



MISSOURI ForestKeepers MONITOR WINTER 2013

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The Disappearing Butternut

TREES MAY NOT READILY COME TO MIND when people think about rare or endangered plants and animals. Perhaps they simply are not “showy” enough. However, one such tree that is disappearing from the landscape is called butternut. This species is closely related to eastern black walnut. But unlike its valuable relative, which is grown for both its high quality timber and edible nuts, butternuts in Missouri are being threatened by a disease called the butternut canker. This fungal disease eventually kills the tree with the result that each year fewer butternut trees remain in Missouri forests.

Locating Missouri butternut trees is the first step in a MDC-sponsored program dedicated to the recovery of this valuable species. Better yet, finding disease-free trees is considered to be the best strategy that may lead to the recovery of this uncommon tree species. Dr. Mark Coggeshall with the Department of Forestry at the University of Missouri in Columbia is conducting butternut research to determine if trees resistant to butternut canker can be found. Wood (twigs) obtained from healthy trees, known as scion wood, is grafted onto eastern black walnut seedlings known as root stocks in a greenhouse. This grafting phase is similar to work done in fruit trees, such as apples, and results in the “capture” of the genetic makeup of the butternut tree. This

first step is considered to be part of an overall gene conservation strategy for the species. Subsequently, it can then be determined if the trees are truly resistant to the butternut canker fungus, or simply have not been exposed.

Butternut was historically well known for its wood and nuts. Native Americans used the nuts as an important food source and boiled the bark to create a tea for treating various aches and pains. The buttery fat was harvested from boiled nuts, hence the name. The wood was used for fine wood products, and considered to be easier to work with and lighter in color than eastern black walnut.

It is up to concerned tree enthusiasts to save this precious tree. Locating disease-free trees will aid in its recovery. Nuts from the tree are also desired by the Department of Conservation George O. White State Nursery. These will be grown into seedlings to be planted throughout the state.

Join us in the search for butternut trees. Request a butternut tree observation form today.





MISSION:

To develop a network of informed citizens working to conserve, sustain and enhance Missouri's urban and rural forest resources through volunteerism, advocacy, and management.

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The Missouri Forestkeepers Network is a statewide volunteer program administered by Forest ReLeaf of Missouri in partnership with the Missouri Department of Conservation. Membership is free.

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Tree City USA

BY AARON HOLSAPPLE

IN MANY MISSOURI TOWNS, TREES ON PUBLIC

property outnumber trees on private land. These "public" trees beautify city streets, adorn and shade parks and add character and a sense of permanence to communities.

People love their trees so much that they often name streets after them. How many Elm Streets do we have in Missouri? How many towns have streets named Locust or Maple? How many Willow Lanes? We even have towns named after tree species. Poplar Bluff, Birch Tree and Pineville are just a few examples.

As you drive across Missouri, as well as across the nation, you'll see many communities proudly displaying the Tree City USA logo.

The sign proclaims that the community cares about the environment.

The Tree City USA program, sponsored by the U.S. Forest Service, The National Arbor Day Foundation and the National Association of State Foresters, recognizes communities working to improve the population, health and future growing space of their public trees. The program provides direction, technical assistance, public attention and national recognition for urban and community forestry programs.

Earning Tree City USA certification is a good deal for communities. Meeting the requirements of the program helps ensure the long-term planning and management necessary to preserve or improve urban forests.

Strong, healthy-growing street trees increase property values, improve the local and global environment by absorbing carbon dioxide and reduce energy consumption by reducing the need for cooling.

Public trees attract people to public places, where community spirit is fostered. They also draw people to shopping areas, which in turn draws businesses to locate in inviting and shaded downtown areas.

Tree City USA certification may also be useful when communities apply for state or national grants for forest-related work or activities. The designation signifies that trees are a high priority in the community, and it guarantees that a working infrastructure is in place to manage public trees.



Mark Hoffman, MDC Forest Management Chief, congratulates the City of Webster Groves for their Tree City USA designation

Tree City USA certification also might mean another holiday. One of the four requirements for qualification is for a community to have an Arbor Day observance and proclamation. How communities comply might range from a simple ceremony honoring volunteer tree planters to a day-long festival that can be used as a springboard for helping residents learn more about trees and forest management.

BECOMING A TREE CITY USA

There are four basic requirements to gaining Tree City USA status:

1. A tree board or department
2. A tree care ordinance
3. A community forestry program with an annual budget of at least \$2 per capita
4. An Arbor Day observance and proclamation

The requirements aren't difficult and are within the reach of any community — large or small. The effort often attracts volunteers, spreading the workload while fostering community pride and spirit.

Learn more about the Tree City USA program online or call 402-474-5655 for a free booklet.

Conservation Department foresters are available to assist any community needing tree care instruction. For assistance in applying for Tree City USA certification, contact your local Missouri Department of Conservation forester, or visit www.arborday.org/programs/treeCityUSA/ where you can download a Tree City USA workbook.

FEATURED SPECIES:
BUTTERNUT

Juglans cinerea (L.)



YOU MAY HAVE NEVER SEEN THIS TREE in the wild, and the numbers of them are steadily decreasing. Butternut, also called White walnut, is a close relative of our very well-known Black walnut. The fruit is sweeter and the wood is much easier to work with and is just as beautiful as Black walnut. Unfortunately, the tree is highly susceptible to butternut canker, a fungal disease that girdles the stems and branches.

FRUIT: Nut, in clusters of 1 to 5, drooping with a strong odor, 1½ to 3 inches long, sticky with rust brown hairs, seed sweet, oily and edible.

LEAVES: Alternate, pinnately compound, 10-25 inches long, 11-19 leaflets per leaf with sticky hairs on the leaf stalk, upper surface yellow-green with fine hairs.

APPEARANCE: Medium-sized tree up to 60 feet, limbs spread near the base to form an irregular or round-topped crown.

Butternut is prized by woodworkers for its wood qualities, but the nuts are the real prize. Native Americans and European settlers harvested the buttery fat left from boiling the nuts, which is where we get the name. Butternut also contains the active component, juglone, which has been shown to have antiseptic and anti-tumor properties.

SOURCE: *Trees of Missouri* by Don Kurz

Treevia

FUN FOREST FACTS
TO KNOW AND TELL!

Did you know that Butternut contains the active component, juglone, which has been shown to have antiseptic and anti-tumor properties?

Q&A

Q: How do my trees survive the winter?

A: *Our trees are incredible organisms and can tolerate extremely cold conditions that commonly occur during Missouri winters. Winter dormancy is not the best term to describe this adaptation as it's more like hibernation. Just as a hibernating animal slows metabolism a tree will shed its leaves and limit photosynthesis, transpiration and more of its normal functions. Physiological changes occur within the tree such as changes in the cell membranes and the increased production of abscisic acid and other key compounds. Trees also tap water reserves in the trunk and roots or derive the ever-critical water they need from the soil below the freeze line. One of the greatest challenges trees face in urban areas during winter is poisoning from humans, by way of road salt and vehicle exhaust. An alternative to salt near trees could be cinders, sand, or other environmentally-friendly solution.*

Have a question about Forestkeepers, trees, or what you read in this issue? Contact us at information@forestkeepers.org or by mail to: Q&A, c/o Forest ReLeaf of Missouri, 4207 Lindell Blvd., Suite 301, St. Louis, MO 63108.

Welcome New Members!

We would like to welcome the following new members to the Missouri Forestkeepers Network:

James Bordges

Doug & Joyce Bradley

Mr. Brad Buttram &
Hollister R-V School

Jeremy Chamberlain

Jerry & Nina Decker

Claire DuCharme

Vanessa Harper

Cody Harris

Danny Heckstetter

Sue Helm

James Hook

Richard Hudgens

Jason Mattison

Scott Neeld

Terry D. Pilkenton

Dusty Renfrow

Grave Schneider

Phillip J. Schuler

Philip & Tonya Schwartz

Jim Summers

Bryan & Billie Jo Sutterer

Do you know someone who might be interested in becoming a Forestkeeper? Call 1-888-9-Forest or visit www.forestkeepers.org for details on joining our Network of over 2,000 citizens who are working to conserve, sustain and enhance Missouri's urban and rural forest resources.

WINTER ACTIVITY

A seasonal project to enjoy with the whole family



Sightsee at Peck Ranch Conservation Area

ELK WERE ONCE FOUND THROUGHOUT MOST OF MISSOURI, BUT THEY DISAPPEARED from the state about 150 years ago due to over hunting and habitat loss. Within the last several years, the Missouri Department of Conservation has been working to restore this once-native species to a large restoration zone.

This winter, gather your family and head to Peck Ranch Conservation Area to partake in a self-guided, driving elk tour! The route begins at the Peck Ranch office and is marked along the way; no need to check in. Peck Ranch is located near Winona in Shannon County with entrances off both Route 19 and Route 60. Peck Ranch is open sunrise to sunset seven days a week — except during managed deer hunts, fall firearms deer season and in the event roads are closed due to weather.

Your best chances of seeing elk are the hours right after sunrise or right before sunset. We can't guarantee an elk sighting, but your family and friends will enjoy the beautiful drive through fields, forests and glades where you can also see deer and other wildlife. Feel free to take photographs, and get out of your vehicle for a better view, but please do not disturb elk or other wildlife in any way.

For more information on elk or other area wildlife, call Twin Pines Conservation Education Center located near Peck Ranch at 573-325-1381 or call toll free at 855-2-MDC-ELK (855-263-2355). Visit <http://mdc.mo.gov/discover-nature/outdoor-recreation/driving-tours/elk-tours-peck-ranch-ca> for further description and maps on the area.



As part of a research study with the University of Missouri, Missouri's restored elk are fitted with radio collars to help track their movements and gather other activity information. Photo taken from the MDC web site.





FORESTKEEPERS BULLETIN

Technology for Landowners

MANY LOOK UPON TECHNOLOGY AS KEEPING us from nature and enjoying the outdoors. Techno savvy kids today seem glued to their favorite electronic device. The combination of the internet and smart phones may offer a solution to merge this digital age with a better understanding and reconnection with nature and the property many people own.

Woodland owners have many different objectives for their properties. Some are well thought out and possibly put into a written management plan while others are more loosely defined in their minds. Mylandplan.org is designed to assist landowners in fleshing out the details and provide advice to reach landowner objectives.

Within this site, landowners can create a map of their property and outline critical points of interest. These may be forested stands, food plots, ponds and so on. Features can be titled, described and acreages calculated by the program; all by double clicking on the feature to open a new window.

Once lands are mapped, goals and actions can be explored. Five categories of goals are provided with several detailed goals listed beneath each. Landowners can choose the ones that fit their needs. Each detailed goal is linked to more information on implementation and advice. The categories include:

- 1) **Pass It On:** Landowners interested in keeping property in the family can learn about estate planning and mechanisms to make land transfer to the next generation feasible.
- 2) **Profit From It:** If you are looking for opportunities to generate income, this section provides advice on timber sales, improving the investment value of your land and potential cost share programs.
- 3) **Make It Healthy:** Learn about improving water quality, resistance to pests and encouraging desirable regeneration in your woods.
- 4) **Enjoy It:** Advice is provided to enhance the number one reason many landowners own woods: to make your land better for deer or birding, along with hiking and camping.

- 5) **Protect It:** Your land is a valuable asset. Set some goals and make plans to protect it from trespassers and fire hazards.

Once you have laid out your goals, your map and plan are saved for you to come back later for updates and documenting progress. You may also keep an online journal.

continued on next page >



Previous *Technical Bulletins*

More than 50 previous Technical Bulletins covering topics such as pests and invasive plants, managing wetlands or woodlands and proper pruning techniques may be accessed online at www.forestkeepers.org or by contacting Forest ReLeaf at info@moreleaf.org (1-888-936-7378).

Technology for Landowners

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The greatest drawback to this resource is you can not take it with you to the woods. The map you create resides in the ATFS system. ArcGIS.com has a combination web based program and smart phone app that allows you to access aerial imagery and develop a map of your property and then take it to the woods — provided you have a cellular connection, that is.

ArcGIS is a geographic information system that allows for mapping and data management. The free app and web access will allow for some mapping and data development. The full program would allow you to edit your maps using a smart phone in the woods, but this costs a bit of money and requires some programming ability. They do not tell you this up front in their online video tutorials, but take my word for it. Much time was spent trying to figure out how to edit maps on my smart phone when it was not possible.

What you can do however is create a map similar to that for mylandplan.org. The map is saved under your profile within ArcGIS. Many different kinds of base maps from aerial imagery to street maps are available. Property boundaries and stand lines (known in the program as polygons)

can be drawn. Trails and roads (line features) and points marking your deer stand or other locations are other mapping options. Access to this map in the field is achieved with your smart phone. The app is available from the Play Store through Google (or other online app store). Search for ArcGIS and look for the green icon that has the letters “esri” on it. They are the makers of the ArcGIS program. The free version allows you to do what has been described above.

Once in the field, you access your map from the phone; with the map open you can turn on the GPS function. Most smart phones have this capability. A blue dot appears on the map indicating your location. This is surprisingly accurate (plus or minus 30 feet in my experience).

While in the field, you can measure areas and distances. After selecting the area icon, tap on the screen to draw a polygon. Then tap at various points to complete the polygon. The area will be displayed in the chosen units. Choose the unit by tapping on the calculated area and pick the appropriate unit from the menu that pops up. Detailed user manuals for applications like this are often hard to find — the best strategy is to poke and click on different icons and menu choices until it starts to make sense.

What's your soil type?



Knowing your soils is critical to good management. Yes, there is an app for that! The app soilweb is sponsored by the Natural Resources Conservation Service (NRCS). A more detailed map and soils information is available at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. However, if you are in the woods and curious about the soil type, this app can get you the information.

The GPS capabilities of the smart phones allows the app to locate you on the ground. Accuracy can be adjusted from 1 meter to 1150 meters depending on your cellular connection. Once the location is acquired, the app pulls in soil information. A graphic depicting the soil profiles and the name of the soil will appear. Tapping on the soil profile will provide you a general description of the soil and detailed descriptions of the soil profile at

various depths. Tapping on the name will give you information on the soils capabilities, limitations, erodibility and associated plants.

The app works best when you can get an accurate location. If your signal strength requires you to have a wide range of accuracy, then multiple soil types may be retrieved. At this point you may need to move to a new location and try again.

Once your soil type is determined, you can then search for more detailed information on the internet. NRCS has developed lists of suitable trees and productivity potential for different soil types that are useful for many forestry projects.

Your smart phone can be viewed as the modern day Swiss army knife. Everyone wants one and it has a million uses. So grab your smart phone and go to the woods. Better yet, grab your kids or grandkids and ask them to go to the woods and use technology to engage them in the natural world.



“Tree Topping:” Obsolete, Yet Still Common in Missouri

WE MISSOURIANS TEND TO TAKE OUR TREES FOR granted, much to the envy of those in the bordering states of Kansas, Iowa, Oklahoma and Illinois.

Perhaps because there are so many trees we hardly blink when we notice a tree that has been “topped” or drastically trimmed. Yet it’s prevalent throughout the state, in urban settings, established neighborhoods, in the midst of suburban sprawl, and in rural and agricultural settings. Missouri’s Forestkeepers can help educate the public about this obsolete and tree-killing practice.

“Topping” is the drastic removal or cutting back of large branches in mature trees. The tree is pruned or sheared much the way a hedge is cut, leaving large exposed stubs. The practice is also known as heading, stubbing, tipping, lopping, roundover, dehorning or hatracking. Regardless of what it’s called, topping is ugly, expensive and dangerous.

Alex Shigo, a foremost expert in tree physiology, argues that the practice has gotten so bad that local governments should consider laws against topping. In fact, some states and local municipalities already have.

“Topping is a major starting point for hazard trees,” Shigo says. “Malpractice suits may be in the near future for people who continue to top trees. We must push hard to let people know that if it must be topped, then it would be better to remove the tree and start over again with a new tree.”

Just how bad is topping in Missouri? Talk to Missouri’s tree experts, including arborists certified by the International Society of Arboriculture (ISA), the only recognized, industry-wide testing group for professionals in tree care. They will tell you that “topping” is so widely practiced that it’s accepted by homeowners as “the right thing to do” when you need to make trees “smaller” or reduce homeowner liability.

Ironically, tree topping does just the opposite of what people think it will do. The severe, harsh cutting only makes the tree grow back faster in the form of ugly sprouts or shoots, which are much weaker and more susceptible to disease, insects and rot. Weakened trees are much more likely to fall during storms — or at any other time — and thus become hazardous.

So, where did the habit start in the first place? There are many theories. What has happened over time, however, is that topping has been practiced so frequently that it seems normal. Because Missouri is blessed with so many trees, numerous

people have found seasonal work in providing mulch, firewood and in the trimming and maintenance of established trees. When an ice storm hits a community, or a rash of spring storms leaves neighborhoods splattered with broken limbs and fallen trees, a whole new crop of chainsaw wielders appear — usually with little or no understanding of how trees should be properly pruned.

Buyers should always beware of these people. But even established firms have to be questioned. Just check the telephone directories and see how many tree services advertise that they “top.” Topping is a quick way to make a buck.

Although some may want to point a finger at utility companies as the culprits, most utilities in Missouri are involved in the campaign to end topping wherever they can. More importantly they are eager to help consumers pick the right tree for the right spot — and how to prune it properly — near or under power lines.

So, how do we begin to tackle this problem? The answer lies in public education. The right tree planted in the right place in our state can provide us shade, wildlife habitat, cleaner air and lower energy costs. Hopefully a more informed public, and a little common sense, will quash the topping myth before the uninformed people with chainsaws kill off more of our cherished trees.

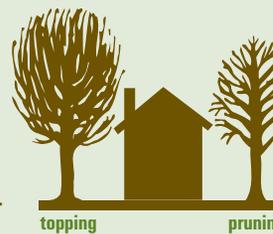
For more information, or to receive copies of anti-topping informational materials, contact Forest ReLeaf of Missouri.



Year 1: The topped tree is an ugly stub. The pruned tree’s size was reduced, but its form and beauty retained.



Year 3: Fast growing sprouts have sprung from the topped tree in large numbers. The pruned tree adds growth more slowly and naturally.



Year 6: The topped tree is taller and bushier than ever. The properly pruned tree is safer, more beautiful and its size is better controlled.

Save the Date!

The Annual Tree Farm Conference is set for June 1st, 2013, recognizing Ed Keyser for "Tree Farm of The Year" in Kirksville, Missouri. Additional information to come in future newsletters, or check out the Forestkeeper's calendar online at <http://forestkeepers.org/calendar/> to stay up to date on all upcoming events, workshops, classes, and activities throughout Missouri!



Keep Following Forestkeepers on Twitter!

THE MISSOURI FORESTKEEPERS NETWORK NOW has a Twitter account where we will be tweeting photos, updates and news related to Missouri's forests and wildlife! Log on to Twitter and follow @FORESTKEEPERS today!



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