

Katy Trail – Klondike Park

December 16, 2024

	BOTANICAL NAME (with genus pronunciation)	FAMILY [CC] = Coefficient of Conservatism	COMMON NAME
<input type="checkbox"/>	<i>Acer negundo</i> (AY-sr)	Sapindaceae [CC1]	Boxelder
<input type="checkbox"/>	<i>Ailanthus altissima</i> eye-LAN-thus	Simaroubaceae / Sapindales [introduced]	Tree of Heaven
<input type="checkbox"/>	<i>Alliaria petiolata</i> (al-lee-AYR-ee-uh)	Brassicaceae [introduced]	Garlic Mustard
<input type="checkbox"/>	<i>Ampelopsis cordata</i> (am-pel-OP-sis)	Vitaceae [CC3]	Raccoon Grape / Heartleaf Peppervine
<input type="checkbox"/>	<i>Asplenium platyneuron</i> (uh-SPLEE-nee-um)	Aspleniaceae [CC4]	Ebony Spleenwort
<input type="checkbox"/>	<i>Campsis radicans</i> (KAMP-sis)	Bignoniaceae [CC3]	Trumpet Vine
<input type="checkbox"/>	<i>Cardamine hirsuta</i> (kar-DAM-ih-nee)	Brassicaceae [introduced]	Hairy Bittercress
<input type="checkbox"/>	<i>Carex crus-corvi</i> (CARE-x)	Cyperaceae [CC6]	Raven's Foot Sedge
<input type="checkbox"/>	<i>Carex muskingumensis</i> (CARE-ex / muss-KING-goo-MEN-sis)	Cyperaceae [CC9]	Palm Sedge / Swamp Sedge
<input type="checkbox"/>	<i>Celastrus scandens</i> (sell-ASS-trus)	Celastraceae [CC3]	American Bittersweet
<input type="checkbox"/>	<i>Conium maculatum</i> (KOH-nee-um)	Apiaceae [introduced]	Poison Hemlock
<input type="checkbox"/>	<i>Corydalis flavula</i> () (kor-RID-uh-liss)	Papaveraceae (Fumarioideae subfam) [CC3]	Pale Corydalis / Yellow Fumewort
<input type="checkbox"/>	<i>Equisetum hyemale</i> (eck-weh-SEE-tum)	Equisetaceae [CC3]	Rough Horsetail (conelike strobili)
<input type="checkbox"/>	<i>Euonymus alatus</i> (yoo-ONN-i-mus)	Celastraceae [introduced]	Burning Bush / Winged Euonymus /
<input type="checkbox"/>	<i>Euonymus fortunei</i> (yoo-ONN-i-mus)	Celastraceae [introduced]	Wintercreeper
<input type="checkbox"/>	<i>Fallopia scandens</i> (fuh-LO-pee-uh)	Polygonaceae [CC3]	Climbing False Buckwheat
<input type="checkbox"/>	<i>Geranium carolinianum</i> (jr-RAY-nee-um)	Geraniaceae [CC0]	Carolina Geranium
<input type="checkbox"/>	<i>Gymnocladus dioica</i> (jim-no-KLAY-dus)	Fabaceae (Caesalpinioideae subfam) [CC6]	Kentucky Coffeetree
<input type="checkbox"/>	<i>Heuchera richardsonii</i> (HYOO-kr-ah)	Saxifragaceae [CC6]	Prairie Alumroot
<input type="checkbox"/>	<i>Lamium purpureum</i> (LAY-mee-um)	Lamiaceae [introduced]	Purple Dead Nettle
<input type="checkbox"/>	<i>Lonicera japonica</i> (lo-NISS-r-uh)	Caprifoliaceae [introduced]	Vine Honeysuckle
<input type="checkbox"/>	<i>Parthenocissus quinquefolia</i> (parth-in-o-SISS-us)	Vitaceae [CC3]	Virginia Creeper
<input type="checkbox"/>	<i>Perilla frutescens</i> (pr-ILL-uh)	Lamiaceae (Nepetoideae subfamily) [introduced]	Perilla
<input type="checkbox"/>	<i>Phacelia bipinnatifida</i> (fuh-SEE-lee-uh)	Boraginaceae [CC5]	Fernleaf Phacelia / Purple Phacelia
<input type="checkbox"/>	<i>Phytolacca americana</i> (fy-toh-LACK-uh)	Phytolaccaceae [CC2]	Pokeweed
<input type="checkbox"/>	<i>Populus deltoides</i> (POP-yoo-lus)	Salicaceae [CC2]	Eastern Cottonwood
<input type="checkbox"/>	<i>Rosa multiflora</i> (RO-zuh)	Rosaceae [introduced]	Multiflora Rose
<input type="checkbox"/>	<i>Sicyos angulatus</i> (SISS-ee-os)	Cucurbitaceae [CC4]	Bur Cucumber
<input type="checkbox"/>	<i>Solidago drummondii</i> (so-lid-DAY-go)	Asteraceae (Astereae tribe) [CC8]	Cliff Goldenrod

<input type="checkbox"/>	<i>Stellaria media</i> (steh-LAYR-ee-uh)	Caryophyllaceae [introduced]	Chickweed
<input type="checkbox"/>	<i>Ulmus rubra</i> (UL-muss)	Ulmaceae [CC5]	Slippery Elm / Red Elm
<input type="checkbox"/>	<i>Urtica dioica gracilis</i> (UR-tick-kuh)	Urticaceae [CC3]	Tall Stinging Nettle

NOTES

WHERE WE WALKED: We met at Klondike Park’s “Boat Ramp” parking lot to begin our Katy Trail walk. From there we walked southward along the Katy for a mile until we arrived at a junction in the trail. We turned around and started to head back to the cars but decided to first walk to the Missouri River on the pleasant little trail next to us. Unbelievable for a December day, it warmed up to 65° while we were walking!

VINES:

The theme of the day and the main attraction of this week’s walk were the vines. Against a backdrop of beige sandstone bluffs and without any leaves to hide them, the vines were on full display. They were beautiful. The interplay of their stems grabbed our attention like works of art.

Vines really benefit from their relationships with trees, but it’s hard to see how the reverse can be true. Trees have to invest great time and energy into building a strong infrastructure. They probably look down on vines as lazy freeloaders. The vines, on the other hand, probably consider themselves quite clever as they look up at their sugar-daddies.

The phrase “symbiotic relationship” usually needs to be clarified with 1 of 3 “-ism” words. Trees and vines are certainly in **symbiotic** (close, long-term) relationships. But the average tree would surely object to the term “**mutualism**” (with benefits to both parties). If the tree’s a good sport, it might not object too much to the word “**commensalism**” (one party benefits, but the other is neither helped nor harmed). However most trees would probably push for the term “**parasitism**” (one party benefits, but the other is hurt). To support that claim in court, trees would have at least 4 persuasive arguments:

- Vines can **get heavy**, causing limbs to break or trees to topple.
- Vines can **damage the bark** by trapping moisture that promotes the growth of fungi. Also, removing vines that cling to the tree may actually pull-off bark, exposing it to insects and pathogens.
- Vines can **constrict the phloem**, preventing the tree from transporting sugars.
- Vines can **block sunlight** from the tree when it spreads across the canopy.

Here are a few random factoids about vines:

- The British are more likely to use the word “CLIMBER” instead of “vine” (which they reserve for grape vines).
- A term for a woody vine is “LIANA”.
- A term for a vine that climbs by winding its shoot into a helix around a support is “BINE”.
- Studies in the tropics show that lianas are INCREASING IN BOTH MASS AND NUMBER. They are endangering some species of trees and the health of the forests.
- Different plant families often arrive with different kinds of vines. This suggests that the “vining” growth habit EVOLVED INDEPENDENTLY many times.
- Not all vines are climbers.
- Richard Abbott created a key for Missouri vines.
- Charles Darwin’s final plant book was titled: “*Power of Movement in Plants*”. In it he theorized that the different parts of all plants move in a circle over long periods of time – a phenomenon he termed “CIRCUMNUTATION”.
- Some tropical vines exhibit “SKOTOTROPISM” – a growing towards darkness (the opposite of phototropism)
- Many vines exhibit “THIGMOTROPISM” – a differential growth in response to touch. The side of the tendril *opposite* the contact grows faster than the contact side.
- Wine grapes are grown on plants grafted to American rootstock for protection against PHYLLOXERA (an insect whose nymphs feed on grapevine roots and whose past achievements include the “Great French Wine Blight” of 1863).
- The etymology of “vine” is “*vinum*” (the Latin word for “wine”)
- Using BONAP and our “3-adjacent counties” strategy to find established plants, it appears that the St. Louis area has 6 species of *Vitis* (list [HERE](#)) plus 3 non-*Vitis* members of the grape family Vitaceae.

- The word “vine” also refers to a decade-old video craze in which mostly young people would upload 6-second homemade video loops. So don’t research “vine” on YouTube because this is mostly what you’ll get. You’ll find all these goofy little mindless videos and think “How juvenile!”. Hours later you’ll realize that you’ve learned nothing about botanical vines at all.

There seems to be no standard categories to organize the different ways that vines climb. Terms like “clingers”, “winders”, and “twiners” are sometimes used loosely and overlappingly. Most references lump vines into 3 or 4 categories, but those categories can bleed into each other. “Splitters” might be able to come up with a couple dozen different categories.

Here’s a list of 26 vines we’re likely to find in St. Louis, along with a description of how each vine appears to climb:

<i>Ampelopsis cordata</i>	[Vitaceae]	Heartleaf Peppervine:	climbs with tendrils
<i>Aristolochia tomentosa</i>	[Aristolochiaceae]	Woolly Pipevine:	helical twining stems
<i>Campsis radicans</i>	[Bignoniaceae]	Trumpet Vine:	climbs with aerial rootlets that can attach
<i>Celastrus scandens</i>	[Celastraceae]	American Bittersweet:	helical twining stems
<i>Clematis ternifolia</i>	[Ranunculaceae]	Sweet Autumn Clematis:	climbs using leaves as tendrils
<i>Convolvulus arvensis</i>	[Convolvulaceae]	Field Bindweed:	helical twining stems (bine)
<i>Dioscorea villosa</i>	[Dioscoreaceae]	Wild Yam:	helical twining stems
<i>Euonymus fortunei</i>	[Celastraceae]	Wintercreeper:	climbs with aerial rootlets that can attach
<i>Fallopia scandens</i>	[Polygonaceae]	Climbing Buckwheat:	helical twining stems
<i>Hedera helix</i>	[Araliaceae]	English Ivy:	climbs with aerial rootlets that can attach
<i>Humulus scandens</i>	[Cannabaceae]	Japanese Hops:	helical twining stems (bine)
<i>Ipomoea lacunosa</i>	[Convolvulaceae]	Small White Morning Glory:	helical twining stems
<i>Ipomoea pandurata</i>	[Convolvulaceae]	Wild Sweet Potato:	helical twining stems
<i>Lathyrus hirsutus</i>	[Fabaceae]	Caley Pea	climbs with tendrils
<i>Lonicera japonica</i>	[Caprifoliaceae]	Vine Honeysuckle:	helical twining stems (bine)
<i>Menispermum canadense</i>	[Menispermaceae]	Moonseed:	helical twining stems
<i>Parthenocissus quinquefolia</i>	[Vitaceae]	Virginia Creeper:	climbs with tendrils that end with adhesive pads
<i>Parthenocissus tricuspidata</i>	[Vitaceae]	Boston Ivy	climbs with tendrils that end with adhesive pads
<i>Passiflora incarnata</i>	[Passifloraceae]	Purple Passionflower:	climbs with tendrils
<i>Phaseolus polystachios</i>	[Fabaceae]	Thicket Bean:	helical twining stems (bine)
<i>Rosa setigera</i>	[Rosaceae]	Climbing Rose:	a sprawling climber that uses thorns as hooks
<i>Sicyos angulatus</i>	[Cucurbitaceae]	Bur Cucumber:	climbs using branched tendrils from leaf axils
<i>Smilax tamnoides</i>	[Smilacaceae]	Bristly Greenbrier:	climbs with tendrils
<i>Toxicodendron radicans</i>	[Anacardiaceae]	Poison Ivy:	climbs with aerial rootlets that can attach
<i>Vitis cinerea</i>	[Vitaceae]	Winter Grape:	climbs with tendrils
<i>Wisteria frutescens</i>	[Fabaceae]	American Wisteria:	helical twining stems

SHORT OBSERVATIONS:

- It had rained the night before. The wet bark of the many “Tree of Heaven” trees was as black as coal. HD was the first to draw our attention to them. They were very eye-catching.
- There was quite a bit of greenery that we found along the shoulder of the Katy – but it was mostly comprised of 3 edible plants: 60% of it was the tasty CHICKWEED (*Stellaria media*), 30% of it was the not-so-tasty PURPLE DEADNETTLE mint (*Lamium purpureum*), and 10% of it was the troublesome GARLIC MUSTARD (*Alliaria petiolata*). We omitted the word “tasty” because Prem said that she had once stir-fried some Garlic Mustard but didn’t like it. However we didn’t omit the word “troublesome” because the invasive Garlic Mustard has been found to be ALLELOPATHIC (it secretes a bioactive substance that inhibits the growth of neighboring plants and harms micro-organisms). By the way, even though they’re in different families, a *Lamium* leaf looks very much like a small *Alliaria* leaf – at least from a distance. At first some of us thought that they were both *Alliaria*.
- Kathy Bildner took quite a few photos. You can find them in her Google Drive [HERE](#). Among the photos was a peculiar one that showed a trail of animal tracks in the sand down by the river. Our naturalist Kathy Thiele later suggested that the tracks were probably from a muskrat.
- John and Steve were at it again. Some genius had somehow scaled high up onto the bluff and had painted the word “BUTT” with big black letters. Steve walked over to John and pointed up to the defacement and asked: “John, I don’t understand. It looks like a letter “B” followed by a letter “U”. And then it looks like a “T”...” John interrupted and explained: “Somebody was just up there trying to spell the word “BUTTER” but slipped.” Everybody laughed. Those two should charge admission.

- With huge formations of St. Peter Sandstone next to us the whole way, we got some good lessons in Geology. Len mentioned that the sandstone makes for a good aquifer – that people are able to sink wells into it. David explained that the huge sandstone bluffs had been wind-deposited, and that they are capped with limestone because a sea was once above it all.
- Protruding from the sheer rock cliffs next to us were the remnants of last summer's *Solidago drummondii*. John said that its common name is “Cliff Goldenrod”, then quipped that he didn't know why it was called that. Everybody laughed.

PARTICIPANTS:

There were 15 of us botanists today, who are (in alphabetical order):

Gisela Baner, Prem Barton, Kathy Bildner, Steve Bizub, Wayne Clark, June Jeffries, HD Key, Michael Laschober, Len Meier (and his friend Mike C.), Burt Noll, John Oliver, David Steinmeyer, Kathy Thiele, and George Van Brunt