

# Katy Trail

(Starting from the Page Bridge, walking about 1 mile westward before returning)

December 4, 2023

	<b>BOTANICAL NAME</b> (with etymology & genus pronunciation)	<b>FAMILY</b> [CC] = Coefficient of Conservatism	<b>COMMON NAME</b> (with comments we heard)
<input type="checkbox"/>	<a href="#"><i>Ailanthus altissima</i></a> (sky tree + high) eye-LAN-thus	Simaroubaceae / Sapindales order [intro]	Tree of Heaven (huge leaf scars help in identification)
<input type="checkbox"/>	<a href="#"><i>Alliaria petiolata</i></a> (garlic-like + having a leaf stalk) (al-lee-AYR-ee-uh)	Brassicaceae [intro]	Garlic Mustard (hard to get rid of with its self-compatible flowers and seeds that remain viable in the soil for years)
<input type="checkbox"/>	<a href="#"><i>Ampelopsis cordata</i></a> (resembling a vine + heart-shaped) (am-pel-OP-sis)	Vitaceae [CC3]	Raccoon Grape / Heartleaf Peppervine (fruit cluster more spherical than the typical distended cone or columnar shape of <i>Vitis</i> species / bark deeply furrowed / stem less dense than <i>Vitis</i> species)
<input type="checkbox"/>	<a href="#"><i>Aralia elata</i></a> (arailia + elevated) (uh-RAY-lee-uh)	Araliaceae (Ginseng Family) [intro]	Japanese Angelica Tree (a cold-hardy cousin of Devil's Walking Stick)
<input type="checkbox"/>	<a href="#"><i>Asimina triloba</i></a> (native American name of tree + 3 lobes) (uh-SIM-in-uh)	Annonaceae (a Basal Angiosperm family) [CC5]	Pawpaw (the only member of the family not confined to the tropics)
<input type="checkbox"/>	<a href="#"><i>Campsis radicans</i></a> (bent [stamens] + rooting stems) (KAMP-sis)	Bignoniaceae [CC3]	Trumpet Vine (opposite leaves / aerial rootlets / capsules / teeth / vine has lighter color)
<input type="checkbox"/>	<a href="#"><i>Celtis occidentalis</i></a> (tree name + western) (SELL-tiss)	Cannabaceae [CC3]	Hackberry (easy to identify from its laminated bark)
<input type="checkbox"/>	<a href="#"><i>Equisetum hyemale</i></a> (horse bristle + winter) (eck-weh-SEE-tum)	Equisetaceae (in the same Polypodiopsida class as ferns) [CC3]	Rough Horsetail (hollow stems with conspicuous ridges impregnated with silica / conelike strobili atop stem / tiny black bands of leaves around stem at nodes)
<input type="checkbox"/>	<a href="#"><i>Euonymus alatus</i></a> (= good name + winged) (yoo-ONN-i-mus)	Celastraceae [intro]	Burning Bush / Winged Euonymus (although sometimes wingless / leaf underside hairless, whereas our native species has hair on leaf underside)
<input type="checkbox"/>	<a href="#"><i>Euonymus atropurpureus</i></a> (good name + dk purple) (yoo-ONN-i-mus)	Celastraceae (Bittersweet Family) [CC5]	Wahoo (small tree with attractive pink fruits)
<input type="checkbox"/>	<a href="#"><i>Euonymus fortunei</i></a> (euonymus = good name) (yoo-ONN-i-mus)	Celastraceae (Bittersweet family) [intro]	Wintercreeper (has a juvenile non-flowering creeping stage, which is followed by a climbing, flowering, fruiting stage / Robert Fortune brought us an unfortunate, highly destructive plant)
<input type="checkbox"/>	<a href="#"><i>Hedera helix</i></a> (ivy + spiral) (HEDD-r-uh)	Araliaceae (Ginseng Family) [intro]	English Ivy (has a creeping juvenile stage, followed by a climbing flowering stage / leaves covered with waxy cuticle / looks similar to Wintercreeper, though from a very different family)
<input type="checkbox"/>	<a href="#"><i>Ilex decidua</i></a> (= deciduous) (EYE-lex)	Aquifoliaceae [CC5]	Possumhaw / Deciduous Holly (dioecious / spur branches useful for identification)
<input type="checkbox"/>	<a href="#"><i>Lonicera japonica</i></a> (= somebody's name + Japanese) (lo-NISS-r-uh)	Caprifoliaceae [intro]	Vine Honeysuckle (berries black)
<input type="checkbox"/>	<a href="#"><i>Lonicera maackii</i></a> (= somebody's name + somebody's name) (lo-NISS-r-uh)	Caprifoliaceae [intro]	Bush Honeysuckle (berries red)
<input type="checkbox"/>	<a href="#"><i>Parthenocissus quinquefolia</i></a> (virgin + ivy + five + leaf) (parth-in-o-SISS-us)	Vitaceae [CC3]	Virginia Creeper (climbs with suction cups)
<input type="checkbox"/>	<a href="#"><i>Polymnia canadensis</i></a> (Greek muse of sacred music and dance) (po-LIMM-nee-uh)	Asteraceae (Polymnieae tribe) [CC6]	Whiteflower Bearsfoot / Whiteflower Leafcup (this is the one with the tacky glandular leaves that emit a pleasant but hard-to-describe fragrance, whereas the Yellowflower Bearsfoot [ <i>Smallanthus</i> ] does not)
<input type="checkbox"/>	<a href="#"><i>Sassafras albidum</i></a> (sassafras + white) (SASS-uh-frass)	Lauraceae (Laurel Family) [CC2]	Sassafras (has green twigs, even in winter / scratch to enjoy Juicyfruit Gum or Fruit Loops fragrance / terminal buds green and plump / plant is dioecious / leaves: some mitten- shaped / no longer sold as food because of safrole's cancer link)

<input type="checkbox"/>	<a href="#"><i>Smilax tamnoides</i></a> ( <i>S. hispida</i> ) (resembling <i>Tamus</i> , a yam plant) (SMY-lax)	Smilacaceae [CC3]	Bristly Greenbrier (lower stem prickles crowded and black)
<input type="checkbox"/>	<a href="#"><i>Toxicodendron radicans</i></a> (poison tree + rooting) (TOCK-see-ko-DEN-dron)	Anacardiaceae (cashew, mango, pistachio family) [CC1]	Poison Ivy (urushiol / aerial rootlets point in all directions along stem in contact with tree)
<input type="checkbox"/>	<a href="#"><i>Tsuga canadensis</i></a> (= Japanese name for hemlock) (TSOO-guh)	Pinaceae [intro]	Eastern Hemlock (short flat needles in opposite rows, green above, but 2 white stripes below / needle connected to twig with tiny petiole "hems have stems" / live >500 years)
<input type="checkbox"/>	<a href="#"><i>Urtica dioica gracilis</i></a> (nettle + dioecious + graceful) (UR-tick-kuh)	Urticaceae [CC3]	Tall Stinging Nettle (This is the real McCoy stinging nettle with opposite leaves)

### Highlights:

Quite close to the parking lot, the first plants that John led us to were a couple of **Devil's Walking Sticks** (*Aralia spinosa*). At least we assumed they were. Although the leaves were gone, what else could they be with such vicious-looking spines on their stems?

John explained that although the Devil's Walking Stick can be planted in the St. Louis area, it's not natural here. It's natural range begins several counties south of St. Louis. So that begs the question: were these two trees planted or not? They're in a rather neglected wooded area, probably with a history of disturbance – not a likely place somebody would want to plant such special trees. Long story short, they're not Devil's Walking Sticks. They're instead a more cold-hardy lookalike species from Asia: **Japanese Angelica Tree** (*Aralia elata*). They're also growing in Forest Park's Kennedy Forest. Cold hardy? You bet. They've been found growing near Chicago, and even in the Northeast (where they're even considered an invasive species!).

Both *A. spinosa* and *A. elata* have huge, huge, huge leaves. Kathy Bildner found a rachis on the ground left over from one of the leaves. It was as big and thick as a crowbar used for removing tires (well, almost). The **Kentucky Coffee Tree** (which we later also found) is touted as having the largest leaves. But that claim is now doubtful. Hopefully we'll have a chance to return in the summer with a ruler (better yet, a yardstick) to compare them.

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INVASIVES: Our goal was to find as many of our St. Louis invasives as possible. We pretty-much hit the jackpot. Here are ten of them:

- We found both the **Bush Honeysuckle** (a bush, of course) and the **Japanese Honeysuckle** (a vine) conveniently growing right next to each other so that we could compare them. They both still had their green leaves and were hard at work while their less successful competition had already gone off on winter holiday. One interesting comparison that we made is that the Bush Honeysuckle has red berries while its viny cousin has black ones.
- We found troublemakers that were big (**Tree of Heaven**) while growing right underneath them were troublemakers that were small (**Garlic Mustard**). The Garlic Mustard rosettes looked so vibrant, so green, so delicious! But everybody's eyes stayed upward at the Tree of Heaven as John pointed to the huge easy-to-identify leaf scars on its stem.
- As for bushes, we found **Burning Bush** plants (still in their crimson glory), **Multiflora Rose** bushes with their frilly stipules, and the **Autumn Olive**.
- As for ground-covers, we found both **Creeping Charlie** and the far worse **Winter Creeper** (some of whose vines were even climbing-up trees to make their fruit available to the world).
- We should get a bonus point for identifying **English Ivy** (*Hedera helix*). It's easy to confuse it with Winter Creeper. They both have a very waxy cuticle covering their leaves. They both have a juvenile, non-flowering creeping stage until they find something to climb and flower. It's an example of "convergent evolution" because they're far apart on the Tree of Life. John reminded us that this plant is in the same family as the Devil's Walking Stick that we met earlier (and ginseng too – hard to believe!). These ivy plants were surely planted because they were bordering some new houses that were built surprisingly close to the trail. English Ivy is a stubborn plant. They'll have a hard time removing it. By the way, this is the ivy that grows on Princeton University buildings. Most of the other ivy-league schools have Boston Ivy growing on them. Yale has Virginia Creeper.

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VINES: As a group, we seem to be getting much better at identifying woody vines ("lianas"). We sure got lots of vine practice today – they were everywhere! We saw *Vitis*, *Ampelopsis*, *Parthenocissus*, *Campsis*, *Toxicodendron*, and *Rubus* to name just a few.

A pair of “grape” and “raccoon grape” vines were conveniently next to each other. John was able to simultaneously move the *Vitis* with one hand and the *Ampelopsis* with the other hand to compare their densities. The *Vitis* (grape) vine was more resistant to movement with its greater density than the *Ampelopsis* (Raccoon Grape) vine, even though the *Ampelopsis* was larger and looked more massive with its deeply furrowed bark. The *Parthenocissus* (Virginia Creeper) is also in the grape family, but its tendrils end with adhesive pads that look like suction cups.

The Trumpet Vine (*Campsis radicans*) was rather fun to identify because it appeared lighter-in-color than the others. It had root hairs emerging from its opposite nodes and directed towards the tree. In contrast, our other “*radicans*” [= root], the beloved *Toxicodendron radicans* (Poison Ivy) had adventitious roots sticking out all along its stem (not just at the nodes) and in all directions (not just towards the tree). John humorously said it didn’t know where the tree was. He then invited us to plant its white berries. Everybody laughed.

It’s always hard to determine which *Rubus* is which – the different blackberry plants look so similar. But among those that we found was one with a glaucous blush on its stems – a big clue that we had a Raspberry.

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SPECIAL VINE: At one point along the trail, there was a tangle of unfamiliar vines overhead. “What can we make of this?” asked John. “Baskets!” replied our quick-witted Kathy Thiele. Everybody laughed. At first we thought the disintegrating vines might be *Kudzu*. John explained that despite its notorious reputation in areas south of us, *Kudzu* is rather well-behaved in St. Louis. He mentioned that the plant is edible and smells like grape soda. But Len later saved the day by identifying the deteriorating vines as *Passiflora* (Passionflower). It’s a shame that we won’t have the chance to put that weird “grape soda” claim to the test, but at least we’ll know where to someday find delicious passionflower fruit and those extravagant, over-the-top flowers.

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FROM INVASIVES TO NATIVES: Just guessing, we probably walked two miles in total – a mile out and a mile back. About halfway out, we found the first of many *Polymnia* plants. It was then that we started realizing that we were no longer on the “Trail of Invasives”. The Katy had entered a more stable, natural area. *Polymnia canadensis* (Whiteflower Leafcup) is itself a C6 on the Floristic Quality index. Another common name is “Whiteflower Bear’s Foot”. Keeping the word “white” in there is useful because there’s a “Yellow-Flowered Bear’s Foot” – *Smilax uvedalia* whose leaves look confusingly similar. Even though the yellow *Smilax* flower is prettier, larger, and has a higher Floristic Quality value of 8, our *Polymnia* is more interesting because its large glandular leaves feel sticky and emit a unique, pleasant fragrance (which we experienced today).

After finding *Polymnia*, we found other conservative natives. Expecting *Celastrus orbiculatus*, we were surprised that the Bittersweet vine we found was the native *Celastrus scandens*. We knew this because its fruit clusters were at the ends of the stems (rather than in axils along the stems), and the color of its fruit valves were orange (instead of yellow). We were again surprised to find that the fruit-laden *Euonymus* tree wasn’t the expected Burning Bush, but rather the native Wahoo (*Euonymus atropurpureus*). We knew this because it didn’t have any corky wings on its branches.

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BAMBOO: David was curious about some tall grasses he spotted a distance from the trail. Might it be bamboo? He went off to investigate and brought back a leafy culm. It was indeed our native bamboo, *Arundinaria gigantea*, with the high Floristic Quality value of C7. Some of us were wondering if it might instead be a “cane”. We might have been getting our words confused because this bamboo is a cane – *River Cane* – and it used to form large canebrakes (a now endangered ecosystem). Maybe we were thinking of the word “reed”. We have several tall, easy-to-confuse reeds in St. Louis. There’s *Arundo donax* (Giant Reed) which is not in the Bamboo subfamily even though the word “Arundo” is contained in the word “Arundinaria”. There’s *Phragmites australis* (Common Reed), and there’s *Phalaris arundinacea* (Reed Canary Grass) – again with “Arundo” in its name. Hopefully we’ll someday have the chance to meet these and learn to differentiate them.

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COMMON TREES: Among our more common trees, we found native *Sassafras* trees with their big buds and greenish stems. This is a dioecious tree with the pleasantly fragrant (scratch-and-sniff) smell of Fruit-Loops cereal.

We also found our native Hackberry (*Celtis occidentalis*) with its easy-to-recognize laminated bark. Somebody wondered if it might instead be its cousin Sugarberry (*Celtis laevigata*) which has fewer patches of laminated bark. There were no leaves to observe the teeth. (Sugarberry has fewer teeth because you lose teeth when you eat too much sugar. My joke.) John told us that some botanists (i.e. Justin Thomas) regard Hackberry and Sugarberry to be the same species. Interestingly, the Hackberry we found had a **Witches Broom** gall on it. It's a cluster of twigs developing from a single point on a branch. The gall is caused by the interaction of a powdery mildew fungus and a mite. The Pawpaw trees (*Asimina triloba*) that we found had no leaves but were easy to identify with their long paintbrush-like leaf-buds. John suggested that the buds were not protected by winter scales because the tree comes from a tropical family which never has to deal with winters. By the way, the Pawpaw comes from an ancient lineage of Basal Angiosperms.

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**OTHER PLANTS:** There was a section of the trail that was lined with Horsetail colonies (*Equisetum hyemale*). George observed that horsetails (a type of fern) were commonly found along railroad tracks. John explained how the early settlers would burn the horsetail and then put the silicon-rich ashes into their pans to clean them. The fat in the pan would form a soap-like mixture with the ashes.

We also found Stinging Nettle (*Urtica dioica*) – not the imposter *Laportea*, but the real McCoy with opposite leaves that we hardly ever see.

Steve found some actual flowers on a tiny unidentified plant from the Brassicaceae (Mustard Family).

Planted in front of a house was an Eastern Hemlock tree (*Tsuga canadensis*) with its cute little cones. Somebody mentioned that the tree was poisonous. But John understood that they were confusing this tree with the “Poison Hemlock” of Socrates fame (*Conium maculatum*). Poison Hemlock is in the carrot family. The hemlock tree we found isn't even a flowering plant. It's a gymnosperm from the oldest family in this report (except for the horsetails).

We found a tree with a red bungee cord hanging from it. John identified it as a “Bungee Tree” (*Bungee arborea*). Everybody laughed.

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**BIRDS:** Changing from the “Kingdom Plantae” to “Kingdom Animalia”, it was June who first noticed the turban-shaped **Swallow** nests way above us under the highway. They were quite beautiful, lined-up so orderly. June explained that they were built with mud, one mouthful at a time. Later along the trail Sharon and June identified a **Cedar Waxwing** bird. Oh, to be a true naturalist who tries to understand how everything fits together is a noble pursuit. Maybe unachievable, but still noble.

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Our famous Katy Trail. At 240 miles, we should visit it more often. It saved us on this cold morning because rain had been falling just a few hours earlier. Anyplace else would have been a muddy mess. Our topic was perfect too. It's not often that we purposefully focus on invasives. But the invasives are an important part of our natural world. And chugging along the old MKT railroad, we got a chance to pretty-much meet them all!

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Here (in alphabetical order) are the 18 participants in this morning's Botany Walk:

Cathy Barnett, Prem Barton, Kathy Bildner, Steve Bizub, Jerry Castillon, Wayne Clark, June Jeffries, Michael Laschober, Sharon Lu, Len Meier, Burt Noll, John Oliver, David Steinmeyer, Brenda Suea, Fr. Sullivan, Kathy Thiele, George Van Brunt, and Laura Yates