

Why Trees Matter

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Name That Tree Skills: Don't Go Home Without Them

Part One

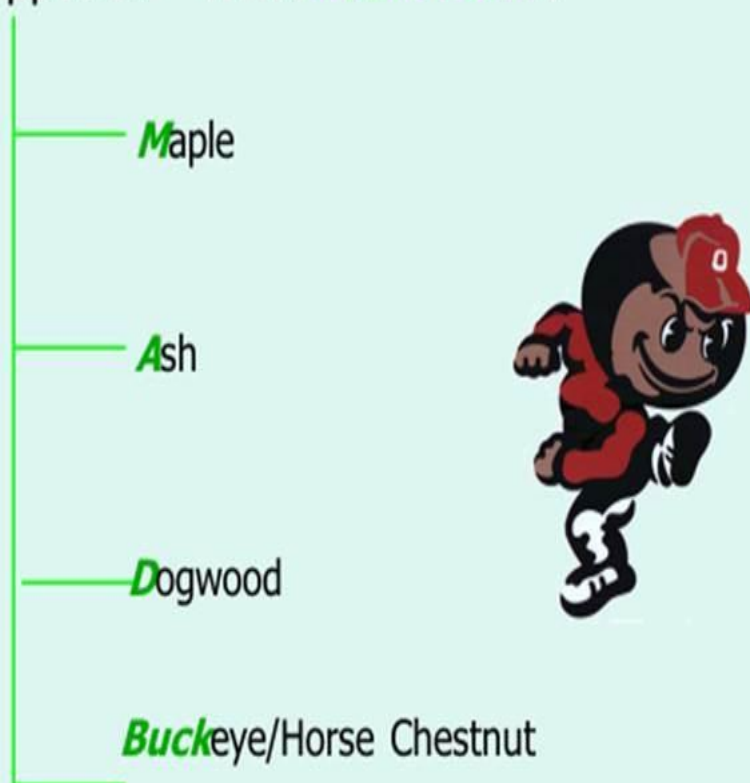
I was teaching with the wonderful OSU Woodlands Steward coordinator Kathy Smith at a recent Name That Tree program at OSU Mansfield and we started with three recent examples of the importance and use of tree identification in what we learn and teach. Here they are:

Thousand Cankers Disease?

It started with a digital diagnostics query about a walnut tree which was dying. The first responder online wondered if thousand cankers disease of black walnut was the culprit. This channels a useful aspect of the 20 Questions of Plant Diagnostics (PP401.03 OSU Fact Sheet) with Question #3 of “What are common problems of the plant”. Thousand cankers disease is not yet common, as far as we know, in Ohio, having been identified only in Butler County, but it is much-talked about and something that comes to mind immediately now when a diagnostician hears of or sees a declining walnut. Within minutes, though, second responders chimed in online with - opposing views.

Opposing, as in “opposite branching”. Black walnut (*Juglans nigra*) has opposite leaf and branch arrangement, and the digital picture provided illustrated, albeit not completely clearly – opposite branching patterns. For native trees at least, there are few opposite-patterned trees: maple, ash, dogwood, and buckeye, thus the familiar mnemonic of MAD BUCK for native opposite-leaf/branch trees. With that in mind the suspected diagnosis from the dying tree was – emerald ash borer damage. Of course, follow-up is often called for with digital diagnosis, but this example points to the extreme importance of Question #1 of the 20 Questions: “What is the plant?” If plant ID goes awry, the diagnostics may not fly.

Buds Opposite - Think M A D Buck !





Straight species, sourgum, *Nyssa sylvatica* (JC)

Sour and Sweet, Spring and Fall

The second example to kick off our Tree ID day was a sampling of *Nyssa sylvatica*. This native tree has numerous common names of sour gum, black gum, and tupelo (as in the earthy and floral tastes of tupelo honey). In our nature and nurture class of learners both with woodland and landscape interests, it is important to note that plants in the woods have differences from plants in landscapes. One sample was the straight species, *Nyssa sylvatica* (the name given by the Botanical Code of Nomenclature) with its glossy green leaves this time of year.

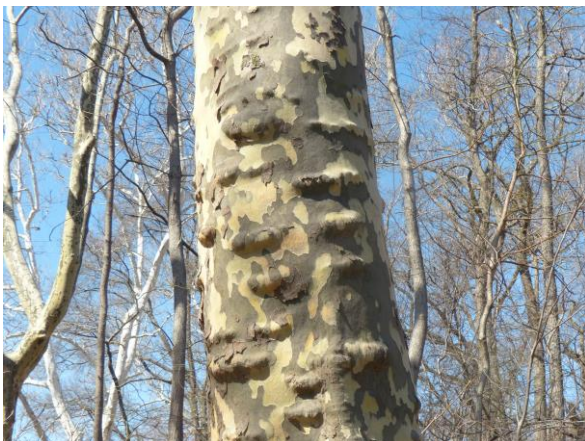
A second sample was a cultivated variety, a cultivar, *Nyssa sylvatica* ‘Wildfire’, (the name given by the Horticultural Code of Nomenclature), a plant which through a mutation and selection is asexually propagated as clones, and a tree that has fiery red, glossy leaves this time of year. If you are doing plant ID with keys or guides geared to woodland plants this feature will never show up. You need to supplement with Dirr’s Manual of Woody Landscape Plants or other sources. So, ID is ever-challenging, which is most cool – a lifetime of learning and perspectives for all of us.



Horticultural cultivar, ‘Wildfire’ sourgum, *nyssa sylvatica* ‘Wildfire’ (JC)

A Planetree By Any Other Names

The third preliminary example was of the origins of planetrees amongst us. In Shakespeare’s infinite book of secrecy some know that London planetrees came about in the 17th century when at London’s Vauxhall Gardens a sycamore or American planetree (*Platanus occidentalis*) and an oriental planetree (*Platanus orientalis*) stepped out of the reproductive isolation that separate species are supposed to have from each other – and crossed. A new plant, the hybrid London planetree (*Platanus x acerifolia*) was the offspring of this marriage.



London planetree bark (JC)

This is useful to know from an ID standpoint, for sycamores with whiter bark, leaves often drooping below midplane, and from a plant disease standpoint with sycamores having greater anthracnose susceptibility and lesser Ceratocystis wilt disease than the London planetree hybrid.

Then, as I was doing some fact-checking for an article I was writing on the 2016 Arbor Day tree for OSU’s Secret Arboretum, the Morton Circle London Planetree (*Acer x acerifolia* “Morton Circle’ Exclamation!™), my mind expanded with some new awareness. Leaving aside for a later article the seemingly

torturous multiple name issues above (for Latin binomials, cultivar names, trademark names), this plant’s history intrigued me.

‘Morton Circle’ planetree is a newer translation of London planetree, propagated by the late George Ware of Morton Arboretum by deliberately crossing an American planetree and an oriental planetree, blending nurture to match Mother Nature. It is patented as the cultivated variety ‘Morton Circle’ and trademarked as the redundantly

named Exclamation!™. In a way it is a Chicago planetree, though George did it deliberately, while the original Vauxhall Gardens planetree was more strictly by Mother Nature, though of course horticulturists played their part as well – by bringing divergent planetree species to London.

As with other London planetree hybrids this cross will have less anthracnose disease than our native sycamore and this selection is also touted as having less susceptibility to powdery mildew. It has an upright-pyramidal habit, growing to a spreading 60 foot by 30-foot stature and as such a big canopy tree will provide high levels of environmental services for energy, air quality, and stormwater remediation if planted properly. It shows excellent tolerance to a variety of soils and should be planted in full sun and with room to grow and not too near buildings, - true for all large trees.



London planetree bark (JC)

Then I got to thinking, do London and Chicago planetrees cross with sycamores? I asked forester Kathy Smith relative to her experience and she said – yes. The mind boggles, and it reminds us that plant identification is always challenging. Just ask a horticulturist about Freeman or “rilver” maples! They are selected crosses of silver and red maples, combining the best of these two species.

Name That Tree Skills

So, enough of the introduction. But my editors say I am almost to the end of my article length! Not the first time. That is why this was labelled **Part One**. Yet, let’s do a few skills: such as pines have needles in bundles while spruces and other evergreen conifers have needles singly attached to the twigs. Spruces have triangular to square needles while firs have flat needles. Firs have needles that attach directly to twigs while hemlocks have tiny little petioles (leaf stalks) that attach to the twigs. The genus *Prunus* almost always has glands or extrafloral nectaries at or near the juncture of the petiole and the leaf blade.



(Left to Right) Spruce needles are singly attached to the twig (Kathy Smith), White pine needles in a bundle of five (Kathy Smith), A hemlock pine? Not. A hemlock with a two-needled pine cluster that fell into it (JC)

American elm has pointed, double-toothed leaf edges while Siberian elms have rounder, single-toothed leaf edges, walnuts have alternate leaf and branch arrangement while ashes have opposite arrangement. And on and on... So if your company or group of companies wants a plant identification primer stay tuned for **Part Two** or maybe three and four, and better yet, schedule an in-house seminar, ongoing ID sessions, Joe Bogg's BYGLive! Diagnostic Walkabouts, or a program with OSU Extension. Contact me at chatfield.1@osu.edu or any of your OSU educators.



American elm leaves with pointed doubly-toothed leaf edges (JC)



Siberian elm leaves with rounded single-toothed leaf edges (JC)

Remember, proper plant identification is clearly a key horticultural skill for all in the green industry. Landscape architects and designers need to know what is what when they evaluate how a particular plant they “designed” into a landscape is performing. Landscape maintenance professionals must evaluate how to correct problems: plant identification is in fact the first question in the 20 questions of plant diagnostics. Nursery professionals are constantly on the look for new plants with different features and what growing issues are associated with this variability: form and function. Developing plant identification skills is fun for plant lovers; it need be as tortured as the Monty Python Larch skit (check it out).

“There are some four million different kinds of animals and plants in the world. Four million different solutions to the problems of staying alive.”

— David Attenborough

Millions are a bit daunting, start by identifying one unknown (to you) plant each day.