Penn State **Extension**

Pennsylvania Forest Stewards News

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2013 Private Forest Landowners Conference a Success!

On May 10 and 11, over 450 private forest landowners, natural resources professionals, and others came together in Altoona to support and learn more about caring for Pennsylvania's private forests resource. With an exhibit hall full of over 50 vendors and exhibitors, ninety-nine different educational sessions on the gamut of subject matter related for forest systems, field tours, and ample time for networking, the feedback and evaluations have been overwhelmingly positive – even asking when the next one will be! Over 100 PA Forest Stewards volunteers took part in the event: some were speakers, some were attendees, and twenty of them (and their supporters) worked for almost a year to pull this event off. Tremendous thanks go to the conference committee for all their hard work to make the Conference happen!

In 2014, the PA Forest Stewards will have their regularly scheduled Annual Meeting. The annual meeting remains an important time for volunteers to reconnect and get re-energized about promoting good forest stewardship across the region. We don't want to lose that. So come join us at the fall inservice training opportunity (see the calendar for more information); come help us at one of the myriad outreach opportunities (see below for another one). Otherwise we'll see you in the summer of 2014! Thanks for all that you do!

Forest Fest

Every two years the Penn State Department of Ecosystem Science and Management and the Arboretum at Penn State cooperate to offer a celebration of Pennsylvania's Forests. With booths and displays, opportunities to enjoy the gardens, and food and activities, planners have asked for help at the event, Sunday, September 15. If anyone is interested in offering a display or leading a woods walk or other demonstration, please contact Sanford "Sandy" Smith, sss5@psu.edu or 814-865-4261. Last time helping earned a very nice t-shirt!

Southeastern Region

Volunteers from the Southeastern region contributed to this issue of the PA Forest Stewards Newsletter. Here are the resources available in that region.

Woodland Owners Associations:
Cumberland Woodland Owners Association, c/o Fred Peabody, 187 Hoot Owl Road, Newville, PA 17241
Dauphin County Woodland Owners Association, 1451 Peters Mountain Road, Dauphin, PA 17081, Email: DCWOA@live.com
Southeast Forest Resources Association, c/o George Kaufman, 1825 Upper Ridge Road, Green Lane, PA 18054
Tri-County Woodland Owners Association, c/o Rick Hartlieb, 845 Park Road, Elverson, PA 19520, Email: rhartlieb@pa.gov
York-Adams Woodland Owners Association, c/o Matt Kern, 2600 Smith Station Road, PA 17331, Email: mkern@pa.gov

Service Foresters:
Adams and York Counties: Matt Kern, mkern@pa.gov, 717-637-1770.
Berks, Chester, and Lancaster Counties: Rick Hartlieb, rhartlieb@pa.gov, 610-582-9660.
Bucks, Delaware, Philadelphia, and Montgomery Counties: Jessica Salter, jesalter@pa.gov, 610-489-8326.
Cumberland and Franklin Counties: Nathan Fite, nfite@pa.gov, 717-352-2211.
Dauphin and Lebanon Counties: Andrew Brought, abrought@pa.gov, 717-362-1152.
Lehigh and Northampton Counties: Tim Latz, tlatz@pa.gov, 610-799-3800.
Schuylkill County: Frank Snyder, frsnyder@pa.gov, 570-385-7807.

PGC Wildlife Diversity Biologist:
Dan Mummert, dmummert@pa.gov, 717-326-0031.

Penn State Cooperative Extension:
Julianne Schieffer, Urban and Community Extension Forester, jxs51@psu.edu, 610-489-4315.
George Hurd (Cumberland, Franklin), Natural Resources Extension Educator, grh5@psu.edu, 717-263-9226, ext. 225
Diane Oleson (York County), Natural Resources Educator, djo13@psu.edu, 717-840-7429
Nina Redding (Adams, Franklin, York), Extension District Director, nlr2@psu.edu, 717-334-6271.
Richard Kauffman (Berks, Lehigh, Northampton, Schuylkill), Extension District Director, rsk5@psu.edu, 610-378-1327.
Nancy Stevens (Bucks, Delaware, Montgomery), Extension District Director, nbs1@psu.edu, 610-489-4315.
Leon Ressler (Chester, Lancaster, Lebanon), Extension District Director, ljr6@psu.edu, 717-394-6851.
Dave Swartz (Cumberland, Dauphin), Extension District Director, dls19@psu.edu, 717-582-5150.
John Byrnes (Philadelphia County), Extension District Director, jxb70@psu.edu, 215-471-2200.

Goats: One Answer to Invasives and Brush

By Calvin & Esther Mae Kurtz, '11

After writing a Stewardship Plan for our twenty-five woodland acres along the northern ridge of Welsh Mountain in Chester County, we did a timber sale. As the plan recommended, our forester selected crop trees marked as "leave" trees and we did a pulpwood sale, removing the culls and deformed trees, allowing more light to the understory, which was missing due to heavy deer population in the past. The goal was to bring vigor and health back to our woodland, making it a more sustainable forest. The land is in the headwaters of the Conestoga River Watershed, which eventually flows into the Chesapeake Bay.

We had built our home on a part of the property twenty-five years ago and we wanted the woods to be a "mature looking" forest to be enjoyed during outdoor activities, and we wanted to produce excellent timber in the future. The plan called for planting various hardwood seedlings including oaks, yellow popular, hickories, etc. We sheltered most seedlings with tubes to protect from deer browsing which was destroying much of the regeneration. The plan also prepared us to deal with the mile-a-minute invasive weed, already a problem in the area, using herbicides to keep it under control.

There is a two-acre area on the property between an old county lane and a busy highway that at one time was used as a public dumping area. It had been left to whatever thrived in such an environment—sumac, *Ailanthus*, multiflora rose, chokecherry, walnut, honeysuckle and poison ivy vines climbing over trees and brush.

When mile-a-minute became a serious problem, Calvin sprayed as needed. We saw some potential areas for improvement where a few valuable trees were still standing. However, this was also an area of neglect, and the old tires, cans and junk looked insurmountable. But as we got more involved in the tree planting, we kept noticing some potential land under the tangled mess.

After consulting advisers, and watching a couple of forestry webinars, we started to reconsider that ignored area. Webinars about goats and silvopasturing looked interesting. A little experimenting wouldn't hurt this retired couple, and one day we came home with ten young goats! First we had purchased a couple rolls of electric mesh fence and energizer – a very important part of goat keeping. We had decided to fence off a part of the worst area.

Watching these hungry goats eating to their hearts' content was interesting; we were fascinated with their antics and constant nibbling and chewing. First thing they headed for was the poison ivy growing up the large trees (their dessert), and soon, with the exception of a few species, the ground was barren of anything green! Now, we could see the trash that had been hidden there for years. Now, neighboring children with their parents were checking on the goats, each with its own name and personality. Watching them climbing and jumping on anything that looked like fun kept the entertainment going, and the children kept coming back to see the amazing cleanup job in progress. Calvin was kept busy moving the fence to new plots.

The goats were busy, chewing and nibbling the lush fresh growth each time they entered a new area; they weren't even interested in checking out the fences!

Our summer was an interesting experience of supplying water, supplements, moving fences and energizer, vaccinating, banding, and checking out webpages for goat raising information. What a change to the now exposed landscape! When fall came, it was time to think of the next stage. Would we keep the goats over winter for breeding? When we learned that New Holland Sales Stables had a good market for goat meat, we sold them—they had about doubled in weight.

After cleaning up some areas, we are experimenting with seeding grasses where once it was overgrown with brush and invasive plants. Now we wonder, should we consider sheep?

What have you done for me lately?

By Tim Eck, '10

I used to have a manager who asked me that question every time I came into his office. And no matter what I said, he would respond "But what have you done for me LATELY?" I have longed to use the same phrase but until now never had a good opportunity.

Most foresters know something of the American chestnut (*Castanea dentata*) and its demise by our hand. It was a valuable part of the Eastern forest ecology, contributing far more than any other tree to native wildlife and it had many important uses to mankind. The chestnut blight (*Cryphonectria parasitica*) was probably first introduced on Asian chestnuts over 150 years ago, but the epidemic that destroyed the American chestnut can be traced to the introduction of Japanese chestnuts (*Castanea crenata*). It was first isolated and named by Dr. Merkle at the Bronx zoo botanical gardens in 1904.

Most people understand that the chestnut blight destroyed the American chestnut, but like most easy answers, there are qualifications to that idea:

1. Millions of American chestnuts remain in our forests – so many that the American chestnut is not considered endangered or even threatened. The blight does kill them down to the ground and they re-sprout from the root crown (mycorrhizae and other soil fungi prevent the blight from killing the rootstock). However, they are generally incapable of reproducing because they do not receive enough sunlight to trigger the flowering and seed production necessary for reproduction and recovery of the species.
2. From one viewpoint, the blight does not kill American chestnuts – environmental stress does. The American chestnut was master of the mountains where most other tree species grew in its shade. It is moderately shade tolerant and manages to hang on in its new niche as an understory tree. Optimists will point to stumps that predate the blight that still produce sprouts, but more realistically we lose far more stems every year than are regenerated. One study showed a 40% loss of American chestnuts in the survey area after a particularly stressful drought.
3. The American Chestnut Foundation is restoring the American chestnut by breeding the blight resistance genes of the Chinese and Japanese chestnuts into the American chestnut. Whether the American chestnut would ever have recovered on its own will be forever moot – the fossil records of past extinctions cannot resolve timescales less than thousands of years

even if we knew what to look for. But we do know this is the sort of event that causes extinctions – a sudden catastrophic change in the environment.

In many respects, the American chestnut is a perfect proving ground for species restoration. Other species "restored" to Pennsylvania like the wild turkey and the white-tailed deer had virtually no local specimens representing them, but were restored from "foreign" genetics. But we have lots of local variants out there – we just need a way to get them into the breeding program. Toward that end, the Pennsylvania chapter of The American Chestnut Foundation has started a bio-preserve in cooperation with the Lancaster County Solid Waste Management Authority designed to preserve local chestnut genetics from across Pennsylvania for use in breeding and research for at least the next fifty years. With deer and drought protection and the availability of full sun, the American chestnut varieties planted there will produce pollen for breeding and re-sprout when attacked by the blight. After incorporating blight resistance into local genetics, the seed can be sent back to its area of origin for reintroduction.

At this point, you should be realizing what you can do for me (and The American Chestnut Foundation). We need American chestnut seed from various locales in the PA and NJ region, but we need to do it in a controlled and well-documented manner:

1. Send a twig and leaf sample, along with a Tree Locator Form, to PA-TACF for authentication as pure American. http://www.patacf.org/patacftree.htm
2. On the Tree Locator Form, be sure to record the GPS coordinates or another method to locate the seed source on a map.
3. In the fall, collect seed and send it to PA-TACF for cataloging and overwintering. More information on harvesting may be found here: http://www.patacf.org/files/Harvesting_sff.pdf or by requesting a FAQ sheet from the PA-TACF office: 814-863-7192
4. To encourage suppressed (shaded) sprouts to flower and produce chestnuts, "release" them (when practical) by cutting trees that shade your finds.

For every distinct seed source, we will reserve ten sites in the orchard but we will start out with two seeds per tree tube if available. Different trees in the same grove should be represented if possible but we will plant them as one set of ten (or at most twenty).

We intend to use your seed in breeding blight–resistant American chestnuts and may ask you to replant them in your area. We intend to make seed, pollen and genetic samples available to you the contributor as well as other breeders and researchers.

De Vines OR Yet one more threat to your woodlot.

By Carl Martin, '00

De Vines – In this case we aren't speaking of the hereafter, but many of the vines reaching the overstory of our woodlots that certainly are trying to get to heaven. Here in the fragmented and often unmanaged forests of southeast PA, one should not overlook the impact competitive vegetation has on your woodlot. One need not travel far, but only to the highway corridors in many of our metropolitan areas, or look beyond a farmer's field to his hedgerow to see the creeping and destructive effects of unmanaged vines. As our southeastern forests mature, the cumulative effects of competitive vegetation and other threats are taking a toll on our forests and leaving us questioning the health and regenerative capacity of the future forest.

Whether it's our native grape or the non-native bittersweet or honeysuckle (let's not even discuss Kudzu found here in SE PA) vines by themselves can be trouble enough to individual trees. When left unmanaged they can overtop and literally replace the canopy of a mature tree, killing it in time. If this doesn't happen, the additional weight and leaf area can hold wet and heavy snow or increase the effects of high winds which leads to many more broken branches or sometimes the loss of the entire crown of a mature tree. Look no further than the Halloween snow of October 2011 and Hurricane Sandy for evidence of this. Many mature trees were lost or damaged due to the additional weight or surface area of the vines found in their canopies.

The often overlooked, and arguably most insidious, threats to our forests health are these cumulative stresses. The forest and individual trees can cope with a drought, insects, predation, physical (storm or other) damage; but the more of these stresses that are added to the forest system, the greater impact to the health of individual trees and certainly the forest ecology. In the SE PA forests this is very pronounced as there is not guarantee that a lost canopy tree will be replaced. In the most extreme, and unfortunately more and more frequent situations, the forest that was, is now replaced not with forest but rather a sea of non-native (and non-preferred) shrub and plant species.

To understand what this looks like, one must first understand the forces at work. In many places in the southeast the white-tailed deer population is well in excess of the carrying capacity and they consume nearly every seedling and stump sprout they can reach, along with what remains of our native shrub and herbaceous layer. There are places where they have even taken to consuming non-preferred species such as spice bush and multiflora rose, leaving behind the least preferred or inedible species that are often nonnative plants, and, unfortunately, these plants aggressively expand their reach for resources.

It's a very natural occurrence when a large mature tree drops out of the canopy. This creates a hole where sunlight then can reach deeper to the understory, sometimes making its way to the forest floor. In a healthy forest there should be several seedlings ready to take advantage of that light and start to grow in that space once occupied by the mature tree. In many of our degraded forests this is not the case. No seedlings are there waiting for the sun's rays, and any stump sprouts or root suckers that may happen to start are quickly browsed. The shrub layer quickly thickens with new growth fortified by the increased light; this quickly shades out the forest floor again and reduces the chance of any tree seedling that isn't browsed to grow to maturity.

Deer and certain aggressive plants can literally short circuit the forest regenerative process. At the very least, these threats will dynamically change the species composition and limit diversity. Compounding this problem now are the vines

that can and do threaten the overstory/canopy trees. If these are mature trees and just 60 or 70 years old, they were established in a time when deer numbers were not nearly as high and the presence of non-native plants nothing like it is today. These mature trees represent the last hope for naturally regenerating a native forest; as they are lost, from vines or other stresses, that seed source disappears. Releasing your healthy, mature trees from vines, especially those non-native species, is one, low-cost endeavor that will increase the health of your forest and ensure that it has a chance of naturally.

There are several methods for controlling vines, from simple mechanical removal to the herbicides. When mechanical removal alone is employed, the optimal time to cut is in late summer. Cutting at this time causes the vine to re-sprout and expend stored energy. Then, unable to recapture the energy in an abbreviated growing season it is weakened; sometimes it is necessary to cut it again the following spring after leaf-out. Eventually, continued cutting forces the vine to expend its stored resources and it will die. Cutting along with herbicide on the cut stump can be done at any time the vine is actively growing. The same applies for a basal bark application to those vines with thinner bark, such as bittersweet. Obviously special precaution should be taken when treating with basal bark applications; herbicide should not be mistakenly applied to the host tree. For more information on the control of other competitive vegetation, including vines, please go to the following links:
http://extension.psu.edu/natural-resources/forests/vegetation-management/chemical-control
http://pubs.cas.psu.edu/freepubs/pdfs/UH174.pdf

Regional Foci for PA Forest Stewards News – Northwest Region, You're Up!

Just a gentle reminder for those of you in the Northwest Region region of Pennsylvania… Your region is responsible for an article in the July/August issue of the PA Forest Stewards News. Bob Slagter (slags@zoominternet.net) and Blaine Aikin (blaine@fi360.com) are the contacts for compiling the region's piece(s). Please contact them if you have items of interest to share.

And heads-up to the North Central region! You're up for the September/October newsletter. Send your articles to Allyson.

We're looking forward to hearing from you all!

Dates for Your Calendar

September 13-15 and October 4-6 – PA Forest Stewards Basic Training, Camp Krislund, Madisonburg, PA (Centre County).

October 4 – Forest Vegetation Management In-service Training, Camp Krislund, Madisonburg, PA (Centre County).

Contact Penn State Natural Resources Extension

Renewable Natural Resources Extension
Dept. of Ecosystem Science & Mgmt
416 Forest Resources Building
University Park, PA 16802
(814) 863-0401
(800) 235-9473
Jim Finley: fj4@psu.edu
Allyson Muth: abm173@psu.edu
http://extension.psu.edu/paforeststewards

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Pennsylvania Forest Stewards
416 Forest Resources Building
The Pennsylvania State University
University Park, PA 16802