Monsanto Lake (Northeast Side)

April 30, 2024

	BOTANICAL NAME (with etymology & genus pronunciation)	**FAMILY** [CC] = Coefficient of Conservatism	**COMMON NAME** (with tips we learned)
☐	*Andersonglossum virginianum* [formerly *Cynoglossum*] (an-dr-sun-GLOSS-um)	Boraginaceae [CC6]	Wild Comfrey (perennial, unbranched, hairy plant / basal leaves: large, entire, tapered into winged petioles / stem leaves: large, entire, sessile, clasping stem)
☐	*Asclepias verticillata* (Greek god of medicine + whorled) (uh-SKLEE-pee-us)	Apocynaceae [CC2]	Whorled Milkweed (perennial / leaves: narrow, linear, arranged in whorls of 4-6 / flowers: greenish-white in umbels of 7-20, fragrant / habitat: glades, dry areas /)
☐	*Asplenium platyneuron* (without spleen [medicinal for aiding spleen] + flat veins) (uh-SPLEE-nee-um)	Aspleniaceae [CC4]	Ebony Spleenwort (cheerful little fern; fertile fronds stand upright but die off during winter; sterile fronds are evergreen and lie on ground during winter)
☐	*Baptisia bracteata* (to dip [as in dyeing] + with bracts) (bap-TIZZ-ee-uh)	Fabaceae [CC7]	Cream Wild Indigo (perennial / leaves: compound with 3 oblanceolate leaflets / flowers: white, pea-like (with banner, wings, and keel) arranged in racemes / the "*bracteata*" epithet refers not to the conspicuous leaf stipules, but rather to the leaflike bracts at the base of each flower's pedicel)
☐	*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)
☐	*Cephalanthus occidentalis* (head + flowers + western) (seff-uh-LANN-thus)	Rubiaceae [CC3]	Buttonbush (habitat: wetlands / leaves: opposite, entire / fruit: spherical clusters of achenes persist into winter)
☐	*Cirsium caroliniana* (thistle + Carolina) (SR-see-um)	Asteraceae (Cardueae tribe) [CC8]	Carolina Thistle (tall but more friendly than other thistles, with narrow leaves and fewer spines / involucral bracts have conspicuously white midribs and long spines / garden-worthy)
☐	*Cunila origanoides* (= mint + like oregano) (KOO-nil-luh)	Lamiaceae [CC6]	Dittany (leaf: opposite, sessile, ovate tapered to sharply-pointed tip / strong fragrance and flavor of oregano / producer of frost flowers / indicator [along with blueberries and White Oak] of acid soil)
☐	*Cypripedium parviflorum* (Aphrodite + slipper + small flower) (sy-prih-PEE-dee-um)	Orchidaceae [CC8]	Yellow Lady's Slipper Since it's an orchid, we expect to see 6 tepals (3 sepals spaced at 120° plus 3 petals spaced between the sepals, with the bottom petal [the lip or labellum] being special.) However with the Lady's Slipper, it's hard to account for these 6 tepals. We of course see the special yellow shoe-like petal (labellum). But that means we should have 5 remaining tepals, but we only see 4. That's because the 2 lateral sepals are fused into one large one that hangs down behind the big puffy yellow petal. The remaining 2 petals appear as curlicues on either side of the puffy yellow labellum.
☐	*Equisetum arvense* (horse bristle + field) (eck-weh-SEE-tum)	Equisetaceae (in the same Polypodiopsida class as ferns) [CC1]	Field Horsetail (short, whitish, non-photosynthesizing fertile stems appear in early spring, followed by green "pine sapling" vegetative stems)
☐	*Erigeron strigosus* (er-RIJ-er-on)	Asteraceae (Astereae tribe) [CC3]	Daisy Fleabane (stem leaves: linear to narrowly oblanceolate)
☐	*Galium circaezans* (milk + enchanting) (GAY-lee-um / sr-SEE-zanz)	Rubiaceae [CC4]	Licorice Bedstraw / Wild White Licorice [roots] / (whorl of 4 leaves, each with 3 prominent veins [which distinguishes it from *G.pilosum* which has only 1 prominent vein] / 4 leaves in whorl, / mnemonic: the first 4 letters of "circaezans" are the same as "circus" where licorice can be

			found / leaves have a rather pleasant flavor, though not of licorice)
☐	*Galium pilosum* (milk + fine hairs) (GAY-lee-um)	Rubiaceae [CC6]	Hairy Bedstraw (whorl of 4 leaves, each with 1 prominent vein [which distinguishes it from *G.circaezans* which has 3 prominent veins] / also distinguished by its tiny maroon [rather than whitish] flowers)
☐	*Glandularia canadensis* (gland-tipped hairs of calyces?) (gland-yoo-LAYR-ee-uh)	Verbenaceae [CC5]	Rose Verbena (leaves: opposite, deeply cut into an attractive treelike shape / flowers in terminal clusters; 5 purple petals with notched tips; not quite actinomorphic)
☐	*Heuchera richardsonii* (somebody's name + somebody's name) (HYOO-kr-ah)	Saxifragaceae [CC6]	Prairie Alumroot (St. Louis has 2 Heuchera species [the other being *H.americana*] which are difficult to differentiate / Our *H.richardsonii* is more tolerant of dry conditions and doesn't grow in the moister eastern states) / Our *H.richardsonii* blooms a bit earlier [April-June] / Our *H.richardsonii* typically just has green leaves which lack the purple, bronze, and cream color variations /
☐	*Hypoxis hirsuta* (under + sharp + straight hairs) (hy-POX-iss)	Hypoxidaceae / Asparagales / monocots [CC5]	Yellow Stargrass (small plant with grasslike leaves / flowers open in morning with 6 bright yellow tepals)
☐	*Krigia biflora* (somebody's name + 2 flowers) (KRIGG-ee-uh)	Asteraceae (Cichorieae tribe) [CC5]	Two-flower Dwarf Dandelion (leaves: smooth, glaucous, oblong, clasping stem / heads: all ligulate florets [no disc florets] like a dandelion, but much taller than a dandelion / may have 20 or more heads, often 2 per flower stalk)
☐	*Lithospermum canescens* (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)
☐	*Monarda bradburiana* (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 *M.fistulosa*] / of the "Big 4" St. Louis mints [*Monarda bradburiana, M.fistulosa, Blephilia ciliata, B.hirsuta*], this is the first to flower)
☐	*Nemastylis geminiflora* (threadlike styles + twin flowers) (nem-uh-STY-liss)	Iridaceae [CC10]	Celestial Lily (stems grow from bulb, with 1-4 linear leaves clasping each stem / long grasslike leaves folded near base and pleated along veins higher / flowers have 6 blue tepals [with whitish eye at base], 3 very prominent anthers [which shorten considerably after dehiscence], and its namesake 6 threadlike styles [actually 1 style with 3 arms which are each split] / flowers only last a day, opening late morning and closing mid-afternoon)
☐	*Oxalis violacea* (sharp taste + violet) (oks-AL-iss)	Oxalidaceae CC5	Violet Wood-Sorrel (leaves with the *Oxalis* trademark 3 obcordate leaflets / purple flowers often re-appear for an encore in the Fall without leaves)
☐	*Pellaea glabella* (dark-colored + rather smooth) (pell-EE-uh)	Pteridaceae [CC9]	Smooth Cliffbrake Fern (almost always seen growing from limestone or dolomite rock / stems brown, stiff and wiry / sori found along margin on underside of leaflets, protected by recurved edge)
☐	*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)
☐	*Penstemon pallidus* (5 stamen + pale) (PENN-steh-mun)	Plantaginaceae / Lamiales [CC5]	Pale Beardtongue (St. Louis has 2 penstemons, the other being *P.digitalis*. They both have opposite leaves and a white bilabiate flower with 4 fertile stamens and the famous 5th infertile staminoid that lays on the bottom of the corolla tube like a hairy tongue. But there are differences: Our *P.pallidus* is a smaller plant of 1-3ft (rather than 4-5ft) Our *P.pallidus* is fuzzy all over (rather than mostly glabrous stems and leaves)

			Our *P.pallidus* flower has a lower lip that sticks out like an underbite or an angler fish (rather than a lower lip that flops down)
☐	*Potentilla simplex* (powerful + plain) (po-ten-TILL-uh)	Rosaceae [CC3]	Common Cinquefoil (Leaves: palmately compound with 5 sharply serrated leaflets / Flowers: 5 yellow petals, slightly notched, over 20 stamens and often even more carpels / sprawls along ground with long stolons whose tip can root and form new plants / has hypanthium /
☐	*Ranunculus hispidus* (=little frog + hairy with long, erect, rigid hairs) (ruh-NUN-kyoo-lus)	Ranunculaceae [CC4]	Bristly Buttercup (St. Louis has 6 buttercups. 3 of them have tiny flowers, 1 of them has medium-sized flowers, and 2 of them [*R. hispidus* and *R.fascicularis*] have comparatively large flowers. Of the large flowers, here's how to differentiate our *R.hispidus*: Our *R.hispidus* has trifoliate leaves which have much busier leaflets with many pointed lobes. They don't look like birdfeet. Our *R.hispidus* appears to have (despite its name) less hair on its leaves. Our *R.hispidus* does NOT have tuberous thickenings on its roots right below the plant's crown. But checking for this feature might imperil the plant, so we don't.
☐	*Rhus aromatica* (= fragrant) (ROOS)	Anacardiaceae / Sapindales [CC4]	Fragrant Sumac (this is the plant that would look like poison ivy if its terminal leaflet had a long petiolule / the plant is mostly dioecious, but sometimes with some opposite-sex or bisexual flowers in the mix / Flowers: emerge from dark-scaled catkins that were formed during the previous summer / female flower has 3 blobs at its very center which are the knob-like stigmas at the tips of the short 3-lobed style / male flower has 5 short stamens that encircle the gynoecium / St. Louis has 2 rather distinct varieties of *Rhus aromatica.*: variety AROMATICA [C4] has a more sharply-pointed terminal leaflet, it flowers before the leaves emerge, it's a shorter plant that is more common in our area. Variety SEROTINA [aka Tall Sumac – C6] has a more rounded terminal leaflet, it flowers after the leaves emerge ("serotina" = "late" in Latin), it's a taller plant that is not as common in our area (its range extends westward to the Rocky Mountains).
☐	*Scutellaria parvula* (small dish + small [flower]) (skoo-teh-LAYR-ee-uh)	Lamiaceae / Lamiales [CC4]	Small Skullcap St. Louis has 5 different species of Skullcap [*S.elliptica, S.incana, S.lateriflora, S.ovata,* and *S.parvula*]. They all have opposite leaves, square stems, and a "tractor seat" protuberance on the back of their calyx called a "scutellum". This *Scutellaria parvula* 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
☐	*Sisyrinchium campestre* (pig snout + of the fields) (siss-seh-RINK-ee-um)	Iridaceae [CC5]	Prairie Blue-Eyed Grass St. Louis has 3 species of *Sisyrinchium*: *S.albidum, S.angustifolium,* and *S.campestre*. This *Sisyrinchium campestre* 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
☐	*Thalictrum thalictroides* (thuh-LICK-trum)	Ranunculaceae [CC5]	Rue Anemone (This is the so-called "True Rue" which is often confused with the "False Rue" (*Enemion biternatum*): *Thalictrum* often has

			more than 5 petals (*Enemion* has only 5), *Thalictrum* often has pinkish petals [actually petaloid sepals] (*Enemion* only has white), *Thalictrum* prefers a drier upland habitat (*Enemion* prefers a moist lowland), *Thalictrum* is solitary or grows in small groups (*Enemion*, often grows in large groups), *Thalictrum*'s leaflets have short lobes – like kitten paws (*Enemion*'s leaflets have longer fingerlike lobes)
☐	*Viburnum prunifolium* (= to tie [maybe referring to the pliancy of the twigs] + leaves like *Prunus*) (vy-BURR-num)	Adoxaceae / Dipsacales [CC4]	Blackhaw St. Louis only has 2 Viburnums: this *V.prunifolium* and *V.rufidulum*. They both have opposite, broadly elliptic, finely-toothed leaves. They both have flowers in large, white, snowball inflorescences. However there are differences: Leaf: *V.prunifolium* has thin leaves with a somewhat dull upper surface and with a petiole devoid of dense red hairs. Winter Bud: *V.prunifolium* has bivalve leaf-bud scales that are tan, somewhat sticky, and mostly hairless.
☐	*Viburnum rufidulum* (= to tie [maybe referring to the pliancy of the twigs] + reddish) (vy-BURR-num)	Adoxaceae / Dipsacales [CC4]	Rusty Blackhaw St. Louis only has 2 Viburnums: this *V.rufidulum* and *V.prunifolium*. They both have opposite, broadly elliptic, finely-toothed leaves. They both have flowers in large, white, snowball inflorescences. However there are differences: Leaf: *V.rufidulum* has somewhat thick, leathery leaves with a glossy upper surface and with petioles densely covered with red-brown stellate hairs. Winter Bud: *V.rufidulum* has bivalve leaf-bud scales that are not sticky and densely pubescent with red-brown stellate hairs.
☐	*Viola palmata*) (violet + leaves palmately lobed) (vy-O-luh)	Violaceae [CC5]	Tri-Lobed Violet (young plants with unlobed leaves are hard to distinguish from the common *Viola sororia*)

NOTES

For this Monday's Botany Walk (it was actually Tuesday because it had been raining on Monday), we met at the Monsanto Lake parking lot and walked to our left to explore the northeast side of the lake. Our purpose for coming here was to look for Yellow Lady's Slipper Orchids.

Long story short, we hit the jackpot! We found them all over. In one cluster alone we counted 13 flowering stems! And in addition to the orchids, we found other interesting plants. A favorite of everybody's was the Celestial Lily (*Nemastylis geminiflora*). The flowers weren't yet open when we first saw them along the trail, but on our return they were open in all their glory.

It's unusual to have everything go so perfectly. But it did. We all learned new things. And to top it off, we even found a patch of morel mushrooms on our way back to the cars! Thank you, John, for creating this opportunity for us.

PARTICIPANTS:
There were 10 of us botanists today, who are (in alphabetical order):
Kathy Bildner, Steve Bizub, Michael Laschober, Len Meier, Burt Noll, John Oliver, Tina Richardson, David Steinmeyer, Kathy Thiele, and George Van Brunt.