

Tower Grove Park (Main Drive)

November 4, 2024

	BOTANICAL NAME (with genus pronunciation)	FAMILY [CC] = Coefficient of Conservatism	COMMON NAME
<input type="checkbox"/>	Acer miyabei (AY-sr / my-AH-bee-eye)	Sapindaceae [planted]	Miyabe Maple
<input type="checkbox"/>	Acer palmatum (AY-sr)	Sapindaceae [introduced]	Japanese Maple
<input type="checkbox"/>	Acer platanoides (AY-sr)	Sapindaceae [introduced]	Norway Maple
<input type="checkbox"/>	Acer rubrum (AY-sr)	Sapindaceae [CC5]	Red Maple
<input type="checkbox"/>	Acer saccharinum (AY-sr)	Sapindaceae [CC2]	Silver Maple
<input type="checkbox"/>	Acer saccharum (AY-sr)	Sapindaceae [CC5]	Sugar Maple
<input type="checkbox"/>	Aesculus glabra (ESS-kyoo-luss)	Sapindaceae [CC5]	Ohio Buckeye
<input type="checkbox"/>	Aesculus pavia (ESS-kyoo-luss)	Sapindaceae [CC7]	Red Buckeye
<input type="checkbox"/>	Betula nigra (BET-choo-luh)	Betulaceae [CC4]	River Birch
<input type="checkbox"/>	Carpinus caroliniana (car-PY-nus)	Betulaceae [CC6]	Musclewood Tree
<input type="checkbox"/>	Carya illinoensis (KAYR-ee-uh)	Juglandaceae [CC7]	Pecan Hickory
<input type="checkbox"/>	Castanea sativa x crenata () (kass-TAY-nee-uh)	Fabaceae [planted]	Colossal Chestnut
<input type="checkbox"/>	Catalpa bignonioides (kuh-TAL-puh)	Bignoniaceae [introduced]	Southern Catalpa
<input type="checkbox"/>	Catalpa ovata (kuh-TAL-puh)	Bignoniaceae [planted]	Chinese Catalpa / Yellow Catalpa
<input type="checkbox"/>	Catalpa speciosa (kuh-TAL-puh)	Bignoniaceae [CC2]	Northern Catalpa
<input type="checkbox"/>	Celtis laevigata (SELL-tiss)	Cannabaceae / Rosales [CC4]	Sugarberry
<input type="checkbox"/>	Celtis occidentalis (SELL-tiss)	Cannabaceae / Rosales [CC3]	Hackberry
<input type="checkbox"/>	Cercis canadensis (SR-siss)	Fabaceae (Caesalpinioideae subfam) [CC3]	Redbud
<input type="checkbox"/>	Chionanthus virginicus (kee-oh-NANN-thus)	Oleaceae [CC10]	White Fringetree
<input type="checkbox"/>	Cladrastis kentukea () (klad-DRASS-tiss)	Fabaceae [CC10]	Yellowwood
<input type="checkbox"/>	Cornus florida (syn. <i>Benthamidia florida</i>) (KOR-nuss)	Cornaceae [CC5]	Flowering Dogwood
<input type="checkbox"/>	Cornus kousa (syn. <i>Benthamia kousa</i>) (KOR-nuss)	Cornaceae [planted]	Kousa Dogwood
<input type="checkbox"/>	Cryptomeria japonica () (krip-toe-MEER-ee-uh)	Cupressaceae [planted]	Sugi / Japanese Redwood
<input type="checkbox"/>	Diospyros virginiana (dee-OSS-pr-us)	Ebenaceae [CC3]	Persimmon Tree
<input type="checkbox"/>	Fagus grandifolia (FAY-guss)	Fagaceae / Fagales / Rosids [CC8]	American Beech
<input type="checkbox"/>	Fagus sylvatica (FAY-guss)	Fagaceae / Fagales / Rosids [planted]	European Beech (Purple Fountain cultivar)
<input type="checkbox"/>	Fraxinus americana () (FRAX-i-nuss)	Oleaceae [CC4]	American Ash / White Ash
<input type="checkbox"/>	Fraxinus pennsylvanica (FRAX-i-nuss)	Oleaceae [CC2]	Green Ash

<input type="checkbox"/>	<i>Ginkgo biloba</i> () (GINGK-go)	Ginkgoaceae [planted]	Ginkgo
<input type="checkbox"/>	<i>Gymnocladus dioica</i> (jim-no-KLAY-dus)	Fabaceae (Caesalpinioideae subfam.) [CC6]	Kentucky Coffeetree
<input type="checkbox"/>	<i>Heptacodium miconioides</i> () (hep-tuh-KO-dee-um)	Caprifoliaceae [introduced]	Seven Son Flower
<input type="checkbox"/>	<i>Ilex opaca</i> (EYE-lex)	Aquifoliaceae [CC7]	American Holly
<input type="checkbox"/>	<i>Ilex verticillata</i> (EYE-lex)	Aquifoliaceae [CC10]	Winterberry
<input type="checkbox"/>	<i>Juglans nigra</i> (JUG-lanz)	Juglandaceae [CC4]	Black Walnut
<input type="checkbox"/>	<i>Juniperus virginiana</i> () (joo-NIPP-pr-russ)	Cupressaceae [CC2]	Redcedar / Red Juniper
<input type="checkbox"/>	<i>Ligustrum obtusifolium</i> (ligg-GUSS-strum)	Oleaceae [introduced]	Border Privet
<input type="checkbox"/>	<i>Lindera benzoin</i> (lin-DEER-uh)	Lauraceae [CC5]	Spicebush
<input type="checkbox"/>	<i>Liquidambar styraciflua</i> (liquid-AM-bar)	Altingiaceae [CC6]	Sweetgum
<input type="checkbox"/>	<i>Liriodendron tulipifera</i> (leer-ee-o-DEN-dron)	Magnoliaceae [CC7]	Tulip Tree
<input type="checkbox"/>	<i>Maclura pomifera</i> () (mack-KLOO-ruh)	Moraceae / Rosales [introduced]	Osage Orange
<input type="checkbox"/>	<i>Magnolia acuminata</i> (mag-NO-lee-uh)	Magnoliaceae [CC7]	Cucumber Tree
<input type="checkbox"/>	<i>Magnolia grandiflora</i> (mag-NO-lee-uh)	Magnoliaceae [garden]	Southern Magnolia
<input type="checkbox"/>	<i>Magnolia stellata</i> (mag-NO-lee-uh)	Magnoliaceae [garden]	Star Magnolia
<input type="checkbox"/>	<i>Magnolia virginiana</i> (mag-NO-lee-uh)	Magnoliaceae [garden]	Sweetbay Magnolia
<input type="checkbox"/>	<i>Magnolia x soulangeana</i> (mag-NO-lee-uh)	Magnoliaceae [garden]	Saucer Magnolia
<input type="checkbox"/>	<i>Morus alba</i> (MOHR-us)	Moraceae [introduced]	White Mulberry
<input type="checkbox"/>	<i>Morus rubra</i> (MOHR-us)	Moraceae [CC4]	Red Mulberry
<input type="checkbox"/>	<i>Nyssa sylvatica</i> (NISS-uh)	Nyssaceae (Cornales) [CC5]	Blackgum / Black Tupelo
<input type="checkbox"/>	<i>Paulownia tomentosa</i> () (pow-LO-nee-uh)	Paulowniaceae / Lamiales [introduced]	Empress Tree
<input type="checkbox"/>	<i>Pinus strobus</i> (PY-nuss)	Pinaceae [introduced]	White Pine
<input type="checkbox"/>	<i>Pinus taeda</i> (PY-nuss)	Pinaceae [introduced]	Loblolly Pine
<input type="checkbox"/>	<i>Pistacia chinensis</i> () (pih-STAY-shee-uh)	Anacardiaceae (Sapindales) [planted]	Chinese Pistache
<input type="checkbox"/>	<i>Platanus x hispanica</i> (PLATT-tuh-nuss)	Platanaceae (Proteales) [planted]	London Plane Tree
<input type="checkbox"/>	<i>Prunus serrulata</i> (PROO-nus)	Rosaceae [planted]	Japanese Cherry
<input type="checkbox"/>	<i>Quercus alba</i> (KWERK-us)	Fagaceae [CC4]	White Oak
<input type="checkbox"/>	<i>Quercus bicolor</i> (KWERK-us)	Fagaceae [CC7]	Swamp White Oak
<input type="checkbox"/>	<i>Quercus coccinea</i> (KWERK-us)	Fagaceae [CC5]	Scarlet Oak
<input type="checkbox"/>	<i>Quercus falcata</i> (KWERK-us)	Fagaceae [CC6]	Southern Red Oak
<input type="checkbox"/>	<i>Quercus macrocarpa</i> (KWERK-us)	Fagaceae [CC4]	Bur Oak
<input type="checkbox"/>	<i>Quercus marilandica</i> (KWERK-us)	Fagaceae [CC4]	Blackjack Oak
<input type="checkbox"/>	<i>Quercus pagoda</i> (KWERK-us)	Fagaceae [CC7]	Cherrybark Oak

<input type="checkbox"/>	<i>Quercus palustris</i> (KWERK-us)	Fagaceae [CC4]	Pin Oak
<input type="checkbox"/>	<i>Quercus phellos</i> (KWERK-us)	Fagaceae [CC7]	Willow Oak
<input type="checkbox"/>	<i>Quercus prinoides</i> (KWERK-us)	Fagaceae [CC5]	Dwarf Chinkapin Oak /
<input type="checkbox"/>	<i>Quercus robur</i> (KWERK-us)	Fagaceae [introduced]	English Oak / Pedunculate Oak /
<input type="checkbox"/>	<i>Quercus rubra</i> (KWERK-us)	Fagaceae [CC5]	Northern Red Oak
<input type="checkbox"/>	<i>Quercus stellata</i> (KWERK-us)	Fagaceae [CC4]	Post Oak
<input type="checkbox"/>	<i>Quercus velutina</i> (KWERK-us)	Fagaceae [CC4]	Black Oak
<input type="checkbox"/>	<i>Salix babylonica</i> (SAY-licks)	Salicaceae [introduced]	Weeping Willow
<input type="checkbox"/>	<i>Sassafras albidum</i> (SASS-uh-frass)	Lauraceae [CC2]	Sassafras
<input type="checkbox"/>	<i>Taxodium distichum</i> (tax-O-dee-um / DIS-tick-um)	Cupressaceae [CC8]	Bald Cypress
<input type="checkbox"/>	<i>Tilia americana</i> (TILL-ee-uh)	Malvaceae (Malvales) [CC5]	Basswood
<input type="checkbox"/>	<i>Tilia cordata</i> (TILL-ee-uh)	Malvaceae (Malvales) [planted]	Littleleaf Linden
<input type="checkbox"/>	<i>Ulmus americana</i> (UL-muss)	Ulmaceae [CC4]	White Elm / American Elm
<input type="checkbox"/>	<i>Ulmus glabra</i> (UL-muss)	Ulmaceae [planted]	Wych Elm
<input type="checkbox"/>	<i>Ulmus minor</i> (UL-muss)	Ulmaceae [planted]	Field Elm / Smoothleaf Elm
<input type="checkbox"/>	<i>Ulmus pumila</i> (UL-muss)	Ulmaceae [CC]	Siberian Elm
<input type="checkbox"/>	<i>Ulmus rubra</i> (UL-muss)	Ulmaceae [CC5]	Slippery Elm / Red Elm

NOTES

WHERE WE WALKED: We met in the rain near the Shakespeare statue at Flag Circle. Although we first walked over to the Waterlily Ponds to check-out the final gasps of their flower displays, our morning was mostly focused on trees. We walked all the way down Main Drive to the “absent” Christopher Columbus statue near Grand Avenue, then crossed the street and walked all the way back to Flag Circle, identifying trees the whole way. It was a good feeling to be able to identify almost every tree we encountered, except of course for the hybrids and exotics that were planted from far corners of the world.

MAGNOLIA:

Bordering the north side of Tower Grove Park is Magnolia Street. That suggests that there might be some Magnolia trees in the park. Actually, there are more than “some”. Andy Berg (the former Forestry Supervisor for the Park) mentioned that Tower Grove had 34 taxa of Magnolia! The 2 species that we stopped to talk about were the evergreen “Southern Magnolia” (*Magnolia grandiflora*) and our Missouri native “Cucumber Tree” (*Magnolia acuminata*). John drew our attention to the unusual green color of the Cucumber Tree’s buds.

Speaking of Magnolia, a small Japanese wooden space satellite named “LignoSat” was coincidentally launched that very same day from the Kennedy Space Center. It was crafted from Honoki Magnolia (*Magnolia hypoleuca*). In space there are no micro-organisms to rot wood, no moisture to swell it, and no oxygen to inflame it. So wood is being considered as a better material from which to build satellites. Among its advantages, it would be less polluting upon re-entry. LignoSat (about twice the size of a Rubik’s Cube) was assembled using traditional Japanese joinery that famously uses no screws or glue.

CHESTNUT and CHINKAPIN CONFUSION:

It all started with Burt. While we were admiring the reddish wood from a felled Kentucky Coffeetree near the end of Main Drive, somebody looked up and saw Burt in a far-distant field wandering from tree to tree. What in the world is he doing? We learned that he was looking for a Chinkapin tree. More than a half hour later Burt caught-up with us. He was dangling a spiky golf-ball-sized fruit by its peduncle like a Christmas Tree ornament. It was quite eye-catching. One by one we all reached out to feel its spiky covering. What was it?

There are certain names that can become a messy blur. Chinkapin, Ozark Chinquapin, Chestnut, Chinkapin Oak, Chestnut Oak, Swamp Chestnut Oak, Chestnut Blight, Chestnuts-roasting-on-an-open-fire... ugh! So let's once-and-for-all sort them out systematically. First let's deal with the common names because they seem to cause the most trouble. Any common name that includes the word "Oak" refers to a tree in a totally different genus than the "non-Oak" names. So for the 3 "Oak" common names, let's identify them and then remove them from our list because they're not helping us one bit to better understand the Chestnuts / Chinkapins:

- Chestnut Oak = *Quercus montana*. This species isn't found in Missouri. Unfortunately it isn't found in Montana either. But it is found in states east of us.
- Swamp Chestnut Oak = *Quercus michauxii* [me-SHOW-ee-ie] This isn't a St. Louis native, but it is found in southern Missouri and in states east of us.
- Chinkapin Oak = *Quercus muehlenbergii* This tree is indeed a St. Louis native and is found solidly throughout Missouri. [As for the spelling of "muehlenbergii", note that there's an "e" stuck in the first syllable (due to an umlaut ü confusion). Although the tree uses this spelling, the *Muhlenbergia* grasses don't. The Pennsylvanian pastor/botanist Gotthilf Muhlenberg did not himself spell his name with an "e" (or with an umlaut ü). For a mnemonic, remember that the word "tree" has an "e" in it, but the word "grass" doesn't. (No charge for that.)

Now with the 3 oaks out of our way, we can deal with the remaining 5 trees. Once again their common names can cause trouble. As for the difference between "Chinkapin" and "Chinquapin", there seems to be none. "Chinkapin" is just a simpler way of spelling "Chinquapin". So let's stay simple and stick with "Chinkapin". As for the difference between "Chestnut" and "Chinkapin", it just seems to be a matter of size. The word "Chestnut" is used for larger trees with larger nuts. The word "Chinkapin" is used for smaller trees or shrubs with smaller nuts.

At last we can look at the remaining 5 species without getting confused by their names. They all belong to the ill-fated "*Castanea*" genus. "Ill-fated" because a certain Ascomycete Fungus from China named "*Cryphonectria parasitica*" took a hankering to them. Make that a "cankering". (An online article by a tree pathologist tells the horrible Chestnut Blight story [HERE](#).) These are the names of our fallen heroes:

- American Chestnut (*Castanea dentata*): This is the majestic tree of the eastern states that played such a life-giving role in early America. It was a massive tree with a long straight trunk and durable wood. Its edible nuts were an important food source for all. It was everywhere, occupying 50% of many eastern hardwood forests. Unfortunately it was highly vulnerable to the Chestnut Blight and got wiped out. Its demise led to economic and social devastation in some areas. It still appears plentiful on its [BONAP map](#), but that's because it still sprouts from its old resistant roots and root collar. But the sprouts don't last long enough to reproduce before the fungus takes them out again.
- Chinese Chestnut (*Castanea mollissima*): Having grown-up with the fungus in China, this sprawling tree knows how to get along. It's not unscathed by the fungus and it does indeed get canker lesions, but it doesn't succumb to them. Nels Homberg, our beloved past member, had a Chinese Chestnut in his yard and would share its tasty nuts with us.
- Ozark Chinkapin (*Castanea ozarkensis*): This is the smaller but important species that gives hope to those who want to restore the Chestnut. Its [BONAP map](#) shows that it once ventured up to southern Missouri. But the map is colored yellow instead of green, meaning that it is (*gulp*) extirpated. But some 45 trees have been found that have survived the blight. Analysis of these trees has shown that the Ozark Chinkapin has far more genetic diversity than the American Chestnut and suggests that it might be ancestral to both the American Chestnut and the Allegheny Chinkapin. The goal of the [Ozark Chinquapin Foundation \(HERE\)](#) is to develop a 100% pure Ozark Chinquapin that is blight resistant, and to distribute the seeds to everyone interested. (Marge Zubler told us that she planted her seeds with some success!)
- Allegheny Chinkapin (*Castanea pumila*): Its other common names "American Chinkapin" and "Dwarf Chestnut" are helpful in defining this plant as a shrub-sized little brother of the American Chestnut with half-sized fruit and smaller leaves. It is less susceptible to the Chestnut Blight fungus, often able to send out suckers and produce fruit. Its [BONAP map](#) shows that it barely reaches into southern Missouri.

- Spanish Chestnut (*Castanea sativa*): This is the “Sweet Chestnut” of Europe. The “sativa” of its botanical name reflects its importance as a cultivated food plant. With biological controls it is now able to resist the Chestnut Blight fungus.

So, what is the species of the cupule that Burt was dangling before us? According to Tower Grove Park’s online tree map, it is the “Colossal Chestnut” (*Castanea sativa* x *crenata*), described by a merchant as a hybrid with “exceptionally large, sweet, good-quality nuts that ripen early and are easy to peel”. Nothing but the best for Tower Grove Park!

SHORT OBSERVATIONS:

- We were surprised to learn that the colorful New Guinea Impatiens (*Impatiens hawkeri*) had “exploding” seed pods similar to our native *Impatiens capensis* and *Impatiens pallida* – and Kathy proved it!
- We noticed that there were insecticide ports in the bases of the Park’s Ash trees to protect them from the Emerald Ash Borer.
- The Empress Trees (*Paulownia tomentosa*) were full of buds, and at least one of them had opened-up to display a large purple flower.
- John removed a Norway Maple leaf to show us its milky sap. He said he used to climb one in his yard as a boy.
- The Seven-Son Flower trees (*Heptacodium*) were still holding-on to their reddish flower sepals. The Park had recently planted 9 of them in a group. We joked that they should have planted 7 instead.
- The Catalpa trees that we saw had very twisted trunks. David mentioned that he finds that to be a common feature of Catalpa trees.
- John taught us to differentiate the “Hard Maples” (such as Sugar) from the “Soft Maples” (such as Silver) by feeling for the sharpness and hardness of their terminal buds.
- We were able to compare the bell-shaped Southern Red Oak leaf to the very similar pagoda-shaped Cherrybark Oak leaf.
- We made a special stop to visit a Yellowwood (*Cladrastis*) tree. John showed us how the pulvinus at the base of each petiole covers the winter bud like a suction cup – similar to the pulvinus of a Sycamore leaf.
- We stopped to marvel at a female Ginkgo tree and all the smelly sarcotesta-covered seeds that she had dropped. It’s a gymnosperm, so we can’t technically call them “fruits”.
- Just past the Woodland Pool, we were stumped by a tree with Japanese Maple leaves, but without an opposite leaf arrangement. It was raining and the leaves were sticking together so we didn’t spend much time investigating it... but it continues to gnaw.
- Kathy has again shared her photos with us. They can be found [HERE](#).
- Except for a newspaper photographer from the Post Dispatch (who informed us that we’d be in tomorrow’s paper), nobody seemed to mind the weather. It was an adventure. A nice long sidewalk free from any mud, this was the perfect place to go botanizing on such a rainy day.

PARTICIPANTS:

There were 8 of us umbrella-carrying botanists on this rainy day, who are (in alphabetical order):

Kathy Bildner, Steve Bizub, Wayne Clark, Michael Laschober, Burt Noll, John Oliver, David Steinmeyer, and Marge Zubler.