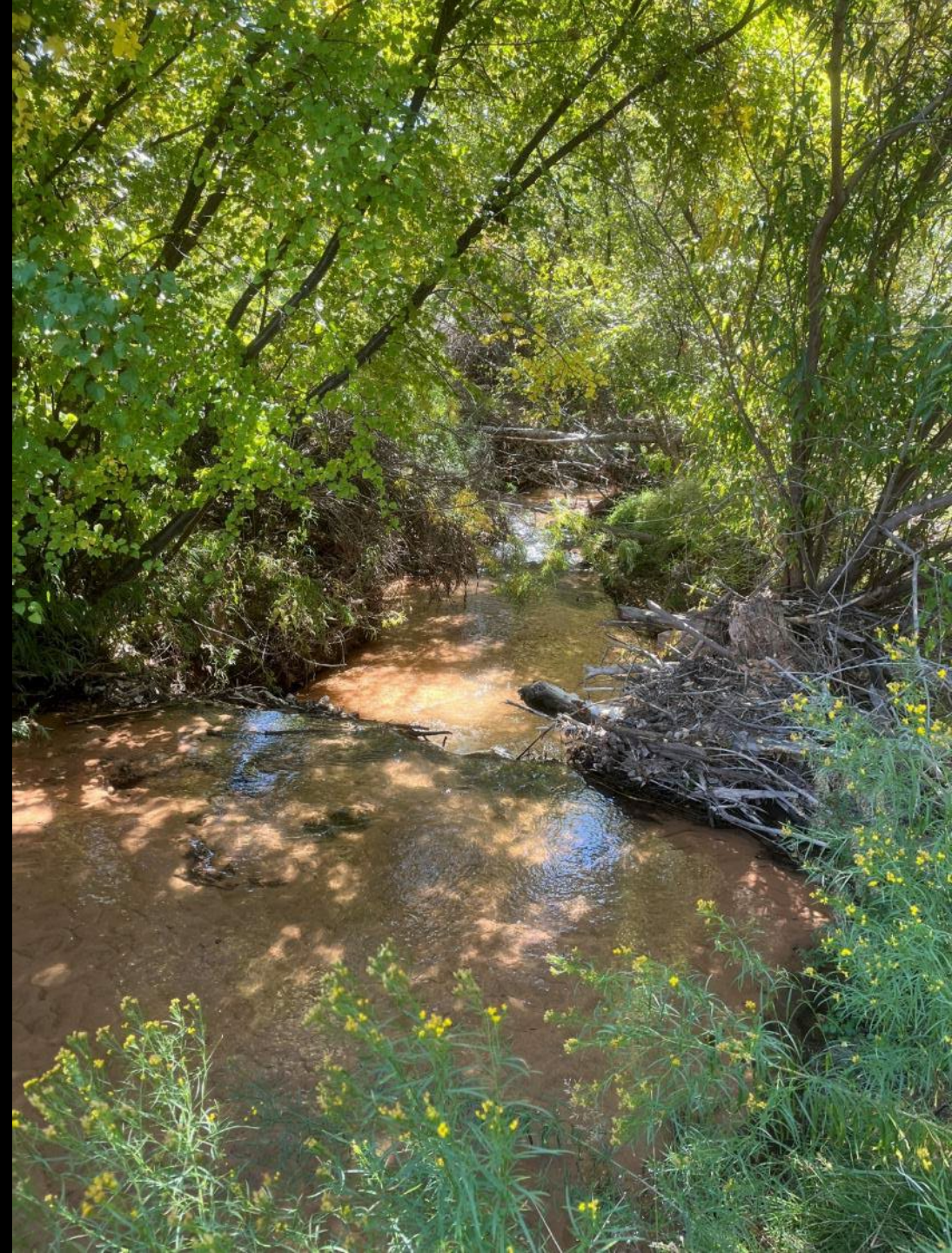


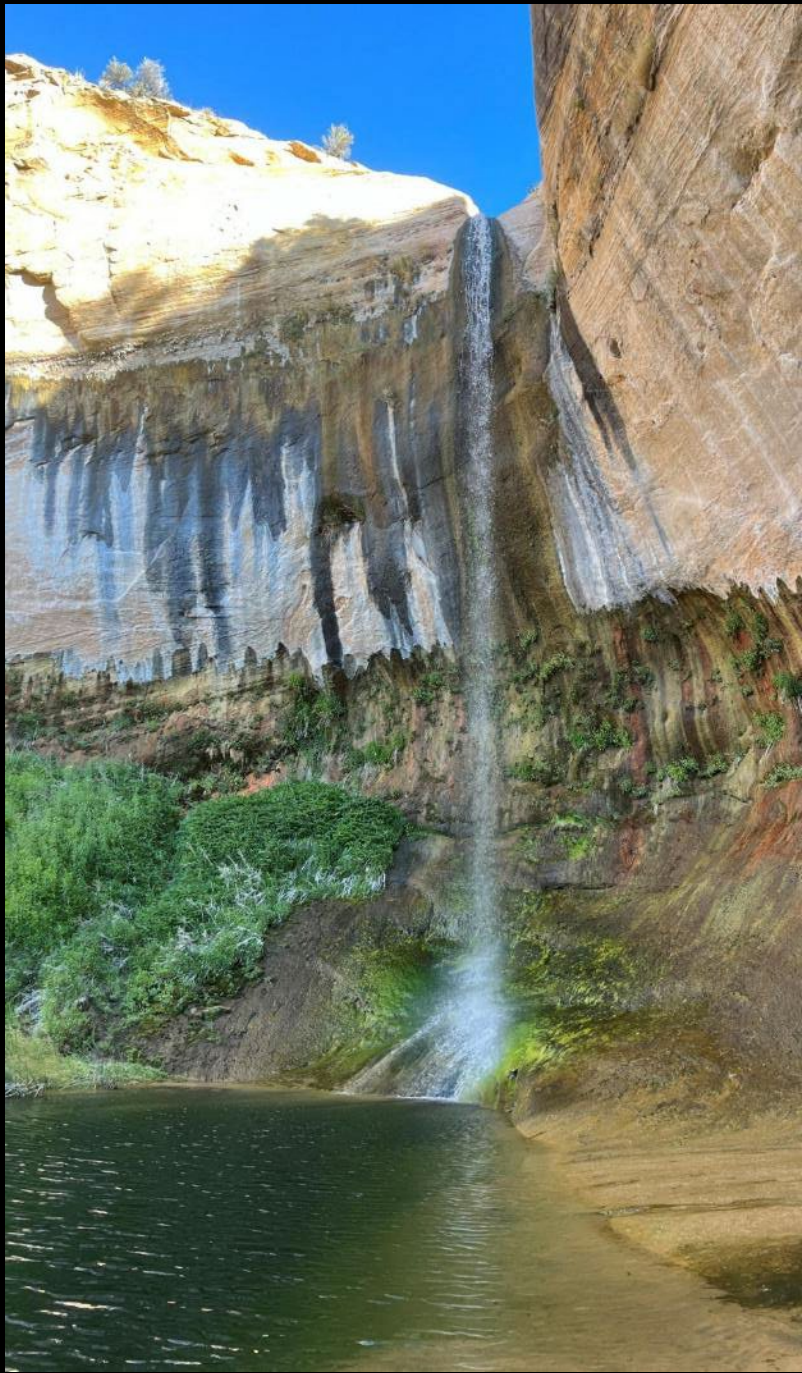
Riparian and Wetland Plants of Grand Staircase-Escalante National Monument

Marc Coles-Ritchie

BLM Ecologist and Science Coordinator at
Grand Staircase-Escalante National Monument

Kanab Library, February 2025

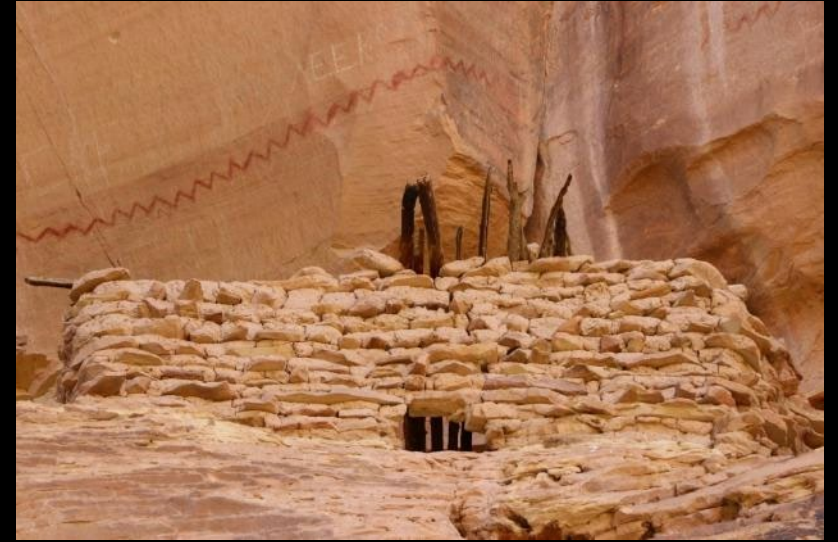






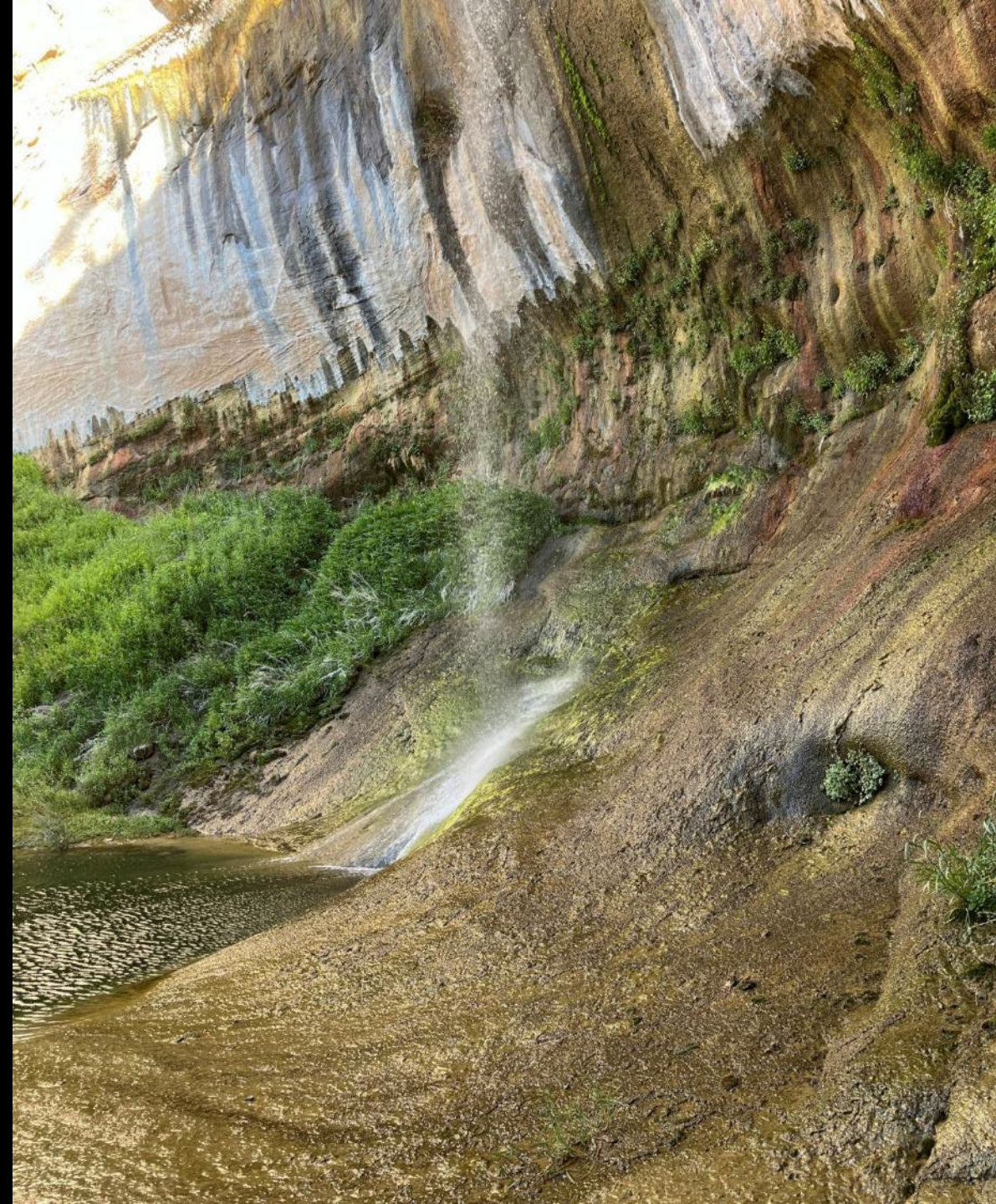
Recognizing Indigenous People and Knowledge

- Tribes with connection to this land include
 - Southern Paiute
 - Hopi
 - Zuni
 - Pueblo
 - Dine' (Navajo)
 - Ute
 - others
- Indigenous people lived off this land.
- Indigenous knowledge holders knew and know the many uses of plants.



Settings to Know

- Riparian
- Stream
- Streambank
- Floodplain
- Wetland
- Hanging garden



Past Presentations at Kanab Library

pdf's available [here](#)



Nature Talks in Kanab

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Science and Nature Talks in Kanab in 2024 and beyond

The Grand Staircase-Escalante National Monument [science program](#) hosts a lecture series at the Kanab Library (374 N Main Street) that is open to all. Times are 6pm unless noted otherwise. If you have ideas for topics or speakers contact Marc Coles-Ritchie (mcolesritchie@blm.gov).

Upcoming Talks (2025)

- February 12: Riparian and wetland plants (by Marc Coles-Ritchie)
- February 26: Bighorn sheep in GSENM and other Treasured Areas of Southern Utah ([Joel Berger](#))
- March 12: Walking with Tyrants: Grand Staircase-Escalante's Tyrannosaur Renaissance (by Dr. Alan Titus)
- April 9: Landscaping with Native Plants (by Marc Coles-Ritchie & Tim Clarke)
- April 16: Bumblebees & Citizen Science (Amy Dolan)
- May: many nature talks at
 - [Amazing Earthfest](#) May 8-11, 2025 in Kanab
 - Grand Staircase-Escalante region symposium March 20-22, 2025 in Escalante; [agenda will be here](#)
- Fall: ?

Past Presentations (link to pdf [here](#) and below)

- January 15, 2025: [Cactus](#) (by Marc Coles-Ritchie & Jared Higgs)
- December 11, 2024: [Lichens](#) (by Steve Leavitt)
- November 13, 2024: [Cultural site stewardship](#) (Lexi Little & Caitlyn McCallister)
- October 9: [Shrubs](#) (by Marc Coles-Ritchie)
- August: [Grasses](#) (by Marc Coles-Ritchie)
- April 2024: [Wildflowers](#) (by Marc Coles-Ritchie)
 - Related presentations [here](#) and [here](#).
- March 2024: Wildlife (by Joel Berger)
 - Related presentation [here](#)

Outline

Riparian-Wetland Plants

- Trees
- Shrubs
- Vines
- Graminoids
 - Grasses
 - Sedges
 - Rushes
- Forbs (a few)
- Future talks could focus on Hanging Garden Plants and other riparian topics

Trees of Riparian Areas

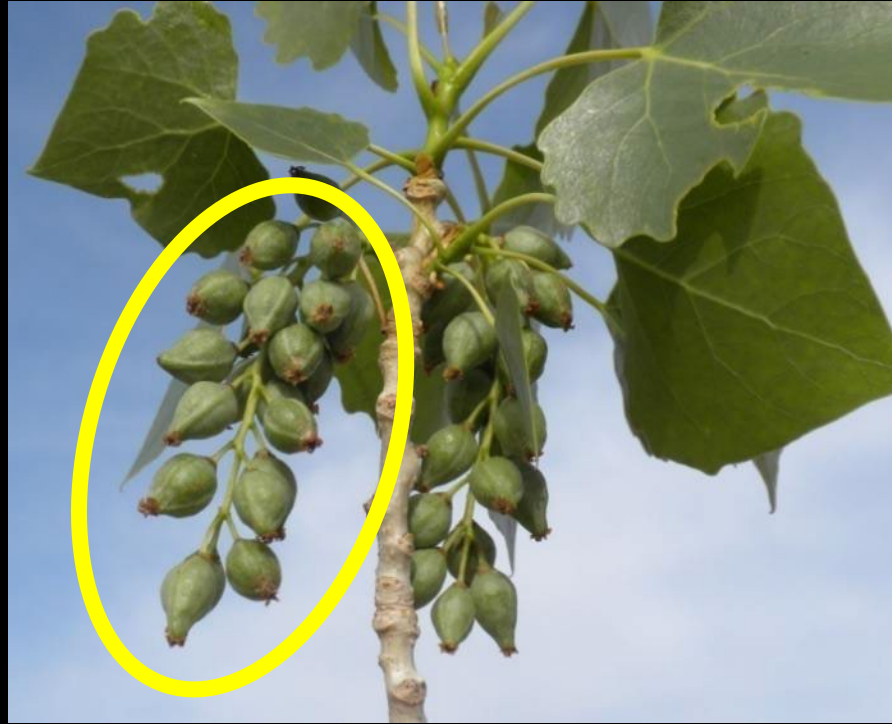


Populus fremontii Fremont cottonwood

Leaves heart shaped



Flowers: catkins with cottony seeds



Populus angustifolia (narrow-leaf cottonwood)



Acer negundo (box elder)



Betula occidentalis water birch

- Leaves serrate
- Flowers: catkins that fall apart
- Bark/stems red



Other trees sometimes in riparian areas

- Hackberry
- Aspen
- Conifers (ponderosa, Douglas fir, white fir, Rocky Mountain juniper, and others)

Salix exigua coyote willow

- clonal shrubs
- Petiole short to absent
- Common along streams



Male flowers



female flowers



Salix exigua (coyote willow)



Salix exigua (coyote willow)
& post-fire sediment



Salix exigua (coyote willow)



galls



Salix exigua
(coyote willow)
on wall



Salix goodingii (black willow) is taller



Salix lutea (yellow willow)



Salix lutea (yellow willow)



Female catkins in winter



Female catkin (and leaf) in winter



Rhus
aromatica
(skunkbush
sumac)



Cornus sericea Red-osier dogwood

- Red-twigs with opposite branches
- Berries white when mature



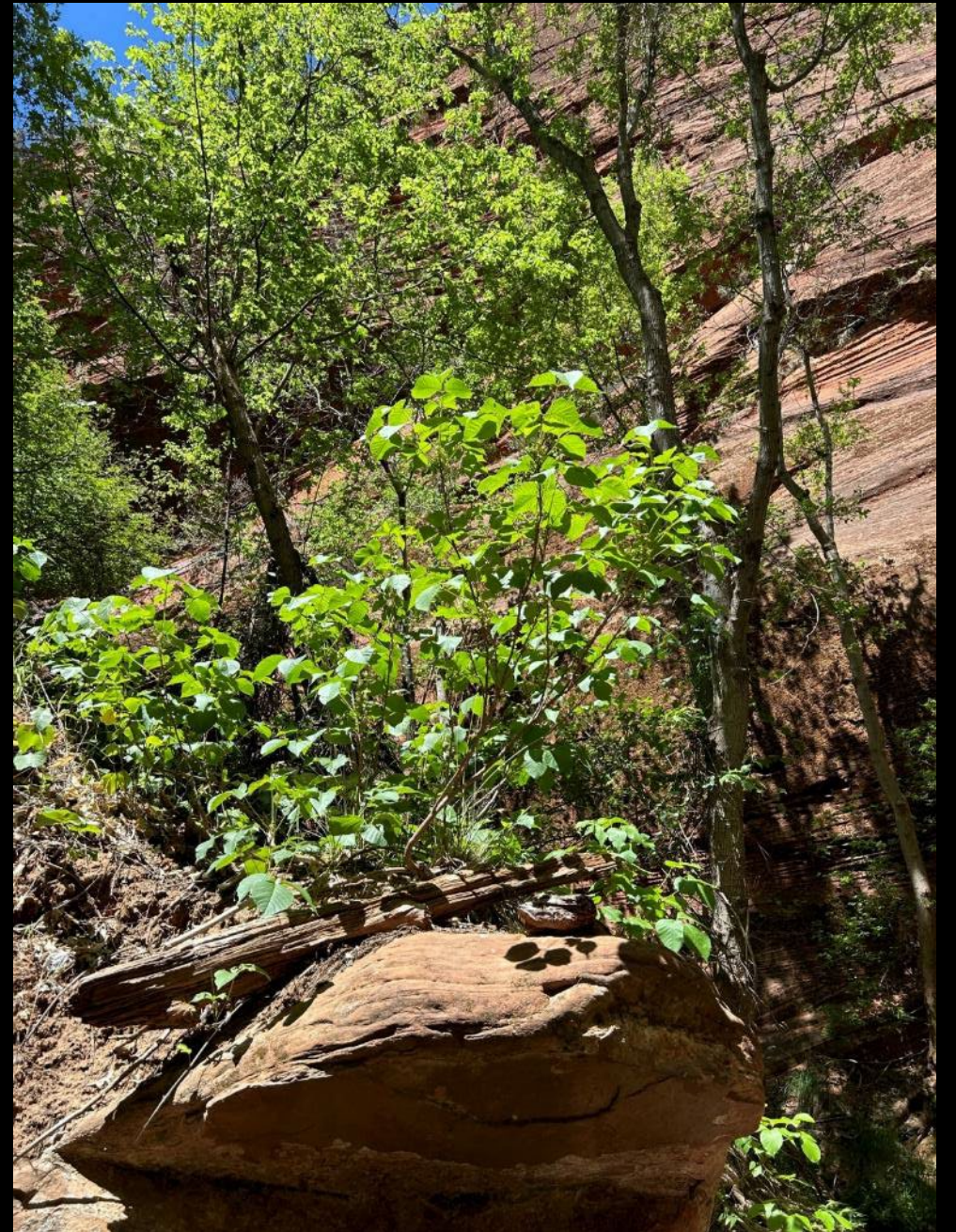
Rosa woodsii
Woods' rose



Toxicodendron rydbergii
Western poison ivy



Toxicodendron rydbergii
(Western poison-ivy)

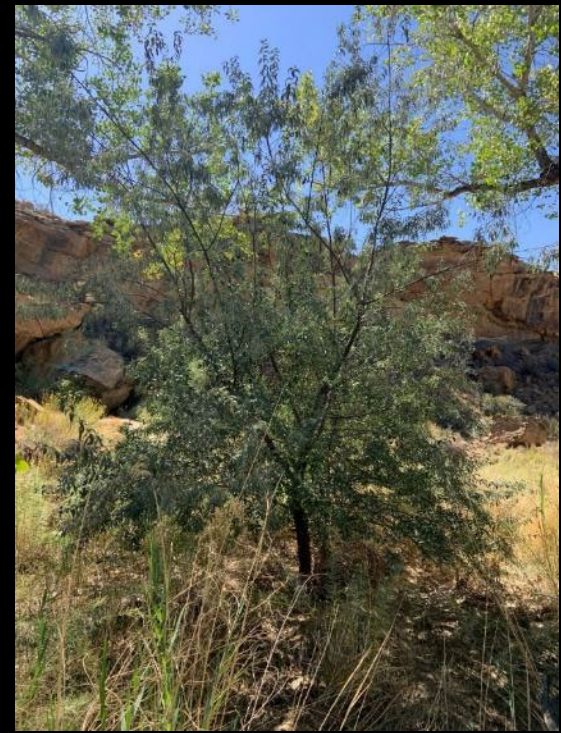


Non-native trees of riparian areas

Tamarix (Tamarisk)



Elaeagnus angustifolia
(Russian olive)



Tamarix chinensis tamarisk, salt cedar

- Introduced around 1900 or earlier for erosion control



Elaeagnus angustifolia Russian olive

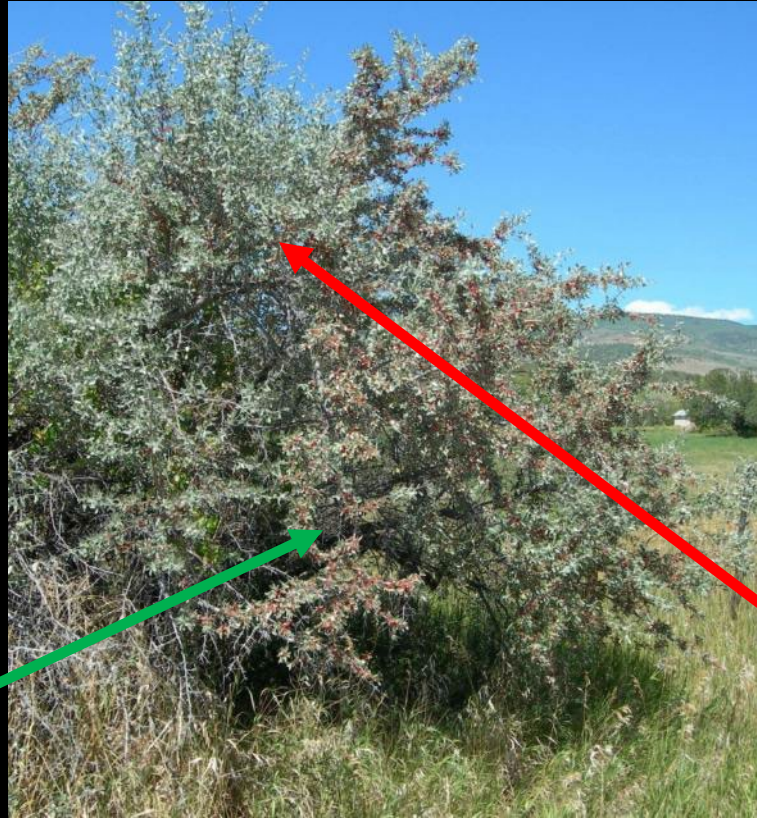
Branches alternate



Shepherdia argentea vs *Elaeagnus angustifolia*

Shepherdia argentea

- Opposite branches
- Fruit Red, (edible)



Elaeagnus angustifolia

- Alternate branches
- Fruit brownish-red, mealy, (edible)

Vitis arizonica (Canyon grape)

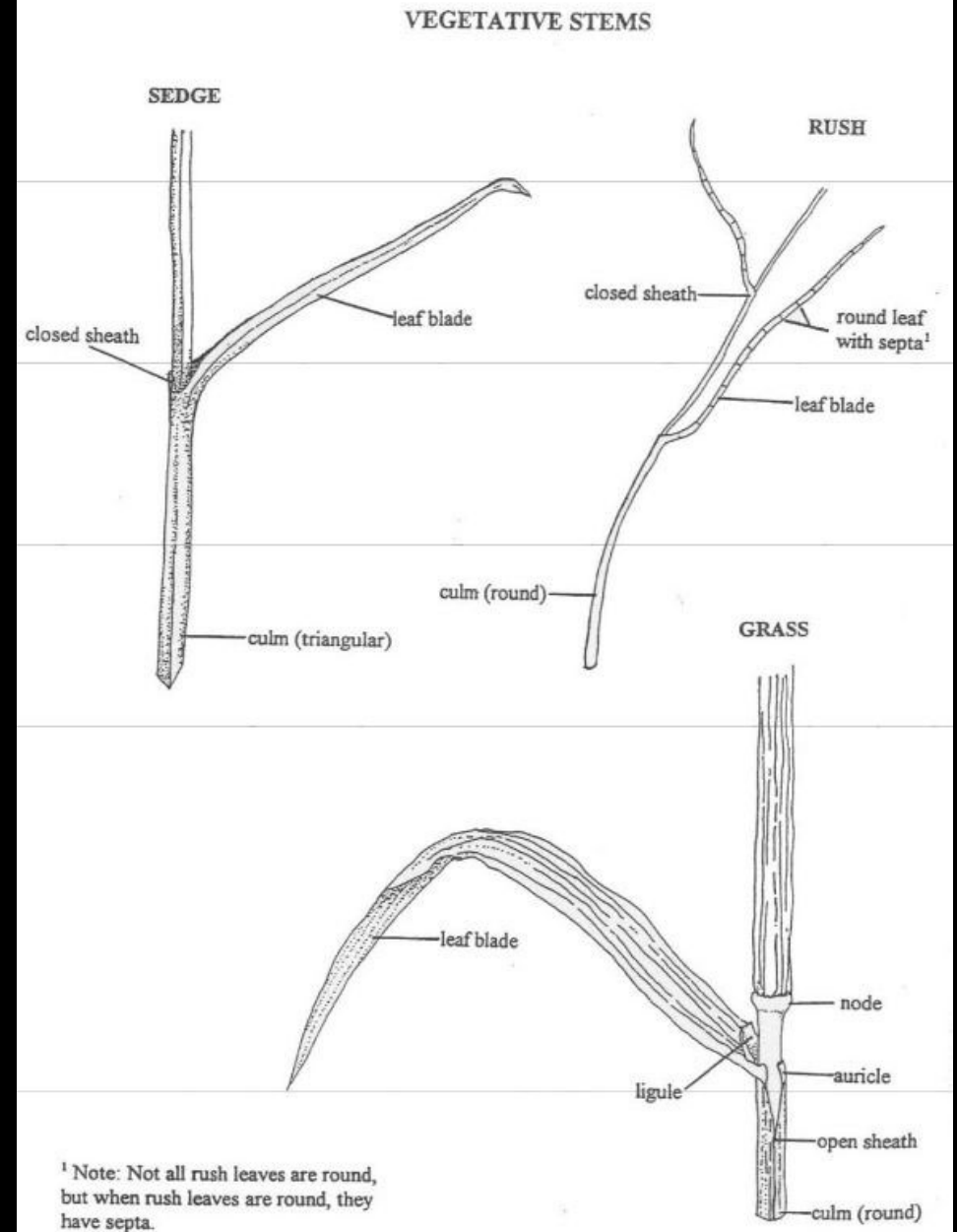


Riparian Grasses and Grass-like



Grasslikes: Grasses, Sedges and Rushes

Sedges have edges
Rushes are round
Grasses have joints



Phragmites australis (common reed)



Phragmites australis (common reed)



Distichlis spicata desert or inland saltgrass





Muhlenbergia asperifolia (scratchgrass)

Cyperaceae (sedge family)

Stems

often *triangular*, solid

“Sedges have edges”

No joints (nodes) as grass has

Leaves

alternate, often a *closed sheath*; blades flat,
round or absent

Inflorescence

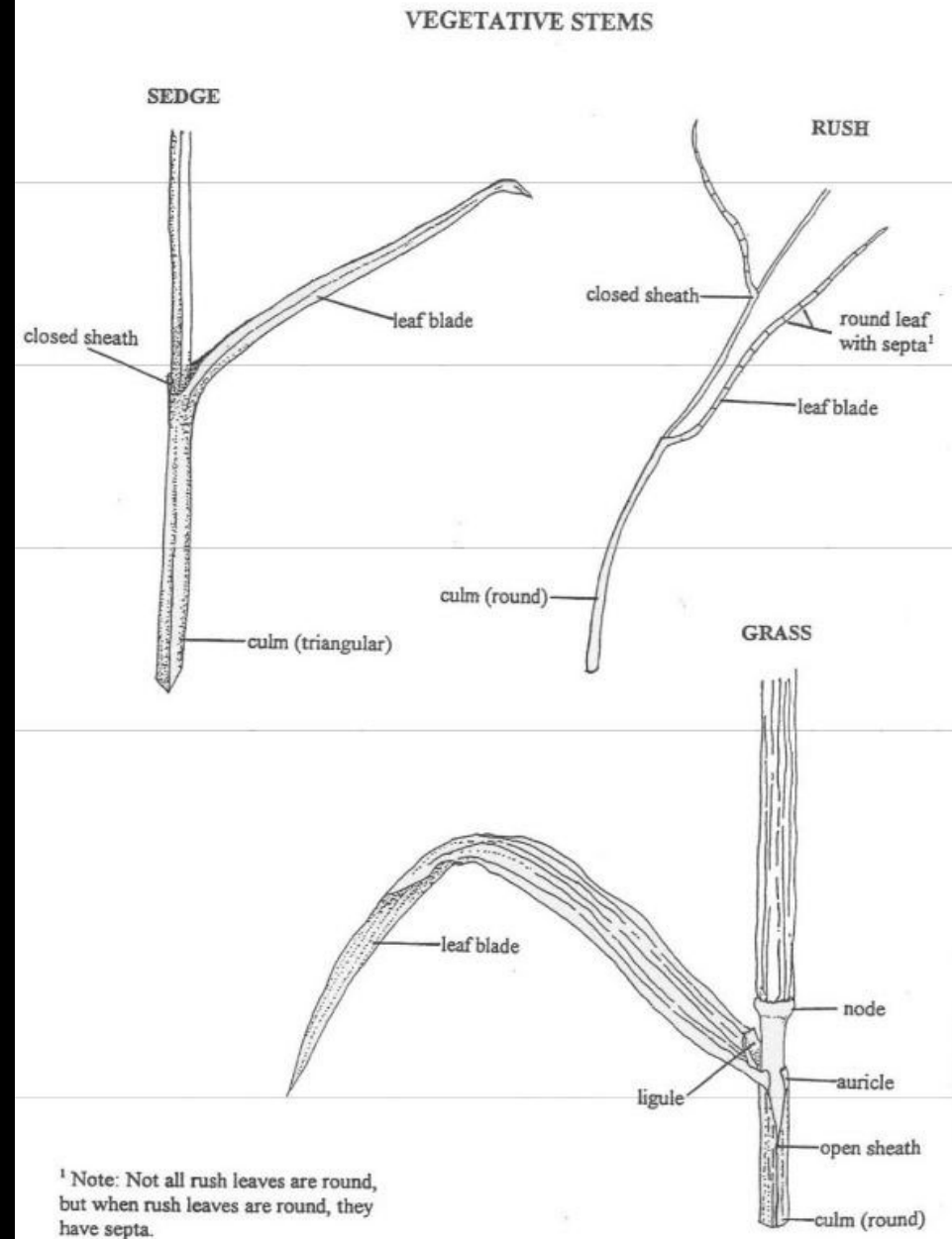
of spikelets aggregated into racemes, spikes,
panicles, or umbels

Flowers

subtended by a single bract or 1 bract and a
perigynium (sac-like circular bractlet that
encloses female flowers of *Carex*)



Carex (sedge)





Male flowers

Female flowers

Carex nebrascensis Nebraska sedge



Carex hystericina (bottlebrush sedge)



Carex pellita (wooly sedge)



Juncaceae (Rushes)

Stems

mostly round; “Rushes are round”
Spongy material inside (not hollow like grass)

Leaves

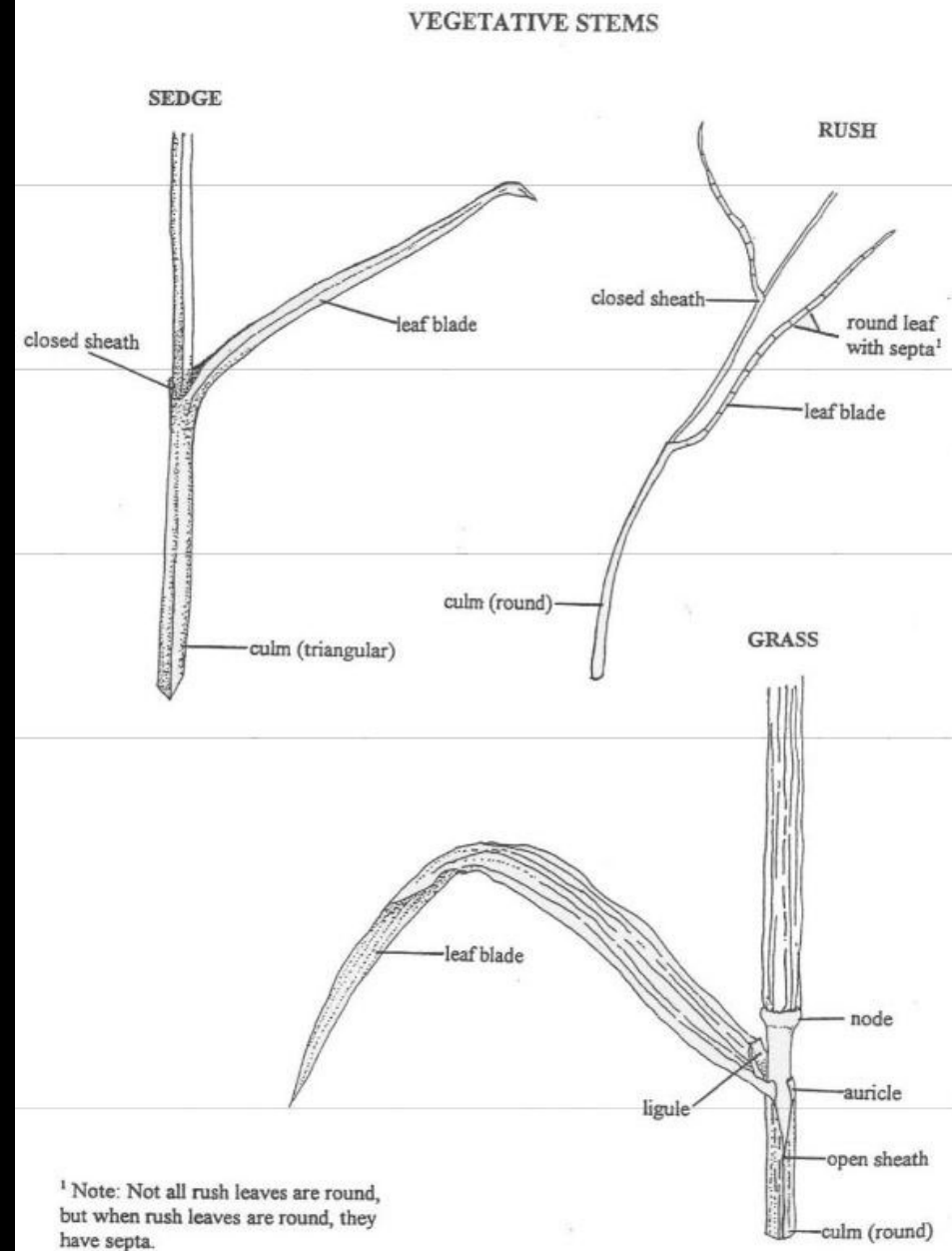
sheathing, 3-ranked or represented by sheaths only

Inflorescence

of *solitary* flowers grouped into panicles, or heads (not spiklets!!!)



Juncus (rushes)



Juncus arcticus wiregrass, Baltic rush



Juncus ensifolius swordleaf rush



Juncus ensifolius (swordleaf rush)



Juncus ensifolius
(swordleaf rush)
with yellow willow



Typha (cattail)

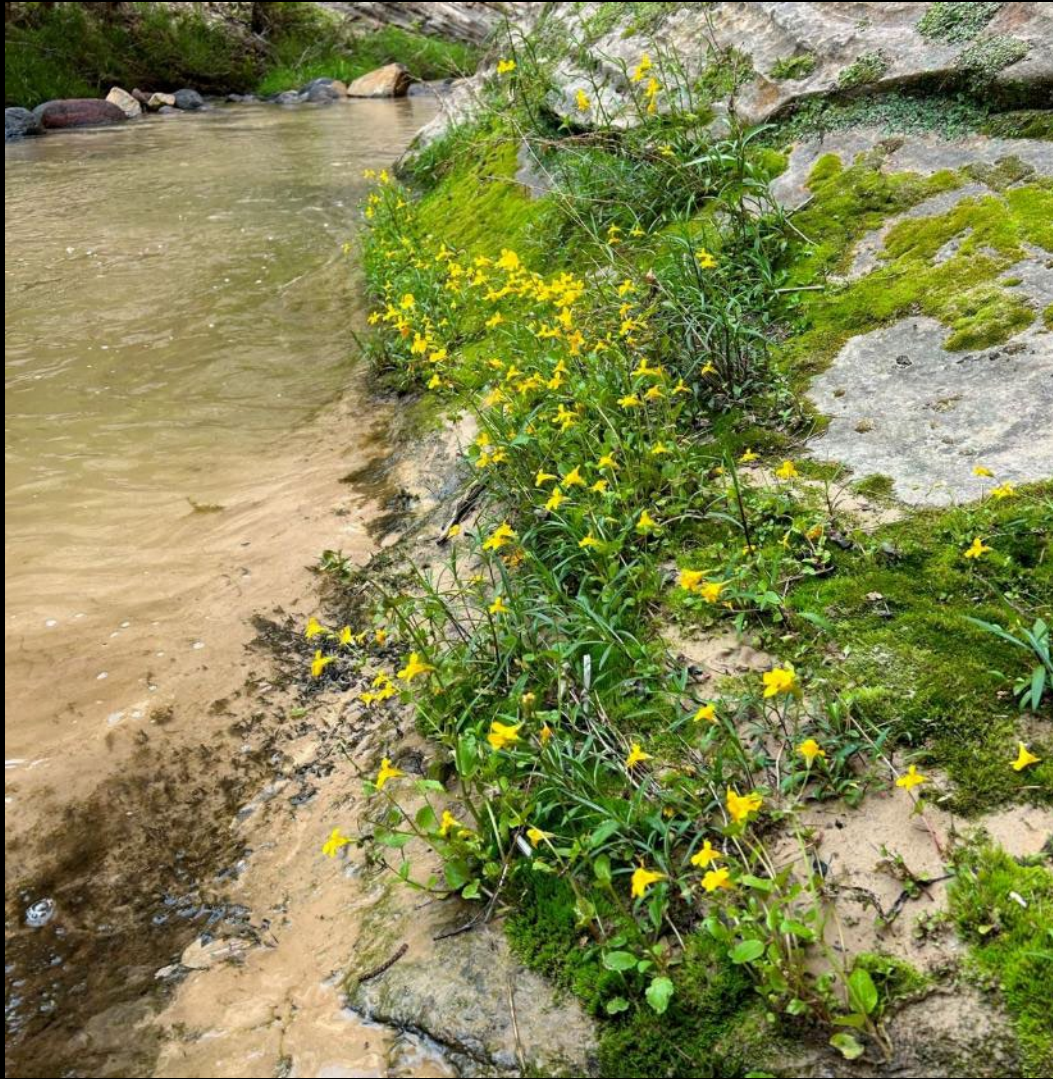


Other grasslikes of riparian areas

- Mannagrass
- Bullrushes
- Spike rushes
- Many sedges & rushes

Wildflowers of Riparian areas (especially springs and hanging gardens)





Mimulus guttatus (Yellow monkeyflower)

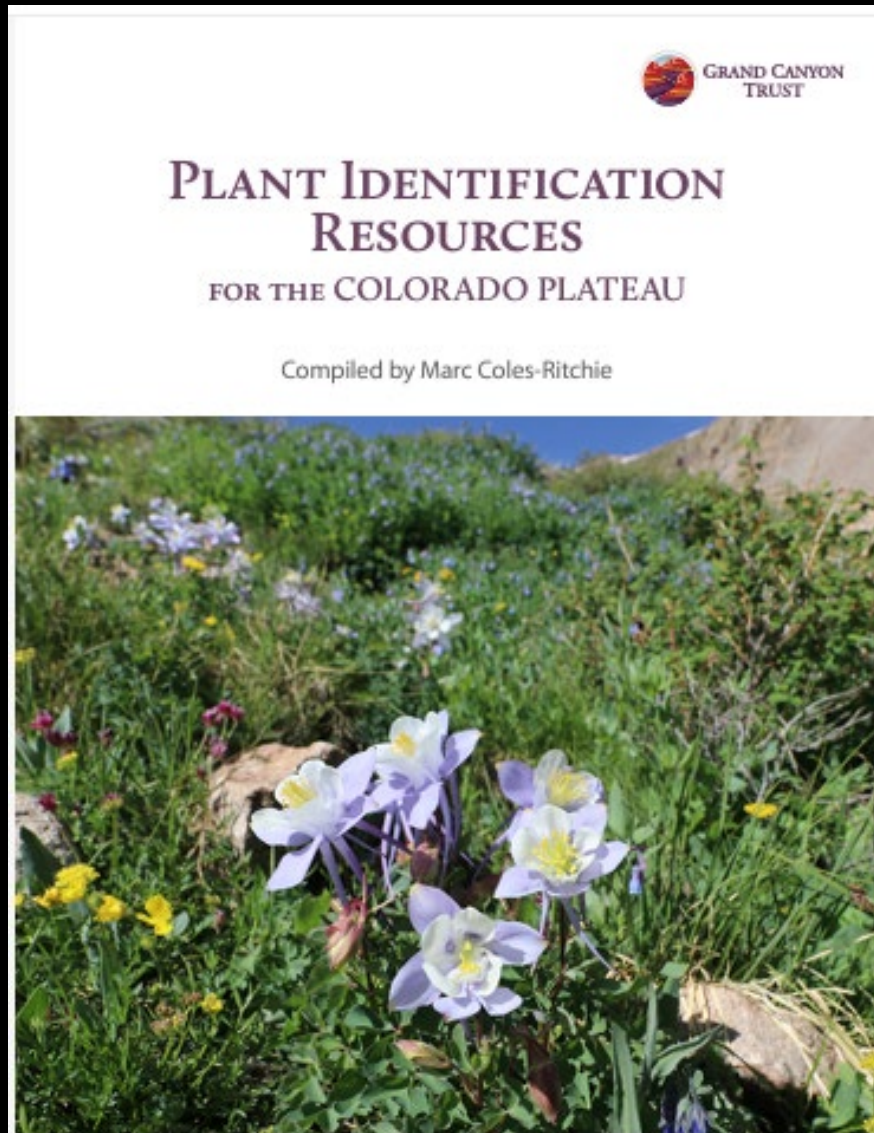
Erythranthe cardinalis (scarlet monkeyflower)



Other wildflowers of riparian areas

- Columbine
- Paintbrush
- *Cirsium rydbergii* (Rydberg's thistle)
- *Epipactis gigantea* (Stream orchid)
- Many others


<https://www.grandcanyontrust.org/plant-identification-resources>




TITLE	GEOGRAPHIC FOCUS	DESCRIPTION	AUTHORS AND PUBLISHER
Forbs/Wildflowers (may include some shrubs, trees, and grasses)			
<i>A Field Guide to the Plants of Arizona</i>	Arizona	Color photographs and descriptive text for 850 plant species found in Arizona.	Anne Orth Epple, Falcon Guides, 1997.
* Capital Reef Wildflowers	Central Utah	Field guide to 209 plants of the Capital Reef area, with color photographs; includes 48 endemic species.	Deborah J. Clark, Published by Impact Photographics Inc. 2009.
<i>Rocky Mountain Flora: A Colorado Mountain Club Field Guide</i>	Colorado	Organized by color, with images, taxonomy, and detailed descriptions of each flower.	James Ellis, Colorado Mountain Club, 2012.
* <i>Sandstone Country Wildflowers Mountain Edition: A Field Guide to the Wildflowers of the Moab Region and Beyond</i>	Southeast Utah and adjacent states	Descriptions and color photos for many of the common wildflowers and shrubs of the foothills and mountains of southeastern Utah.	Anne Durt and Dave Montgomery, Red Shoe Guides, 2018.
* <i>Sandstone Country Wildflowers: The Red Shoe Guide</i>	Southeast Utah and adjacent states	Descriptions and color photos for 135 of the common wildflowers and shrubs of the canyons, cliffs, and mesas of southeastern Utah.	Anne Durt and Dave Montgomery, Red Shoe Guides, 2015.
* <i>Spring Wildflowers of Utah's Red Rock Desert</i>	Southeast Utah and adjacent states	Features 500 common spring wildflowers, trees and grasses of the red rock desert with photographs and full descriptions of about half these plants.	Peter Lenica and Walter Fertig, Published by Trillium Press, 2018.
* <i>Wildflowers & Other Herbaceous Plants of Utah: Ranglands: A Field Guide</i>	Utah	A handy booklet with descriptions and color photos of 83 of the common wildflowers in Utah.	Roger Banner, Mindy Pratt, James Bown, and Chad Reid, Utah State University Cooperative Extension, Logan, UT, 2013.
<i>Wildflowers of the Mountain West</i>	New Mexico, Colorado, Wyoming, Idaho, Utah, Nevada and Oregon	Descriptions and color photos organized by flower color.	Richard M. Anderson, JayDee Gurnell, Jerry L. Goodspeed, Utah State University Press, Logan, UT, 2012.


Plants Identification Tools

iNaturalist – post and others will identify

iNaturalist  Explore Community More Log In or Sign Up


Observations  Cacti Go Filters ²

The World	756 OBSERVATIONS	15 SPECIES	88 IDENTIFIERS	323 OBSERVERS
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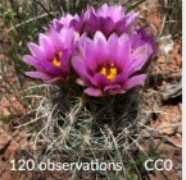
165 observations CC0

Kingcup Cactus
(*Echinocereus triglochidiatus*)



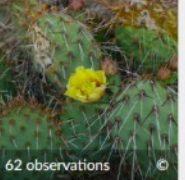
136 observations CC

Plains Pricklypear
(*Opuntia polyacantha*)




120 observations CC0

Smallflower Fishhook Cactus
(*Sclerocactus parviflorus*)




62 observations


Brown-spined Pricklypear
(*Opuntia phaeacantha*)








35 observations CC

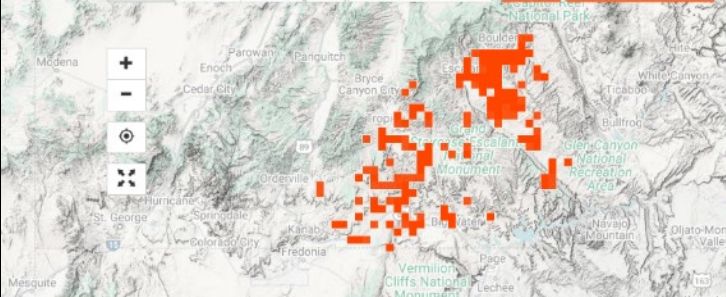
Golden Pricklypear
(*Opuntia aurea*)

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Observations  Cacti Go Filters ²


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 Map  Grid  List  Places of Interest  Redo search in map




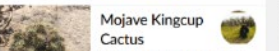
Map controls: +, -, compass, full screen, location pin



Mojave Kingcup Cactus
(*Echinocereus triglochidiatus mojavensis*)
Grand...
• Dec 18, 2024
Research Grade  4 9d



Mojave Kingcup Cactus
(*Echinocereus triglochidiatus mojavensis*)
Grand...
• Dec 18, 2024
Research Grade  5 9d



Mojave Kingcup Cactus

Engagement with Grand Staircase Landscape

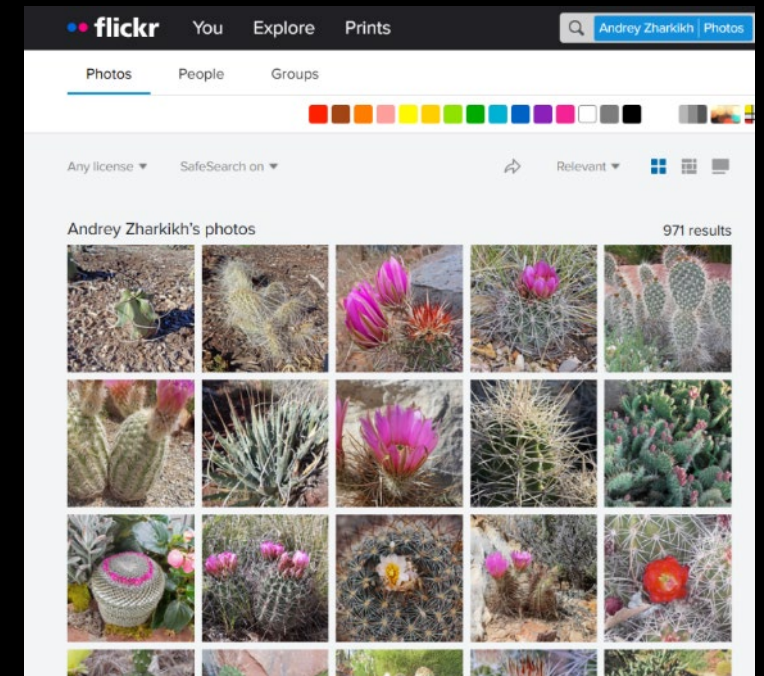
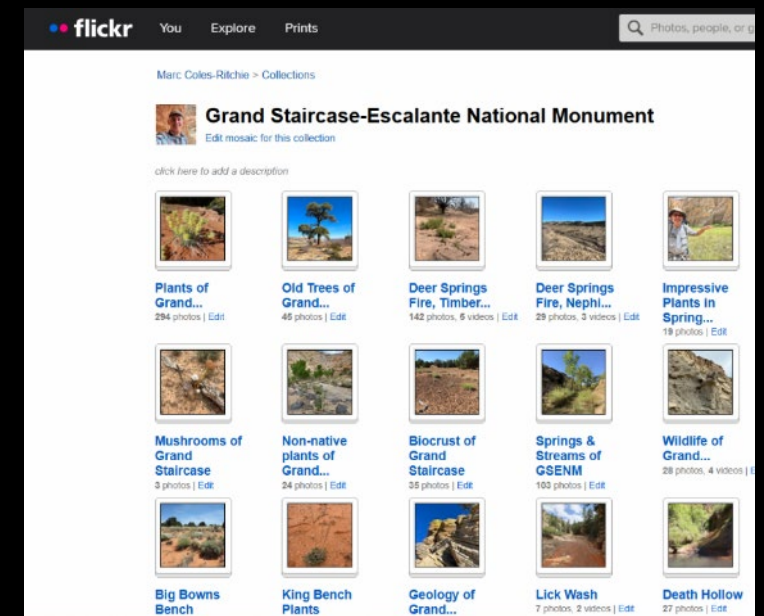
- GSENM Citizen Science website:
<https://www.blm.gov/working-us> -
- GSENM Science & Research website:
<https://www.blm.gov/programs/national-conservation-lands/utah/grand-staircase-escalante-national-monument/science-research> -



Images

Marc's photos of GSENM plants are here
(sorted alphabetically by scientific
name):

<https://flic.kr/s/aHsmVnwKU8>



Upcoming Science Talks at Kanab Library

February 26: Bighorn sheep in Grand Staircase (Joel Berger)

March 12: Walking with Tyrants: Grand Staircase-Escalante's Tyrannosaur Renaissance (Dr. Alan Titus)

April 9: Landscaping with Native Plants (Marc Coles-Ritchie & Tim Clarke)

April 16: Bumblebees & Citizen Science (Amy Dolan)

(summer hiatus)

Fall-Winter 2025-2026: trees, mountain lions, buckwheats, bats, fire?

Note: Grand Staircase-Escalante Regional Symposium March 20-22 in Escalante, Utah

