WWIA NEWS
Summer 2024

President's Message

By John Hilewick, WWIA President

WWIA director Judith Gallagher, who also functions as our newsletter editor, asked me if I could prepare a president's message or one of my articles on "The View out My Kitchen Window."

It is through the professional editing/copy management acumen of Judith and other contributors to our newsletter, especially Mary Jane Busch and Lois Noonan, that we all receive such a wonderfully communicative document three times each year. We should all be grateful for Judith's substantial and long-standing contributions to WWIA.

There will be a **board meeting on August 8.** See page 9 for details. So far this year we've had one BOD meeting in February and three programs in the Barn. Our Forbes State Forest field trip and skills day was canceled due to low registration numbers, but we're hoping to reschedule it in the fall.

We still have three events to come in 2024.

- **The Westmoreland County Fair (August 16-August 24)**, during which WWIA members and Westmoreland residents who are PaFS (Pennsylvania Forest Steward) volunteers will staff a booth in partnership with the DCNR-BOF Service Foresters to provide information and literature about forestry-related issues to members of the public.
- The statewide **"Walk In Penn's Woods" on Sunday, October 6.** We will return to the St. Xavier Nature Preserve of the Westmoreland Land Trust property.
- Our **annual meeting and potluck at the Barn on October 17.** Melissa Kreye, Ph D., of Penn State will discuss "Social & Economic Values Associated with Private Forests, Including Wildlife, Carbon Sequestration, and Water Resources."

WESTMORELAND Woodlands IMPROVEMENT ASSOCIATION

Inside This Issue

Recap of June Program

How Foresters Can Help You Manage Your Forest

By Tony Quadro

At the June meeting, attendees learned how to manage their woodlots with the help of a professional forester.

To lead off the session, DCNR service forester Michael Doucette spoke about the free service provided by the PA DCNR. Each county in PA has a dedicated service forester who will spend a day walking about your woodlot analyzing the composition, age, size, and health of your forest.

They'll advise you on how to sustainably manage your forest resources. This may include selecting trees to plant, dealing with invasive vegetation, and doing your own timber stand improvement work.

Service foresters also provide information on cost-share assistance and how and why to hire a professional consulting forester.

Michael talked about dealing with invasive and undesirable vegetation. Many of these plants were brought in from Asian countries, either intentionally or unintentionally. Plants like Japanese stiltgrass and multiflora rose can take over the forest understory, especially after a disturbance such as a timber harvest or windstorm.

What are your objectives for woodlot management?

When combined with a high population of deer, they make regenerating the forest with desirable trees very difficult. It can take many years and a lot of effort to bring things back into natural succession.

Following Michael's talk, I spoke on what a professional consulting forester can do for you. Pennsylvania has no certification or licensing system, so anyone can call themselves a "forester." When selecting a forester, make sure they have at least a two-year degree in forestry or natural resource management. Most consulting foresters have four-year degrees. The PA DCNR maintains a list of foresters with both educational and experience qualifications.

Biltmore sticks are handy for measuring a tree's width and height.

The first thing to discuss with your forester is how you should manage your forest in a sustainable way.

The forester will ask, "What are your objectives for management?"

I have found that many times landowners are interested in selling timber, but more often they say, "We just want to do the right thing." They want to help wildlife habitat, enjoy the woods, and improve the health of their woods.

Usually the next step is to develop a forest management or stewardship plan. The plan should have maps, soils information, a general property description, management history, a detailed inventory of each management unit or "stand," management objectives, and recommendations.

Specific recommendations may include

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How Foresters Can Help, continued from page 2.

deer management, bat habitat management, invasive species treatment, tree planting, and regenerating the stand by doing a timber sale. Plans are usually good for 10 years and provide a blueprint for management activities recommended for that period.

The plan can be tailored to the landowner's objectives. For example, I did one plan where the landowner had cancer and objected to using any chemicals to treat multiflora rose. In his case, I recommended using goats, combined with mowing and infecting the multiflora with rose rosette disease.

Cost-share assistance for your plan is available through the state Natural Resources Conservation Service (NRCS).

For Tree Farm and Forest Stewardship plans the expense of developing the plan is not cost shared, but it may qualify you for cost-share assistance for various activities mentioned in the plan, also through the NRCS.

A consulting forester can help develop a forest stewardship plan.

Another service of a consulting forester is doing a timber sale. In nearly all cases, you'll have a better result and get more for your timber than if you deal directly with a timber harvesting company.

The forester will mark and inventory all the timber to be cut, based on stand recommendations, then create a prospectus and send it to many timber harvesters to get the highest bid. The forester will draw up a contract, handle the payments, monitor the sale, make sure all regulations are followed, and make sure the property is left in good condition after the harvest. Payment is usually on a percentage basis, typically 10-15%.

Cost-share assistance for your forest management plan is available through NRCS.

Consultants know the going prices of timber. For example, the price of white oak is high right now, and cherry is down. Most landowners don't have any idea what prices are and can be misled into thinking they are getting a good price when they are not.

A good forester will never recommend a diameter-limit cut (high grading). This is where all trees over a certain diameter are cut, supposedly leaving the smaller trees to "grow." This almost always leaves a forest of stunted, poorly formed trees that will never grow into timber trees. In combination with a high percentage of invasives (30 percent or more), the result could be disastrous.

Consultants can also do a timber tax basis, assess damage or timber trespass, and create plans for tree planting and protection, access road layouts, invasives control, carbon credits, and other issues.

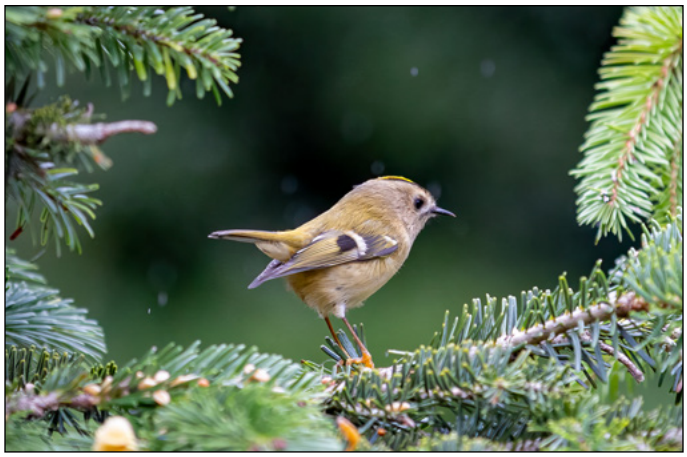
In closing, I mentioned that a timber harvest may occur only once in a lifetime for most forest owners. If it isn't done in a sustainable manner, repairing the damage can take many years.

So use the services of both your county DCNR forester and a good professional consulting forester to manage your forested resource. You'll be much better off for it.

Recap of May Program

How and Why to Manage Your Woodland Birds

By Lois Noonan



A golden-crowned kinglet perched in a pine tree.

On May 16, Scott Stoleson presented a program on how best to manage your woodlands for birds and other wildlife, including what trees and plants provide the most benefits for which bird species.

Scott studied avian ecology in the western U.S. and Central and South America. He has authored over 80 peer-reviewed scientific papers and book chapters.

He received a B.S. in biological sciences from Dartmouth College and an M.E.S. and Ph.D. in wildlife ecology from Yale University. He is also a research adjunct professor at West Virginia University and research associate of the Roger Tory Peterson Institute of Jamestown, N.Y.

Scott's talk began with several surprising facts:

Over the past 50 years, the bird population of North America has decreased by one-third. There are 3 billion fewer birds on our continent than there were in 1974.

Birds in decline include:

- Early successional forest birds, 45% decline
- Grassland birds, 60% decline
- Mature forest birds, 23% decline
- Wetland birds, 18% decline

Some bird species have increased in number:

- Overall, waterfowl have increased 50%, primarily due to the boom in the Canada geese population.
- Vultures and raptures have increased 200% due to the banning of DDT and the increase in deer population, resulting in roadkill as a food source.
- Bald eagles have increased 500% in Pennsylvania.
- Turkey and grouse, especially turkey, have increased 25%.

"Birds are excellent bioindicators of ecosystem health because there are so many of them," Scott explained.

In fact, 190 bird species breed in Pennsylvania. Many birds, such as the golden-winged warbler and American woodcock, are habitat specialists. They require a specific habitat to survive.

Since birds are mobile, if their habitat deteriorates they can fly to a different location. Other birds, such as robins and blue jays, are habitat generalists and do well in human-altered habitats such as backyards.

One important benefit of birds is pest control. Caterpillars are the primary herbivore in Pennsylvania (along with white-tail deer). The red-eye vireo, the most common forest bird, is a voracious caterpillar feeder. A pair of breeding vireos can consume 50,000 caterpillars during the season.

Another benefit of birds is seed dispersal. Research has shown that most mature oaks in Pennsylvania are the result of blue jays burying acorns. Birds also provide waste management by cleaning up roadkill.

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Manage Your Woodland Birds, continued from page 4.

Landowners can attract birds by providing a diverse habitat that includes food sources and shelter. The more diverse the habitat, the more diverse the bird population.

"Homogeneity is usually a bad thing," Scott explained.

Habitat diversity can be in the form of structural and vegetation diversity. Structural diversity means forest stands of different ages, from early successional to mature forests. Some birds prefer mature forests, and some prefer young forests.

In Pennsylvania, there is a lack of early successional forests.

The more diverse the habitat, the more diverse the bird population.

A diversity in the types of vegetation will support birds by providing a variety of food sources consisting of fruits, nuts, and berries.

Here are the benefits to birds of various tree species in terms of food and cover:

Red oak: very high food value; moderate cover; attracts wood ducks, woodpeckers, and blue jays.

White oak: very high food value; moderate cover; attracts cerulean warblers.

Black cherry: very high food value; low cover; Cuckoos are attracted because they love tent caterpillars. Birds that eat fruit, such as orioles, are also attracted.

Eastern hemlock: fair food value; excellent cover; attracts siskins, finches, some warblers, and grouse.

Black and yellow birch: moderate food value; moderate cover; attracts goldfinches, siskins, and grouse.

Maple (red and silver): moderate food and cover; attracts grosbeaks, vireos, and owls.

Sugar maple: moderate food value; moderate to high cover; attracts grosbeaks, sapsuckers, and hummingbirds.

American beech: high food and cover value; attracts turkey and grouse.

Aspen: moderate food value; high cover; attracts grouse, woodcock, woodpeckers, chickadees, orioles, warblers, vireo.

White pine: high food value; high cover; attracts turkeys, warblers, woodpeckers.

Pin cherry: high food value (of all the trees, pin cherry has the most insects per leaf); low cover.

Norway spruce (non-native); low food value; moderate cover; attracts kinglets and nuthatches.

Many types of fruit-producing shrubs attract birds. Some produce fruits in summer, others in fall/winter.

Shrubs that produce in summer have fruits that are low in fat. These include **blackberry, raspberry, serviceberry, blueberry, cherry (black and choke), elderberry, and devil's walking stick.**

Shrubs that produce fruit in fall/winter have fruits that are high in fats and nutrients. Examples are **dogwoods, viburnum, sassafras, spicebush, black gum, winterberry holly, and sumac.**

There are also many non-native fruit-producing shrubs, but their fruits have very low nutrient value for birds. These include honeysuckle, privet, multiflora rose, and Japanese barberry.

"Most of the non-natives have the nutritional value of Twinkies," Scott said.

In summary, birds are a critical ecological component of forests. Habitat and structure diversity affects bird diversity. Anything you do to your woodland stand will benefit some species of birds and hurt others. And it is best to avoid non-native species of trees and shrubs.

Recap of April Program

Herpetologist Shares Critter Lore with WWIA

By Mary Jane Busch

On April 17, AAron Capouellez, a second-year graduate student in biology at Indiana University of Pennsylvania, presented a Critter Talk at the J. Roy Huston Conservation Center Barn. The presentation included live specimens and vocal recordings of various frogs and toads found in western Pennsylvania.

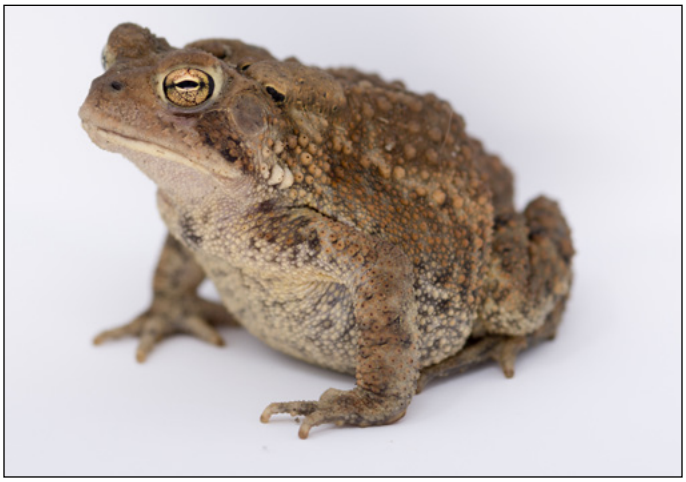
AAron is the founder and president of PA Woods and Forests and the creator of the citizen science project Frog Week. He related his personal experiences of documenting, mapping, and rescuing amphibians such as the American toad, wood frog, Eastern gray tree frog, pickerel frog, and spring peeper.

These species are not at risk in Pennsylvania, but their relative numbers and distributions have not been well documented. Such demographics would give ecologists baselines to determine whether a species is healthy or declining.

Scientists are still looking for the elusive northern leopard frog.

The program opened with AAron identifying the vocalizations of these amphibians and where the species live in Pennsylvania. Through their conservation work in 2020 in Somerset County and 2021 in Cambria County, AAron and colleagues documented the first-ever discoveries of Eastern gray tree frogs in those counties.

The scientists are still looking for the elusive northern leopard frog here in western Pennsylvania, where it hasn't been seen in the last fifty years.



The American toad is common to our woods and forests.

AAron also brought some of the equipment that he uses in his fieldwork: a spotlight with a red lens, night-vision binoculars with video recording capability, vocalizations for calling, a drone for photographing habitat, and a walk-through camera that can be coordinated with the drone's satellite imagery to map species' locations.

One of the many interesting facts Aaron shared with us concerned the pitcher plant and its mutualistic relationship with frogs. These carnivorous plants take in nutrients by trapping and digesting insects and animals.

The plants consume salamanders, but tree frogs remain unscathed when they are trapped in the pitfalls. It is thought that the frog's feces provide the needed nutrients for the pitcher plant, while the plant provides a secure habitat for the tree frog.

This fact and many anecdotes that AAron shared with the audience illustrated how "toad-ally dedicated" (*Pitt Magazine*, Spring 2023) AAron and his colleagues are to the conservation of amphibians here in our Commonwealth.

Go Nuts for Acorns!

PART TWO

By Mary Jane Busch

Part One of "Go Nuts for Acorns!" ran in the Winter 2024 issue.

Sawtooth oak acorns found on the Roaring Run Trail in Apollo, PA. Note the fancy, frilly cupule. Sawtooth oak is native to eastern Asia and was introduced into the United States around 1920.

Photo by Mary Jane Busch.

In autumn white-tailed deer fatten on acorns, which can provide 25% of their diet. Hunters take advantage of this food preference and often hang tree stands in oaks or hunt in oak stands.

Bears also depend on these oak seeds. A widespread acorn crop failure in 2022 caused Connecticut officials to warn residents to secure their garbage and to refrain from putting out bird feeders until the hungry bruins were in their winter dens.

Birds that feed on acorns include turkeys, bobwhite quail, woodpeckers, crows, jays, wood ducks, and mallard ducks. Many vertebrates have digestive systems that counteract the toxins in acorns. However, eaten in large enough quantities, the nuts are lethal to horses, cattle, and dogs.

In England, about a half dozen wild New Forest ponies die each year from consuming poisonous acorns. This mortality is usually kept in check by pannage, the practice of farmers releasing hundreds of pigs into the woodlands for two months to forage on the raw acorns.

In 2013, a storm brought a deluge of bumper-crop acorns to the ground before the hogs could be released to scarf up the toxic morsels. Fifty-one ponies died agonizing deaths from internal bleeding. In 1968, over 80 ponies and 40 cattle died from feasting on oak nuts in the New Forest.

Swines' appetite for the tannin-laced seeds is touted as one method hunters can use to locate and eradicate feral hogs in the fall. Wild pigs are destructive to forest ecosystems and are considered an invasive species.

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 them.

Oak trees feed millions of animals via their fruits.

Acorns from the white oak group germinate immediately after falling and will spoil if they are cached. To preserve some of the nut, rodents 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 spring.

The rodents also shake the nuts to determine if they are inhabited by a consuming acorn weevil.

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Go Nuts for Acorns, continued from page 7.

The occupied acorns are today's meal, and the 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.)

More than 700 pounds of woodpecker-stashed acorns were found in the walls of a home.

Blue jays have a gular pouch, a sac that opens under their tongue. This efficient anatomical structure enables the bird to transport as many as five acorns at one time: three acorns in its sac, one in its mouth, and one in its beak. 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 or larder-hoarders. Those individuals that do not survive the winter, amass excess food, or "forget" where they buried the food may have inadvertently planted an oak tree. This food pantry may be as large as seven acres!

University of Richmond researchers Michael Steele and Peter Smallwood have documented that "Gray squirrels may devour many acorns, but by storing and failing to recover up to 74 percent of them, these rodents aid regeneration and dispersal of oaks."

Perhaps the "forgetting" idea of burying acorns should be forgotten! In the September 2017 issue of the journal *Royal Society Open Science*, UC Berkeley professors claim that tree squirrels scatter their pantry staples in a complex and deliberate pattern using a mnemonic technique called "spatial chunking." The rodents may sort their morsels by size and type and then retrieve them by scent.

A more bizarre behavior was studied by Michael A. Steele, a biology professor at Wilkes University in Pennsylvania. In 2008 he reported that Eastern gray squirrels practice "deceptive caching" or "fake burying." The squirrel digs a hole, pretends to drop the seed into it, and then covers the empty hole.

Steele hypothesized that such behavior may deceive and reduce pilfering from other squirrels.

A chipmunk can gather up to 165 acorns in a day, an amount equal to half its winter's needs, so uneaten acorns may survive to sprout into oak trees.

Woodpeckers are renowned larder-hoarders. A pest control worker found more than 700 pounds of woodpecker-stashed acorns in the walls of a home in California!

In 2015 a *National Geographic* video showed an acorn woodpecker's storage mania. The bird had filled a telecommunications antenna in California with 300 pounds of larder!

There are about 450 species of oak trees (600 species if hybridized varieties are included) 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*!

If you'd like to write an article for the WWIA newsletter or send a letter to the editor, email Judith Gallagher at jgallagher@LHTOT.com.

Westmoreland Woodlands
Improvement Association

2024 Calendar of Events

August 16-24, afternoons and evenings. WWIA will once again do outreach to the public at the Westmoreland County Fair. We'll serve as DCNR volunteers at the Bureau of Forestry booth, and we're looking for volunteers to help staff the booth.

October 6, 1:00 p.m. Walk in Penn's Woods at St. Xavier Nature Preserve near Latrobe.

October 17, 6:00 p.m. The annual meeting and potluck dinner will be followed by a presentation by Melissa Kreye, an assistant professor at Penn State and director of the Forest Owner Carbon and Climate Education (FOCCE) program. She'll discuss her research on the social and economic values of private forests.

Please check westmorelandwoodlands.org
for the latest information about program times and places.

WWIA will hold a board of directors meeting on **Thursday, August 8 at 4:00 p.m. at the WCD Barn**, upstairs. We'll meet with Rob Cronauer, the WCD's district manager/CEO; conduct general business; and make plans for the Westmoreland County Fair. All WWIA members are welcome to attend.

WESTMORELAND Woodlands IMPROVEMENT ASSOCIATION

c/o Westmoreland Conservation District
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