



# MISSOURI ForestKeepers MONITOR

FALL 2008

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## Emerald Ash Borer Found in Missouri

**AFTER SEVERAL YEARS OF VISUALLY** surveying for this small, but potentially devastating invasive insect, Emerald Ash Borer (EAB) was officially found in Missouri this summer.

The infestation came to light on July 23 when U.S. Department of Agriculture (USDA) workers discovered seven suspicious beetles on traps at the U.S. Army Corps of Engineers' Greenville Recreation Area in Wayne County. Officials with the USDA Animal and Plant Health Inspection Service confirmed the identity of the insects and estimate that they have been present for about five years.

Missouri is one of ten states to have a confirmed EAB infestation. The pest was first found in Michigan in 2002. Since that time, the EAB has been found in Ohio, Indiana, Illinois, Maryland, Pennsylvania, Wisconsin, West Virginia and Virginia. Missouri is the farthest south and west of any other known infestation.

State and federal forestry officials are working hard to determine the extent of the Emerald Ash Borer outbreak near Lake Wappapello and to develop a strategy for containing the insect. Information to date shows the insect is contained within Wayne County, but that it has spread a great distance from the initial campsite where it may have emerged from firewood unknowingly

transported from another infested state. Wayne County has since been placed under federal and state quarantine. The quarantine prohibits the movement of all hardwood firewood, ash nursery stock, and ash logs. For more information on the quarantine, visit [www.mda.mo.gov/news/2008/PR08152008.htm](http://www.mda.mo.gov/news/2008/PR08152008.htm).

Response to this infestation will be guided by a plan crafted by multiple agencies and stakeholders. That plan was formally adopted by the Missouri Departments of Agriculture, Natural Resources, and Conservation in early July, just weeks before the insect was detected.

While EAB does not pose any direct risk to public health, it does threaten Missouri's ash tree populations and may have a large economic

impact. Ash trees make up approximately three percent of forests and up to fourteen percent of street trees in Missouri. Since no ash trees in North America are known to be resistant to the pest, infestations are devastating to these tree species. Close cooperation between government officials and the forest products industry will be required to ensure that forest-related business can continue, while minimizing the risk of spreading the pest.

Adult Emerald Ash Borers are weak fliers and cannot move far from the tree from which they emerge. However, they can move long distances





**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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Courtesy of the Missouri Department of Conservation

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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## Emerald Ash Borer Found in Missouri continued from page 1

on firewood and nursery stock. With the arrival of this small, metallic green beetle, it is essential for individuals not to move firewood, not to plant additional ash trees, and to work in their community to put a plan in place. The plan should address the potentially damaging financial impact EAB will have when it arrives.

Next spring, federal and state officials will expand trapping efforts to detect the insect. Emerald Ash Borer traps are prism-shaped devices with sticky outer surfaces. The borers are attracted by the purple color of the traps and by chemical scents that mimic a stressed ash tree. Insects that land on the traps get stuck there and can be identified through periodic checking of the traps.

The U. S. Forest Service, Army Corps of Engineers, Missouri Department of Conservation, and Missouri Department of Natural Resources are also working together to develop a uniform policy on how firewood is handled at campgrounds.

To insure that you don't spread Emerald Ash Borers, burn firewood where it is cut or leave it behind when you go home. If you accidentally move firewood, burn it immediately.

For further information about the Emerald Ash Borer, visit [www.mdc.mo.gov/11242](http://www.mdc.mo.gov/11242), or call toll-free 1-866-716-9974.

## It's Black Walnut Season



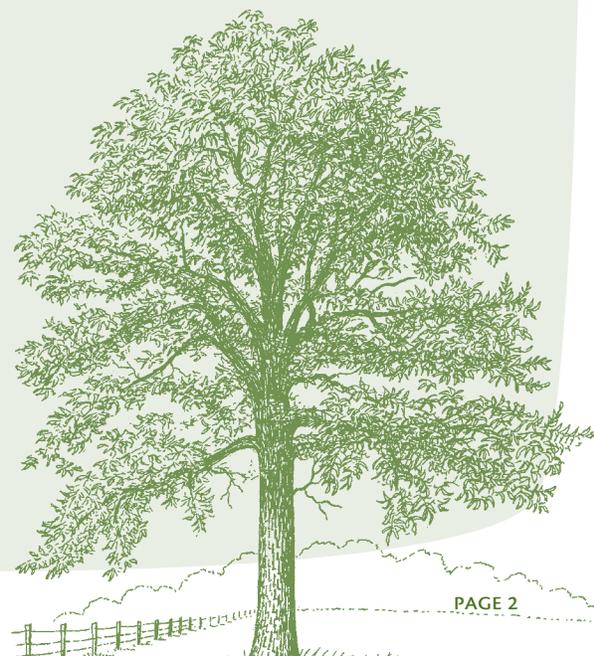
Since 1946, Hammons Products Company of Stockton, Missouri has survived short crops, fad diets, and a destructive tornado to become the world's leading supplier of American black walnuts. Hammons is the largest facility of its kind in the U.S. and processed 36 million pounds of black walnuts last year.



Harvesting black walnuts is an Ozarks tradition spanning generations. Today it involves thousands of people every fall, who gather the fallen nuts from lawns, fields and pastures. It is an almost totally "wild" crop and the collected nuts are taken to centralized hulling stations for processing. There are 200+ hulling stations in twelve states in the U.S., including Missouri.

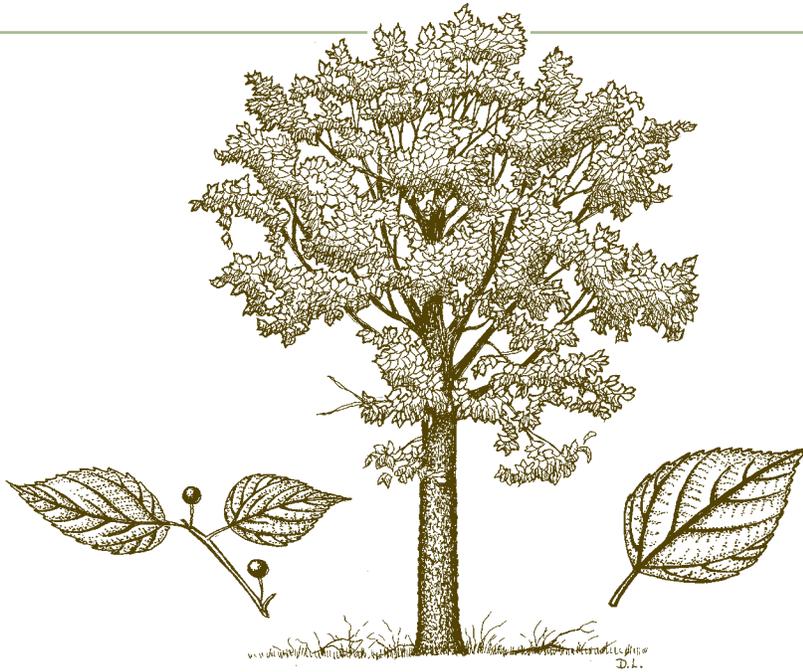
Hammons sells black walnuts to wholesalers, grocers and retailers across the country. For a listing of hulling stations by state, or for more information, visit the Hammons website at <http://black-walnuts.com> or call (888) 4-BWNUTS.

The American black walnut (*Juglans nigra* L.) is among the most valuable natural forest trees in the U.S. It is native to 32 states and the walnut is the official state tree nut in Missouri. Its flavorful nuts are harvested as a popular food and its wood is used in crafting furniture, gun stocks and novelty items. Black walnut husks can be used for making dyes, and its shells, which are the hardest of any tree nut in the world, are used for a broad range of industrial applications. As a result, the black walnut is one of the most fully-utilized trees in America.



FEATURED SPECIES:  
**COMMON HACKBERRY**

*Celtis occidentalis* L.



Illustrations courtesy of the Missouri Department of Conservation

**IN MISSOURI, THE COMMON HACKBERRY** is sometimes called a nettle tree or northern hackberry. It has a rounded crown and is a fast-growing, medium to large tree, which can generally grow up to 90 feet tall. The state champion hackberry is found in Cedar County, Missouri near Stockton Lake and measures 177 inches in circumference and is 97 feet tall, with a spread of 90 feet. The wood of the hackberry is sometimes used for firewood and other purposes, although it is soft and coarse grained. The primary value of hackberry is as a food source for birds and wildlife.

**LEAVES:** Simple, alternate, and serrated along the edges, except at the base; 2 to 4 inches long, and 1/2 to 2 inches wide; hairy and rough to the touch.

**BARK:** Gray with a “warty” and/or ridged appearance. The protruding warts on the bark are a helpful tip for identifying this tree in the winter months.

**FLOWERS:** Appear in the spring as leaves emerge or shortly thereafter; male flowers are found in clusters near the base of new

branches; small, single or paired female flowers are found toward the tip.

**FRUIT:** The drupes are very small (usually about 1/4” in diameter) and an orange-red color, which turns dark purple when they ripen in the fall. The fruit is very attractive to many species of birds and wildlife and can be eaten by humans. It has a single, hard seed and a sweet, date-like flavor.

**HABITAT & RANGE:** Found in moist woodlands throughout the state. Can be a good urban park tree as it grows in adverse conditions and is drought-resistant, although it often develops a type of “witches’ broom.” This is a cluster of twigs which can resemble a crude, hand-made broom. It is a condition caused by a powdery mildew fungus, combined with a certain type of mite. Hackberry is similar to sugarberry (*Celtis laevigata*), which is resistant to this condition as well as leaf galls, which may also attack hackberry.

Compiled from *Manual of Woody Landscape Plants* by Michael A. Dirr and *Trees of Missouri* by Don Kurz.

# Treevia

FUN FOREST FACTS  
TO KNOW AND TELL!

There are 787 Certified Tree Farms in Missouri totaling 212,015 acres of forest.

Most tree farmers do not own their land for trees alone. Nearly 90 percent say they would continue to own the land even if they did not make a profit from the trees.

## Q&A

**Q:** How can I get help managing my family’s forest?

**A:** If you own 1 to 10 acres of forest, the Backyard Woods program may be for you! See the article on the back page of this issue and request your free tip sheets soon.

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

We may answer your question in the next newsletter.

# Welcome New Members

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

21st Century Afterschool

Stephanie Anderson

Asher Family

Kevin Barnes

Eureka High School  
Environmental Club

Patricia A. Fitzgerald

J. Goode Environmental  
Services

Herbert Family

Holshouser Family

Hopper Family

Wanda Johnson

Knights of the Forest  
at South Holt

Mahin Family

Mastroianni Family

Pattonville High School  
Science Club

Levi Pederson

Michael Phillips

Promnitz Family

Nancy Schulze

Sarah Spangler

Robin Star

Tree and Trail  
Management Group

Robert Virag

Webster University

Wright Family

Do you know someone who might be interested in becoming a Forestkeeper? Call 1-888-9-FOREST or visit [www.forestkeepers.org](http://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.

## FALL ACTIVITY

*A seasonal project to enjoy with the whole family*



## Magic with Cones

### **RIPE BROWN PINECONES CLOSE UP TIGHTLY**

when it's wet outside in order to protect their seeds. In dry weather, their winged seeds can fly far away on a breeze and find a good place to grow. But if the seeds come out when it is raining, they become wet and heavy and fall straight to the ground.

Take an open cone and sprinkle it with water. After about ten minutes, you'll see it beginning to close, and in about an hour the scales will be shut. If you let it dry, the scales will open again in a few hours. Cones will open and shut whether they have seeds in them or not.

Late fall is a good time to find pinecones and this is an excellent magic trick to share with your family or friends. Just secretly wet a cone before you show it to them and then say you are "magically" going to make the cone close!





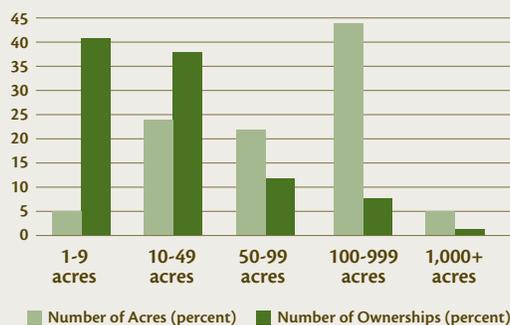
# FORESTKEEPERS BULLETIN

## Who Owns Missouri's Forests?

**EIGHTY-THREE PERCENT OF THE FOURTEEN** million acres (13,992,000) of forestland in Missouri is privately owned. This land is owned by families and individuals in what we call 'family forests.'

Missouri's 339,000 family forest owners are diverse, dynamic and numerous. Family forest owners are pivotal in the protection and sustainable management of our forests. As Missouri landowners face ever-increasing pressures and challenges, a better understanding of their needs and concerns can help foster more effective care of Missouri's natural resources and increased awareness of the importance of these forests.

Acreage and Ownership of Missouri's Family Forests



### ARE YOU A FAMILY FOREST OWNER?

Whether you have 'just trees' that shelter native plants and animals, a bit of 'woods' behind your house where the kids play and you cut firewood, or a 'tree farm' that earns your family income—if you have an acre or more of land with trees on at least ten percent of it, you have a forest. If you own that forest as an individual, a couple, a family partnership, or some other grouping of incorporated individuals, you are a family forest owner.

### WHO ARE MISSOURI FAMILY FOREST OWNERS?

The typical Missouri family forest owner is male, fifty-five years old or older, and Caucasian. In fact, sixty-six percent of Missouri forest owners are fifty-five+ years in age. This group owns seventy-six percent of the family forests acreage in our state. These owners are primarily people who work with or operate machinery (i.e. factory workers, truck drivers), farmers, and professionals. In general, their highest level of formal education is graduation from high school and their annual household income is between \$25,000 and \$49,999.

### EVERY ACRE COUNTS

Most of the family forest acreage is in holdings of 100 or more acres, but many family forest owners (approximately forty-one percent) own fewer than ten acres of forest land. The size of the forest can make a difference in attitudes, behaviors, and intentions related to its management.

### FAMILY FOREST OWNERS' TOP TEN REASONS FOR OWNING FAMILY FORESTS

1. Beauty and scenery
2. Connected to home or cabin
3. Privacy
4. Nature protection
5. Family heritage
6. Hunting or fishing
7. Investment
8. Hiking and other recreation
9. Firewood
10. Timber production

Adapted from the U.S. Forest Service's 'Family Forest Owners of the United States, 2006' General Technical Report NRS-27

*continued on next page >*



**PREVIOUS  
TECHNICAL BULLETINS:**

- #1 Our Upland Oak-Hickory Forests
- #2 Bottomland Forests
- #3 Missouri's Coniferous Forests
- #4 Urban Forests and Plantations
- #5 The Gypsy Moth
- #6 Dogwood Anthracnose
- #7 The Japanese Beetle in Missouri
- #8 Butternut Canker and Its Dwindling Host
- #9 Asian Longhorned Beetle
- #10 Chip Mills in Missouri
- #11 Community Forestry
- #12 Proper Pruning
- #13 How to Hire an Arborist
- #14 Can These Trees Be Saved?
- #15 Maintenance of Backyard Trees
- #16 Selecting Professional Tree Care
- #17 Tree Protection During Construction
- #18 Poison Ivy
- #19 Tick-Borne Diseases
- #20 Chiggers
- #21 Snakes of Missouri
- #22 Managing Your Forest
- #23 Are You Protecting Missouri's Water?
- #24 Selling Timber the Smart Way
- #25 Timber Stand Improvement
- #26 Benefits of Livestock Fencing
- #27 Edge Feathering
- #28 Managing for White-Tailed Deer
- #29 Turkeys & Woodlands
- #30 Underutilized Trees for Missouri Landscapes
- #31 Managing Your Yard for Trees and Grass
- #32 Windbreaks: Protection That Grows
- #33 Evergreens: Selections for Your Landscape
- #34 Specialty Products
- #35 Heating with Wood
- #36 Utilizing Eastern Red Cedar
- #37 Black Walnut: Missouri's Most Valuable Tree
- #38 Those Pesky Insects
- #39 Diseases and Healthy Forests
- #40 I Hurt My Tree?
- #41 Exotic Forest Pests Are Becoming A Common Threat
- #42 Trees Pay Us Back
- #43 How Is Your Habitat?

You can access these bulletins online at [www.forestkeepers.org](http://www.forestkeepers.org) by clicking on "Newsletters" on the homepage.

# Who Owns Missouri's Forests?

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## OWNERS' ISSUES OR CONCERNS

1. Trespassing or poaching
2. Vandalism or illegal dumping
3. Keeping land intact for future generations
4. Insect or tree diseases
5. Air or water pollution
6. High property taxes
7. Wildfire
8. Undesirable plants and weeds
9. Development of nearby lands
10. Wind or ice storms

## CAN FAMILY FOREST OWNERS ACHIEVE THEIR GOALS?

Whatever the reason for owning family forests, adequate planning and consideration of various management practices can help landowners achieve their goals over time. Yet only 4 percent of Missouri landowners or 11 percent of the acreage in family forests is owned by someone who has a written forest management plan, and only 12 percent of family forest owners have received professional forest management advice.

## WHAT DOES THE FUTURE HOLD?

Future plans vary, but most owners plan little to no activity, except for harvesting firewood. The large percentage of landowners who are planning to harvest firewood is of concern in light of the recent find of Emerald Ash Borer in the state. This invasive insect moves primarily on firewood. Consequently, there is a potential risk of landowners moving the pest to new locations.

## CONCLUSIONS

Missouri forests reflect the remarkable diversity and complexity of both their landscapes and their owners. Most of the forests are private, and most of those are family forests.

Many attitudes, behaviors, and concerns are shared by family forest owners, who commonly take great satisfaction in the beauty and privacy that their forests provide and the family heritage that they represent. Yet, every family forest owner has a unique set of circumstances and faces individual challenges.

If the size of forest holdings continues to decrease in the future, as current trends suggest, there will be changes in how land is viewed and how it is managed. On one hand, more people owning and living on forest land can mean increased personal awareness and appreciation for forests. On the other hand, smaller forests may offer fewer opportunities for certain activities, such as traditional forestry, collection of non-timber forest products, and recreation. Smaller forests may also become more vulnerable to weeds, wildfires, development, and other issues.

To address the challenges that change can bring, family forest owners are encouraged to seek professional forestry technical assistance. Utilizing such assistance can help ensure that your goals can be sustained in the future and that your family forest remains healthy and growing.



*Percentage of family forest land and family forest owners who have activities planned for the next five years. Respondents could select multiple activities from list.*

For more information on this survey, visit the Forest Service's National Woodland Owners Survey website at [www.fia.fs.fed.us/nwos](http://www.fia.fs.fed.us/nwos) or contact: US Forest Service, National Woodland Owners Survey, 160 Holdsworth Way, Amherst, MA 01003, 413-545-1387 or [nwos@fs.fed.us](mailto:nwos@fs.fed.us).

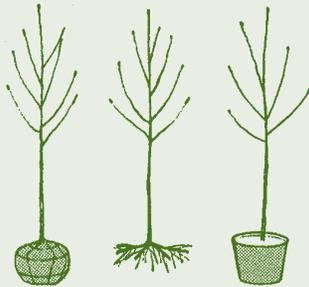


# Fall Planting?

By Frances Main, Resource Forester, Missouri Department of Conservation

**ARE ALL THOSE NURSERY CATALOGS MAKING YOU** itch to plant something? Are you feeling compelled to buy a tree and plant it now that the weather is cooling? Well go ahead! Give into temptation!

Fall planting can be a great way to scratch the itch to plant, and it gives young trees a large window of time to become established. Fall-planted trees develop good root systems early in the growing season and consequently require much less maintenance in the summer.



If you're interested in fall planting, consider these points:

## PLANT IT YOURSELF?

Fall planting is best confined to balled and burlapped (usually tan burlap enclosing a round "ball" of soil and roots) or container (usually a plastic pot) trees rather than bare root seedlings. Balled and burlapped or container trees are going to be larger than bare root seedling trees and weigh more. Soil is heavy. The biggest of these trees are generally best left to the professionals. Containerized trees are a good choice if you will be handling the tree yourself. Just be sure to select a tree that has a healthy root system without any circling roots in the root ball.

## COST A CONSIDERATION?

Fall planting can be a great way to get a good root system established before summer stresses arrive. However, the balled and burlapped trees available from local commercial nurseries are much more expensive than bare root seedlings.

If less expensive is your preference, then keep in mind that you can order seedlings in the fall from the Missouri Department of Conservation (MDC). The trees will arrive in the spring. It is best to choose the earliest delivery date possible. The earlier trees are planted, the more time they have to become established

and the less stress they suffer during the summer. You can order your seedlings any time after November 15th via [www.missouriconservation.org](http://www.missouriconservation.org) or by mail. To request an order form, please contact MDC at 1-573-751-4115.

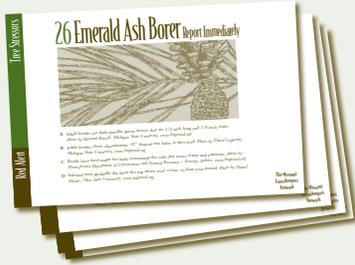
## WHAT TYPE OF TREE?

Some species require a little more work if you plant them in the fall. Evergreen trees (i.e. white pine and Norway spruce) continue to lose water through their needles all winter long. That means that consistent water availability to the roots is very important. Keeping up that "one inch of water per week" recommendation becomes a task in the dry air of the winter months. Thin barked species such as maple, birch, dogwood and others are susceptible to sunscald or trunk damage. This means you probably need to wrap the trunk for the first year after planting. The wrap may also deter deer and rodent damage.

If you're getting the urge to do some fall planting, consider your options, make some decisions, and then get out and enjoy doing a little yard work in the nice weather!



# New Tree Stressor Cards Available!



Five new Tree Stressor Identification Cards are now available to members of the Network. The cards describe these pests and diseases: ***Emerald Ash Borer, Sapsucker Damage, Leaf Galls, Twig Girdler/Twig Pruner, and Verticillium Wilt.***

If you would like a set of the new cards, along with an updated instruction card, just send an email to [information@forestkeepers.org](mailto:information@forestkeepers.org) or call 1-888-9-FOREST. If you don't have the original set with the first 25 cards, we'd be happy to send you that as well! You can view all 30 cards online at [www.forestkeepers.org](http://www.forestkeepers.org).

# Backyard Woods Tip Sheets

Thanks to the Backyard Woods program of the USDA Forest Service, the NACD, and The National Arbor Day Foundation, a series of tip sheets is available for landowners in Missouri. The topics include: attracting wildlife; keeping your woods healthy; making a master plan; planting trees; protecting clean water; and working safely with a chain saw.

You may request the series of six black & white glossy sheets customized for our state, and/or the complete color manual with all 12 tip sheets published for landowners across the U.S. Just give us a call or send us an email. You may also download the Missouri tip sheets from the Forestkeepers website.



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