

# Save the Date!

Missouri Forestkeepers Network Annual Conference

Saturday, June 4

10 am – 1 pm

Springfield Conservation Nature Center

Springfield, Missouri

A free event featuring informative field sessions, fun activities, lots of resources, and a chance to meet other members!

Watch your mailbox and the website for details. 

# Wanted: Spring Reports

Spring is a such great time to get outside and enjoy nature. It also presents an excellent opportunity to observe trees. If you're willing to collect tree data, we'd like to hear from you! Just follow the instructions in your reporting kit, which you can get by calling us or downloading them from [www.forestkeepers.org](http://www.forestkeepers.org).

Report back to us **by June 1** and you will be eligible for your choice of one of our great incentives. You can preview the incentives on our website at [www.forestkeepers.org](http://www.forestkeepers.org). 

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The Missouri Forestkeepers Network



Return Service Requested

Forest Relat of Missouri  
4207 Lindell Blvd, Suite 301  
St. Louis, MO 63108

The Monitor

A newsletter for all participants in the Missouri Forestkeepers Network

# The Monitor

Spring 05

## Giving Trees a Healthy Start

By Helene Miller, Urban Forester, Missouri Department of Conservation

Did you know that the way a tree is planted has a profound impact on its health one, 10, and as many as 50 years from now? Improper planting has been shown to cause stem girdling roots, which are roots that circle back around the tree instead of growing out and away from the trunk. These roots can cause the tree long-term health problems and even premature death.

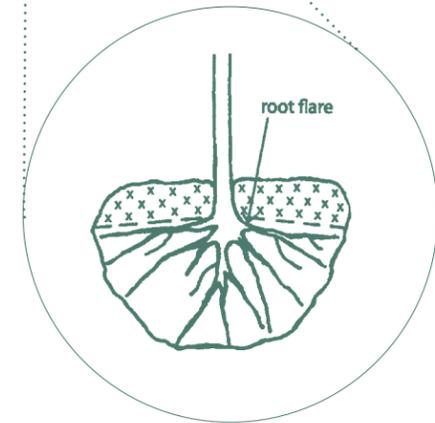
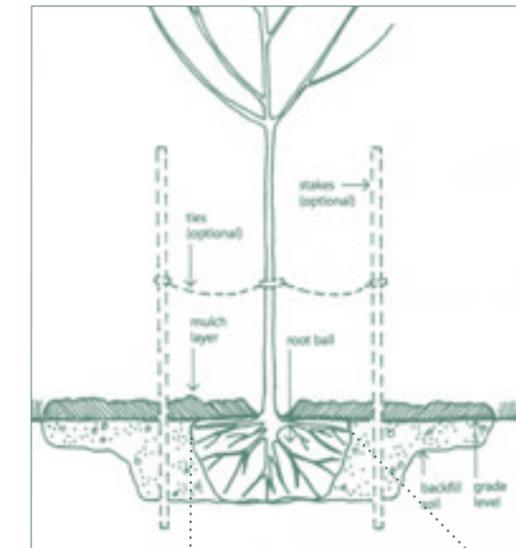
Planting at the proper depth is key to avoiding stem girdling roots. Trees should be planted with the root flare even with the surrounding soil line. The root flare is the area where the trunk broadens and roots extend out. Many trees come from the nursery with this flare buried under several inches of soil. Excess soil should be removed and the planting hole dug just deep enough to put the root flare at ground level.

The root flare may be difficult to see on your newly purchased tree, making a little investigation necessary to determine the depth to dig the planting hole. For trees in plastic containers, remove the tree from the container and carefully remove soil from the top until you find the flare.

For balled and burlapped trees, poke a stiff wire through the burlap next to the tree trunk until you hit something solid (a root). Note the depth to the root. Check in several locations around the trunk. Be sure not to undo the burlap at this time. The distance from the buried root flare to the bottom of the ball is the correct depth to dig your hole.

Dig the planting hole at least twice the diameter of the root ball and deep enough to place the root flare at ground level. After carefully placing the tree in the hole, gently remove the burlap from at least the top third of the root ball. Completely remove any synthetic burlap and at least the upper half of wire baskets.

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Non-Profit Organization  
U.S. Postage PAID  
St. Louis, MO  
Permit No. 3900

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Forestkeepers Network  
is a project coordinated  
by Forest ReLeaf of  
Missouri and the  
Missouri Department of  
Conservation. Its goal is  
to help people conserve,  
sustain and enhance our  
state's trees and forests.

#### For questions on forest health:

Contact your nearest  
forest district office  
or Forest ReLeaf  
of Missouri:  
4207 Lindell Blvd.  
Suite 301, St. Louis,  
Missouri 63108  
toll-free:  
1-888-9-FOREST  
(1-888-936-7378)



# Welcome New Members

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

Nancy Borrett  
Judy C. Cook  
Creative Minds Foundation  
Martin Cunningham  
Sean George  
Girl Scout Troop 159, Kirksville  
Mark Gregor and sons  
Hanson Family  
Paula James and children  
Daniel M. Jones  
George and Michelle Morasch II  
Park Hill South Environmental Club  
Christopher Parker  
Schweiss Troop  
Grant Stauffer  
J. T. Stefano  
Michael Walker  
Linda Wells

Membership is free and just a phone call or a click away! Call 1-888-9-FOREST (1-888-936-7378) or visit the website at [www.forestkeepers.org](http://www.forestkeepers.org). ☐

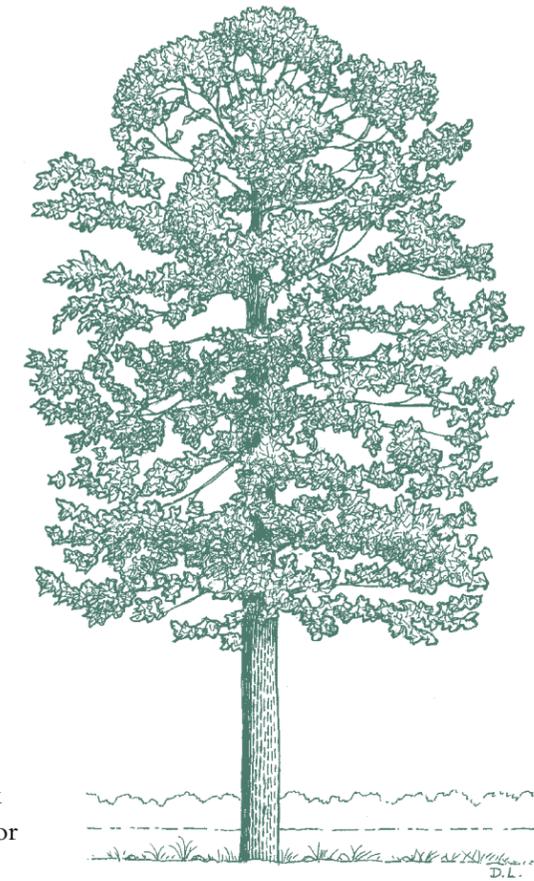
## Giving Trees a Healthy Start

*continued from page 1*

Remove excess soil from the top of the root ball until the root flare is just exposed. Cut and remove any twine, tags, strings or any other fasteners wrapped around the stem or branches. Cleanly cut any circling roots observed before planting.

Make sure the tree is straight in the hole. Backfill the planting hole using the same soil that came out of the hole. Amendments like peat moss and potting soil are not recommended.

Once the tree is planted, spread wood mulch in a two- to three-foot diameter circle that is three to four inches deep. Mulch should not



touch the tree trunk. Prune only dead, broken or badly deformed branches the first year. A regular pruning program should begin the second or third year after planting. Staking and wrapping are not generally recommended.

The key to giving trees a healthy start is using good planting procedures. Plant using the proper technique and you will give your tree a wonderful opportunity to grow and do well for a lifetime! ☐

# What's Wrong with My Tree?

By Ryan Dawson, Resource Forester Assistant, Missouri Department of Conservation

A fever, sore throat and runny nose are all symptoms that point to the common cold. Doctors use signs and symptoms to diagnose illnesses in patients every day. Trees also display visual indicators when they are infected with a disease or are being attacked by insects. Homeowners, like doctors, can use these indicators to help diagnose problems.

Tree owners must look for signs and/or symptoms. A symptom, such as browning leaves or defoliation, is the response of a tree to an insect, pathogen or an environmental problem. A sign is physical evidence of an insect or disease. Examples include exit wounds where a beetle has emerged from the trunk of a tree, or a fruiting body like a mushroom, which shows the presence of a wood-decaying fungus. A symptom will help narrow down the causal agent, and a sign will help confirm it.

Every tree owner should keep an eye on their trees for signs and symptoms of insects and diseases. Some problems may threaten the life of the tree, while others may only cause cosmetic damage. Identifying the specific problem your tree is experiencing is key to selecting an appropriate control method. Remember, the best response to many problems is to do nothing as it may merely be a temporary annoyance.

Here are some common problems:

#### Insects & Related Problems

- ☛ *Borers*—insects which tunnel under the bark of a tree, disrupting the flow of water and nutrients
- ☛ *Scales*—tiny sucking insects which adhere themselves to branches or needles
- ☛ *Webworms*—leaf eating caterpillars which form big silken webs in the crotches of trees and at the ends of branches
- ☛ *Twig gall*—a woody growth on branches caused by insects or mites
- ☛ *Bagworms*—leaf eating insects which build a sack that hangs down on the undersides of branches

#### Diseases

- ☛ *Anthracnose*—a fungus which causes leaf browning on many types of trees
- ☛ *Dutch elm disease*—a fungus which clogs the cells that move water and nutrients in a tree, ultimately causing death
- ☛ *Wetwood*—a bacteria which invades a wound, keeping the tree from closing it; often accompanied by a foul smelling ooze
- ☛ *Rust*—a type of fungus which can cause brown galls on cedar trees and spots on apple leaves, among other signs and symptoms on various species

An excellent way to learn more is to visit some of the websites featuring common insects and diseases, such as:

<http://muextension.missouri.edu/explore/agguides/hort/index.htm>

[www.oznet.ksu.edu/dp\\_hfrr/extensn/hortprob.htm](http://www.oznet.ksu.edu/dp_hfrr/extensn/hortprob.htm)

A tree owner has many options when diagnosing a tree problem, but the most important thing is to recognize that there is a problem. Check trees often for signs and symptoms and confirm your diagnosis with a forestry professional before undertaking any control measures.

As a benefit for members of The Missouri Forestkeepers Network, a set of 25, colorful *Tree Stressor Identification Cards* are available. If you haven't yet received your set, be sure to request one next time you send in a report! ☐



# Underutilized Trees for Missouri Landscapes

Forestkeepers Bulletin #30

By Mark Grueber,  
Urban Forester, Missouri  
Department of Conservation

“What kind of tree should I plant?” Although it seems like an easy question, the answer is more involved than you would think.

Missouri is blessed with a wide diversity of plants and animals because of our climate and soils. So why is it that many of our planted landscapes look the same? Nurseries may be limited by available space, but they are also limited by demand. In other words, most people aren't going to buy something they don't know anything about.

Entire books are written on this subject as there are so many types of trees to consider. We've compiled a few good selections to give you a start. Don't limit yourself to this list, however—do more investigation on your own. Look for trees that you appreciate during all four seasons in your neighborhood, shopping mall, park, botanical garden, and forest.

Make notes about what you like (and don't like) about them. See how large they grow, whether they can tolerate drought, or have pretty fall color. They may have seed pods that you consider messy. Choose wisely and your tree will provide you with a lifetime of pleasure and joy for generations to follow.

## Conifers

All conifers are not necessarily evergreen. **Baldcypress** (*Taxodium distichum*) for example, is a conifer that sheds its needles in autumn. Though usually identified with the “cypress swamps” of the Deep South, the baldcypress is also native to Missouri's Bootheel.

Once established, baldcypress tolerates a wide range of soil conditions, so it doesn't have to be planted in a wet site. It can grow quickly in



Downy serviceberry

its youth, but has a moderate growth rate overall. It will eventually grow into a large tree at least 50 feet high and 20 feet wide and will need plenty of room.

Baldcypress is a great substitute for pines where the soils are heavy clay. It can be planted throughout most of Missouri, but may be too sensitive for the northern third of the state. Baldcypress is commonly available at most garden centers and retail nurseries.

For those of you who are fortunate enough to have soils that are a bit loamier, **white fir** (*Abies concolor*) might be the evergreen for you. Native to the Rocky Mountains and other parts of the West, this fir is the most tolerant of its kind to clay soils.

Its appearance is similar to Colorado spruce, but its needles are much softer to the touch. It is also more disease resistant than blue spruce.

The impatient gardener shouldn't plant white fir as its growth rate of six to 12 inches per year won't set any records. White fir will attain

# Underutilized Trees for Missouri Landscapes

continued from front

a height of 60 feet with a spread equal to about half its height. It is available from nurseries that specialize in conifers and some mail order catalogues.

## Small Ornamental Trees

**Downy serviceberry** (*Amelanchier arborea*) grows throughout Missouri and is a great alternative to disease-prone crabapples. This Missouri native's prolific, small white flowers look like a white cloud in the forest understory during late March and early April. In the fall, the leaves can vary from yellow to orange, to deep red.

Serviceberry also grows as a multi-stemmed shrub and quickly reaches heights of 15 to 25 feet. Serviceberry tolerates full sun or partial shade, but more sun will provide more flowers.

Serviceberry fruit doesn't stay on the tree long enough to create a mess. Birds love them and serviceberries make excellent pies, jams, and jellies. This species is available at most garden centers.

For those "green thumbs" who love a challenge, **Franklin tree** (*Franklinia alatamaha*) makes a beautiful addition to the landscape. Named to honor Ben Franklin, it is one of few trees that flowers in the summer. A tree I grew in the St. Louis area flowered during the first few weeks in August with spectacular, three-inch wide, white flowers.

Franklin tree is a small tree, not more than 10 to 15 feet in height. It is best cultivated by those who enjoy caring for plants. Plant this specimen as a small, containerized or bare root tree in rich, loamy soil with plenty of organic matter. It can be located through mail order catalogues or the Internet.

## Large Shade Trees

Those of you familiar with the devastation caused by Dutch elm disease are probably wondering why **American elm** (*Ulmus*

*americana*) would be included in this article. Recently, great strides in the development of disease-resistant elms have allowed this species to return to the landscape.

The elm's dominance as the "street tree of choice" comes from its graceful, vase-like shape. American elm still exists in the wilds of Missouri, but if you wish to plant one, use the disease resistant varieties "Valley Forge" or "New Harmony." These varieties will attain the same large size of 80 feet with an equal spread, and they will achieve that height at a relatively quick rate.

Although resistant to Dutch elm disease, American elm is susceptible to other insect and disease pests, as well as occasional storm damage. It is available only through specialty nurseries and mail order catalogue or Internet sales.

It's hard to list landscaping trees without including an oak. Missouri's forests harbor more than 20 different oak species. One of my favorites is **white oak** (*Quercus alba*). Its light-colored, peeling bark is attractive, especially in the winter season.

Although it will take many years, white oak will attain heights of 80 feet or more with an equal or greater spread. It grows one foot or less per year. Most literature describes white oak as difficult to transplant, but it moves well in containers. Look for white oak at nurseries that specialize in container plants, or if you are patient, try a fall-germinating acorn or plant a seedling!

## Sources for Trees

Many of the more unusual tree species make wonderful additions to your landscape. If you are shopping for an unusual tree to add to your landscape, you'll quickly discover that it can be hard to find. Check out the Missouri Botanical Garden website at [www.mobot.org/gardeninghelp/plantfinder/alpha.asp](http://www.mobot.org/gardeninghelp/plantfinder/alpha.asp) for a list of plant sources. 