Victoria Glade – Nature Conservancy May 6, 2024

BOTANICAL NAME (with <u>etymology</u> & genus pronunciation)	FAMILY [CC] = <u>Coefficient of</u> <u>Conservatism</u>	COMMON NAME (with tips we learned)
<u>Agave [Manfreda] virginica</u> () (uh-GAH-vay)	Asparagaceae / Asparagales [CC7]	American Aloe (succulent basal rosette)
<u>Amorpha canescens</u> (shapeless [referring to single-petaled corolla] + gray from pubescence) (a-MOR-fuh)	Fabaceae (Faboideae subfamily) [CC8]	Leadplant Leaf: alternate, odd-pinnately compound, linear stipules, densely canescent, leaflets w mucro tip and rounded or cordate base (the similar <i>Tephrosia</i> - goat's rue - has a tapered base and no mucro tip)
<u>Aquilegia canadensis</u> (eagle [claw-like nectaries of some European species] + Canada) (ack-weh-LEE-jee-uh)	Ranunculaceae [CC6]	Red Columbine (leaves twice-ternately compound [9 leaflets] / nodding flower covered with 5 red sepals that also form 5 red nectar spurs; inside are 5 yellow honeycomb-shaped petals, about 20 stamens, and a gynoecium of 5-10 free carpels)
<u>Asclepias viridis</u> (uh-SKLEE-pee-us)	Apocynaceae [CC5]	Green Antelopehorn Milkweed St. Louis has a whopping 14 different milkweeds [see list <u>HERE</u>]. But 2 of them share the name "green". (We have the same problem with our Trilliums: <i>T.viridis</i> , vs. <i>T.viridescens</i>). The 2 milkweeds are easy to sort out. Our <i>Asclepias viridis</i> has alternate (not opposite) leaves. It has white flowers in a single umbel (not greenish flowers in multiple nodding umbels). And finally ours is a much smaller plant.
Baptisia australis (to dip [as in dyeing] + southern) (bap-TIZZ-ee-uh)	Fabaceae [CC8]	Blue Wild Indigo Leaf: trifoliate compound with stipules / Leaflets: glabrous, entire, with short petiolules / Fruits: the distal end of the legume has a long taper (in contrast to the squared-off end of <i>B.alba</i>). St. Louis has 3 species of Baptisia: <i>B.alba</i> , <i>B.australis</i> , and <i>B.bracteata</i> . At CC8, this Blue Wild Indigo has the highest conservation value of them all and is the most commonly cultivated.
Castilleja coccinea (somebody's name + scarlet) (kass-till-LAY-uh)	Orobanchaceae [CC6]	Indian Paintbrush (annual or biennial / hemiparasitic / upward-reaching leaves somewhat resemble the colorful flower bracts / the famous scarlet paint colors come not from the petals, but rather from the sepals and especially from the subtending flower bracts)
<u>Celastrus scandens</u> (evergreen tree + climbing) (sell-ASS-trus)	Celastraceae [CC3]	American Bittersweet (although crossbreeding is common, the native has narrower leaves, fruit in terminal [rather than axillary] clusters, and orange [rather than yellow] fruit valves)
<u>Clematis fremontii</u> (climbing plant + somebody's name) (kleh-MATT-iss)	Ranunculaceae [CC10]	Fremont's Leatherflower (not a vine / leaves entire, opposite, persists through winter as skeletonized piece of art / flower: nodding, urn-shaped with reflexed tips of its 4 purple sepals [it has no petals] / numerous free stamens and carpels [primitive type flower]))
<u>Comandra umbellata</u> (hair-man + umbel inflorescence) (ko-MAN-druh)	Santalaceae [CC7]	Bastard Toadflax small [<10" tall] / hemiparasitic / leaves: alternate, elliptic, sessile, glabrous / flower: 5 white sepals [no petals], inferior ovary – interesting because the hypanthium is open at the end and lined with fleshy green nectary tissue, to which the 5 stamens are attached to its rim. / <i>Comandra</i> is in the fragrant Sandalwood family. It has no St. Louis relatives, but a bit farther South its cousin Mistletoe can be found.
<u>Coreopsis lanceolata</u> (kor-ee-OPP-sis)	Asteraceae (Coreopsideae tribe) [CC5]	Lanceleaf Coreopsis St. Louis has 6 species of Coreopsis: [<i>C.grandiflora,</i> <i>C.lanceolata, C.palmata, C.pubescens, C.tinctoria,</i> and <i>C.tripteris</i>]. They all have rays with lacerated tips and translucent "ghost phyllaries" behind their main green ones. <i>C.lanceolata</i> is distinguished by having only a few leaf nodes – and these are restricted to the bottom half of the plant (and

		produce opposite leaves that are long and narrow, sometimes with a pair of lateral lobes near the base)
<u>Coreopsis palmata</u> (buglike + palmate) (kor-ee-OPP-sis)	Asteraceae (Coreopsideae tribe) [CC7]	 Stiff Coreopsis St. Louis has 6 species of Coreopsis: [<i>C.grandiflora</i>, <i>C.lanceolata</i>, <i>C.palmata</i>, <i>C.pubescens</i>, <i>C.tinctoria</i>, and <i>C.tripteris</i>]. They all have rays with lacerated tips and translucent "ghost phyllaries" behind their main green ones. <i>C.palmata</i> is distinguished by having: leaf blades shaped like turkey foot (lobed, but not divided, shorter than <i>C.lanceolata</i>) ray florets paler shade of yellow than other species
<u>Cornus obliqua</u> (C.amomum) (KOR-nuss)	Cornaceae [CC5]	Swamp Dogwood Blue-fruited / narrowest leaves of any of our 5 St. Louis dogwoods / 3-5 pairs of curved lateral veins / <i>Cornus obliqua</i> (Swamp Dogwood) used to be a subspecies of <i>Cornus amonum</i> (Silky Dogwood) and known as <i>Cornus amonum</i> subsp. <i>obliqua</i> . But now they are distinct species. Swamp Dogwood does not have Silky Dogwood's rusty hairs on its leaf undersides. Swamp Dogwood's leaves are a bit narrower.
<u>Dalea purpurea</u> (somebody's name + purple) (DAY-lee-uh)	Fabaceae (Faboideae subfamily) [CC8]	 Purple Prairie Clover St. Louis has 3 Dalea species [<i>D.candida, D.leporina</i>, and <i>D.purpurea</i>]. They're all conservative plants. <i>D.leporina</i> is an annual, whereas the other 2 are perennials. Comparing the White Prairie Clover to our purple <i>Dalea purpurea</i>, we have: magenta (instead of white) color and shorter flower spikes narrower leaflets (but denser foliage) foliage often appearing as fascicles of trifoliate leaves with linear "birds-feet" leaflets (instead of pinnately-compound leaves with 5-11 elliptic or oblong leaflets) blooming that begins 2 weeks after white
Delphinium tricorne (dolphin + 3 horns) (del-FINN-ee-um)	Ranunculaceae [CC6]	Dwarf Larkspur (leaf: resembles a toothwort, but with forked tips and no teeth / flowers can be white or purple / primitive flower with about 20 stamens and 3 free carpels)
<u>Echinacea simulata</u> (hedgehog + imitate) (ek-in-NAY-shuh)	Asteraceae (Heliantheae tribe) [CC7]	 Wavyleaf Purple Coneflower (or Glade Coneflower) St. Louis has 3 <i>Echinacea</i> species: <i>E.purpurea</i> [Purple Coneflower] easiest to identify because ray florets are wide, deep pink-purple in color, and are much less droopy than the others. <i>E.pallida</i> [Pale Purple Coneflower] has WHITE POLLEN, and narrow, droopy, pale ray florets <i>E.simulata</i> [Wavyleaf Purple Coneflower] has YELLOW POLLEN, and narrow, droopy pale ray florets
<i>Erigeron strigosus</i> (early old man + strigose [bristly with stiff, straight, flat- lying hairs]) (er-RIJ-er-on)	Asteraceae (Astereae tribe) [CC3]	Daisy Fleabane (St. Louis has 5 species of Erigeron (<i>E.annuus, E.canadensis,</i> <i>E.philadelphicus, E.pulchellus, E.strigosus</i>). Daisy Fleabane can be distinguished by: stem leaves that are NARROW)
<u>Fimbristylis puberula</u> (fim-bri-STY-liss)	Cyperaceae [CC7]	 Hairy Fimbry or Glade Fimbry Fimbristylis is a "non-Carex" genus of sedges. Most species are associated with water, but this one (Fimbristylis puberula) can be found on glades. St. Louis has 2 species of Fimbristylis: F.autumnalis [Slender Fimbry] and F.puberula [Hairy Fimbry].
<u>Frangula caroliniana</u> (= brittle) (FRANG-goo-luh)	Rhamnaceae [CC6]	Carolina Buckthorn / Indian Cherry / Rhamnus thornless / leaves are smooth, simple, waxy, dark green, elliptic, toothless, entire /
<u>Houstonia longifolia</u> (hew-STO-nee-uh)	Rubiaceae [CC5]	Longleaf Bluet (perennial, slender branching stalks rise about 8" from a basal rosette that withers away before flowers bloom / leaves: narrow and opposite, paired at intervals on flowering stem / flowers: small with white 4-lobed corollas [should be called "Whitets" instead of "Bluets"] / prefers full or partial shade in poor soil]
<u>Hybanthus concolor</u> (hump-backed flower + same color)	Violaceae [CC7]	Green Violet

(hy-BANN-thus)		(the rebel of the violet family; only its dehisced 3-armed fruit
<i>Hypoxis hirsuta</i> (under + sharp + straight	Hypoxidaceae /	Yellow Stargrass
hairs)	Asparagales / monocots	(small plant with grasslike leaves / flowers open in morning
 (hy-POX-iss)	[CC5]	with 6 bright yellow tepals)
<u>Leucanthemum vulgare</u> (white + flower) (loo-KANN-thuh-mum)	Asteraceae (Anthemideae tribe) [intro]	 Oxeye Daisy [not to be confused with Oxeye Sunflower – Helianthus helianthoides] (perennial, rhizomatous / declared invasive in many countries / hard to get rid of because pieces of rhizome can produce new plants, and one plant can produce 26,000 seeds which may remain viable for 40 years / national flower of Denmark / one of
		its hybrids, the Shasta Daisy [<i>Leucanthemum</i> x <i>superbum</i> , is a garden favorite)
<u>Lithospermum canescens</u> (stone-seed + gray-haired) (lith-o-SPR-mum)	Boraginaceae [CC6]	Orange (or Hoary) Puccoon (perennial / leaves alternate, sessile, oblong / stems densely hairy / flowers distylous – some with long hatpin-like styles and short stamens, others with short styles and higher-placed stamens / flower color varies from deep orange to yellow / famously difficult to grow from seed because of mycorrhizal dependence)
<u>Monarda bradburiana</u> (somebody's name + somebody's name) (mo-NARR-duh)	Lamiaceae [CC5]	Bradbury's Beebalm (flower white with purple blotches / leaf: sessile [as contrasted with the long petioles of <i>M.fistulosa</i>] / of the "Big 4" St. Louis mints [<i>Monarda bradburiana</i> , <i>M.fistulosa</i> , <i>Blephilia ciliata</i> , <i>B.hirsuta</i>], this is the first to flower)
<u>Nostoc</u> (German "nostril") (NOSS-stock)	Nostocaceae (family) / Nostocales (order)	Nostoc Commune / Sky Jelly (a genus of cyanobacteria encased in a gelatinous mass of polysaccharides / photosynthetic / nitrogen fixer / important pioneer species / can enter a dehydrated dormancy for a hundred years / traditional culinary uses in Asia, however a neurotoxin has been found)
<u>Oenothera macrocarpa</u> () (ee-no-THEER-uh)	Onagraceae [CC7]	Missouri Evening Primrose St. Louis has 9 <i>Oenothera</i> species [see list <u>HERE</u>]. They all have the trademark Evening Primrose features, such as a basal rosette, the 4 stigma branches that famously make an X-shape, the inferior ovary that's far, far away from the flower opening, and the viscin threads that hold the pollen grains together. We have some beauties such as the Pink Evening Primrose. But when it comes to both beauty and flower size, this Missouri Primrose is our clear winner.
Parthenium integrifolium (par-THEEN-ee-um)	Asteraceae (Heliantheae tribe) [CC6]	Wild Quinine (leaves: spring leaves somewhat resemble prairie dock / flowerheads: look like a tiny snowballs with 5 ears spaced around their perimeters, which translates to many densely pubescent male disc florets encircled by 5 female ray florets)
<u>Pedicularis canadensis</u> (louse plant + Canada) (peddick-voo-LAYR-iss)	Orobanchaceae [CC5]	Canadian Lousewort / Wood Betony (leaves resemble fern fronds / hemiparasitic)
<u>Pediomelum esculentum</u> (apple of the plains + edible) (ped-ee-o-MEE-lum)	Fabaceae [CC10]	Prairie Turnip (stems: very pubescent with long hairs / leaves: palmately compound whorl of 5 leaflets / flowers: dense hyacinthlike racemes of purple flowers / tubers provide nutritional food)
<u>Penstemon pallidus</u> (5 stamen + pale) (PENN-steh-mun)	Plantaginaceae / Lamiales [CC5]	Pale Beardtongue (St. Louis has 2 penstemons, the other being <i>P.digitalis</i> . They both have opposite leaves and a white bilabiate flower with 4 fertile stamens and the famous 5 th infertile staminoid that lays on the bottom of the corolla tube like a hairy tongue. But there are differences: Our <i>P.pallidus</i> is a smaller plant of 1-3ft (rather than 4-5ft) Our <i>P.pallidus</i> is fuzzy all over (rather than mostly glabrous stems and leaves) Our <i>P.pallidus</i> flower has a lower lip that sticks out like an underbite or an angler fish (rather than a lower lip that flops down)
<u>Phlox pilosa</u> (FLOCKS)	Polemoniaceae [CC6]	Downy Phlox / Prairie Phlox (flower) (St. Louis has 3 Phlox species: <i>P.divaricata</i> [woodland], <i>P.paniculata</i> [garden], <i>P.pilosa</i> [prairie] / petals usually more of a pink than purple color / the best way to differentiate this

		Prairie Phlox from Woodland Phlox is to look for hair on the outside of the floral tube. This Prairie Phlox flower has hair whereas Woodland Phlox does not)
<u>Physalis virginiana</u> (bladder + virginia) (fy-SAY-liss)	Solanaceae [CC3]	Virginia Groundcherry St. Louis has 5 <i>Physalis</i> species [list <u>HERE</u>].
<u>Physocarpus opulifolius</u> (= bladder fruit + maple-leaved) (fy-so-KARR-pus)	Rosaceae [CC5]	Ninebark (peeling bark on older branches)
<u>Primula meadia</u> (first [to bloom] + somebody's name) (formerly <i>Dodecatheon</i>) (PRIMM-yoo-luh)	Primulaceae [CC7]	Shooting Star (perennial plant whose smooth, silky, elliptic leaves emerge from a basal rosette and whose handful of pinkish flowers nod from an umbel atop a long scape)
<u>Sabulina michauxii</u> (sandy + botanist's name) / synonyms: <i>Minuartia michauxii</i> and <i>Arenaria stricta</i> (sab-yoo-LY-nuh / mish-SHOW-ee-eye)	Caryophyllaceae [CC9]	Rock Sandwort / Stiff Sandwort / (leaves: needle-like, dense lower on stem, absent higher on stem / habitat: limestone glades, rocky soils / attractive)
<u>Scutellaria parvula</u> (small dish + small [flower]) (skoo-teh-LAYR-ee-uh)	Lamiaceae / Lamiales [CC4]	 Small Skullcap St. Louis has 5 different species of Skullcap [<i>S.elliptica</i>, <i>S.incana</i>, <i>S.lateriflora</i>, <i>S.ovata</i>, and <i>S.parvula</i>]. They all have opposite leaves, square stems, and a "tractor seat" protuberance on the back of their calyx called a "scutellum". This <i>Scutellaria parvula</i> has distinguishing features: It's short (3-9" tall) It has ovate leaves with entire leaf margins It has small (1/3") blue flowers Its inflorescence is special with flowers produced individually from leaf axils [rather than in terminal or axillary racemes] It grows in shallow soils over bedrock
<u>Silphium terebinthinaceum</u> (= extinct Greek plant that was resinous and medicinal + turpentine tree) (SILL-fee-um)	Asteraceae (Heliantheae tribe) [CC5]	Prairie Dock St. Louis has 4 Silphiums – and they're all special. Leaves: basal / resin flows from wound, giving plant a sweet smell / 14' taproot to reach water / leaves feels cool)
<u>Sisyrinchium campestre</u> (pig snout + of the fields) (siss-seh-RINK-ee-um)	Iridaceae [CC5]	 Prairie Blue-Eyed Grass St. Louis has 3 species of <i>Sisyrinchium: S.albidum</i>, <i>S.angustifolium</i>, and <i>S.campestre</i>. This <i>Sisyrinchium campestre</i> has these distinguishing features: pale blue (sometimes white) flowers with yellow centers dry, sandy habitat produces a single umbel of flowers between a pair of spathelike bracts on each flowering stalk never produces secondary flowering stalks from the primary flowering stalks perennial that produces a dense clump over time
<u>Sporobolus heterolepis</u> (seed thrower + different scales) (spor-O-bo-lus)	Poaceae (Chloridoideae subfamily) [CC6]	Prairie Dropseed (perennial bunchgrass / fine texture used as ornamental / part of the tallgrass and mixed-grass prairies / flowers and seedheads smell like buttered popcorn)
<u>Tephrosia virginiana</u> (ash-colored) (teff-RO-see-uh)	Fabaceae (Faboideae subfamily) [CC5]	Goat's Rue Leaf: alternate, pinnately compound with 8-15 pairs of oblong leaflets, hairy especially on their undersides / resembles Leadplant [<i>Amorpha canescens</i>], but Leadplant leaflets have rounded bases while Goat's Rue has leaflet bases that taper to their short petioles / Flower: bicolored with yellow banner petal and pink keel and wing petals /
Thalictrum revolutum (thuh-LICK-trum)	Ranunculaceae [CC5]	 Waxy-Leaf Meadow Rue St. Louis has 3 Thalictrum species: <i>T.dasycarpum, T.revolutum</i>, and <i>T.thalictroides</i>. This <i>T.revolutum</i> is difficult to differentiate from <i>Thalictrum dasycarpum</i>; here are some special <i>T.revolutum</i> features: stem and underside of leaflet pubescent with gland-tipped hairs (usually, but not always) leaflet margins revolute (rolled under) crushed leaflet has a peculiar odor
<u><i>Thaspium barbinode</i></u> (a location + bearded at the nodes)	Apiaceae [CC7]	Hairy-Jointed Meadow Parsnip

	(THASS-pee-um)		St. Louis has 2 Thaspiums (this <i>T.barbinode</i> and <i>T.trifoliatum</i> var. aureum). Features of this <i>Thaspium</i> include:
			 small yellow flowers with in-turned petals [as with Zizia]
			 stem and leaves mostly glabrous, with some sparse pubescence esp. at base of leaf sheaths
			 crushed leaves emit strong odor [as with Zizia] leaves are trifoliate compound
			 leaves have sheath-like clasping bases
			• leaflet margins toothed, but not as finely toothed as <i>T.trifoliatum</i>
			 flowers in compound terminal and axillary umbels on 3" peduncles
			 flowers with 5 sepals, 5 yellow petals, 5 stamens, inferior 2-carpel ovary topped with a stylopodium with 2 stylos
			 fruits are elliptical schizocarps with prominent longitudinal wings
			Lookalikes include: <i>Thaspium trifoliatum</i> [but it has thicker,
			more finely serrated leaves]
			more finely serrated leaves, a famously sessile central flower or
			fruit of their secondary umbellets, fruits that may be ribbed but
			not strongly winged, and a preference for a moister habitat]
			Lookalikes include: <i>Taenidia integerrima</i> [but it has airier
			Lookalikes include: Pastinaca sativa [but it's an aggressive
			much larger plant with grooved stems, flattened ribbed fruit, a
			larger flower cluster of duller, greenish-yellow flowers, and
			pinnately-compound leaves with up to 15 leaflets]
			Virginia Spiderwort
			(St. Louis has 4 spiderworts: <i>Tradescantia bracteata</i> ,
_	<u>Tradescantia virginiana</u> (trad-eh-SKANT-ee-uh)	Commelinaceae [CC6]	<i>T.ohiensis, T.subaspersa</i> , and this <i>T.virginiana</i>)
			small size
			 small size senals that are hairy but not glandular
			 narrow leaves
		T 11	Winged Elm (conspicuous wings on branches / base of leaf
	<u>Ulmus alata</u> (= elm + winged) (UL-muss)	Ulmaceae [CC4]	more symmetrical than other elms / terminal leaf is larger than
			lateral leaves / leaves double-serrated /)
			Striped Creamy Violet
	<u>Viola striata</u>	Violaceae	(a white violet with purple "landing stripes" venation on its
	(vy-O-lun)		lower petal / unusual in producing aerial stems and having
			miged supulos)

NOTES

Whenever we visit Victoria Glades, we usually cross the street from the parking lot and climb the hill up to the 239-acre MDC Conservation Area. But this time we didn't cross the street. We stayed on the parking-lot side to explore the "other" Victoria Glade – the richly diverse 101 acres that the Nature Conservancy owns.

SHORT OBSERVATIONS:

- The much-awaited periodical cicadas are starting to emerge and will continue through June. We are finding cicadas from Brood XIX (the largest brood of 13-year cicadas). A 17-year brood (Brood XIII) is also emerging at the same time, but we'd have to drive down to St. Francois, Perry, or Cape Girardeau counties to experience the co-emergence. Burt told us that more than one species occupies a brood. Kathy Bildner explained that to properly identify a cicada, its underside must be viewed.
- We noticed that the *Phlox pilosa* plants we encountered had mostly white flowers (instead of the more common pink).

- There was a large spread of *Viola striata* next to the parking lot. John explained that these white violets were different from most other violets because they have true stems from which the flowers and leaves grew. They also have fringed stipules (in contrast to the entire stipules of our other stemmed violet, the yellow *Viola pubescens*).
- Kathy demonstrated how to use the Merlin app for identifying bird songs.
- John pointed-out the pustular hairs of Prairie Dock and explained that the leaves feel cool because they are a good conductor of heat.
- We saw quite a few Missouri Primrose plants in bloom. John said that they could be called a "Yesterday, Today, and Tomorrow" plant because all 3 flower states could be seen on the same plant. He also showed us how far the ovary is from the mouth of the flower, a distance that requires a very long-tongued moth.
- Although we didn't find any, John took us to an area where he's seen *Muhlenbergia capillaris* growing. He described this Muhly Grass as being especially beautiful with its red flowers. Cultivars of it are sold commercially.
- We spent some time marveling over a mass of Nostoc, which is a genus of cyanobacteria. George reminded us that bacteria are procaryotes whose lineage goes way, way back on the evolutionary timescale even before algae!
- Kathy Bildner introduced us to insects that put frass on their backs to discourage birds.
- Somebody found a 3-toed male turtle.
- John noticed a Dogwood actually growing in a stream! *Cornus obliqua* (Swamp Dogwood) used to be a subspecies of *Cornus amomum* (Silky Dogwood) and known as *Cornus amomum* subsp. *obliqua*. But now they are distinct species. They both have blue fruit!
- A special thanks to Steve Bizub who volunteers for the Nature Conservancy and helps keep it free from invasives. He knew where all the special plants were and shared his knowledge to help us navigate through this fascinating treasure trove of glade botany.

PARTICIPANTS:

There were 13 of us botanists today, who are (in alphabetical order):

Brenda Adams, Kathy Bildner, Steve Bizub, Jerry Castillon, Wayne Clark, Michael Laschober, Burt Noll, John Oliver, David Steinmeyer, Mark & Deb Tolcou, George Van Brunt, and Laura Yates.