennsylvania could work with the PA DCNR and the

PA Forest Stewards program to identify opportunities for forest management activities which support DCNR's goals and resources to accomplish the work, and then identify interested Tree Farmers—or other forest owners—to host the needed work on their land and connect them to the resources. It is a simple vision that will take a lot of work to implement, but the potential results are breathtaking, at least to me.

Our Outstanding Tree Farmer of the Year for 2022, Monte Kapec, has agreed to

host a Tree Farm Field Day at his property on October 21. More details will follow; but all Tree Farmers should definitely save the date!

Our next Tree Farm Committee meeting is November 9 at 10 a.m. We encourage all interested to attend. Email me at ssb4295@gmail.com to be added to the meeting notice.

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

Seeds, continued from page 1

Before you plant, you will want to consider where you plant the seeds and where their final planting site will be.

If you are planning on collecting seeds to plant in an area more than a few miles away, you should consider the seed zone of both the collection site and the planting site. It is a good idea to plant seeds in the same seed zones they were collected in, and record and keep track of where you collect the seeds in case problems arise later in the plantings.

This excerpt of Jeff's article provides some of the considerations you should take if you want to plant seeds on your property or elsewhere. Read the entire article at <https://ecosystems.psu.edu/research/centers/private-forests/news>.

For more in-depth information on choosing appropriate seed sources for your location, check out Penn State's latest publication, *Climate-Smart Seed Sourcing for Resilient Pennsylvania Forests*, at ecosystems.psu.edu/seed-sourcing.

Go Nuts for Acorns!

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

One of the most recognized seeds is the rotund acorn. Like brilliant fall foliage, oak nuts are associated with autumn and are introduced to young children in their science studies for the seed's role in nourishing wildlife and propagating oak trees. For most people, their knowledge about acorns probably concludes with these simple facts, and the importance of these oak gifts is little comprehended or appreciated.

Acorns are the fruits or seeds of oak trees, but not all acorns are created equally. The nuts are species-specific and vary in size, shape, color, cupule (cap), and nutrients. For instance, in the United States, the red oak and black oak have hybridized so extensively that experts argue the two species cannot be identified by their leaves, but their acorn sets them apart. In the black oak acorn, the 0.5-1.0-inch body is covered by half or more of the acorn's cupule. The red oak's 0.75-1.25-inch fruit has a cap that sits like a beret on top and covers only a quarter of the acorn.

Oak species are categorized into two main groups: the white oak group and the red oak group. The latter is recognized by the soft bristles on the tips of the lobes of the leaves; the former has no bristles on their leaves. Also, species in the white oak group produce acorns every year, whereas the red oak group's acorns mature every two years. In Pennsylvania, the most abundant white oaks include the chestnut oak and the white oak. The most abundant red oaks include the red oak, black oak, pin oak, and scarlet oak.

Each acorn is one seed (rarely two) protected by a hard outer shell and cupule. The fruit has a high nutrient content with large amounts of protein, carbohydrates, and fats and critical dietary minerals such as calcium, phosphorus, potassium, and niacin. Acorns also contain bitter, toxic tannins which vary by species.

To make them palatable, Native Americans gathered acorns and leached the bitter tannins from the nuts. Sometimes the ripe acorns were first ground into flour using a mortar and pestle and then leached. Some tribes roasted the seeds to kill the acorn weevil larva that often metamorphosizes inside the nuts. Each tribe had their species preference and depended on the variety of acorns available in their environment. Even though they are generally smaller, acorns from the white oak group were often preferred because



More than 100 species of vertebrates consume acorns across the U.S., including the gray squirrel shown feasting above.

they are less bitter than fruit from the red oak group.

Mast is the fruits, seeds, and nuts of trees and shrubs that are eaten by wildlife. Soft mast includes fruits and berries, and hard mast includes nuts such as acorns, hickory nuts, hazelnuts, and beech nuts. Oak trees produce more hard mast (by weight) than all other nut trees combined. An older oak can drop up to 10,000 acorns in a year!

Particularly heavy acorn yields are dubbed mast year events. One hypothesis for mast bumper crops is that the huge seed quantities overwhelm the seed eaters, and thus more seeds escape for germination. Additionally, the significant impact of these acorn bonanzas is evident in nature's food web. More than 100 species of vertebrates consume acorns in the United States. Mammals feasting on or caching the nuts include white-tailed deer, squirrels, chipmunks, bears, mice, voles, rabbits, foxes, raccoons, opossums, and wild hogs. Birds that feed on acorns include turkeys, bobwhite quail, woodpeckers, crows, jays, wood ducks, and mallard ducks. Obviously, many vertebrates have digestive systems which counteract the toxins in acorns; however, the nuts eaten in large enough quantities are lethal to horses, cattle, and dogs.

Animals that cache acorns have unique sensory abilities—sniffing and shaking—and can differentiate between acorns from the white oak group and the red oak group. Squirrels identify the acorns by smell, a definite advantage when it comes to storing acorns. Acorns from the white oak group germinate immediately after falling and will spoil if cached. To preserve some of the oak nut,

the rodents chew out and eat the germinating embryo and then store the rest of the seed. Acorns from the red oak group are left intact as they do not germinate until the following spring. The rodents also shake the nuts to determine if they are inhabited by a consuming acorn weevil; occupied acorns are today's meal and uninhabited seeds are keepers.

Because of the relatively large size of the oak seed, transporting acorns for winter stash would be a major, energy-depleting chore if it were not for the cheek pouch or the gular pouch of some vertebrates. The pudgy cheeks of the chipmunk and the ground squirrel are a dead giveaway that the rodents are carrying acorns. (Tree squirrels do not have cheek pouches.) Blue Jays have a gular pouch, a sac which opens under the bird's tongue, enabling it to transport up to five acorns at a time. Because of this physiological capacity, Blue Jays are known to disperse acorns a half-mile or more away from the mother tree.

Acorn stashers are labeled as either scatter-hoarders (a large number of small hoards, such as gray squirrels and Blue Jays) or larder-hoarders (a single, large hoard, such as chipmunks and red squirrels). Individuals that do not survive the winter, amass excess food, or "forget" where they buried the food may have inadvertently planted an oak tree.

Chipmunks can gather up to 165 acorns in a day, an amount equal to half its winter needs, so uneaten acorns may survive to sprout into an oak. Woodpeckers are renowned larder-hoarders. A pest control worker found over 700 pounds of woodpecker-stashed acorns in the walls of a home in California!

There are about 450 species of oak trees (600 species if hybridized varieties are included) found in the northern temperate zone and the high altitudes of the tropics. The United States harbors about 90 species. As proven by these nutty facts, these hardwood giants feed millions of animals via their fruits. The significance of this food source and the intricate and substantial food chain relationships of acorns to fauna should impel landowners to encourage the growth of oak trees. Remember, also, that the lowly acorn is the seed source for oak regeneration which continues this life cycle. Like the many animals that go nuts for acorns, so should *homo sapiens*!

At the Finley Center: Making the Most of Summer and Fall

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

Summer and fall prove to be a busy time of year at the Finley Center as we carry our work across the state and beyond. We're doing research out in the field, hosting workshops and meetings, attending conferences, and supporting partner efforts.

This summer, the Pennsylvania Forest Stewards held two regional meetings for fellow volunteers and their guests. Dale Spitzer hosted us in Tioga County and Tim and Sandi Troup hosted us in Armstrong County. Between the two events, 55 volunteers joined us for continued learning and fellowship. Our thanks to our hosts! At the very end of summer, we hosted the 2023 class of PA Forest Stewards for four days of basic training in Westmoreland County. Twenty-five new volunteers joined the complement with lots of enthusiasm and learning to take home to their own land and share with others. As with all classes, we're excited to see how they will use and spread what they learned.

We also launched an undergraduate research project at Fuller's Overlook in northeastern PA during the summer months, thanks to the generosity of Mort and Sue Fuller. With a focus on restoring degraded forest stands, we hired an undergraduate research intern and spent several days in the field collecting baseline data to assess current stand condition. Our plan is to use this site and research as a demonstration or model to highlight small-scale restoration efforts when forest stands are threatened by forest pests.

In June, PhD candidate Sasha Soto and Finley Center director Allyson Muth traveled to the International Association for Society and Natural Resources conference in Portland, ME, where Sasha shared her work as part of a special session on private forests and forest landowners



Finley Center research team assesses stand condition at Fuller's Overlook in July.



THE JAMES C. FINLEY CENTER FOR PRIVATE FORESTS

hosted in memory of Jim Finley. Her presentation, and the special session, were both very well received, and Sasha continues her analysis and writing toward the completion of her degree.

In September, we began offering presentations about the results of the data coming out of the 2021 Pennsylvania Forest Landowners Survey. Two presentations, one to the Westmoreland Woodlands Improvement Association and one to the Western PA Consulting and Industrial Foresters Conference, reached 60 attendees, updating our understanding about the forest landowner population in general, how things have changed in the 10 years since the last survey, and how we can make use of what we're learning about the landowner population. Many more opportunities to share this data are being planned for 2024.

Looking Ahead

The PA Forest Stewards volunteer program, started in 1991, began its "futures" efforts, making sure that our volunteer program best meets the needs of its 500-plus active volunteers and the needs of the larger forest stewardship community, and that the Finley Center and our partners are best supporting the volunteers and their work. Benchmarking our program against others around the nation, surveys and conversations with our volunteer corps, and mapping how the PA Forest Stewards fit within the larger forest stewardship network are all steps that will lead us to a more resilient program into the future. We expect this project to be completed at the beginning of 2025.

The Finley Center also launched a new research study in partnership with Dr. Margot Kaye within the Department of Ecosystem Science and Management. Titled "Social and Ecological Capacity of Small and Medium Forests for Ecosystem Services," this applied research project will evaluate forest landowners' desire and capacity to manage for multiple ecosystem services; quantify the capacity of small forests to provide ecosystem

services of timber and non-timber forest products, carbon sequestration, and wildlife habitat; and then combine this research to identify forest management and landowner assistance strategies best suited to encourage management for ecosystem services.

We also continue to work in partnership with numerous other forest stewardship-focused organizations and agencies to pursue grants and programming that will enable us to expand our peer-to-peer learning efforts, strengthen relationships with and cultivate resources for natural resources professionals, and work to create resources that best support our mission and vision.

Annual Giving Opportunities

The Finley Center's many accomplishments would not be possible without the generous support of our donors. Contributions to the Center endowment enable us to undertake research and scholarship; inspire stewardship values and practices; expand the size of the community dedicated to forest stewardship; and strengthen connections among professionals, policy makers, and landowners interested in caring well for the woods.

If you would like to make a tax-deductible contribution to the Finley Center, visit the Center's donation website at <https://raise.psu.edu/FinleyCenterNews> or scan the QR code below.

On November 28, the Finley Center will also be participating in the ninth Penn State Giving Tuesday celebration. This annual day of giving provides alumni, students, families, and friends an opportunity to learn about and support the Center and many other programs across the university. Follow the Center on social media (@finleyprivateforests on Facebook and Instagram) for information on when this initiative will go live and how to access the Giving Tuesday website.

Thank you for your generous support of our work and for being part of the Penn State community.





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:

November 13, 12 p.m. and 7 p.m.:
Benefits of Large Woody Debris in Streams (register at <https://extension.psu.edu/pennsylvania-forest-seminar-benefits-of-large-woody-debris-in-streams>)
December 13, 12 p.m. and 7 p.m.:
To be determined
January 9, 12 p.m. and 7 p.m.:
Ticks and Public Health presentation with Jessica Turpin

FOREST LEAVES Autumn 2023

Editors:

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Barb Sellers

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

December 8, 2023

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.sfiopa.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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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 these articles with you each quarter.

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

Brown Rot in Wood

Brown rot, sometimes called cubical brown rot, is one type of decay fungi that can attack wood that leaves the wood with a reddish color and causes it to break into small, cube-shaped pieces.

Wildlife Habitat Is the Top Priority

Managing forests for wildlife habitat is a top priority for the Pennsylvania Game Commission and many private forest landowners. Current issues and insights are presented in this video.

Rabbit Hemorrhagic Disease Virus (RHD) in Pennsylvania

This article introduces the reader to the threat posed by rabbit hemorrhagic disease virus serotype 2 to native rabbits and hares of Pennsylvania and the northeastern United States.

Pennsylvania Timber Market Report, Second Quarter, 2023

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

White-tailed Deer Hide and Seek

White-tailed deer movements in forests are at times predictable and other times unexplainable. Research reveals where deer go during hunting and other seasons.

Heating with Wood: An Introduction

This article walks through how to begin heating with firewood, including how to safely and cheaply procure firewood. It also discusses some methods for processing, seasoning, and storing firewood.

Herbaceous Forest Openings for Wildlife

Managing forest openings for herbaceous vegetation can provide wildlife with quality insect and plant foods, but a single annual mowing is required.

Wild Turkey Population Swings

Wild Turkey population levels vary over time—some years the changes are dramatic, other years they seem to have changed but have not. This video explores why.

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

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NEXT DEADLINE:
December 8, 2023

PFA News: Register Now for Annual Symposium

By Randy White, Pennsylvania Forestry Association President

The PA Forestry Association (PFA) invites you to the 2023 Annual Symposium Saturday, November 4 at Toftrees Golf Resort in State College, PA. This year, PFA welcomes the opportunity for the PA Department of Conservation and Natural Resources Bureau of Forestry's Leadership team and Resources Planning Section to share the Bureau's new strategic plan.

For over 125 years, the Bureau of Forestry has worked in partnership with the public and stakeholders to manage and steward the forests of Pennsylvania. Since the establishment of its first strategic plan for Penn's Woods 30 years ago, the Bureau has been building from its foundations and engaging in new ways with people and forest resources. Today, the forests of Pennsylvania—and the people they support—are facing new and complex challenges. The Bureau and its partners, peers, and the public have been develop-

ing a new strategic plan that will chart the path forward for facing these challenges and generating a future where we, together, care for Pennsylvania's forests for all.

Join PFA members and friends on November 4 to learn more about this strategic plan and what it means to you and your passion for and role in caring for the forests of Pennsylvania as our speakers address three key themes throughout the day: Making Connections, Stewarding Resources, and Working Together. Our annual awards will also be presented. Come, ask questions, and engage with the Bureau and each other about the future of our collective forests. **Registration required; deadline: October 20 (www.paforestry.org).**

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

Forest Leaves Calendar of Events

Saturday, November 4. PA/NJ Chapter of the American Chestnut Foundation 2023 Fall Meeting, 8:30 AM – 2 PM. Berks Campus, Penn State: Perkins Student Center, 2080 Tulpehocken Rd Reading, PA 19610. <https://patacf.org/pa-nj-chapter-2023-fall-meeting>.

Saturday, November 4. PA Forestry Association Annual Symposium (see article at left) www.paforestry.org.

Sunday, November 5. 11:30 AM – 4:00 PM. North Central Forest Landowners Association Annual Banquet. Emporium Recreation Center.

For the most up-to-date listing, visit ecosystems.psu.edu/research/centers/private-forests/events. If you have an event to share, send your information to Jeff Osborne at jao5194@psu.edu. Events will be posted on the James C. Finley Center for Private Forests online events listing and shared with our *Forest Leaves* readers.