



# The Ohio *Hetuch*



Fall 2008

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## Chair Comments—Stephanie Miller, OSAF Chair

Wow! That’s what I think of Ohio’s foresters. As you know from the last *Hetuch*, Roger Williams (OSAF Policy Chair) and I have been working to rekindle the Policy Committee. It was important to both of us to have members from a variety of specialties and backgrounds be represented. It was a difficult task at the beginning simply because OSAF has so many talented, experienced foresters from so many disciplines. What a pool to select from! From there it got easier. I’ve never had this happen in my career, but every single person we approached to be on the Policy Committee accepted. Wow!



Stephanie Miller

The Executive Committee has already assigned them two tasks. One task pertains to the impact of federal forestry funding on Ohio and the other addresses state support for forestry education at the college/university level. Both are very timely issues and we’ve got more lined up when these two are completed. We look forward to hearing what they develop.

Thanks to Randy Heiligman, Kathy Smith, Bob Long, and Tom Berger for your help in planning a very successful Central States Forest Soils Conference. Everyone is so busy, doing more with less, yet they dedicated their time and resources to organize this terrific event.

Joe Puperi has been working with a website designer to redesign the OSAF website. It’s looking great. Many thanks to the members who have beta tested, reviewed, and offered photographs and other pieces of useful information to help make it look more professional and up-to-date. A great addition to the site over the next year will be an OSAF history section to honor Ohio Fellows, award recipients, and past officers as well as a space to add neat historical photos, documents, and notes of interest. I really think that you’ll like the updated website too.

CONGRATULATIONS to the team who developed the OSAF on-line forester directory for being awarded the first annual SAF House of Society Delegates National Recognition Award: Dave Apsley (committee Chair,) Eric Roush, Kathy Smith, Stanley Swierz, Dean Berry, and Lee Crocker. It is a well-deserved honor and HSD was truly impressed.

There are many more great things going on in Ohio! If there’s something special that you or other OSAF members are doing, I’d love to hear about it. Consider submitting something to *The Hetuch* for future editions. Foresters tend to be a humble bunch; but in this time when we’re constantly justifying our worth to society, we need to spread the good word about what we’re doing.

While in Reno, Nevada for the SAF National Convention it was easy to see that Ohio ranked right up there with the rest of the country. I was honored to represent such a talented, dedicated, diversified, and knowledgeable group of professionals! Thank you everyone for a wonderful year and allowing me to serve as your OSAF Chair.

Happy Holidays,

*Stephanie L. Miller*

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## White Oak Health in Southern Ohio... Every Year is Different

- Bob Long, Forest Science and Technology Coordinator

Over the last several years, white oaks have had some major problems in the forests of southern Ohio. We've seen dieback and mortality over large areas after oaks experienced drought followed by several years of defoliation from forest tent caterpillar, common oak moth, and the half-wing geometer. Not all trees and all sites were affected, but some areas like Shawnee and Scioto Trail State Forests had significant mortality episodes. Secondary organisms like *Armillaria* fungi, the two-lined chestnut borer, and hypoxylon canker were the actual mortality agents. The mortality pattern was the most unique aspect of this event. Most oak declines occur along ridge tops and upper slopes, usually the areas with greatest amounts of defoliation. The southern Ohio oak decline was unique in its frequent occurrence on bottomland and lower slope landscape positions and the tendency for mortality to track along the moist drainage paths as it moved upslope.

Because of this pattern and the finding that *Phytophthora cinnamomi* (Pcinn) was present in southern Ohio's forests, we developed research to explore the role of this pathogen in this white oak decline and mortality event. Over the past three years cooperative research with West Virginia University and now Ohio State was conducted to try to determine the role of Pcinn in this decline. Soil borne pathogens are difficult to work with because they can be ephemeral and their isolation is frequently affected by the changing soil microclimate. While we have established circumstantial data that strongly implicates Pcinn in this decline, it is difficult to prove a cause and effect relationship because of the large number of factors that can vary or confound the results. Among the more convincing data we have from Scioto Trail State Forest is the finding by WVU research scientist Yilmaz Balci that white oak fine root production was significantly reduced at sites with abundant Pcinn. Similarly, Pcinn inoculum density was much higher on sites with dead and declining white oaks.

In addition to work at Scioto Trail, we also established plots at Zaleski State Forest in summer 2006. The white oak mortality pattern at Zaleski was similar to Scioto Trail but decline and mortality was not as severe or extensive. Mortality was more scattered, but, again, lower slope sites were most severely impacted. This past summer we re-evaluated all the trees on 24 one-fifth acre plots established in 2006. More than 400 oaks were rated in these plots. Based on evaluation of crown condition for all oaks on the plot, 11 of the 24 plots showed improved oak crown condition while 9 plots had continued deterioration and 4 showed no changes. In general, trees with less than 25% crown dieback or mortality stayed the same or improved in health. Trees with greater than 25% crown dieback tended to stay the same or showed continued deterioration in crown condition. Out of the 415 oaks that were examined, 78 were dead in 2006 (19%), increasing to 96 in 2008 (23%). An average mortality rate of 1% to 3% per year, depending on the stage of stand development, is considered normal based on long-term analyses of Forest Inventory and Analysis data, so the increase in mortality between 2006 and 2008 may be high, but does not appear to be excessive.

This year white oak anthracnose and jumping oak gall were both factors that affected white oak health at Zaleski and other locations in southern Ohio. Cool, moist conditions in the spring favor development of the anthracnose fungus (*Apiognomonium quercina*) on young oak leaves. Usually, as temperatures increase, the fungus is not as aggressive and leaves start to form a thicker cuticle layer that inhibits colonization. Perhaps injury from the jumping oak gall (*Neuroterus saltatorius*), or favorable weather created circumstances that facilitated repeated anthracnose infection cycles on white oak leaves. At Zaleski State Forest in July, many white oaks were severely infected with anthracnose and leaves had jumping oak galls present leaving crowns noticeably thin and brown. However, other white oaks in the same stand were seemingly unaffected. Since these forests seem to be over the worst of the white oak mortality episode, it is unknown whether this anthracnose/jumping oak gall problem will incite additional white oak dieback and mortality. As you know, it is quite difficult to predict how weather and changing environmental conditions will interact with all the organisms in the complex ecosystem of a hardwood forest. Every year is different in some way, and hopefully we learn something from these events.

### OSAF 2009 Winter Meeting

March 18-19, 2009

The Ohio State University Campus, Columbus

Watch your mailbox for registrations!

**Don't forget to renew your membership to SAF at [www.ohiosaf.org](http://www.ohiosaf.org)**

## Forester Spotlight



Pete Woyer

Pete Woyer will be named Ohio's 2009 Fellow, making him the 35<sup>th</sup> fellow named to the Ohio SAF chapter.

Pete has been a member of SAF since 1980. He has served as the Ohio Chapter vice-chair and chair and done a number of presentations and letters of support to promote good forestry practices throughout the state. At the national level, Pete has served on the SAF Recognition Committee, Council of Eastern Forestry Technical Schools and represented the Ohio SAF Chapter at the House of Section Delegates, in Richmond, Virginia.

Pete started at Marietta College, where he opted for the Forestry transfer program. He then completed his bachelor's degree in 1970 at the University of Michigan. Shortly after graduating with his bachelor's degree, he began his career as a procurement forester and logging supervisor. In 1985, Pete received his Masters in Education from Ohio University and began a 17-year stint teaching Forestry and Timber Harvesting at Hocking College. He has also been working as a consulting forester since 1979. Pete has done a great deal over his nearly 40 year career to get forestry students active in SAF, promote BMP's in the logging community, and improve strip mine restoration.

The SAF Fellow rank honors members who have provided outstanding contributions to the Society and to the forestry profession. The rank of Fellow is a special accomplishment because the individual must be nominated by their local chapter and approved by the District Fellow Committee. Please be sure to congratulate Pete on achieving this honor.

## Visit the New OSAF Website - Joe Puperi, OSAF Communications Committee

Ohio SAF's website has had a makeover to give it a more modern look and to make it more user friendly. I have worked with Dynamic Webs, LLC here in Findlay to complete this. Visit today at: [www.ohiosaf.org](http://www.ohiosaf.org)

Now that the new platform is up, it is time to update some of the content. That is where you, the membership comes in. There are a few things that will really improve the quality of the site:

The first thing you noticed is probably the pictures at the top of the home page were taken here in Findlay, because that is what was easily available. If you have other pictures - either scenic or of OSAF members at work that you think would look good here, send them to me. The dimension of that space is 1400x200 pixels, so please crop them appropriately.

Next, the "Ohio Issues" section is intended to help the general public understand how forestry and forest management is important to them. New articles or updating of the old articles under "Ohio Issues" will keep this section relevant. If you wish to undertake updating any of these, please let me know. Unless I have heard from anyone else already working on that one, I will give you the green light.

Under "Upcoming Events", the only thing listed as of now is the March Winter OSAF meeting. If you have other events throughout the year that other OSAF members may be interested in, let me know and we will get those posted.

Please review the site, and send feedback to me. I appreciate the many folks who have given feedback thus far. E-mail: [joe.puperi@dnr.state.oh.us](mailto:joe.puperi@dnr.state.oh.us)

## Upcoming Event in Indiana

### Emerging Issues in White-tailed Deer Management and Conservation conference announcement

White-tailed deer are a biologically, socially, and economically important wildlife species. Decisions we make today in how to manage deer affects all of us. The purpose of this conference is to facilitate dialogue and new ideas related to the most critical issues in white-tailed deer management. Leading researchers from across the country will present an in-depth look into emerging issues including urban deer management, human dimensions, population management, and more. The planning committee is very excited to bring you this conference and hope you can join us. This conference would be of interest to foresters, wildlife biologists, and other resource professionals impacted by issues surrounding white-tailed deer management.

- Conference dates are February 25 to 27, 2009 at the Lafayette, IN Holiday Inn Select City Center.
- Program and registration information can be found at <http://www.fnr.purdue.edu/2009deer/> or you may contact Lenny Farlee with questions – [lfarlee@purdue.edu](mailto:lfarlee@purdue.edu) 765 494-2153

## History of the OSAF Scholarship Fund –Phil Perry, OSAF History Committee

The idea of the scholarship fund began in October 1985 when the Forestry Club of Hocking College, then called Hocking Technical College, donated \$160 to the Ohio Society of American Foresters (OSAF). Forestry Club members decided that the money they had raised should be used to establish a scholarship fund for forestry students and requested that OSAF administer the program. Over the next few years the Forestry Club, the Forestry Forum at The Ohio State University, and OSAF members raised and donated money for the scholarship fund. The students raised money by conducting raffles at OSAF meetings and Paul Bunyan Shows.

In December 1986, Chair Dan Kincaid requested a committee to recommend specific procedures to implement the scholarship fund. At this time about \$1300 had been raised. The committee consisted of Mark Jukich, Dave Embree, Jim Brown, and Phil Perry. The committee met in January 1987 and made the following recommendations: two \$100 scholarships would be awarded beginning at the 1988 winter meeting, only forestry students at Hocking Technical College and The Ohio State University would be eligible, membership in SAF was not required; faculty at the two schools would select the student. It was anticipated that eventually only the interest earned on the account would be needed for the award amount, that future amounts to be awarded could increase as the fund increased, and to the goal was to award two \$150 scholarships when the fund reached \$5,000.

The fund was named after David Embree and William Cowen, both OSAF members. Dave Embree was a forestry instructor at Hocking College and advisor to the Forestry Club. Bill Cowen was a forestry professor at The Ohio State University. Both have donated a significant amount of money to the scholarship fund. Bill's first donation was in memory of Irving I. Dickman, a long time OSAF member and former Chief of the Division of Forestry.

For several years, money for the scholarship was taken directly out of the OSAF Treasury. Eventually the fund increased to the point that the interest could cover the amount of the award. As the fund increased, the amount of the award has been increased to \$500. Currently there over \$23,300 in the fund. In the future, it is hoped that as the fund continues to increase the award can be increased and possibly additional scholarships can be awarded. Many sincere thanks to those of you that have been so generous.

Year	Ohio State Univ.	Hocking College	Award Amount
1988	Luke Lines	Tom Schott	\$100
1989	Jeffrey Percy	Kareneda Kennedy	100
1990	Donald Schmenk	Glenn Burley	100
1991	Marianne Stacklin	Brent Henry	200
1992	Todd Mers	Ernest J. Wiltsie Jr.	200
1993	Matt Bumgardner	Hugh Hillman	200
1994 *	Jeremy C. Alden	Jeneen Martin	200
1995	Todd Roffe	Lisa Shumaker	200
		Jennifer Henry	
1996	Amy Shuck	Sara Huffman	250
1997	Jeff Sanders	Rodd Schroeder	250
1998	Nik Narahari	Jim Daschbach	500
1999	Jeremy Scherf	Jennifer Thorton	500
2000	Leigh Moran	Rick Hauger	500
2001	Katherine Princic	Jed Caldwell	500
2002	Carrie Mahl	Brian McCombs	500
2003	Tom Shuman	Mike Krohl	500
2004	Brian Riley	Stephen Rist	500
2005	Katheryn Yoders	M. Robin Marshall	500
2006	Stephanie Colwell	Kyle Siegley	500
2007	Kacy L. Ray	Kenneth J. Mason	500
2008	Thomas Macy	Anthony Weber	500

\*Don't know which is OSU or Hocking

In 1995, Shumaker and Henry each received \$100.

## Perils of Planting Trees Too Deeply (condensed version) -Stephanie Miller and Drew Todd, ODNR Urban Forestry Program

Foresters spend a great deal of time selecting the appropriate plants, preparing the planting site, properly installing the tree, and providing appropriate after care. This is done to ensure the rapid establishment, survival, and growth of the community's investment. Much has been written about each of these four critical elements, and failure in any single area may adversely affect the success of the planting.

This article focuses on one element of the planting process that is far too familiar in Ohio – *planting trees too deeply*. Although not readily apparent at the time of installation, the long-term affects of improperly placing the root system in the planting hole is substantial.

There are both short and long-term problems. When buried too deeply, tree roots decline in health and condition which leads to reduced growth rate, atypical leaf size and color, increased disease susceptibility, and reduced cold hardiness. Trees in poor condition exhibit decay, cracks, and excessive deadwood. Sometimes trees show signs of stress within the first year of planting, but it usually takes several years for the problem to rear its ugly head. What exactly happens to cause these adverse reactions?

**Lack of Water & Oxygen:** When root systems are buried, less soil oxygen and water is available. As a survival response, trees grow roots closer to the soil surface where there is a more reliable source of both. The energy that a newly transplanted tree should use to overcome normal transplant stress is instead used just to survive. The tree expends its energy by forcing its roots to grow upward or by creating new roots from dormant buds on the buried trunk. Some plants survive being buried too deeply and live normal

lives after developing a functional root system. Others begin a long, slow decline of health resulting in either premature death or sudden failure during wind or ice storms.

**Reduced Root Mass:** Most trees today are dug with mechanical tree spades that extract soil balls that are wider at the top than at the bottom. The widest part of the ball contains the highest proportion of the volume of the ball and should have the highest proportion of roots. Unfortunately, if the nursery liner's root collar is planted too deeply, the tree spade will be unable to reach a large portion of roots. The soil ball may be the correct size for the tree being moved, but the actual root mass may be ½ or less of what it should be. Trees with undersized root systems that are planted too deep rarely survive.

**Disease Susceptibility:** Deeply planted trees often succumb to secondary problems not commonly associated with healthy root systems.

**Stem-girdling Roots (SGR):** Roots that grow toward the soil surface often wrap around or run close to the buried stems. As these roots enlarge over the years, along with normal growth of the buried stems, roots begin to compress and weaken the stem tissues. The compressed areas of the stems are weak points and are frequently sites of failure during wind or ice storms. For instance, following catastrophic windstorms in Minnesota in 1998, storm damage research showed that 73.3% of the lindens that were lost actually broke at compression points from SGRs, and most broke below ground.

The University of Minnesota's Forest Resource Department research shows that as little as one inch of soil over the root collar flare can disguise SGR's until it is too late. A survey of 302 street trees found that buried root systems of street trees were "alarmingly common". The transport roots of all studied species were buried with one to 11 inches of soil. They found a direct relationship between declining tree condition and depth of soil over the roots. In other words, "as main order roots were covered by more and more inches of soil, the condition of all three tree species further declined". They concluded that there is no biological reason to bury root collar flares.

Identifying deeply planted trees is fairly simple. If the trunk is going straight into the ground like a pole it is probably deep. Rock the tree a bit. If it simply pushes soil aside and creates a larger hole in the ground, then it is probably buried. Digging is often necessary to find the root flare. Plastic dandelion pullers and hand spades work well for small-scale root excavation and an Air Spade® is a good tool for diagnosing root-related problems.

**How do tree roots get buried?** Sometimes it happens before the trees get to the planting site, sometimes at the time of planting. It has been a common and acceptable practice to plant with the tree's soil line level with the site's soil line. But, if there is excess soil over the root system when the tree is dug and balled at the nursery, then anyone following the normally accepted installation practice could actually be planting the root system several inches too deep. It only takes a few minutes to find the root flare prior to planting. It is far more efficient to check for it ahead of time and adjust the soil ball than it is to go back later to correct it.

To avoid deeply planted trees, it is important to communicate expectations with nursery suppliers and landscape contractors. Write understandable and precise specifications for the purchase and installation of plant material; inspect all incoming trees as well as random inspections of their installation, and contract with reputable, qualified, and ethical firms and individuals.

The problems associated with planting trees too deeply are numerous, long-term, and difficult to correct; but, they can be prevented. By understanding how tree roots normally function and respond to transplanting, we can take those actions necessary to ensure that trees are not short-term liabilities but long lasting assets.

For a full copy of this article contact Steph Miller at [Stephanie.miller@dnr.state.oh.us](mailto:Stephanie.miller@dnr.state.oh.us) or 419-429-8313.



(Above) This tiny root looks harmless now...(Below) 10 to 15 years later it will likely cause this.



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## **Announcements**

### **Ohio Maple Days**

January 29, 2009– Morrow County

January 30, 2009– Wayne/Holmes County

January 31, 2009– Geauga County

For more information contact Gary Graham (330) 263-3799

### **Commercial Pesticide Recertification**

General Conference including Turf, Ornamental, Industrial Vegetation, Pest Control

Dayton– January 21

Sandusky– February 10

Columbus– February 25

Akron– March 11

For more information about these events or to get registration visit <http://pested.osu.edu>

### **2009 Ohio Woodland, Water, & Wildlife Conference**

Tuesday, March 10, 2008 8:45 AM to 3:30 PM

Mid-Ohio Conference Center, Mansfield Ohio

Registration is Required

Early Registration by 2/25/2009 - \$60, after \$80

For more information and for online registration visit <http://woodlandstewards.osu.edu>

Questions? Contact (614) 688-3421 or [ohiowoods@osu.edu](mailto:ohiowoods@osu.edu)