



Kentucky Woodlands

Volume 7 Issue 1

Magazine

Dying Oaks

FOR 101: Measuring Tree Diameter

**Celebrating the
Kentucky Division of Forestry's Centennial**

Kentucky Woodlands

Volume 7 Issue 1 Magazine
August 2012

Promoting stewardship and sustainable management
of Kentucky's non-industrial private forests.

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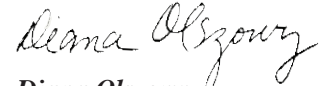
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From the Editors of the Kentucky Woodlands Magazine:

After you read a few of the articles in this issue you will probably agree that it's not easy being a tree! The old saying, "if you don't like the weather in Kentucky, wait 5 minutes" rings true, especially this year. From floods to tornados (see Morgan County Tree Nursery article), to weeks of three-digit temperatures to the on-going drought that has severely affected crop production – how will all these weather events affect our woodlands?

This issue offers insight on what has been going on with our oak population, as well as an update on the Center for Forest and Wood Certification, a timeline history of the Kentucky Division of Forestry as they celebrate their 100th anniversary, and you can learn how to measure the diameter of your trees using several different methods. Also featured is a champion tree, Kentucky Woodland News to Use and an update from the Kentucky Tree Farm Committee and Kentucky Woodland Owners Association pays tribute to Pete McNeill. We hope you enjoy this issue and please let us know how we are doing.


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About the Cover:

The cover image was supplied by Jeff Stringer, UK Forestry Extension Professor and editor of Kentucky Woodlands Magazine, and shows some dead trees among a canopy of green leaves. When a large tree dies it can quickly grab your attention and be a cause for alarm. While some trees may die rapidly most will show signs of stress or problems well before they reach their end. Knowing what to look for can help you ensure that your woodlands are as healthy as can be. **Back cover:** The back cover image was supplied by Renee' Williams, UK Forestry Extension Information Specialist Senior and assistant editor of Kentucky Woodlands Magazine, and shows a tree that has succumbed to stressors and finally met its demise in a windstorm.

Scan the code below
with your smartphone
or tablet device to view
the latest edition of the
Kentucky Woodlands Magazine.



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Volume 7 Issue 1

Kentucky Woodlands Magazine (ISSN 2152-2391) is published under the direction of the University of Kentucky's Department of Forestry Extension and the Kentucky Division of Forestry and is sponsored by the Kentucky Forest Stewardship Coordinating Committee. Kentucky Woodlands Magazine is supported by funds from the Kentucky Forest Stewardship Program, U.S. Forest Service, Renewable Resources Extension Act, and the Cooperative Extension Services. Views and opinions expressed in the Kentucky Woodlands Magazine do not necessarily represent the opinions of its editors, the UK Department of Forestry or the Division of Forestry. The appearance of a logo, organization, manufacturer or product within the magazine does not constitute an endorsement by the editors, the University of Kentucky Department of Forestry or the Kentucky Division of Forestry.

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Editor's Note: The use of FSC mixed source paper indicates Kentucky Woodlands Magazine's commitment to sustainable woodland management. We are also pursuing the use of SFI paper produced on SFI certified and American Tree Farm System certified land.



Many woodland owners and those who work in Kentucky's forests have noticed the continuing loss of oak trees. These losses are widespread and many woodland owners who have large oaks have seen a number of these trees die. Often these losses occur without any outward signs or symptoms. While outward signs might not easily explain these losses, the majority of oak mortality is understood and expected.

All of the oaks typically do not die in one area. Instead, the mortality is scattered throughout the woodlands. Sometimes sporadic tree death occurs at a high rate for a couple of years and then the losses decline. This sporadic mortality occurs across all common oak species, with some locations showing more red oak losses, others showing more white oak losses, and some showing losses of red and white together.

Dying Oaks

by Jeff Stringer and Jody Thompson

Regardless of the level of mortality or the species of oak involved, the loss of large canopy oak trees is noticeable. However, the decline and death of larger oak trees is part of the natural progression and aging of oak woodlands. While from time to time a single insect or disease causes widespread mortality, insects and diseases do not usually work alone to kill oaks. Typically they work in concert with other factors. Understanding the underlying science and causes of this mortality is important and can be useful in developing appropriate management of our woodlands. For those not owning or managing woodlands, understanding that this mortality is often natural can help dissuade fears associated with the loss of these trees. This article is designed to provide an understanding of the underlying causes of mortality in large oak trees and provide examples of how this manifests itself in different woodlands throughout the Commonwealth.

Photo courtesy: Jeff Stringer

Defoliations from naturally occurring insects can entirely defoliate trees reducing their energy reserves. Such was the case in 2003, as pictured above when regional defoliations of oak trees were common.

Tree-to-Tree Competition

First, it is important to remember that an individual oak tree is growing in a competitive environment. Every tree, including large canopy trees, is in competition with the surrounding trees for moisture, nutrients, and light. This competition occurs above ground and below ground. Each species of oak has a different tolerance for this type of competition.

Age and Vigor

Many Kentucky woodlands have large canopy trees that are 70 to 80 years old, and we can sometimes find oaks more than 100 years old. As a tree reaches the end of its natural life span, it tends to lose vigor, much like animals. Some oak species, such as scarlet oak and black oak, are short lived. They often do not live past 100 to 120 years old. Even white oaks that can live to 450 years old under the proper conditions can have much shorter natural life spans. Regardless, our woods and the large oaks they contain are aging and a loss of vigor associated with age is expected.

Native Insects and Diseases

In typical woodlands, a host of native insects, fungi, and other disease-causing organisms prey upon oaks. These organisms, however, are as much a part of the natural environment as the oak trees. One way to look at this issue is that the ecological job of some insects and disease-causing organisms is to remove the weak, dying, and dead trees so there is less competition for the healthier ones. Typically, healthy trees growing in good conditions can ward off attacks from these insects and other organisms much like a healthy human body fights off a common cold. For example, one way a tree fights off organisms that destroy their roots is by growing a large number of roots to overcome these losses. Simultaneously, physiological processes going on inside a tree act much like our immune system and help ward off the onset of disease or help to repel attacks by insects.



Insect damage such as the dead branch tips (flagging) caused by cicadas or other insects that occur annually may not kill trees but produce constant low level stress to our woodland trees.

Photo courtesy: Jeff Stringer

The insects and diseases affecting trees often go undetected. We occasionally notice insect defoliations in our oaks when the insect populations explode and you can see large scale leaf losses, and these infrequent episodes are important. However, so is the unnoticed defoliation from insects that typically results in the loss of 5 to 20 percent of the leaves over the course of a growing season. This type of low-level leaf loss that occurs across the whole growing season does affect the vigor and health of oak trees. Two common groups of diseases — *Armillaria*, which causes shoestring root rot, and *Phytophthora*, which causes root rot in a wide variety of plants — have species that affect oaks and are present in every woods. However, they are inconspicuous organisms that sometimes have to be found through close examination. Regardless, healthy trees can typically withstand insect defoliations and attacks from disease-causing organisms such as root rot fungi.

However, it is important to understand that our oaks are under constant attack from both insects and disease organisms.

Stress

The last concept that must be understood is stress. Stress is a part of life in the woods for the trees that grow there. While we don't often think of trees as being stressed, stress is a physiological condition not unique to animals. Like animals, stress lowers a tree's ability to fight things that can ultimately kill them. The older and less vigorous a tree, the more susceptible it becomes to things that cause stress.

Generally, trees under stress are not able to balance the amount of food they produce in their leaves from photosynthesis with the amount needed to maintain growth and development of their branches, stems, and roots. Trees must maintain a reserve food supply to re-leaf each spring. They must also be able to maintain root growth in the winter and produce new wood in the spring, in some instances before the leaves are fully formed. In oaks, this reserve supply of food is in the form of starch deposited in the sapwood (the outer section of the wood in large branches and main stems) in a tree's large branches, main stem, and large lateral roots. This imbalance is stress. It can be a large imbalance leading to death over the course of just



Photo courtesy: W. Henry McNab

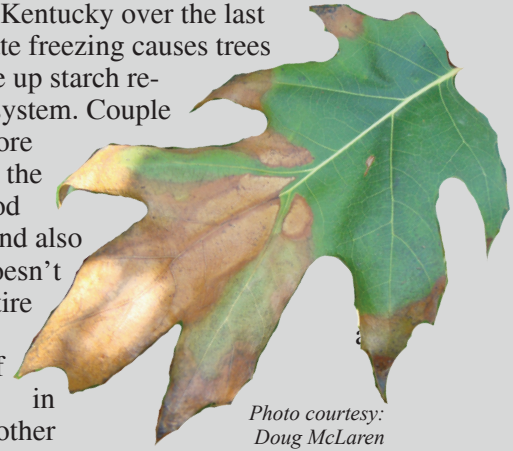
Root rot fungi constantly attack the roots of woodland trees. When the tree no longer has the ability to replenish roots their loss can lead to tree death. Sometimes this can happen through wind throw even when the tree is still alive.

a few years or a small imbalance that cumulatively leads to tree death over decades. Examples include:

1. Droughts that lead to a reduction in food production by the leaves and, ultimately, to a loss of starch reserves
2. Droughts or flooding, which both cause root death that hinders the uptake of water, oxygen, and nutrients necessary to make food, turn food into energy, and put on new growth
3. Late spring frosts and freezes that remove newly formed leaves and shoots, causing the tree to use up food reserves needed to refoliate
4. Defoliation by insects, particularly outbreaks that occur early in the growing season that reduce leaf area and thus food production
5. Storm damage resulting in a loss of leaves
6. Overstocking of trees, resulting in crowding and an increase in tree-to-tree competition
7. Man-made disturbances such as fires, incorrect logging, construction, using the woods for grazing, and other activities that wound above-ground portions of the tree or increase soil compaction, leading to root loss

Combinations of Droughts and Freezing

Both late spring freezes and summer droughts have occurred throughout Kentucky over the last 10 to 15 years. Late freezing causes trees to refoliate and use up starch reserves in the root system. Couple this with one or more drought years, and the tree loses more food reserves. Understand also that the drought doesn't have to last the entire year. It takes only couple of weeks of dry soil conditions in combination with other stressors to start a cycle of decline. The tree then generates fewer new roots and root rot organisms take their toll. The loss of root further reduces a tree's ability to take up valuable moisture and nutrients, leading to more reductions in food production by the leaves. This negative feedback loop results in a tree that is unable to produce enough food to generate roots and refoliate and, ultimately, to the death of the tree in some cases several years later.



*Photo courtesy:
Doug McLaren*

Tree stressors such as a drought can cause leaves to prematurely dry up, typically from the outer edges, leading to early leaf drop.

Defoliations and Droughts

In the last six years, native insect populations, such as forest tent caterpillars, have increased and led to large amounts of lost leaf area. These trees then have to re-leaf, and if a drought occurs in the next year or two, the trees cannot replenish their root starch reserves. The result could be a loss of root regeneration and death in a similar manner as described for droughts and freezing.

Overcrowding and Age

Many oak forests are even-aged or close to it, meaning the majority of the canopy trees are about the same age. As some or all of these trees start to approach 70 to 100 years old, they are losing natural vigor. As they increase in size, each tree needs more and more growing space. This growth leads to crowding, both for canopy growing space, leaf area production, and underground, where roots compete for available soil moisture and nutrients. If these woods are crowded, there is limited room for crown expansion and, thus, leaf production for an individual tree. The limited leaf area leads to a reduction in the amount of food produced from the leaves and, thus, a reduction in the amount of food supplied to the roots. This further increases the trees' susceptibility to the effects of insects and disease organisms. The conditions described lead to the death of large canopy trees. This slow decline and mortality in oak stands is often referred to as oak decline and can easily occur. Couple this with other stressors such as droughts, freezes, or defoliation, and mortality rates will increase in these woods.



Photo courtesy: Jeff Stringer

Uncontrolled grazing can be harmful to woodlands. It can lead to heart rot in large canopy trees and can stifle natural regeneration.

Putting It All Together

Tree death, especially the death of larger or older trees, is a combination of several of the factors that are discussed above. Trees that have been stressed by one or more of the factors listed above start to lose vigor. This loss of vigor is greatly exacerbated if the tree is already low in vigor due to its age. Combining naturally low vigor with stressors makes a tree less able to outgrow the organisms causing root rots or the insects preying upon it. The tree slowly loses the war and eventually dies. You can often see this process as the tree loses large canopy branches and top dieback occurs. Other times, the battle is occurring internally or below ground, and you never know it until the tree dies. Most often however, you can see symptoms of decline before the tree is dead. The following are examples seen in Kentucky over the last several years.

Storm Damage

Storm damage, particularly ice and tornadoes, have recently been common in Kentucky. When the damage is severe, resulting in a significant loss of leaf area (greater than 50 percent), the trees cannot quickly rebuild leaf area—storm damage removes the buds necessary to re-leaf. Some die in the first growing season after severe damage, but it often takes several growing seasons. When trees are not damaged or significantly defoliated, they can usually recover. However, throw in another stressor, such as drought, and it can easily increase the number of dying trees even years after the storm.

Managing Oak Forests

While many factors associated with oak mortality are uncontrollable, as a woodland owner, certain practices can help with some of these losses. The following principles or techniques are important to incorporate into your woodland planning.

1. Determine the risk for loss in your mature woodlands by determining the species, age, and crowding condition of your woodlands. A forester can help assess your woodlands for each of these factors and determine if it is at risk for high rates of oak loss if there is drought or another stressor.
2. If you have short-lived oak species, such as scarlet or black oak, realize their longevity and remove them if they are economically mature. Also realize that you will have losses occurring sporadically or significant losses if droughts or other stressors occur. If there are a large number of these trees in your woodlands, certain places may need to be regenerated and the forester can recom-

mend proper regeneration practices—possibly small group openings or a shelterwood or two-age deferment treatment where scattered large oaks are left. If warranted, a small clearcut may be in order. In all of these cases, the forester will be removing the oaks that are in decline, allowing room for a new age class of oaks to establish.

3. Ensure that oak trees have enough room to grow appropriately. A forester can assess the stocking level of the woods as well as the crowding of individual oak trees. Foresters can recommend practices, such as a

crop tree release or a thinning that can adjust the density of the woods to alleviate overcrowding. In mature oak woodlands, these practices can be accomplished with a timber harvest, providing money for you as well as improving conditions in the woods.

4. When drought, defoliation, freezes, or storms occur, be ready for oak loss over the next several years and have a forester assess the need for a salvage harvest. If the stands are overstocked and individual oaks are crowded, it might be too late to thin the woods to lessen mortality. However, a salvage harvest can be planned with an eye toward improving the remaining trees and allowing for regeneration to occur.

Many woodland owners also have oaks in their yards and, unlike woodland oaks, there are practices that can help reduce their stress. Thoroughly water them during dry summer months or when droughts are starting. A few thorough waterings are much more beneficial than a number of light waterings. Also, get a soil test through your local Cooperative Extension Service county agent office for more accurate fertilization recommendations. These practices are two of the most important for individual care of established trees.

In summary, the loss of mature oak trees is a natural process in the woods. Once an individual oak tree loses vigor and becomes stressed, it is difficult for it to recover. Proper evaluation and management is critical to ensure you are taking proactive steps that can lessen problems associated with aging oak woodlands. Contact your local Kentucky Division of Forestry forester or consulting forester to assist with evaluating your woods. A forester can help make sure you have the proper recommendations for maintaining the health and vigor of your oak woodlands.

About the Authors:

Jeff Stringer, Ph.D., is an extension professor at the University of Kentucky and is responsible for continuing education and research in hardwood silviculture and forest operations. He is also an editor of the *Kentucky Woodlands Magazine*.

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Our woods are sometimes hit by catastrophic events such as heavy ice storms. The resulting damage when severe enough can cripple a tree's ability to fight off insects and diseases that will ultimately kill the tree.

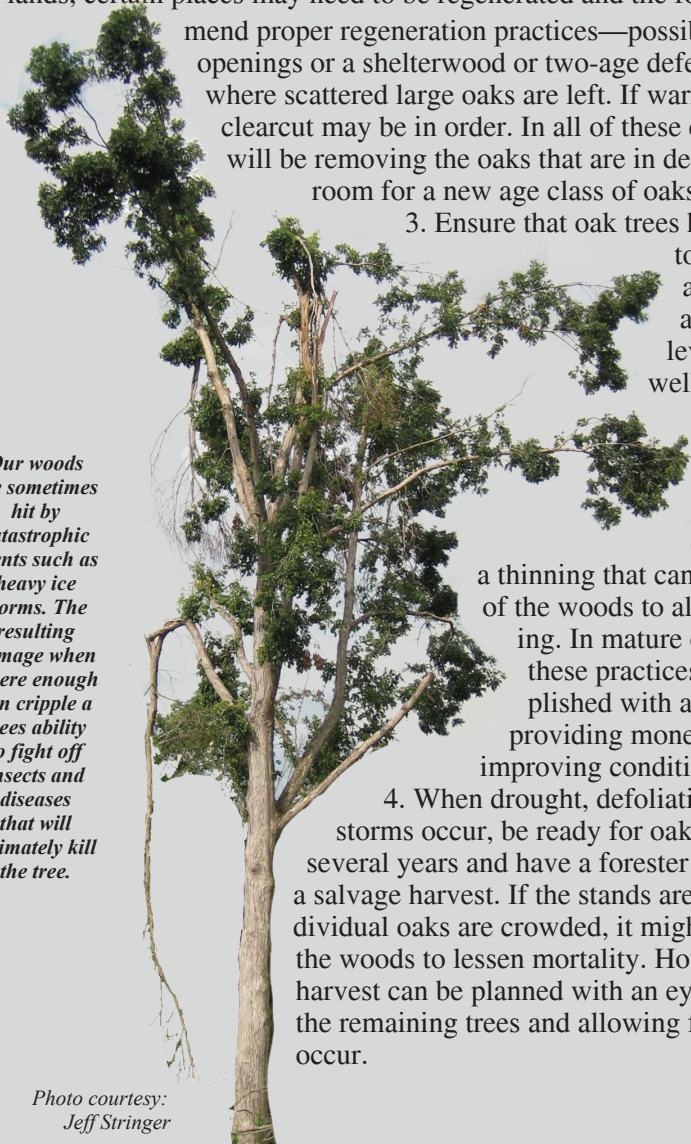


Photo courtesy:
Jeff Stringer

CONNECTING YOU TO FORESTRY

Kentucky Woodlands E-News
For those who own, care for, and depend on Kentucky's Woodlands

June 2012

Extension Calendar

August 4, 2012
Woodland Owners Short Course
Whitley County
INFO: 859.257.7597

August 11, 2012
Woodland Owners Short Course
Marshall County
INFO: 859.257.7597

August 25, 2012

Registration for the Woodland Owners Short Course now OPEN!

Register now for the 2012 Woodland Owners Short Course (WOSC). The WOSC is one of the best woodland educational opportunities available in the state for woodland owners; however, anyone with an interest in forestry or wildlife will benefit from attending. Register now by [clicking here](#).

August 4, 2012
Whitley County

August 11, 2012
Marshall County

August 25, 2012
Franklin/Shelby counties

University of Kentucky Forestry Extension publishes many e-mail newsletters that can help keep you informed about forestry. Whether you are a woodland owner, own a wood business, or are in the industry, one or all of these newsletters are for you. To sign up, visit www.ukforestry.org and scroll to the bottom the page; click on the **Join Our Mailing List** link which will then take you to a registration page for these newsletters.

Kentucky Woodlands E-News shares up-to-date information about educational programming and other items of interest to woodland owners, the wood industry, and those that want to learn more about the amazing woodland resource in Kentucky.

Kentucky Wood Industry E-News was designed for primary and secondary wood products manufacturers, but it will also periodically contain articles of interest for landowners and other audiences.

Kentucky Wood Industry E-News

August 2012
University of Kentucky
Department of Forestry

In This Issue

- International Marketing Update
- Calculating the Carbon footprint of Wood Buildings
- Gibson to Pay \$350,000 in Penalties Over Illegal Wood
- June 2012 Housing Commentary
- Housing Trends

Dates To Note:

August 28, 2012
KEFA - Purchase Regional Meeting - Benton, KY
INFO: 270.658.3193

September 14, 2012
UK Forestry Department Alumni-Student Fall Picnic
T.P. Cooper Building
Lexington, KY
INFO: 859.257.7596

Sept. 25, 26 & 27, 2012
Kentucky Master Logger 3-day program
Hardin County - Elizabethtown
Cooperative Extension Service Office - INFO: 800.859.6006

October 18, 2012
Win With Wood
Wood Utilization Center,
Jackson, KY
9 a.m. - 1 p.m.
INFO: 800.859.6006

November 6, 7 & 8, 2012
Kentucky Master Logger 3-day program
Graves County - Mayfield
Cooperative Extension Service Office - INFO: 800.859.6006

For more Dates To Note, [click](#)

Pallet Manufacturers and Pallet Re-manufacturers Pest Regulations Clarified and Changed for the Better

Pest regulations update: Government and regulatory agencies continue to prevent the spread of pests in wood packaging material and wood products by updating regulations and clarifying ones that are confusing. Pallet manufacturers and pallet re-manufacturers. [Read more...](#)

International Marketing Update Information from Jonathan Van Balen, Import/Export Advisor

Jonathan Balen, Import/Export Advisor in the KY Department of Agriculture has put together a newsletter containing information pertinent to the forest products industry in Kentucky, including information about trade shows, import/export services offered through the KY Ag Dept., important announcements and contacts. Kentucky forest products industries that presently are exporting or wish to start exporting would benefit from checking out this newsletter. [Kentucky Proud International Marketing Update](#)

Calculating the Carbon footprint of Wood Buildings

Forest & Wood Certification E-News July 2012

Control Wood Update

The FSC US Control Wood Working Group is continuing meetings to develop a national control wood risk assessment recommendation for the FSC US board. It is clear that the process will take well beyond the initial one year target. The Center has provided comment on this situation indicating the need for an extension. In the US key issues revolve around how to assign risk designations associated with areas with eco-regionally significant High Conservation Value Forests (the Working Group is charged with refining the definition of eco-regionally significant) and areas where forest conversion is beyond the FSC standard. Unfortunately the standard or threshold for maximum forest conversion rates states "conversion above 0.5% and no net conversion" is vague and confusing. The Center has indicated that there needs to be a clear and easily applied definition of conversion so that the US Working Group can effectively move forward. Further there are some issues associated with legality that have been discussed relative to some regions of the country. As this Newsletter goes out FSC International is finalizing decisions regarding national control wood risk assessment efforts. It is believed that company based risk assessments will be allowed for the next year or so until national risk assessments including the US are finalized. There will no doubt be some directives from FSC International that will be issued regarding this situation shortly. Jeff Stringer with the Center for Forest and Wood Certification is a member of the FSC US Control Wood Working Group in the social chamber and any comments you have regarding Control Wood issues would be welcomed. Contact Jeff directly at stringer@uky.edu.

In This Issue

- Control Wood Update
- Senior logs
- Southeast Region FSC Meeting
- Cooperating Forester Training Completed
- Better Know a Standard
- Center Sponsors and Supports

Acres Certified

- Industrial - 4,450
- Family Forests - 1,317

Chain of Custody Certificates

- Logger - 44
- Primary - 3
- Secondary - 8
- Reclaim - 2

Cooperating Foresters

24

Assistance

The Center is geared up to assist any stakeholder group with help with their certification efforts.

The **Center for Forest and Wood Certification E-News** provides timely and useful information for those interested in forest, wood, and logger certification and informs our partners and stakeholders of programs and activities of the Center.

**SIGN UP TODAY AT
WWW.UKFORESTRY.ORG
BY CLICKING ON THE
JOIN OUR MAILING LIST LINK.**



Many milestones have influenced how the division has changed over the last 100 years, but its initial priorities have remained the same: protecting forests from wildfire, assisting landowners with forest stewardship, and producing tree seedlings for reforestation projects. From the early days of the Kentucky Division of Forestry to the celebration of our centennial the following timeline tracks significant events in the history of the Kentucky Division of Forestry and forestry events in our state.

1913

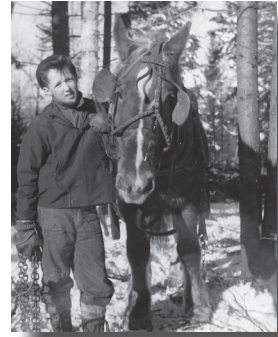
First Fire Protection Association

Under the guidance of the Board of Forestry, the first Fire Protection Association was organized in 1913 in Harlan County. Landowners paid a yearly one-cent-per-acre forest protection tax, and by 1915, the area of protection encompassed 200,000 acres and extended to neighboring counties.

1912

Creation of the Board of Forestry

By the early 1900s, Kentucky's forests had been over-harvested, cleared for agriculture, and charred by wildfires. In response to the depleting resource, the Kentucky General Assembly empowered a new Board of Agriculture, Forestry and Irrigation to act as a forestry commission for the state that included Kentucky's first State Forester, John Earle Barton.



Celebrating the Kentucky Division of Forestry's Centennial: Timeline of Forestry in Kentucky

1914

First Tree Nurseries

Two state-owned tree nurseries were established in 1914 to raise tree seedlings and create state forest reserves. The first and largest nursery was located at the fairgrounds in Louisville, and a smaller nursery was created in Frankfort.



1919

First State Forest

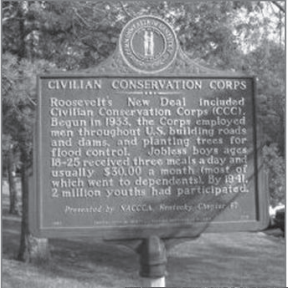
In 1919, the Board of Forestry acquired its first state-owned forest. The property, located in Harlan County on the south side of Pine Mountain, was deeded to the Commonwealth by the Kentenia-Cartron Corporation and subsequently named Kentenia State Forest. The initial tracts of land at Kentenia totaled 3,624 acres. Today, KDF owns and manages ten state forest properties across the state encompassing over 43,000 acres.

1933

Civilian Conservation Corps Come to Kentucky

The Great Depression of the 1930s, as devastating as it was to the nation, had a positive impact on forestry. One of President Franklin D. Roosevelt's New Deal programs was the Civilian Conservation Corps (CCC). From 1933 to 1942, CCC camps were established in every state, including Kentucky.

Among other duties, the young men in these camps worked to reclaim forests by erecting fire towers, fighting forest fires, and planting trees. CCC markers, like the one located near Cumberland Falls, can be found throughout Kentucky.



1948

General Assembly Enacts Laws for Forest Management

The Kentucky General Assembly enacted laws in 1948 that provided for guidance in forest management. These laws serve as the foundation for the Kentucky Forest Stewardship program that provides technical assistance to private landowners for the purpose of sustaining forest resources.

1964

Arbor Day in Kentucky Designated as the First Friday in April

Although the Kentucky General Assembly established Arbor Day in our state in 1896 as a day set aside for recognizing the importance of trees, the actual day changed several times until the 1960's. At the request of the Kentucky Division of Forestry (KDF), in 1964, the Kentucky legislature designated the first Friday of April as Arbor Day in Kentucky.

1970

Fire Towers Give Way to Aerial Detection

The 1970s brought changes to the way the division located forest fires. Fire towers were retired from service, and the division began using aerial detection to spot fires. This method has proven effective in locating and suppressing wildfires.



1990

Forest Management Makes Strides

In 1990, the division's forest-management program was upgraded to encompass the federal Forest Stewardship Program. In 1993, the National Woodland Owners Association honored the division's Forest Stewardship Program as the finest in the United States.



1980

Kentucky Establishes an Urban and Community Forestry Program

The division established a program to provide technical assistance and funding to address the importance of urban trees for their social, environmental, and economic benefits.



**100 Years of Forestry
in Kentucky**



1998

Kentucky Forest Conservation Act

Two years after the creation of the Kentucky Forest Conservation Act (KFCA) in 1998, the division became responsible for inspecting commercial timber-harvesting operations. In accordance with KFCA regulations, a master logger must be on site and in charge of all commercial timber harvests and they must ensure that best management practices are being used to reduce and prevent nonpoint source water pollution.



2009

Discovery of Emerald Ash Borer in Kentucky Brings Attention to Forest Health

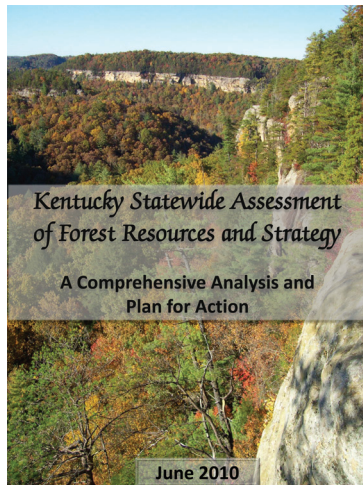
In 2009, one of the worst insect threats in recent history was found to have spread to Kentucky. The insect, known as the Emerald Ash Borer (EAB), was initially discovered in southeastern Michigan near Detroit in the summer of 2002.



2010

Statewide Assessment of Forest Resources and Strategy

In 2010, KDF developed and published the “Kentucky Statewide Assessment of Forest Resources and Strategy” to serve as a resource for partners involved in forestland management. The document also serves to inform the public and policymakers about the status and health of Kentucky’s forest resources. Ultimately, the document, also known as Kentucky’s Forest Action Plan, will influence projects and funding with respect to managing our forestlands.



2012

KDF Today and Tomorrow

KDF celebrates a rich history in forestry. Historically, the division has enforced forest fire protection laws, provided fire suppression on private land, conducted fire prevention activities, maintained a tree-seedling program and provided technical assistance to private landowners. In more recent years, the division has taken on community- and urban-forestry programs, timber-harvesting inspections, forest-health assessments, and environmental education. Our state is fortunate to have a forest resource that remains productive and diverse and with proper management, our forests will continue to provide economic and environmental benefits for hundreds of years to come.



100 Years of

Forestry in Kentucky



A Tribute to Pete McNeill

www.kwoa.net



Pete McNeill and his wife, Anna Lou.

Peter Thurman McNeill Jr., 85, of Flemingsburg, a Kentucky woodlands giant, has passed away. Pete was well-known around the world for his consulting work with agricultural and electrical development and was a great steward of the land; he is the only Kentuckian to have won the National Tree Farmer of the Year award. Among his many accomplishments, he was a founding member of the

Kentucky Woodland Owners Association

(KWOA). Pete had such a positive influence on so many people, and we wanted to share a few tributes to Pete from just a small sample from the Kentucky forestry community:

Greg Kuhns, KWOA Board Member, Bullitt County

“Pete McNeill was Mr. Forestry to many of us, especially those new to the practices of good forestry. His kind gentle ways and legendary contributions will be sorely missed.”

Karen Marshall, KWOA Board Member, Owen County

“I appreciate his advice, his example, and his dedication to not just his wonderful family Tree Farm, but to the betterment of family forests in Kentucky and elsewhere.”

Henry Duncan, KWOA President, Logan County

“I personally was blessed to have an opportunity to travel to Costa Rica on a two-week Methodist mission trip with Pete and his wife, Anna Lou. The highlight of that trip was to accompany Pete to meet with Costa Rica's forestry advisors to share woodland management and planting advice for that region of the country. It was amazing to witness Pete's ability to share forestry details through interpreters. On another recent trip, Pete, my son, and I drove to Washington, D.C., for the National Tree Farmer Conference. He proved to be well-known and respected among the national foresters and the politicians in Washington. Pete McNeill's influence has spread across the continents, but his devotion has been to strengthen woodland owners and their status throughout Kentucky.”

Jerry and Portia Brown, KWOA Board Members, Grayson/Shelby Counties

“Pete has been an inspiration for many people, near and far, and especially in the of woodland-owners community. We feel honored to have known him and, like so many others, will hold his memory as a bright light of caring and consideration to carry forward in our lives.”

Leah MacSwords, KDF Director, Frankfort

“Pete was a delightful person, and I enjoyed working with him on the Tree Farm Committee and the Kentucky Woodland Owners Association board of directors. He was a true advocate for Kentucky's forests and set an example of forest stewardship. I will miss him.”

Cliff and Barbara Taylor, KWOA Members, Boyle/Casey Counties

“I asked for Pete's counsel on carbon credits as well as other timber-related topics. Pete made a great contribution to KWOA and to humanity over the world. I am glad I knew Pete, and all of his family members should be proud he was a part of their family.”

Editors Note: Efforts are underway to establish a memorial forestry endowment for Pete McNeill and other Kentucky forestry leaders. See Kentucky Woodlands News To Use in this issue for more information.

KWOA Working for You...

KWOA offers sharing and networking opportunities for fellow woodland owners, forestry agencies, consultants, loggers, and others in the forestry community. KWOA was founded in 1994 with directors elected from the four regions of Kentucky. The KWOA board meetings are held the third Thursdays of February, May, August, and November. Any KWOA member is cordially invited to attend the board's meetings and participate in the business of the organization. We are excited about the many educational programs and issues initiated and supported by KWOA. Please view our website www.kwoa.net for more details. If you are not already a KWOA member, please join us and become part of an organization that is dedicated to improving the woodlands of Kentucky and assisting those who own and care for them.

For more information log on to www.kwoa.net

FORESTRY 101

Measuring Tree Diameter

by Billy Thomas

Determining the size of your trees is not difficult, and it is important information to know. A key part of determining tree size is knowing the tree's diameter. Recall that diameter is the length of a straight line that passes through the center of a circle. The tree diameter measurement allows you to quantify the size of trees, monitor tree growth (by re-measuring the same trees over time), and make informed management decisions. Tree volume can be determined by combining tree diameter with tree height. Knowing tree volume can have economic implications, because timber is bought and sold by the board foot, a measure of wood volume equivalent to a board that is 12 inches by 12 inches by 1 inch.

Various methods and tools can be used to measure tree diameter, and foresters often will use a diameter tape or tree caliper to accurately provide readings to the tenth of an inch. However, for many diameter measurements, simple tools such as a tree scale stick or a piece of string can be used to give good estimates of tree diameter. Tree diameter is measured at 4.5 feet above the ground on the uphill side of the tree and this is referred to as "diameter at breast height" or "DBH." DBH provides a standardized (and convenient) location to measure tree diameter. This is important because if everyone measures the tree diameter at the same location we can be more assured of getting similar measurements. You can use either of the following techniques to measure the diameter of your trees and gain a better understanding of the trees in your woodlands.

When it is important to be very accurate in measuring tree diameter a diameter tape (top) or tree caliper (bottom) can be used to provide readings to the 1/10 of an inch.

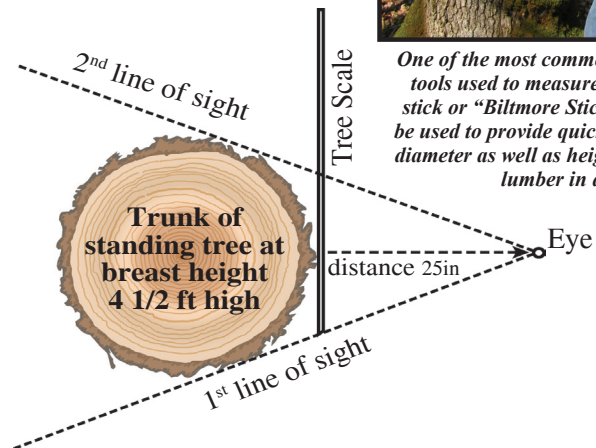
Tree Scale Stick

One of the most commonly used forestry tools is the tree scale stick. These sticks are relatively inexpensive and can be ordered from forestry supplier companies. The tree scale stick has several built in formulas based on geometric functions that make it especially useful. It can be used to measure tree diameter, log diameter, tree height, and



Photo courtesy: Billy Thomas

One of the most commonly used forestry tools used to measure trees is the tree stick or "Biltmore Stick". This tool can be used to provide quick estimates of tree diameter as well as height and volume of lumber in a tree.



it includes a tree volume table that can be used once tree diameter and height are known. The tree scale stick is held flat against the tree at DBH with the tree-scale side (as opposed to the log-scale side) facing the user, 25 inches from the user's eye. The left edge of the stick is lined up with the left outer edge of the tree, and the user then looks to the right edge of the tree without moving his or her head to note the diameter measurement on the stick where the right edge of the tree is visible. While not the most precise way to measure tree diameter, the tree scale stick can quickly be used to provide a good estimate of tree diameter.

Photo courtesy: Renee Williams



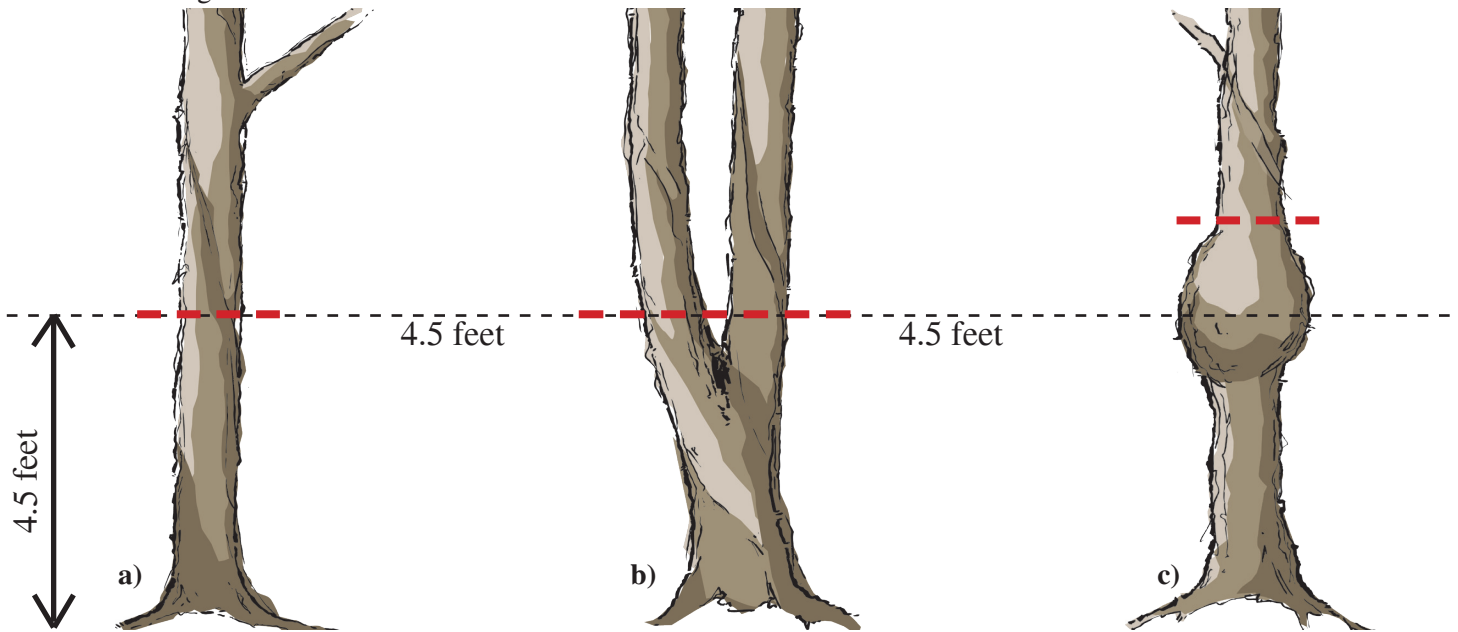
Strings or flexible measuring tape can be used to measure tree diameter. Wrap the string or measuring tape around the tree and divide the length in inches by 3.14 (π) to obtain a good estimate of tree diameter.

String Technique

A low-tech option to measure tree diameter involves the use of a string, tape measure, and some simple math. Wrap a string around a tree at DBH, and pull it tight—make sure the string is level all around the tree. Hold the end of the string against the tree with one hand, and use the other hand to hold the location on the string that matches up with the end of the string after it has been wrapped around the tree. Use a tape measure to measure the number of inches of string that went around the tree (the circumference), divide that number by 3.14 (π), and the result will be the tree diameter. The same technique can be done by using a flexible tape measure and noting the number of inches around the tree directly from the tape measure and then dividing by 3.14.

Diameter Measuring Challenges

Although trees generally are cylindrical in shape they are living organisms that have a variety of shapes, sizes, and growth patterns that generally keep them from being perfect cylinders. When trees are less than cylindrical in shape, taking multiple measurements with a tree scale stick on the long and short axis and averaging them will yield a better result. Trees that fork below 4.5 feet are measured as separate trees and if there is a large knot or other defect at 4.5 feet then we measure above that. Like most efforts, the more you practice measuring tree diameter the better you will become at it. Experienced foresters and woodland owners can often closely approximate tree diameter by visual observation because of their experience in measuring tree diameter.



Because trees are not perfect cylinders you may encounter abnormalities where tree diameter is typically recorded (4.5 feet above the ground on the uphill side). This diagram shows the location to take the diameter measure for three commonly encountered situations: a) trees that are mostly cylindrical are measured at 4.5 feet above ground on the uphill sides—if the tree is more oval or elliptical in shape then take multiple diameter readings on the long and short axis then average them, b) trees that fork below 4.5 feet above ground are measured as separate trees, and c) trees that have bulges or other abnormalities at 4.5 feet are measured just above the abnormality.

For more information visit: www.ca.uky.edu/forestryextension/Publications/FOR_FORFS/FORFS98_13.pdf

Tree Scale Stick Sources:

- Forestry Suppliers, www.forestry-suppliers.com, 1-800-647-5368
- Ben Meadows Company, www.benmeadows.com, 1-800-241-6401

About the Author:

Billy Thomas is an Extension Forester with the University of Kentucky Department of Forestry. He works primarily on non-industrial private forest issues and is the associate editor for the Kentucky Woodlands Magazine.

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Kentucky Tree Farm Committee Newsletter

Kentucky Tree Farm Committee Award Winners

Every August, the Kentucky Tree Farm Committee (KTFC) reviews award nominations for the outstanding Tree Farmer, logger, and Tree Farm inspector of the year. The list of nominations is narrowed down to two or three, and then site visits are conducted by a small team of committee members. The members then report back to the KTFC in February for the selection of the award winners. It is a challenge to select a winner among the many great finalists—the KTFC would like to thank all the nominators and the finalists for their dedication to the Tree Farm program. Congratulations to the following 2011 award winners:

- **2011 Kentucky Outstanding Tree Farmer of the Year:**
Michael Harvey,
Campbellsville



Michael Harvey



Eddie Butler

- **2011 Kentucky Outstanding Logger of the Year:**
Eddie Butler,
Vanceburg



Sean Godbold

- **2011 Kentucky Tree Farm Inspector of the Year:** Sean Godbold,
KY Division of Forestry,
Elizabethtown

Photos courtesy: Paul Miller, Jr.,
National Hardwood Magazine

Grassroots Action Network

The American Tree Farm System (ATFS) has created the Grassroots Action Center, which is a network of Tree Farmers and family forest advocates committed to fighting for policies that ensure family forest owners have the tools they need to keep their forests healthy and productive and protect their forest heritage. The center is a great way to stay current on policy issues that impact family forest owners and to find and contact any elected or appointed official at the national, state, or local level. Learn more about it by visiting <http://familyforestaction.org>.

Saving Special Places

A special site is any noteworthy or meaningful place in your woods: the ruins of an old homestead, a painted cave wall, or even a treasured spot your family returns to year after year. It's a place of personal, historical, archeological, cultural, geological, biological or ecological significance. Protecting these special places for the future is part of the ATFS 2010-2015 Standards of Sustainability for Forest Certification. But it doesn't have to be costly or difficult. Regardless of their type, special sites are important and fragile. And, like our nation's woodlands, they are rapidly disappearing. Woodland owners have a unique opportunity to preserve these pieces of history before they vanish forever. With some information and a little planning, you can preserve a piece of America's heritage for generations to come. Visit www.treefarmssystem.org/special-sites to learn more and to find resources to help.

Third-Party Certification Assessments

Each year, a number of state programs represent their region in the ATFS third-party certification assessments. During the assessment, Tree Farms across each state, representing a range of acreage categories, will be visited by third-party auditors in order to better understand their on-the-ground management and verify conformance with the 2010-2015 Standards of Sustainability. Kentucky will participate in the 2013 assessment, and all Kentucky Tree Farmers should ensure that their management plans and activities are in compliance with the 2010-2015 Standards for Certification (www.treefarmssystem.org/standards-for-certification).

Let Potential Buyers Know You Have Certified Wood

If you are a Tree Farmer, it is important to let potential timber buyers know it. Provide your Tree Farm number and certification information on timber-sale announcements. It can help you establish that the harvested material is eligible for and should be tracked as Certified content at Sustainable Forestry Initiative (SFI) Certified facilities.

Thanks to Pete McNeill

Pete McNeill, a long-time Tree Farmer in Fleming County and member of the Kentucky Tree Farm Committee, recently passed away after a long illness. He and his family have had a long tradition of being great stewards of their property and promoting the concepts of caring for the land. In fact, they are Kentucky's only winners of the National Tree Farmer of the Year award. While we will miss Pete's warm smile, kindness, and dedication to good forest management, we will not forget him.



CFWC

Center for Forest & Wood Certification

Center for Forest and Wood Certification: Providing Certification Possibilities for Woodland Owners

by the Managing Partners of the Center for Forest and Wood Certification

The Center for Forest and Wood Certification (Center) is a partnership venture that provides solutions to forest and wood certification issues in the eastern United States. The Center is designed to define problems associated with wood and forest certification and works toward developing programs and providing assistance so those who could benefit from certification do. The Center assists everyone

from private woodland owners with small acreages to large private and public forest owners. The Center also works with all sizes and types of forest industries, including logging, sawmills, secondary industries, and large

market force that provides the economic incentive for woodland and forest certification. In some cases, non-market incentives from conservation easements and ecosystem services are also possible and the Center works to facilitate these opportunities for woodland owners as well. Regardless, building sustainable certification efforts for woodland owners requires incentives, often the presence of markets for certified timber and fiber (pulpwood), and the development of certified acreage must be done in concert with the development of local markets for certified fiber and timber. Foresters, loggers, and forest industries' capacity to manage, procure, and manufacture also must be choreographed. The design of the Center recognizes the need for balanced growth of all entities involved in certification in order to build sustainable certification networks. The Center also recognizes the need to understand all the costs of producing certified fiber and timber products and how these costs are distributed along the supply chain. Armed with this knowledge, individuals and companies can make good business decisions and certification costs can be appropriately distributed across the supply chain to enhance certification of woodlands.

Photo courtesy: Jeff Stringer



Christopher Reeves, certification forester, with the Center is training cooperating foresters on certification standards and the management plan requirements.

forest industries such as pulp and paper. While the Center does work with public sector forests, its focus is on building private sector certification capacity. The ultimate aim is to allow all entities involved with certification to develop, manage, and profit from their certification efforts. In this regard, the Center is a certification incubator, helping private owners engage and ultimately be self-sufficient in their certification efforts.

Designed to Succeed

The wide range of programs, opportunities, and partnering offered by the Center is strategic. The demand for certified wood products is the primary

How the Center Functions

The Center for Forest and Wood Certification was developed by eight founding partners representing forest industries, forest industry associations, consulting foresters, economic and environmental non-profits, and universities (see Managing Partners box below). These founding partners are referred to as managing

Founding and Managing Partners

- Bobby Ammerman (University of Kentucky, Department of Forestry Extension)
- Britt Boucher (Consulting Forester, Blacksburg, Va.)
- Ken Negray (Kentucky Forest Industry Association /NewPage Corp.)
- Christopher Reeves (University of Kentucky, Department of Forestry Extension)
- Scott Shouse (Mountain Association for Community and Economic Development)
- Jeff Stringer (University of Kentucky, Department of Forestry Extension)
- Chris Will (Central Kentucky Forest Management Inc.)
- Hagan Wonn (Kentucky Hardwood Lumber Company)

partners and actively set Center policy and approve program development*. While the Center has projects throughout the eastern United States, it focuses the majority of its efforts in the Central Hardwood and Appalachian regions. Funding comes from a variety of sources, including membership fees from forest and woodland owners, loggers, and industry; contributions from managing partners; grants; and donations from businesses, non-profits, and associations and organizations (see Support and Endorsement box on page 16). All are directly involved in or interested in promoting forest and wood certification.

Center Structure and Administration

The Center contains three sections designed to manage the wide range of programs undertaken, including forest management (FM), forest industry/chain-of-custody (CoC), and logging. Each has an administrator who manages programs and projects in that section. Of particular importance to woodland owners is the FM section that manages the FM group certificates, including an independently managed group for the American Tree Farm System (ATFS) and an FM group for the Forest Stewardship Council (FSC). This section also trains and supports the Center's Cooperating Foresters—consulting and industry foresters trained to manage certified forests and woodlands.

establish payments for conservation easements for a working certified forest, the Center will help with these contacts as well. Forest owners are able to sell ATFS and/or FSC timber and pulpwood to industries that are in need of this timber or fiber. In some cases these industries are willing to assist with certification costs.

When Does Certification Make Sense

Certification may be important for family forest or woodland owners if industries are willing to provide preferential treatment for certified timber or pulpwood. Currently this is the case with all industries that have a CoC certificate for FSC or SFI. It is also important to note that all forest industries that are provided assistance by the Center are required to provide preferential treatment to woodland owners who are certified. All woodland owners who are members of the Center are FSC and ATFS certified, so regardless of local demand for one type of certification over the other they are covered. Certification may also provide an opportunity for landowners who want to derive income from harvesting timber and non-timber products and at the same time participate



Anne Marie Kittredge auditor for Scientific Certification Systems discusses certification procedures with Walter Alexander (left) owner of Kentucky Flooring Co., LLC. Bobby Ammerman, in charge of chain-of-custody certification for the Center looks on.

The other sections have similar responsibilities for certificate management, training, and technical assistance. The Center also has an operational director who provides administrative support and coordination of Center projects.

Forest and Woodland Certification

Family forest owners (woodland owners) can become ATFS and FSC certified by contacting the Center. The Center will determine if income opportunities are available through timber sales or other sources of payments for certified forest lands and put them in contact with trained Cooperating Foresters who can help them with their management plans and certification requirements. The woodland owner and forester work out their own arrangement on fees. Once the management plan has been written, the Center will work with the forester or landowner on finalization of the certification process. There is an initial and annual fee for membership that is kept as low as possible to help promote certification (see table to right). Also woodland owners will be apprised of loggers and industries that are interested in purchasing their certified timber or pulpwood. Where opportunities exist to

Family Forest Group Members		
Size (in acres)	Initial Fee	Annual Fee
20 - 500	\$50	\$40
501 - 1,000	\$100	\$50
1,001 - 2,470 ¹	\$200	\$75
Large or Industrial Forest		
12.9 cents/acre plus initial audit fee.		
¹ based on FSC's 1,000 hectare size limit of the family forest standard.		

*The Center is housed at the University of Kentucky, Department of Forestry Extension. While extension personnel provide for the majority of the staffing for Center programs, the managing partners provide direction and make Center policy. Managing partners also provide in-kind services to facilitate program development.



CFWC

Center for Forest & Wood Certification

Photo courtesy: Jeff Stringer



Mr. and Mrs. Hewitt Brown's woodlands are being certified through the Center and are also being used to develop a model for using FSC certification as a means of providing a working forest that can potentially obtain conservation easement payments. Certification auditors observed an archeologist dig of a native American Indian fort during a certification audit of the Brown's Massy Springs Farm on the Green River.

in conservation easements and ecosystem services. Certification allows for the concept of a working forest that fits many conservation easement requirements since certification helps to ensure the maintenance of a wide range of conservation attributes that are of interest to the entities providing easement funding or those providing ecosystem payments (such as carbon markets). Finally, certification may make sense for those woodland owners who want a higher degree of technical assistance that is normally provided for on non-certified forests or if they are interested in showing their commitment to high standards of forest management.

Contacting the Center

To get more information on the Center, go to the Center's Web site at www.forestcertificationcenter.org, e-mail the Center at info@forestcertificationcenter.org, or call 1-855-579-2690. The Web site describes all of the Center's programs and provides details on certification. The Center also sends out an e-mail newsletter. If you would like to be on the list to receive this newsletter, contact the Center.

Support and Endorsement

Corporate Sustaining Sponsors

- Time Inc.
- Domtar Corp.
- NewPage Corp.
- Kentucky State Implementation Committee-Sustainable Forestry Initiative

Grants/Public

- Kentucky Division of Forestry (U.S. Forest Service),
- University of Kentucky, College of Agriculture, Department of Forestry

Non-Profit

- Central Appalachian Forestry Alliance lead by the Mountain Association of Community and Economic Development and Rural Action

Endorsements

- National Woodland Owners Association
- The Nature Conservancy
- Kentucky Forest Industry Association
- Kentucky Woodland Owners Association
- Association of Consulting Foresters-Kentucky Chapter
- SFI-Kentucky and Tennessee State Implementation Committees



From the Woods...

Kentucky Woodlands Magazine interviewed Tom Christopher, Marion County woodland owner, to learn his experiences with certification. He has worked with his forester, Chris Will, and the Center for Forest and Wood Certification.

Why did you get involved in woodland certification and how long have you been working with Chris Will?

Tom: I've relied on Chris for the past 15 years and have found his advice very helpful. Chris introduced me to the idea and I like the quality process that I saw. I was drawn to the long term range nature of the program. I also want to ultimately get a good price for my timber and through this program hopefully get a higher price. But a big concern is that when I take the timber I don't damage the land.

Forest certification involves an audit process; please tell us a little about your audit experience.

Tom: I'm a Certified Public Accountant and I understand the audit process. But from my perspective the audit was not bad at all because I had already been through an audit with the carbon credit program. The audit really didn't require a lot from my end but it further solidified what I had already done. Chris helped develop a management plan for the property using some material I already had. I didn't have to change anything to get enrolled.

Do you have any advice for other woodland owners when it comes to woodland certification?

Tom: I hope a lot more people get involved in certification because of the long-term benefits of the program. In general though, I would also recommend that woodland owners involve their families in management and get their lands surveyed especially when it comes time to harvest.



Tom Christopher in the back with his grandchildren (from left to right) Tate, Clay and Samuel. Tom's woodlands are one of the first Forest Stewardship Council Family Forests certified in Kentucky.



Tornado Decimates Morgan County Tree Nursery



All photos courtesy:
Kentucky Division of Forestry

The Morgan County Nursery was all but destroyed by the same tornado that hit West Liberty on March 2. This 50-acre nursery, located only a few miles west of West Liberty on the Licking River, is one of two seedling nurseries owned by the Kentucky Division of Forestry (KDF).

Most of the buildings, including the main office, two barns, equipment-storage building, and a cooler containing over 400,000 seedlings, were decimated. State and federal vehicles, fire-suppression equipment, a Firewise education-



Many seedlings (white bags) were packaged and awaiting shipment when the tornado struck. While some seedling bags were recovered others were too damaged or lost. Seedling bags were found as far away as West Virginia.

al trailer, several tractors, tree lifters and mowers, and a refrigerated trailer full of seedlings packed for shipment also sustained significant damage. “Though the loss is extensive and the scene is devastating, we’re already making plans to salvage as much as we can and begin rebuilding,” said director Leah W. MacSwords.

Despite the debris and flattened trees scattered in the nursery’s valley and along the adjacent Licking River, most of the seedling beds and a research plot with hybrid American chestnut trees remain intact. KDF

organized a crew of approximately 30 division employees from nearby districts to join with the nursery employees in a recovery and salvage effort.

The nursery will remain closed to the public until further notice. For more information about the state nurseries and the recovery effort at the Morgan County Nursery, please contact KDF at 1-800-866-0555, or visit the Division of Forestry at <http://forestry.ky.gov/> and click on their Facebook link.



Numerous vehicles, buildings, and pieces of equipment were destroyed in the tornado.

Forest Health



Storm Damaged Woodlands

by Jeff Stringer

Significant storm damage again has impacted Kentucky's woodlands. The devastating tornado that tore through several communities, including West Liberty, in March functionally destroyed approximately 20,000 acres of timber, according to estimates by the Kentucky Division of Forestry. While those woodlands will regenerate, the loss in timber value and dangers associated with wildfire are significant. The Kentucky Timber Damage Web site (www.kytimberdamage.net; see "Where To Get Help")

was created to provide guidance, publications, and presentations on woodland damage from storms of all types. The site is a joint effort of the University of Kentucky, the Department of Forestry, and the Kentucky Division of Forestry and is managed by UK's Forestry Extension group.

Woodland owners who have timber damaged from ice, snow, straight-line winds, tornadoes, and other weather-related natural disasters typically have a number of concerns, including:

Long-term Woodland Health and Vigor

It is important to determine whether the damage will affect survival of the remaining trees or the regeneration of the woods if the storm eliminated the overstory. What can be done to help?



Tornado damage near Salyersville in 2012. Broken and twisted main stems are common with tornadoes. Tornadoes can reduce salvage values to less than fifty percent of the undamaged timber values.

Photos courtesy: Jeff Stringer



There are numerous publications available to help you address storm damage on your woodlands. Visit www.kytimberdamage.net or contact your local extension office for more information.

Immediate and Long-term Financial Loss

Did the storm result in significant enough damage to warrant declaring a loss on my taxes, and how is this handled? Safety. What types of hazards did the storm create in the woods? Each type of storm creates a different set of hazards that can affect your safety in the woods and potentially create conditions that produce severe wildfires.

Ability to Access and Use the Woodlands

What is the best way to clear woodland roads of debris? What programs can help with these efforts?

Assessment of the woodlands is required to provide woodland owners with knowledge needed to make good decisions regarding a number of the concerns above. The publications available on the Kentucky Timber Damage site can help. Ultimately, foresters often are needed to answer questions such as:

- Is there a fair market-value loss that I need to report on taxes, and how is this done?
- Do my woods need a salvage harvest or not?
- Are there management practices that need to be done to improve the health of my woodlands?

Foresters from the Kentucky Division of Forestry can help with some questions, especially relating to woodland health, overall management, and whether a salvage harvest is warranted. They can also point you to consulting foresters who can directly assess and advise on financial issues and orchestrate a timber harvest.



Photos courtesy: Jeff Stringer

Above: Ice damage in western Kentucky. Ice can uproot, bend, and break trees however the majority of damage is from damage to smaller tree branches reducing the crown size of trees.

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Kentucky Woodlands Storm Damage

Information for Kentucky Woodlands Owners, Farmers, and Forestry Professionals

August 17, 2012

Sponsored by:

UKAg FORESTRY EXTENSION UNIVERSITY OF KENTUCKY

Click on the above logos to view the sponsors websites.

Recent 2012 publications:
[FORFS 12-3 Storm Damage - Safety in the Woods](#)
This publication will help to keep you safe in storm-damaged woodlands and while clearing tree debris from roads, trails, and fences.

Sources of Assistance:

Storm damaged woodlands can create safety issues and anxiety for their owners. Knowing about the information and assistance available is critical. The Kentucky Woodlands Storm Damage website (www.kytimberdamage.net) is a great place to start—not only does it contain photo guides, a recorded webinar, and publications but it also has links to organizations available to assist including the Kentucky Division of Forestry (<http://forestry.ky.gov>) and the Kentucky Association of Consulting Foresters (www.kacf.org).

About the Author:

Jeff Stringer, Ph.D., is a extension professor at the University of Kentucky and is responsible for continuing education and research in hardwood silviculture and forest operations. He is also an editor of the Kentucky Woodlands Magazine.

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This champion scarlet oak is located in southeastern Kentucky. Scarlet oak like most oak species in Kentucky is important to wildlife and for lumber purposes—it is also often used as an ornamental tree.

Scarlet Oak – A Witness to History

by Diana Olszowy

Kentucky Champion Tree Program

Photo courtesy: Kentucky Division of Forestry

The city of Pineville, seat of Bell County was first settled in 1781. Rich in history from the native Americans who first passed through to the early pioneers and settlers traveling on the Wilderness Road to the new land of Kentucky, on through the ebb and flow of the Civil War. Originally called Cumberland Ford, the community was developed at a shallow crossing on the Cumberland River at a gap in Pine Mountain called The Narrows. Although not as well-known as nearby Cumberland Gap, The Narrows was also a key passage on the Wilderness Road that led early settlers from the East into Kentucky.

From the beginning, one truly magnificent scarlet oak stood its ground as the city grew around it. This massive oak is nearly 14 feet in circumference and 98 feet tall. But the most impressive feature is its crown spread which is nearly 100 feet. Though normally considered a medium-sized tree with an average circumference of 2 – 3 feet and a height of 60-80 feet, this champ was obviously not interested in the status quo.

Scarlet oak, also known as Spanish oak, is best known for its brilliant autumn color. It's a fast-growing tree that can be found in a wide variety of soils. It prefers the upper slopes and ridge tops of the central Appalachians. In Kentucky, it is common except for in the far western region. It commonly grows with white, black, and chestnut oaks; shortleaf and Virginia pines; mountain laurel; sourwood; and blueberry. What is particularly interesting about scarlet oak is that it tends

to be better represented in forests with a fire history than in forests with little or no evidence of past burning. Its prominence on burned sites may be related to its vigorous sprouting ability after burning, together with the elimination of more fire-sensitive competitors.

Scarlet oak is a type of red oak and is used for flooring, furniture, millwork, railroad ties, tool handles, fence posts, plywood, veneer and barrels for storing dry goods. The wood is hard, heavy, strong, and pink to reddish-brown. The acorns are an extremely important food source for deer and for bears as they fatten up before hibernation. Turkeys, ducks, grouse, quail, songbirds, blue jays, woodpeckers, raccoons, chipmunks, squirrels and other wildlife also rely on the scarlet oak acorns for food.

In addition to its value as a timber and wildlife species, scarlet oak is widely planted as an ornamental. Its brilliant red autumn color, open-crown texture and rapid growth make it a desirable tree for yard, street, and park. With everything that this champion scarlet oak has seen through its long life, don't you wish it could share its wisdom with us?

Scarlet oak leaves are bright green above and pale below until they turn a brilliant scarlet color in the fall. The acorns of scarlet oak reach about 1 inch in length and often have concentric rings at the bottom tip of the acorn.

Leaf and acorn photos courtesy: David Stephens, Bugwood.org

About the Author:

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Test Your Knowledge

Submit your answers at
www.ukforestry.org to Win a
 \$50 Gift Certificate compliments of...



Editor's note: Questions are drawn from the articles in this issue; if you have trouble with any of the answers then please review the articles to discover them. Visit www.ukforestry.org to enter your answers for a chance to win a \$50 gift certificate to Forestry Suppliers. Sorry, but University of Kentucky and Kentucky Division of Forestry employees (and their family members) are ineligible to win the \$50 gift certificate.

1. Kentucky's first state forest was established in 1919 when it was deeded to the state by the Kentenia-Cartron Corporation. In which county is it located?

- a) Breathitt
- b) Christian
- c) Harlan
- d) Jefferson

Hint: See article on page 8.



2. When a larger, older oak tree dies it is typically because of _____?

- a) Insect and Disease Damage
- b) Combination of Stressors
- c) Storm Damage

Hint: See article on page 1.



3. Diseases that affect trees can go unnoticed. Two of the most commonly found diseases (*Armillaria* and *Phytophthora*) in our woodlands damage the _____ of oak trees.

- a) Leaves
- b) Buds
- c) Twigs
- d) Roots



Hint: See article on page 1.

4. The Center for Forest and Wood Certification is now open! The Center works with which of the following groups on various aspects of forest and wood certification?

- a) Private woodland owners
- b) Public forest owners
- c) Wood industries
- d) All the above



Hint: See article on page 14.

5. Tree diameter is measured at _____ above the ground on the uphill side of the tree and this is referred to as "diameter at breast height" or "DBH." DBH provides a standardized location to measure tree diameter.

- a) 2.5 feet
- b) 3.5 feet
- c) 4.5 feet

Hint: See article on page 10.



6. One of the first steps woodland owners need to consider when dealing with storm damaged woodlands is _____?

- a) Assessment of the woodlands
- b) Reporting losses to state government
- c) Coordinating a salvage harvest



Hint: See article on page 20.

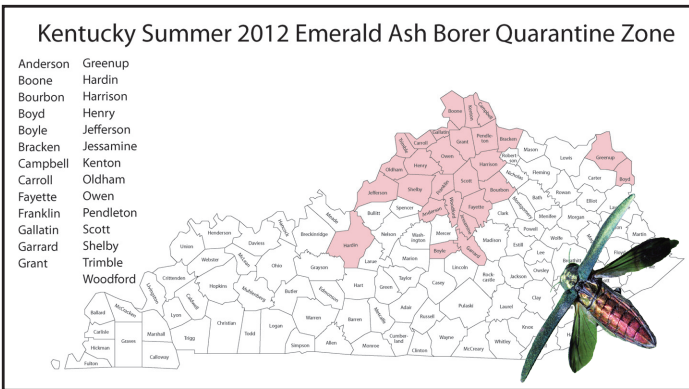


Scan this code with your smartphone or tablet device to submit your answers.

Emerald Ash Borer Quarantine Update

by Bobby Ammerman and Carroll Fackler (UK Forestry Extension), and Joe Collins (UK Entomology)

As of June 2012, the Emerald Ash Borer has now been identified in 20 different Kentucky counties (Anderson, Boone, Boyd, Boyle, Bracken, Campbell, Fayette, Franklin, Garrard, Greenup, Hardin, Henry, Jefferson, Jessamine,



Kenton, Oldham, Owen, Scott, Shelby and Woodford). The following 27 counties in Kentucky are in the regulated (quarantine) area: Anderson, Boone, Boyd, Boyle, Bourbon, Bracken, Campbell, Carroll, Fayette, Franklin, Gallatin, Garrard, Grant, Greenup, Hardin, Harrison, Henry,

Jefferson, Jessamine, Kenton, Oldham, Owen, Pendleton, Scott, Shelby, Trimble, and Woodford. These counties are included in the regulated area because they are either infested with the emerald ash borer, or are in close proximity to an infestation site and they are found within a portion of Kentucky with a high density of ash trees. Quarantined (regulated) materials include the following:

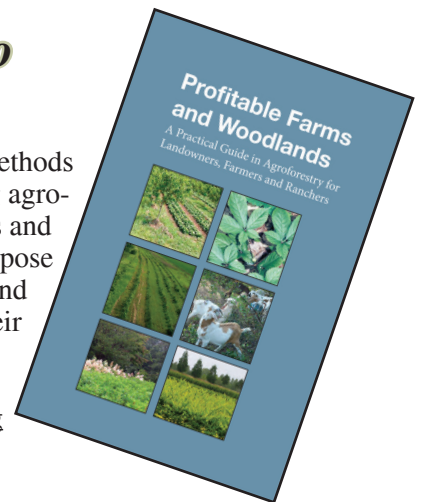
- A living specimen of Emerald Ash Borer.
- Firewood of all hardwood species, such as ash, oak, maple and hickory.
- Green lumber of ash and nursery stock.
- Any other ash material living, dead, cut or fallen including logs, stumps, roots, branches, as well as composted and uncomposted chips of the genus *Fraxinus*.
- In addition, any other article, product or means of conveyance not listed above may be designated as a regulated article if a UK or USDA inspector determines that it presents a risk of spreading EAB.

For more information visit www.ca.uky.edu/forestryextension/EAB/UpdatedPublications/FORFS12-10quarantine.pdf and www.ca.uky.edu/forestryextension/EAB/UpdatedPublications/FORFS12-06Shipping.pdf

Profitable Farms and Woodlands: A Practical Guide to Agroforestry for Landowners, Farmers and Ranchers

A much needed practical guide in Agroforestry has been developed by a team of agroforestry specialists from the 1890 and 1862 Land Grant Universities and the USDA National Agroforestry Center (NAC), led by the 1890 Agroforestry Consortium. Retired UK Forestry Extension professor, Deborah Hill Ph.D. was one of the lead authors of the guide. The purpose of the guide is to assist underserved and limited resources farmers and woodland owners to adopt best management technologies in agroforestry. The

guide depicts step-by-step methods and principles on developing agroforestry practices for farmers and woodland owners for the purpose of enhancing the economic and environmental benefits of their farms and woodlands. A pdf copy of the guide can be found at www.ukforestry.org



Upcoming Dates To Remember:

Date:	Event:	Location:	Contact:
September 18, 2012	Spencer County Forestry Field Day	Spencer County	502.477.2217
September 22, 2012	Taste of the Mountains Field Day	Quicksand, KY	606.666.2438 ext. 285
October 18, 2012	Win With Wood Youth Competition	UK Wood Utilization Center, Jackson, KY	859.257.9511 ext. 233
October 11 - November 8, 2012	Managing Your Land: Natural Resources Opportunities for Landowners	an Internet Broadcast	www.ukforestry.org

For more information about these programs, visit www.ukforestry.org

NEWS TO USE

Pete McNeill Forestry Leadership Endowed Scholarship

Representatives from several Kentucky forestry organizations have met with the family of Pete McNeill, noted forestry ambassador and leader, and this group is working to establish an endowment fund that will support the advancement of forestry education by funding students at the University of Kentucky's Forestry Department in the College of Agriculture. To make a donation or for more information contact Amy VanMeter, e-mail at amyvan@uky.edu or 859.257.7200.



Annual Report of Kentucky's Forest Inventory Released



According to a Forest Inventory Analysis (FIA) Factsheet recently released by the USDA Forest Service Southern Research Station, forest land in Kentucky covers an estimated 12.4 million acres. The report – a compilation of data collected by the Kentucky Division of Forestry's FIA program – also included information about forest composition, common trees, forest land ownership, standing-tree wood volume and average growth and removals. Leah MacSwords, director of the Kentucky Division of Forestry noted that Kentucky's forests are producing two times more wood volume than is being removed. While wood-using industries have been affected by the slowing economy, Kentucky's forests continue to "stand ready" for economic development opportunities in rural areas of the state. For more information visit http://www.srs.fs.fed.us/pubs/su/su_srs057.pdf

Test Your Knowledge Answers from KWM Vol. 6 Issue 3

1. a)
2. b) **Congratulations to M. Dattilo of Clark County. He was randomly chosen from the entries from the last quiz. Thank you Kentucky Woodland Owners Association for donating \$50 gift certificates for Test Your Knowledge.**
3. c)
4. c) **gift certificates for Test Your Knowledge.**
5. b)
6. b) Visit www.ukforestry.org to submit your answers to this issues quiz for a chance to win a \$50 gift certificate to Forestry Suppliers. The answers to this issue's questions will be provided in the next issue of the magazine.

Kevin Galloway Wins KWOA Service Forester Award

In recognition of outstanding professional services, Kevin Galloway, Service Forester, Kentucky Division of Forestry, was presented the Kentucky Woodland Owners Association's Outstanding Service Forester Award during the 2012 KWOA annual meeting. Bob Gossett, Fleming County woodland owner and KWOA board member, nominated Kevin and presented him the



award. Kevin has worked in northeastern Kentucky since 1992 helping countless woodland owners get the most out of their woodlands.

Jeff Stringer, Ph.D. Wins Southern Group of State Foresters Hardtner Award

In May, the Southern Group of State Foresters awarded Dr. Jeffrey Stringer, UK Forestry Professor and editor of Kentucky Woodlands Magazine, the 2012 Henry Hardtner Award. The purpose of the Henry Hardtner Award is to recognize efforts that directly contribute to increased forest stewardship and sustainable forest management on nonindustrial private forest lands and/or the delivery of a positive and influential forest management message to landowners, public and natural resource professionals.





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Also In This Issue: Storm Damaged Woodlands Connecting You with Forestry



Photo courtesy: Renee Williams

On-line version at www.ukforestry.org

Don't forget to...

- **Submit your answers for the Test Your Knowledge section.**
You could win a \$50 Gift Certificate
(sponsored by KWOA).

Visit www.ukforestry.org to
submit your answers.