

# Royal Gorge Trail

November 27, 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>Acer rubrum</i></a> (= red) (AY-sr)	Sapindaceae [CC5]	Red Maple (leaf: usually 3 principal triangular lobes with toothed margins and pointed tips / buds somewhat rounded with multiple scales, softer and less pointed than Sugar Maple / John explained that the Red will display petals in the spring, whereas the closely related Silver will not. Also in contrast with Silver, the Red Maple's twigs are without an odor, and the trunk bark is not scaly / we found no samaras because Red and Silver are the only maples in our area that produce their fruit in spring instead of fall)
<input type="checkbox"/>	<a href="#"><i>Andropogon virginicus</i></a> (man + beard) (an-dro-PO-gon)	Poaceae (Panicoideae subfamily) [CC2]	Broomsedge (easy to confuse with Little Bluestem; see comparison chart below)
<input type="checkbox"/>	<a href="#"><i>Aplectrum hyemale</i></a> (without spurs + winter) (ay-PLECK-trum)	Orchidaceae [CC8]	Adam and Eve Orchid [so-called because on older plants the corm develops a second linked corm] / Putty Root Orchid [so-called because crushed corms release a sticky substance once used to mend pots] Only has 1 leaf, but it is eye-catching with its conspicuous, parallel white strips and its large, pleated blade /
<input type="checkbox"/>	<a href="#"><i>Carpinus caroliniana</i></a> (car-PY-nus)	Betulaceae [CC6]	Musclewood Tree (habitat: shaded areas with moist soils / trunk ribbed like muscles / leaf: looks corrugated with prominent veins, but its veins are NOT forked [in contrast to <i>Ostrya</i> ] / male and female catkins appear in spring with leaves / we also found its Betulac cousins <i>Ostrya</i> and <i>Corylus</i> )
<input type="checkbox"/>	<a href="#"><i>Carya cordiformis</i></a> (nut tree + heart-shaped) (KAYR-ee-uh)	Juglandaceae [CC5]	Bitternut Hickory (has naked buds, like the pecan / St. Louis has 7 different hickory species / John explained that the hickories can be divided into 2 groups: the Bitternut and Pecan belong to one group [the Apocarya section] while all the others, i.e. Pignut, Shellbark, Shagbark, Black, and Mockernut belong to the other group [the <i>Carya</i> section])
<input type="checkbox"/>	<a href="#"><i>Corylus americana</i></a> (Latin for hazel tree) (KOR-ill-luss)	Betulaceae [CC4]	Hazelnut (we found some long green male catkins hanging on the shrub getting ready for spring, but it was still too early to find any small red female flowers at the end of the twigs)
<input type="checkbox"/>	<a href="#"><i>Cunila origanoides</i></a> (= mint + like oregano) (KOO-nil-lah)	Lamiaceae [CC6]	Dittany (producer of frost flowers – which we found! / indicator [along with blueberries and White Oak] of acid soil)
<input type="checkbox"/>	<a href="#"><i>Dioscorea villosa</i></a> (= somebody's name + softly hairy) (dy-o-SKOR-ee-uh)	Dioscoreaceae (a monocot family) [CC5]	Wild Yam (the attractive heart-shaped summer leaves of this vine were all gone, but its 3-winged fruit capsules divulged its identify)
<input type="checkbox"/>	<a href="#"><i>Dryopteris marginalis</i></a> (= oak + fern + margins [where sori are located]) (dry-OPP-tr-us) [but a more etymologically meaningful pronunciation would be “dry-o-TAYR-us”]	Dryopteridaceae [CC7]	Marginal Shield Fern (evergreen, like the Christmas Fern)
<input type="checkbox"/>	<a href="#"><i>Fraxinus smallii</i></a> (FRACK-sin-us)	Oleaceae [CC3]	Sullivan's Ash [yes! our own Father Sullivan!] (a type of White Ash with, among other differences, brown buds instead of the typical black ones)
<input type="checkbox"/>	<a href="#"><i>Galium arkansanum</i></a> (milk + Arkansas) (GAY-lee-um)	Rubiaceae [CC6]	Arkansas Bedstraw (special because it has red flowers in the spring)
<input type="checkbox"/>	<a href="#"><i>Hamamelis virginiana</i></a> (= together with fruit [new flowers and fruit from preceding year at the same time]) (ham-a-MEE-liss)	Hamamelidaceae [CC9]	Fall Witch-Hazel / Eastern Witch Hazel [“witch” is from an Old English word meaning “bendable”] (has 4 yellow shoestring-like petals / <i>H. virginiana</i> is the species from which medicinal Witch-Hazel products are made and sold in local stores)
<input type="checkbox"/>	<a href="#"><i>Hypericum hypericoides</i></a> (above + picture + resembles a hypericum) (hy-PAYR-i-kum)	Hypericaceae [CC8]	St. Andrew's Cross (small green narrow elliptical leaves / trickier to identify without their iconic flower petals)
<input type="checkbox"/>	<a href="#"><i>Hypericum prolificum</i></a> (above + picture + prolific [number of stamens])	Hypericaceae [CC4]	Shrubby St. John's Wort

	(hy-PAYR-i-kum)		(the leaves were still green, but in the chilly weather nobody bothered to hold a leaf up to look for its pellucid dots)
<input type="checkbox"/>	<a href="#"><i>Ostrya virginiana</i></a> (= scale [scaly inflorescence]) (o-STRY-yuh)	Betulaceae [CC4]	Hop Hornbeam (hop-like fruit, shredded bark on older trees, leaves: often marcescent [retained throughout winter], with venation that is forked [in contrast to <i>Carpinus</i> ] / we also found its Betulac brothers <i>Carpinus</i> and <i>Corylus</i> )
<input type="checkbox"/>	<a href="#"><i>Pinus echinata</i></a> (= pine tree + hedgehog) (PY-nuss)	Pinaceae [CC5]	Shortleaf Pine (Missouri's only native pine / people always comment about its beautiful big-plated bark)
<input type="checkbox"/>	<a href="#"><i>Polystichum acrosticoides</i></a> (many rows + resembling <i>Acrostichum</i> , the Elk-Horn Fern, which also has its sori densely packed on pinna underside) (po-LISS-tick-um)	Dryopteridaceae [CC5]	Christmas Fern (so-named because it's still green at Christmas, except for the fertile tips of fronds which are dried up and brown)
<input type="checkbox"/>	<a href="#"><i>Pteridium aquilinum</i></a> (= fern + eagle [image in sliced root]) (tr-RIDD-ee-um)	Dennstaedtiaceae [CC4]	Bracken Fern / Eagle Fern (triangular-shaped fronds, 2-3x pinnate / sori covered by rolled leaf margins / deciduous / rhizomatous / linked to stomach cancer)
<input type="checkbox"/>	<a href="#"><i>Quercus marilandica</i></a> (state of Maryland) (KWERK-us)	Fagaceae (red group) [CC4]	Blackjack Oak (gnarly, short tree / leaf: tough, leathery, wedge-shaped with a narrow base that flares up to a wide leaf-top with 3 lobes, each with only 1 bristle / bark: cracked into black rectangular alligator-skin plates / dead limbs persist on lower trunk / lives in poor, thin, dry, rocky soils)
<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>Sceptridium dissectum</i></a> (skep-TRIDD-ee-um)	Ophioglossaceae (Adder's Tongue Family) – a different order from the common Polypod ferns; [CC5]	Grape Fern (so-called because the sporangia on the fertile stalk resemble grapes) (sterile frond turns bronze during the winter, but still photosynthesizes / although people speak of fertile and sterile fronds, they're actually connected as one)
<input type="checkbox"/>	<a href="#"><i>Schizachyrium scoparium</i></a> (= to split + chaff [lemma] + broomlike) (shih-ZACK-ree-um)	Poaceae (Panicoideae subfamily) [CC5]	Little Bluestem (dense mounds of coppery stems with luminous seedheads)
<input type="checkbox"/>	<a href="#"><i>Scutellaria lateriflora</i></a> (small dish + side flowering) (skoo-teh-LAYR-ee-uh)	Lamiaceae (Scutellarioideae subfam) [CC5]	Mad-Dog Skullcap (St. Louis has some 5 different species of Skullcap. They all have a "tractor seat" protuberance on the back of their calyx called a "scutellum". But this particular species has a special medicinal use as a calmativ.)
<input type="checkbox"/>	<a href="#"><i>Smilax bona-nox</i></a> (good night) (SMY-lax)	Smilacaceae (a monocot family) [CC3]	Saw Greenbrier (so-named because edge of leaf is lined with spines that can be felt / attractive arrow-shaped leaves have wide base / colors are waxy-brown splotched with light-green watermarks / stem prickles are evenly spaced / edible)
<input type="checkbox"/>	<a href="#"><i>Smilax glauca</i></a> (= glaucous) (SMY-lax)	Smilacaceae (a monocot family) [CC4]	Cat Greenbrier (underside of leaf is much paler than the upper side – even somewhat glaucous with a bloom that can be at least partially wiped off)
<input type="checkbox"/>	<a href="#"><i>Vaccinium arboreum</i></a> (blueberry + treelike) (vack-SINN-ee-um)	Ericaceae [CC6]	Farkleberry (of our 3 St. Louis blueberries [ <i>V. arboreum</i> , <i>V. staminium</i> , and <i>V. pallidum</i> ], this is the tallest and has the most OPEN leaf venation)
<input type="checkbox"/>	<a href="#"><i>Verbascum thapsus</i></a> (bearded [stamen filaments] + town in Tunisia) (vr-BASS-kum)	Scrophulariaceae (Figwort Family) [intro]	Mullein (biennial / we saw the very soft-looking basal rosettes of the first-season plants / leaves look as inviting to touch as Lamb's Ear [ <i>Stachys bizantina</i> ] from the Mint Family / unfortunately this interesting plant is considered invasive and is not planted)

## Highlights:

Our main objective was to find *Hamamelis virginiana*, the Fall Witch-Hazel. It was John who found the first one, after which we all found others. Although now in late November their yellow flowers were scentless and past their peak, it was nonetheless exciting to find them. John shared the tantalizing thought that the related Spring Witch-Hazel (*Hamamelis*

*vernalis*) might also be growing in this area – maybe even amongst the Fall Witch-Hazels so that we could do a side-by-side comparison. But we didn't notice any. Anyway, the Fall Witch Hazel is famously the last plant to flower in this part of the world – and we got to see it!

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We found some red maples with their clusters of red buds. Steve recited his poem:

“*Roses are Red, Violets are Purple  
Sugar is Sweet, and so is Maple Syrples*”

This poem unfortunately did not win the St. Louis Poetry Slam, but he insisted that I include it anyway.

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It was Prem who found the first **ice flower** growing from a Dittany stem. Afterwards we found quite a few more. Kathy held a particularly large and beautiful one in her hand. We tasted it to see if it had the characteristic oregano flavor of Dittany. We couldn't detect much of any flavor. Up close, the flower looks like a ribbon laminated in countless micro-layers of ice. But how can this be? It's almost December and the temperature has dipped below 32° many times. The stems probably split weeks ago. How can these plants still be making ice flowers? A few years ago George Van Brunt explained to us that Dittany is a perennial. Although the parts we see now are all spent and strawlike, its roots are still alive and are still pumping-up water.

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Tina found the first (of many) Adam-and-Eve orchids (*Aplectrum hyemale*). It's always a surprise to see its large, pleated leaf with its conspicuous parallel, white-striped venation. John explained how it got its “Adam-and-Eve” name: the single corm on older plants develops a second corm to which it is linked.

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As for the fern department, we found at least four: *Dryopteris marginalis* (Marginal Shield Fern), *Polystichum acrostichoides* (Christmas Fern), *Pteridium aquilinum* (Bracken Fern), and *Sceptridium dissectum* (Grape Fern). John explained that the *Sceptridium* had already changed to its bronze winter color, but it was still able to photosynthesize. The *Sceptridium* is very different from the other two. Forget the family, this single-frond fern is not even in the same taxonomic order as the others!

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With the growing season over, we saw countless spent, dry and desiccated plants. Some in our group are quite skillful in identifying them. John identified one as “Mad-Dog Skullcap” (*Scutellaria lateriflora*). Of our 5 St. Louis skullcaps, this one seems to have some special calming properties, as explained in this short YouTube [VIDEO](#) by Joe Hollis.

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One of the first green-leaved plants we found was a monocot, the uncommon but stylish *Smilax bona-nox* vine. Not long after that we found its brother, another uncommon vine called *Smilax glauca*. So everybody was smiling about our pair of *Smilax*.

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Another objective of ours was to find “gnarled *Quercus marilandica* (Blackjack Oaks) clinging to the ancient rhyolite” to quote the email we got. Well we did indeed find plenty of gnarly Blackjack Oaks – still stubbornly holding-on to their brown leaves (marcescent). And we did find the ancient rhyolite – (even pink ones!) – the igneous rock with microscopic grains.

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As always, we had to ask John for help in identifying whether we found Little Bluestem (*Schizachyrium scoparium*) or Broomsedge (*Andropogon virginicus*). Maybe this table and the photos at the end can help us learn to distinguish between these two very similar grasses:

common:	Little Bluestem (aka “Beard Grass”)	Broomsedge (not a sedge)
botanical:	<i>Schizachyrium scoparium</i>	<i>Andropogon virginicus</i>
pronounce:	shih-ZACK-ree-um	an-dro-PO-gon
useful video	<a href="https://www.youtube.com/watch?v=T3DAh2dEaX0">https://www.youtube.com/watch?v=T3DAh2dEaX0</a>	<a href="https://www.youtube.com/watch?v=VCC7rYmZFKE">https://www.youtube.com/watch?v=VCC7rYmZFKE</a>

cross section	oval (see illustration below)	flattened (see illustration below)
stem exposure:	stems exposed, not enclosed	more densely leaved / stems mostly hidden by overlapping, flattened sheaths
head exposure:	seedheads exposed, not enclosed	seedheads partly enclosed in a leaflike spathe
leaf shape	leaves are folded at the bottom	leaves are generally flat
dormant color:	foliage usually more reddish, bronze color	foliage usually yellowish tan
stature:	stems more likely to stay upright, not leaning or curving at the top / however when they do lean, they're more likely to lean outward from the clump in different directions	stems often lean, with the upper portion of the plant curving considerably / when they do lean, stems are more likely to lean in the same direction
habitat:	can be found in disturbed habitats, but more likely in stable habitats	prefers highly disturbed, early-successional habitats
winter mnemonic:	Little Bluestem is a much more famous and colorful character. He's happy to show-off his white beard as one of the top 4 iconic grasses of the Tallgrass Prairie. Poor Broomsedge, on the other hand, is a shy, paler fellow. He tries to hide his flat body with flattened sheaths. He tries to hide his bearded head with a leaflike spathe. He tries to escape by calling himself a "sedge", but DNA evidence proves otherwise. He lives in a poor-soil part of town, often sorrowfully leaning this way or that way in unison with his fellow inhabitants. He tries to eke out a living by making brooms, but even there he's way outclassed by Broomcorn ( <i>Sorghum</i> ).	

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We didn't find our way back to the cars until after 3:00. We're not often lost – at least not in the geographical sense. But none of us had ever been on this trail before – and the thick carpet of fallen leaves had made the trail invisible and our footing insecure. But nobody seemed to mind this extra bit of adventure on such a beautiful, crisp, sunny day.

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Today's 10 participants (in alphabetical order):

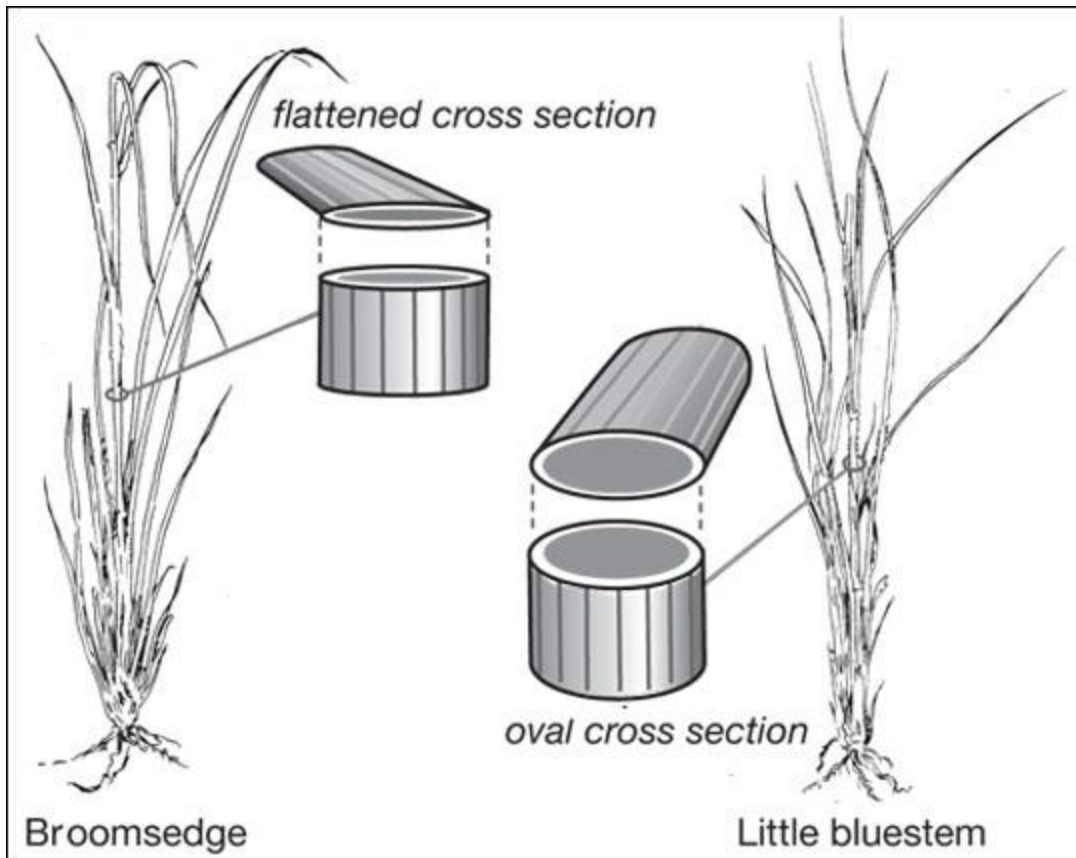
Prem Barton, Kathy Bildner, Steve Bizub, Tina Cheung & Keith Woodyard, Wayne Clark, Michelle Crutcher, Michael Laschober, John Oliver, and Anne Rankin



(above) both photos of Little Bluestem (by Paul Marcum, Illinois Natural History Survey)



(above) Broomsedge photo (from "Picture This" AI Plant Identification webpage)



above illustration: University of Missouri Extension

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