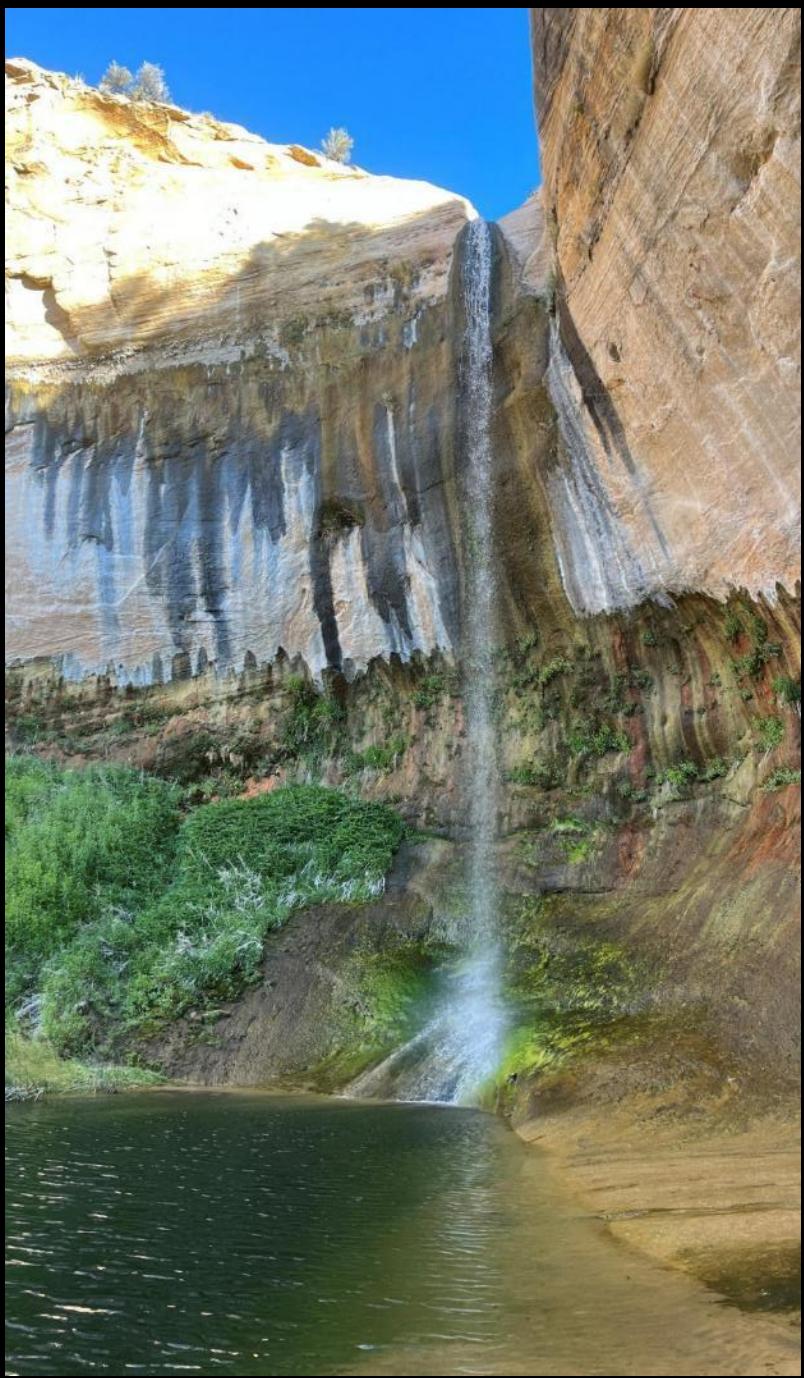


# Riparian and Wetland Plants of Grand Staircase-Escalante National Monument

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

Kanab Library, February 2025





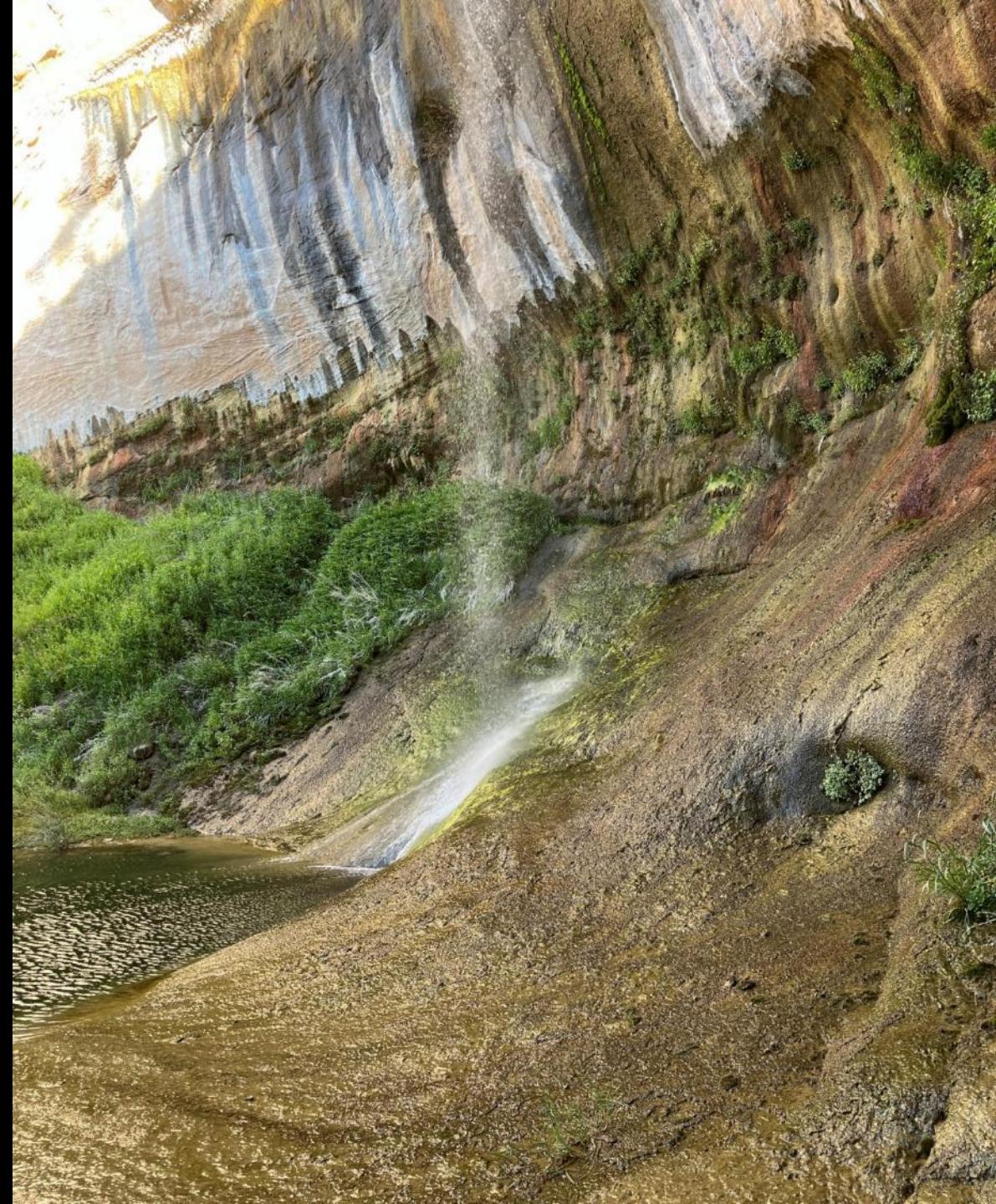


# Recognizing Indigenous People and Knowledge

- 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.

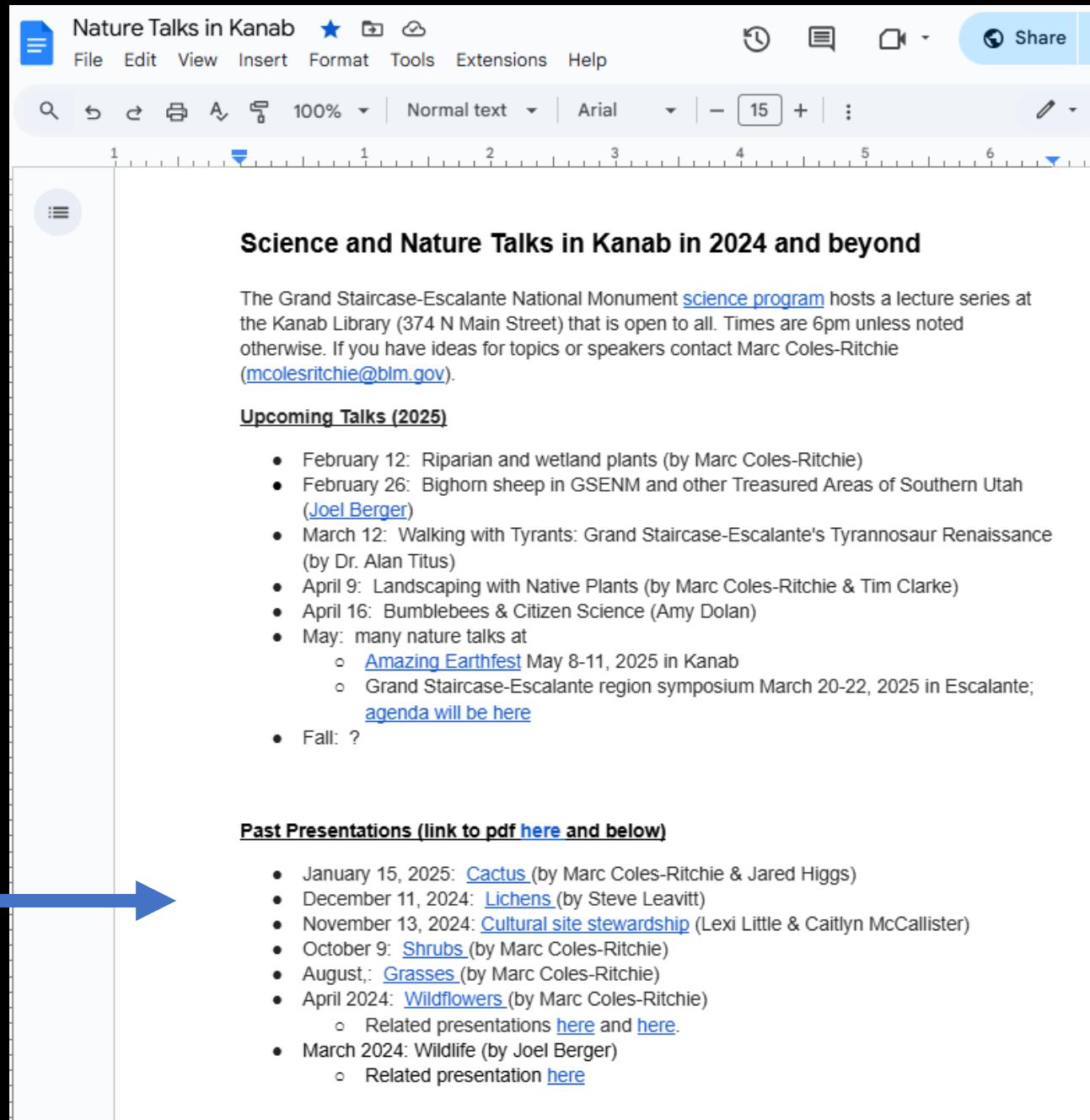
# Settings to Know

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



# Past Presentations at Kanab Library

pdf's available [here](#)



The screenshot shows a Google Document with the following content:

**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](mailto: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)



Leaves often trifoliate



# *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



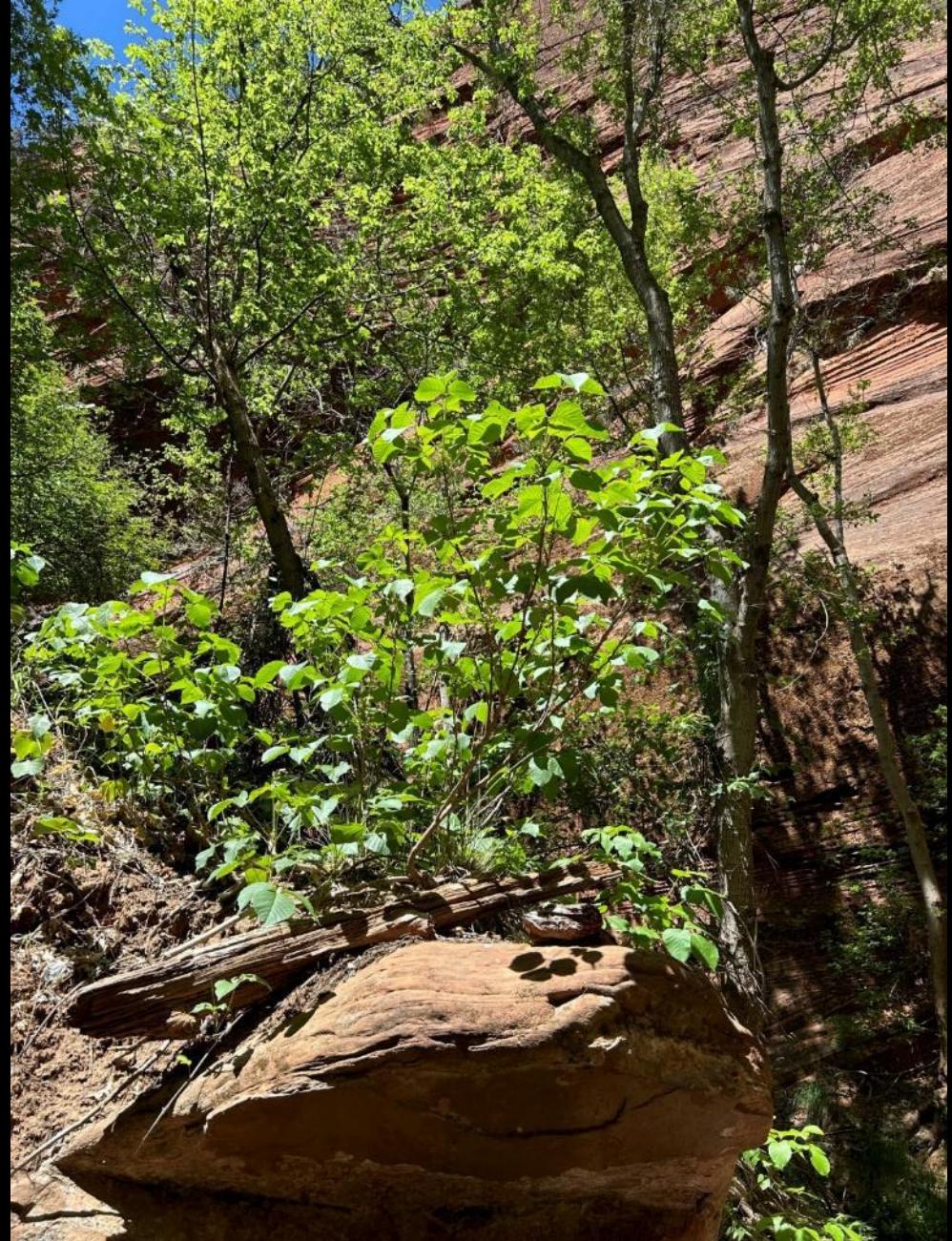
*Rosa woodsii*  
Woods' rose



*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

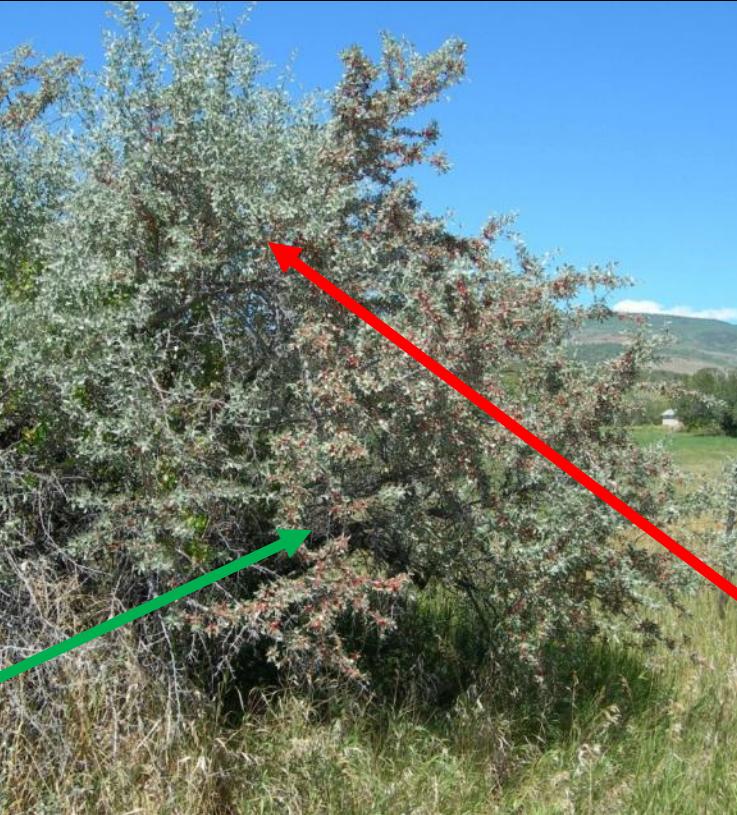
Branches alternate



# *Shepherdia argentea* vs *Elaeagnus angustifolia*

*Shepherdia argentea*

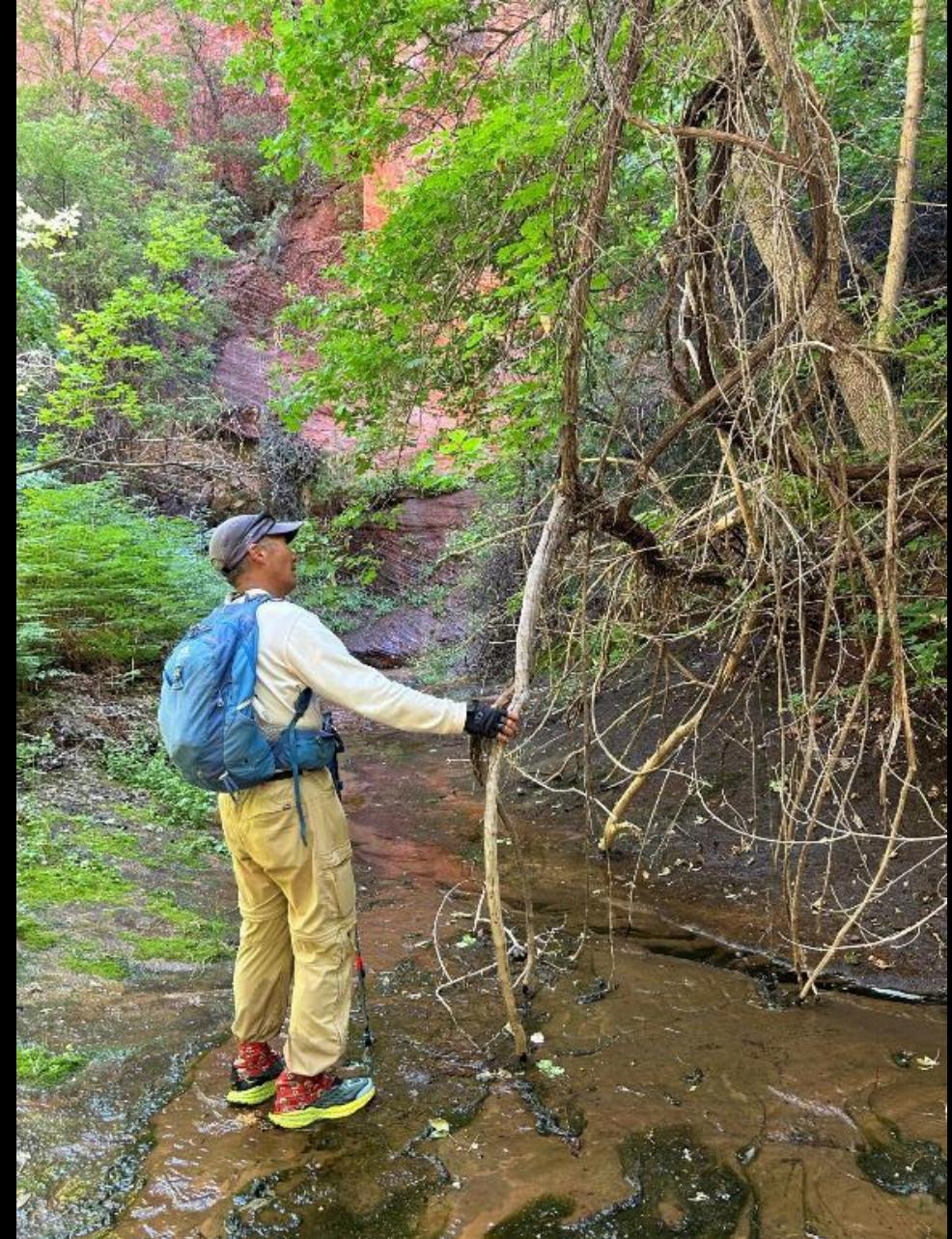
- Opposite branches
- Fruit Red, (edible)



*Elaeagnus angustifolia*

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

# *Vitis arizonica* (Canyon grape)

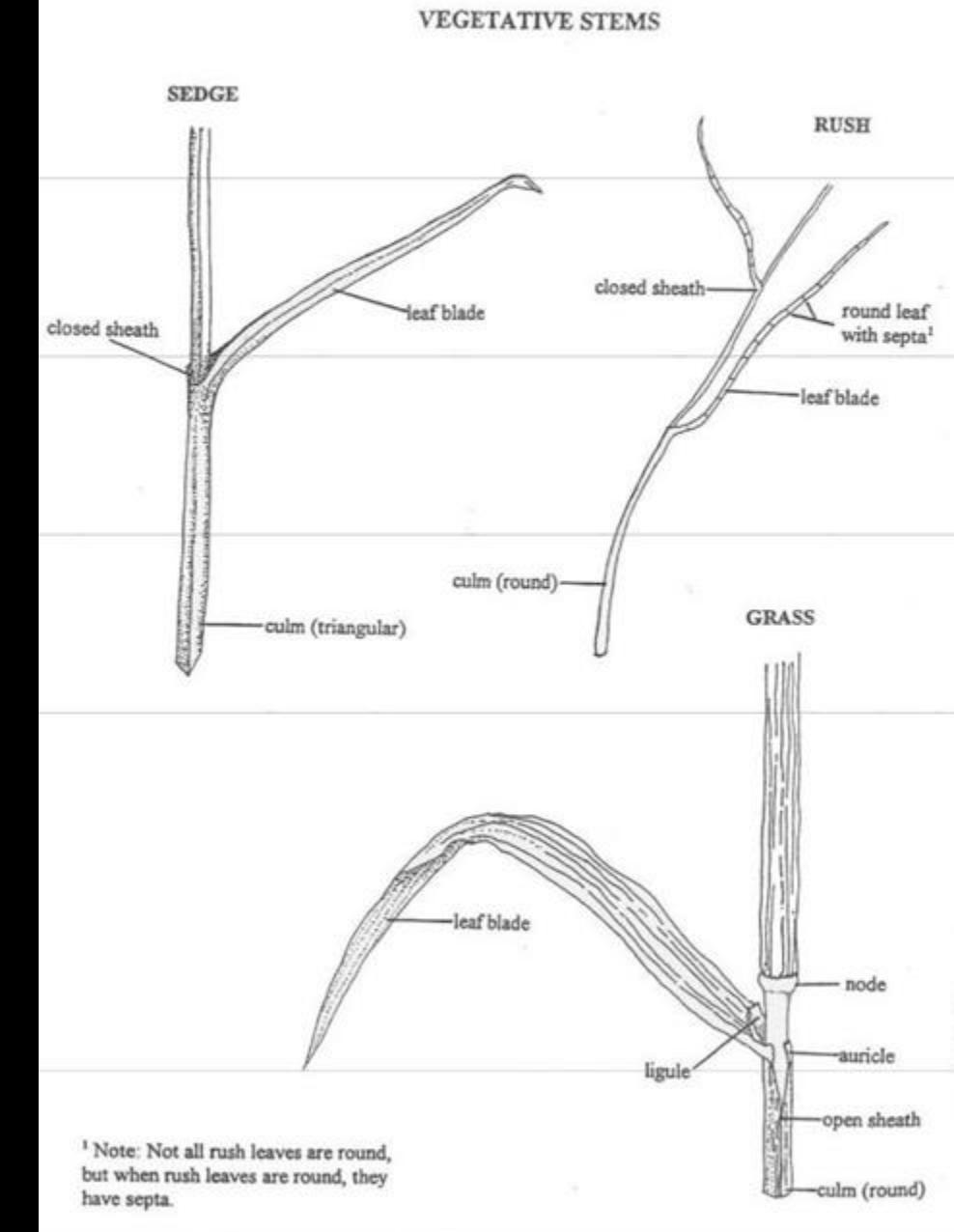


# Riparian Grasses and Grass-likes



# 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

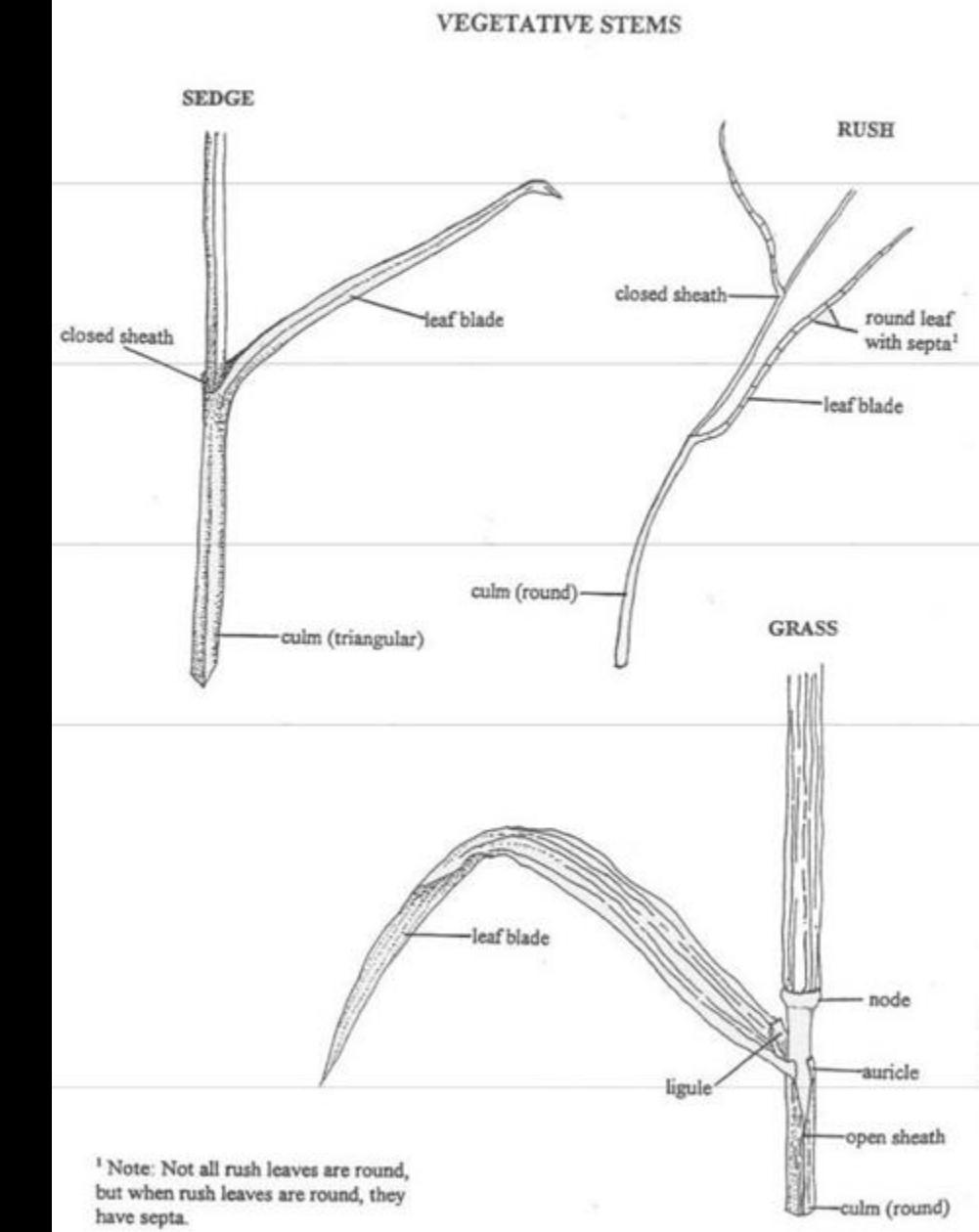
of spikelets aggregated into racemes, spikes,  
panicles, or umbels

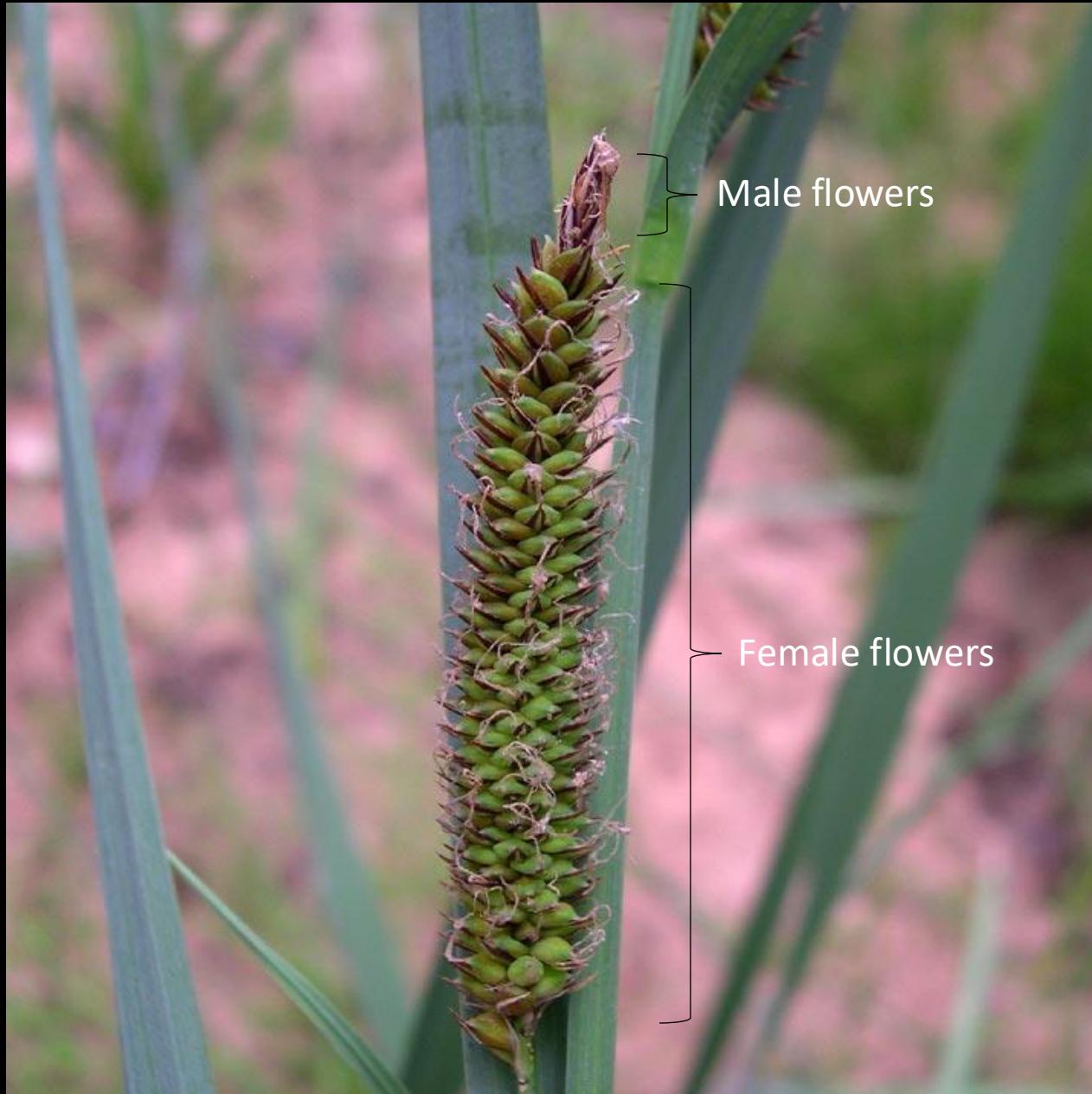
## Flowers

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 pelllita* (wooly sedge)



# Juncaceae (Rushes)

## Stems

mostly round; “Rushes are round”

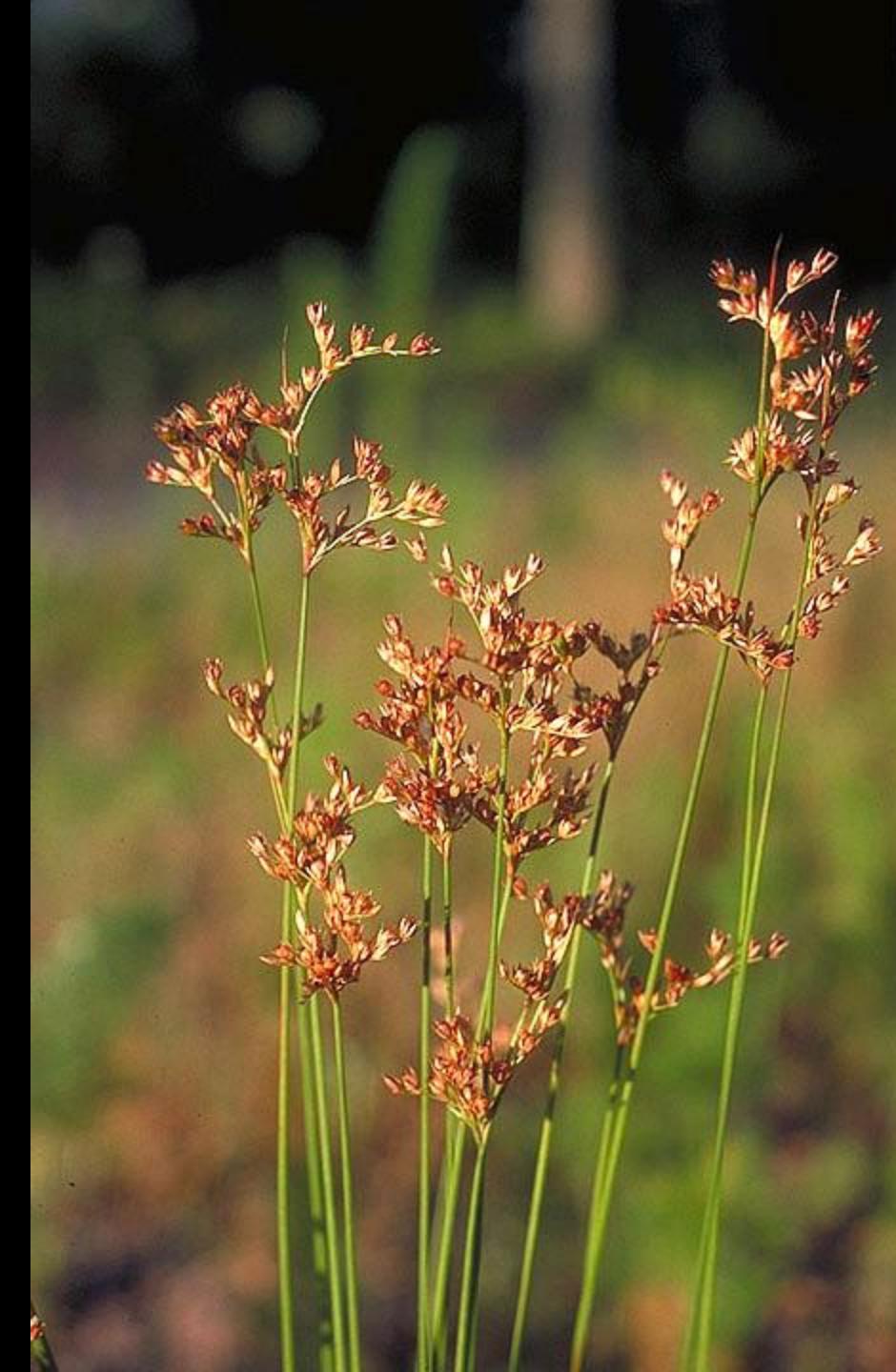
Spongy material inside (not hollow like grass)

## Leaves

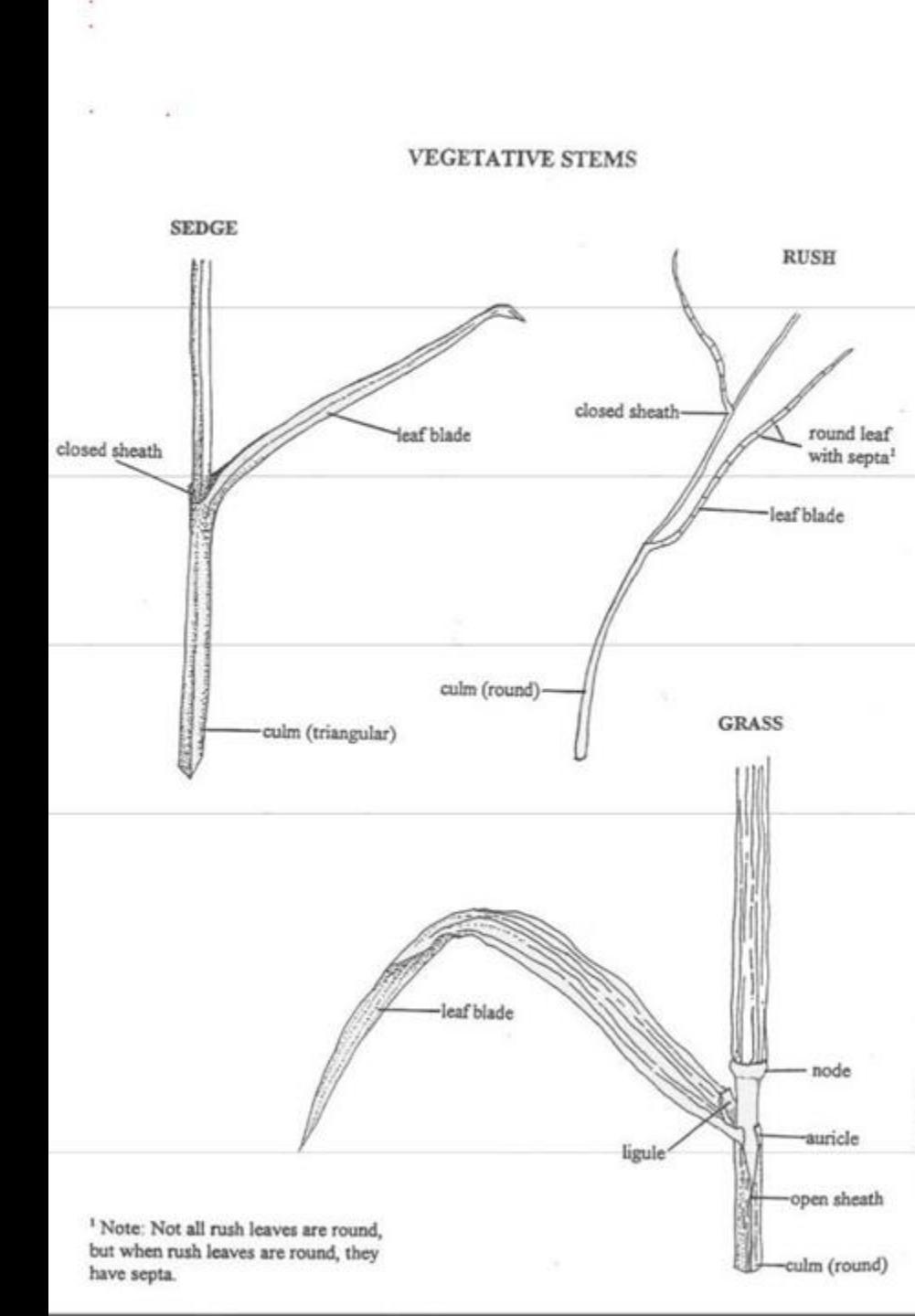
sheathing, 3-ranked or represented by sheaths only

## *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)

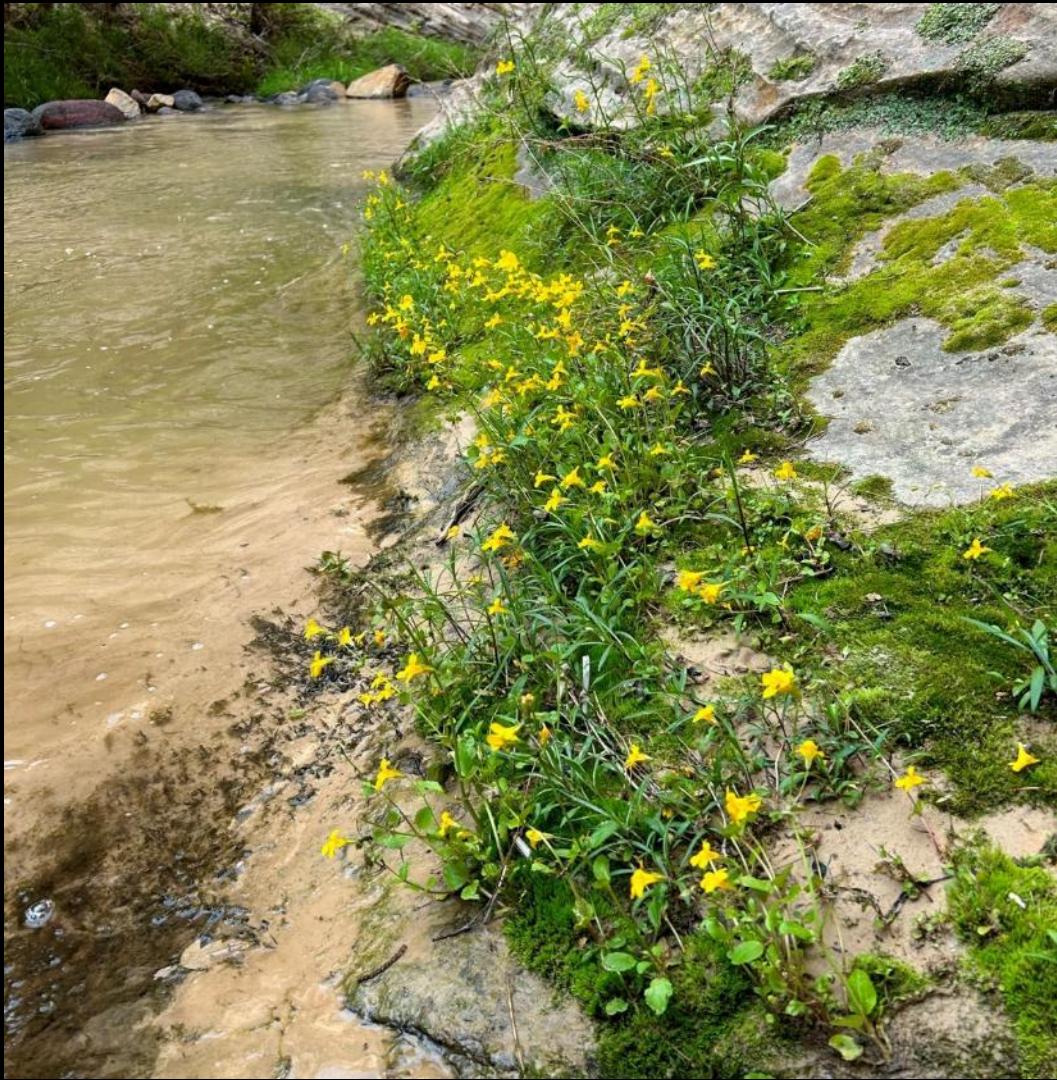


# Other grasslikes of riparian areas

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

# Wildflowers of Riparian areas (especially springs and hanging gardens)





*Mimulus guttatus* (Yellow monkeyflower)

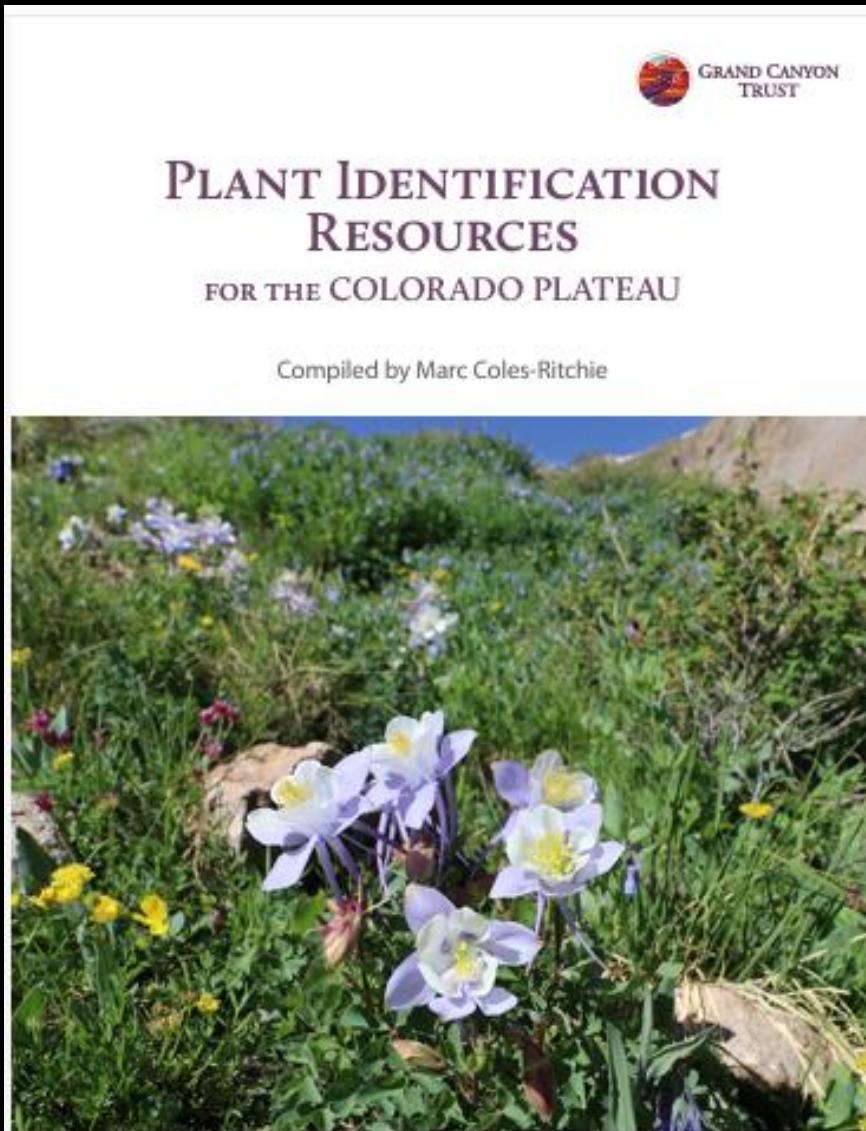
# *Erythranthe cardinalis* (scarlet monkeyflower)



# 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>



Forbs/Wildflowers (may include some shrubs, trees, and grasses)			
TITLE	GEOGRAPHIC FOCUS	DESCRIPTION	AUTHORS AND PUBLISHER
<a href="#">A Field Guide to the Plants of Arizona</a>	Arizona	Color photographs and descriptive text for 850 plant species found in Arizona.	Anne Orth Epple. Falcon Guides, 1992.
<a href="#">* Capitol Reef Wildflowers</a>	Central Utah	Field guide to 209 plants of the Capitol Reef area, with color photographs; includes 48 endemic species.	Deborah J. Clark. Published by Impact Photographics Inc. 2009.
<a href="#">Rocky Mountain Flora: A Colorado Mountain Club Field Guide</a>	Colorado	Organized by color, with images, taxonomy, and detailed descriptions of each flower.	James Ellis. Colorado Mountain Club, 2012.
<a href="#">* Sandstone Country Wildflowers: Mountain Edition: A Field Guide to the Wildflowers of the Mimbres Region and Beyond</a>	Southeast Utah and adjacent states	Descriptions and color photos for many of the common wildflowers and shrubs of the foothills and mountains of southwestern Utah.	Anne Durl and Dave Montgomery. Red Shoe Guides, 2018.
<a href="#">* Sandstone Country Wildflowers: The Red Shoe Guide</a>	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 Durl and Dave Montgomery. Red Shoe Guides, 2015.
<a href="#">* Spring Wildflowers of Utah's Red Rock Desert</a>	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 Lexica and Walter Fertig. Published by Trillium Press, 2018.
<a href="#">* Wildflowers &amp; Other Hazardous Plants of Utah: Range Guide: A Field Guide</a>	Utah	A handy booklet with descriptions and color photos of 83 of the common wildflowers in Utah.	Roger Bannister, Mindy Pratt, James Brown, and Chad Reid. Utah State University Cooperative Extension, Logan, UT, 2013.
<a href="#">Wildflowers of the Mountain West</a>	New Mexico, Colorado, Wyoming, Idaho, Utah, Nevada and Oregon	Descriptions and color photos organized by flower color.	Richard M. Anderson, JayOne 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 Location Go Filters 2

The World 756 OBSERVATIONS 15 SPECIES 88 IDENTIFIERS 323 OBSERVERS

Kingcup Cactus (*Echinocactus triglochidiatus*) 165 observations CC0

Plains Pricklypear (*Opuntia polyacantha*) 236 observations CC0

Smallflower Fishhook Cactus (*Sclerocactus parviflorus*) 120 observations CC0

Brown-spined Pricklypear (*Opuntia phaeacantha*) 62 observations CC0

Golden Pricklypear (*Opuntia aurea*) 35 observations CC0

iNaturalist

Explore Community More Log In or Sign Up

Observations Cacti Location Go Filters 3

The World 756 OBSERVATIONS 15 SPECIES 88 IDENTIFIERS 323 OBSERVERS

Mojave Kingcup Cactus (*Echinocactus triglochidiatus mojavensis*) Grand... Dec 18, 2024 Research Group 4 9d

Mojave Kingcup Cactus (*Echinocactus triglochidiatus mojavensis*) Grand... Dec 18, 2024 Research Group 5 9d

Mojave Kingcup Cactus (*Echinocactus triglochidiatus mojavensis*) Grand... Dec 18, 2024 Research Group 6 9d

# Engagement with Grand Staircase Landscape

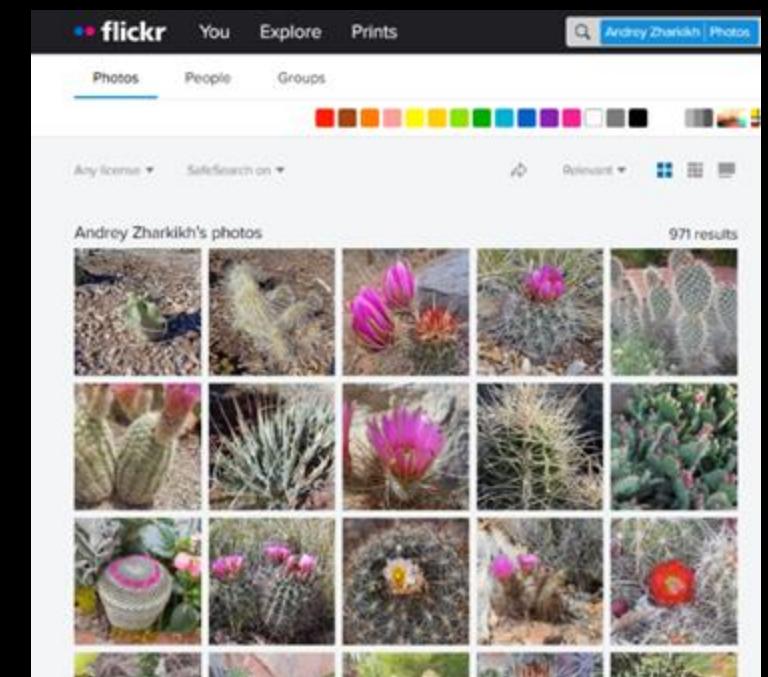
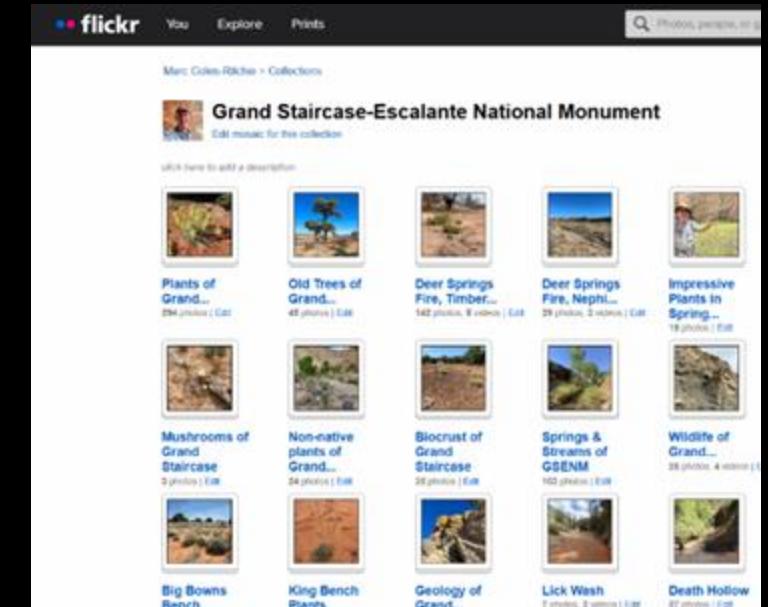
- GSENM Citizen Science website:  
[https://www.blm.gov/working-us -](https://www.blm.gov/working-us-)
- GSENM Science & Research website:  
<https://www.blm.gov/programs/national-conservation-lands/utah/grand-staircase-escalante-national-monument/science-research ->



# 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

