

THE STUMP

INFORMATION BY THE BOARD FOOT

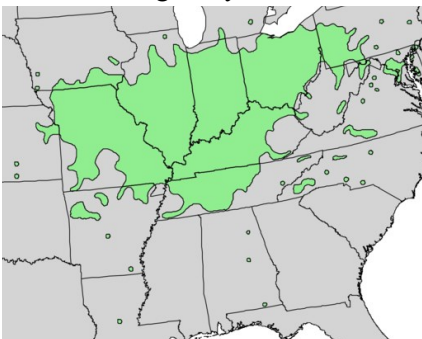
FEBRUARY 2023

KNOT THE HOLE NEWS



shingle oak
Quercus imbricaria

Shingle oak is a medium to large tree with a mature height of 50 to 80 feet and a equal spread. Appropriate for a medium to large yard or park, this tree will reward the grower with shade. It grows best in moist, deep, well drained, acid soils with full sun, but has tolerance for dryer soils and urban conditions. The unlobed, lance-like leaves are lustrous dark green turning tan in the fall and staying attached through most of the winter. Transplanting is easier than most oaks. I have not seen it in SW Missouri. - plantings would be unique in our landscape. The name comes from the wood being used as shake shingles by settlers.

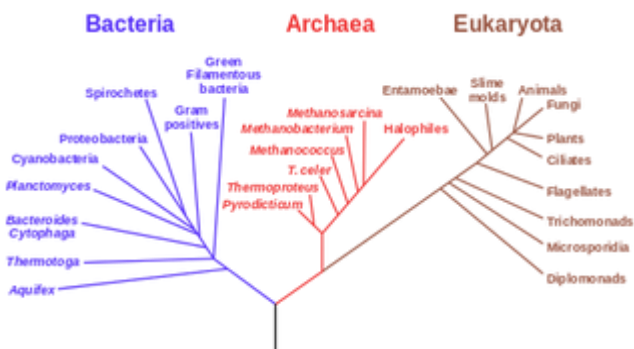


Range map from Virginia Tech Univ Factsheets Web site - <http://dendro.cnre.vt.edu/dendrology/syllabus/factsheet.cfm?ID=70>

Taxonomy Changes

It is amazing the amount of changes that occur, even in taxonomy. I knew some trees would have their names changed as groups fought over the name they thought proper. My classic example is northern red oak (*Quercus rubra*) vs southern red oak (*Quercus falcata*). When southern red oak had the *rubra* name northern red oak would be called *borealis*. This change has not occurred again in decades and still follows the current names.

Phylogenetic Tree of Life



In the last few years, taxonomists, geneticists, and botanists have been learning about the relation of living organisms to each other. This has resulted in what is major changes to taxonomy. This was discovered by reading Chapter 2 of the new 4th Edition of the ISA Arborist Certification Study Guide. As you read the chapter we are introduced to a new top level of the taxonomic system - the domain. The three-domain system introduced by Carl Woese, Otto Kandler, and Mark

Wheelis in 1990 has become the apparent accepted standard. The system divides cellular life forms into three domains, Archaea, Bacteria, and Eukaryota. Each of the three domains contain unique ribosomal RNA. This forms the basis of the three-domain system. While the presence of a nuclear membrane differentiates the Eukarya from the Archaea and Bacteria. The five kingdoms: Plantae, Protozoa, Animalia, Chromista, and Fungi are under the domain Eukaryota.

Other changes that affect us more directly are some of the names/ classifications in other ranks of the taxonomic system. The example used in the chapter is sugar maple (*Acer saccharum*). The researchers have found genetic evidence that maples (*Acer* spp.), buckeyes (*Aesculus* spp.), goldenrain trees (*Koeleruteria* spp.), and soapberries (*Sapindus* spp.) are related and now placed under the family Sapindaceae. You will have to look up your favorite example to see if its taxonomy changed on the

Integrated Taxonomic Information System at: www.itis.gov/index.html.

Taxonomic change of sugar maple

| Old | Domain | New |
|-----------------------|------------------|-----------------------|
| | Domain | Eukaryota |
| Plantae | Kingdom | Plantae |
| Magnoliophyta | Phylum | Magnoliophyta |
| Magnoliopsida | Class | Magnoliopsida |
| Sapindales | Order | Sapindales |
| Aceraceae | Family | Sapindaceae |
| Acer | Genus | Acer |
| saccharum | Specific epithet | saccharum |
| <i>Acer saccharum</i> | Species | <i>Acer saccharum</i> |

Another major change are the terms dicot / dicotyledon are no longer used. They have been replaced by eudicots / eudicotyledon and basal angiosperms. Magnolias (*Magnolia* spp.) and tuliptree/yellow poplar (*Liriodendron* spp.) are part of the basal angiosperms. This is all based on research of how plants evolved.

I encourage you to at least read the Chapter 2 of the new 4th Edition of the ISA Arborist Certification Study Guide to become more aware with these changes. The details of the changes and how the discoveries were made are extensive. If you are truly interested in this path of research, please dig in. I'll just try to keep up on the level I deal with regularly.

Tree City USA Growth Award

The Growth Award is the next level of recognition for Tree City USA recipients. It is meant to honor communities that are doing more than the basic requirements in efforts to improve their community.

The growth award requires earning 10 points. This can be done by doing/completing activities. Changes in how to earn the Tree City USA Growth Award occurred a few years ago. Options were added to earn an Growth Award. I think the changes made it harder to earn an award every year. With this difficulty, it has made the Growth Award more prestigious for the communities that earn it.

It takes planning and time to earn a growth award. Many of the options will require expenditure of community funds to reach. Now is the time to start the process doing the eligible activities. While your community is the one that must do the work, MDC can provide advice as to how useful, or achievable a activity is to your community. Some communities can do harder activities and benefit from them, others will not. Helping you understand the difference is what MDC is here for. Feel free to contact us at any time to discuss what you may want to do.



Phone App Review - vTree

vTree is a tree identification app for Android and iPhone. Created by Virginia Tech University, the app adds to the already useful Tree Factsheets published online. The app has information about 1,000 woody plants from North America. This includes in-depth descriptions, range maps, and images. Plant lists can be reduced by using the location you are at by using the phones GPS location or entering an address. Lists may also be narrowed by key word search such as “oak” or “dogwood”. Additionally, possible trees may be found by answering simple questions like leaf arrangement, flower color, leaf shape, etc. Get the app at either your Google Play or iPhone app store.



bob - bur oak blight (*Tubakia iowensis*)

Bur oak blight is a fungal leaf disease caused by *Tubakia iowensis*. It affects only the small-acorn variety of bur oak (*Quercus macrocarpa* var. *oliviformis*). Most of the bur oak in SW Missouri are the large acorn variety. Infection results in leaf browning and leaf loss in late summer and early fall. Early symptoms appear in midsummer, but the most obvious expression happens in late summer. Leaf symptoms include dark veins on the undersides of leaves and brown, wedge-shaped segments between leaf veins. The disease starts in the lower canopy and progresses up the tree. In severe cases, all



but the outermost leaves around the canopy will die. The fungus overwinters on the petioles of dead leaves that remain attached to branches. Spores are produced in May from black pustules on the petioles of these old leaves, and the spores infect the newly emerging shoots and leaves during rainy weather.

Injecting at half the maximum label rate of propiconazole in late spring (as soon as leaves have formed), can reduce bur oak blight in some healthy bur oaks for at least three years.

Only treat trees that:

- Do not have any dieback or epicormic sprouts.
- Have had two consecutive years with more than 40 percent leaf loss.

See the Minnesota publication on bob at: https://files.dnr.state.mn.us/assistance/backyard/treecare/forest_health/bob-one-pager.pdf

February 7 - 10

2023 ASCA Consulting Academy, Palm Springs, CA. Information and Registration at: <https://www.asca-consultants.org/events/EventDetails.aspx?id=1610995>.

February 5 - 9

TCIA Winter Management Conference, Barbados. Information and Registration at: <https://wmc.tcia.org/>.

February 13

Tree Health Update, Shoal Creek Conservation and Education Center, Joplin. Register by calling 417-629-3434 extn 4543 or email jon.skinner@mdc.mo.gov.

February 14

Tree Health Update, Springfield Conservation Nature Center, Springfield. Register by calling 417-895-6880.

February 21

SWMCFC Meeting / Christmas Gathering, SW MO MDC Regional Office, Springfield, MO.

February 8

ISA Certification Exam, Hulbert, OK. Registration Deadline: January 23. Information at: www.isa-arbor.com/Credentials/Exam-Information.

February 21

ISA Certification Exam, Ames, IA. Registration Deadline: February 2. Information at: www.isa-arbor.com/Credentials/Exam-Information.

March 7

ISA Certification Exam, Oklahoma City, OK. Registration Deadline: February 16. Information at: www.isa-arbor.com/Credentials/Exam-Information.

April 18

Tree Risk Assessment Qualification Renewal Course, Grinnell, IA . Information and Registration at: <https://iowaarboristassociation.org/events-1/tree-risk-assessment-qualification-renewal-course-april-2023/>.

April 20 - 22

Tree Risk Assessment Qualification Course, Grinnell, IA . Information and Registration at: <https://iowaarboristassociation.org/events-1/tree-risk-assessment-qualification-course-april-2023/>.

I'd rather be a forest than a street
Yes, I would
If I could
I surely would

Song: *El Condor Pasa (If I Could)*
- Lyric by Paul Simon, Daniel A. Robles and Jorge Milchberg

WHAT'S HAPPENING

“The Stump” website:
<https://thestumpnewsletter.weebly.com>

To add or remove your subscription, update your address, change contact information or convert from the paper to the email - web version of “The Stump” contact:

Jon Skinner
Community Forester
MO Dept. of Conservation
201 W. Riviera Dr.
Joplin, MO 64804
417-629-3434 Ext. 4543
Jon.Skinner@mdc.mo.gov



Use of names of commercial products or organizations does not imply an endorsement or recommendation by the Missouri Department of Conservation