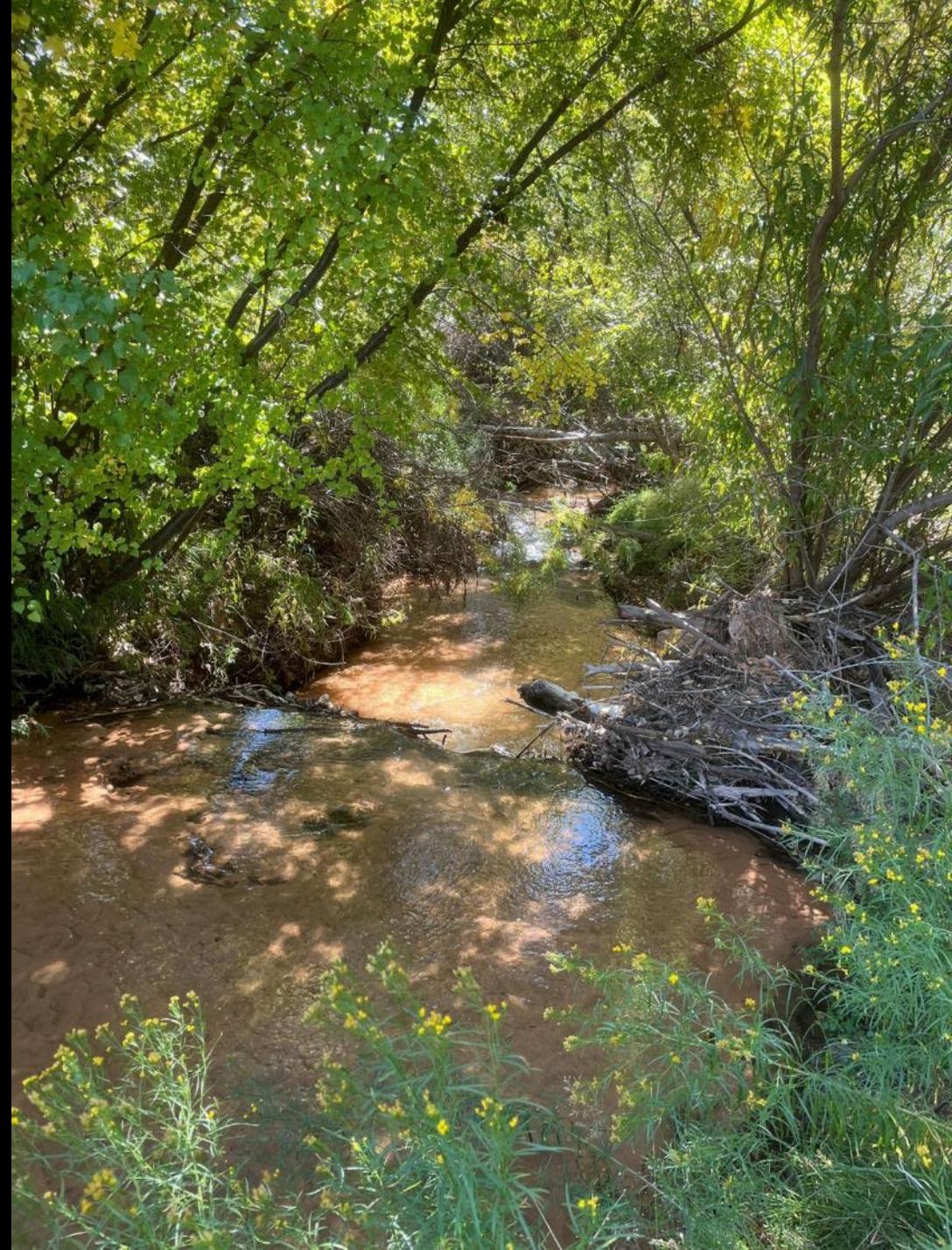


# Riparian and Wetland Plants of Grand Staircase-Escalante National Monument

Marc Coles-Ritchie

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

Kanab Library, February 2025

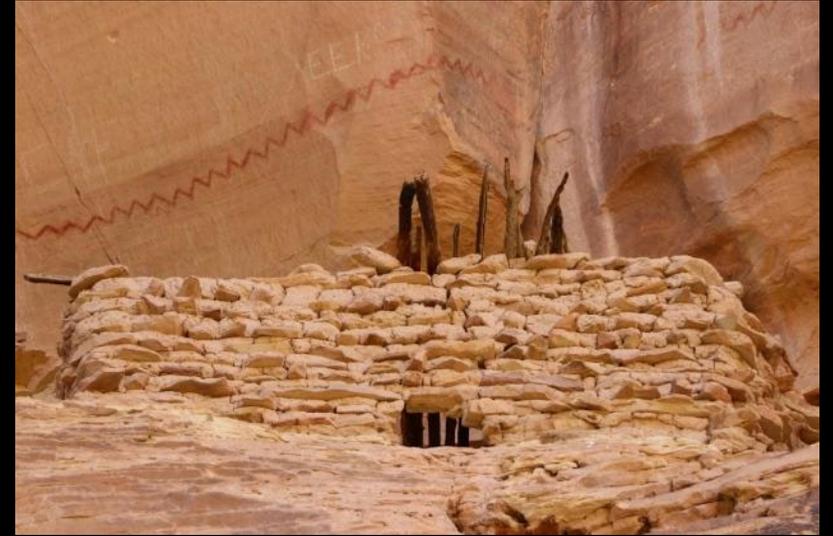






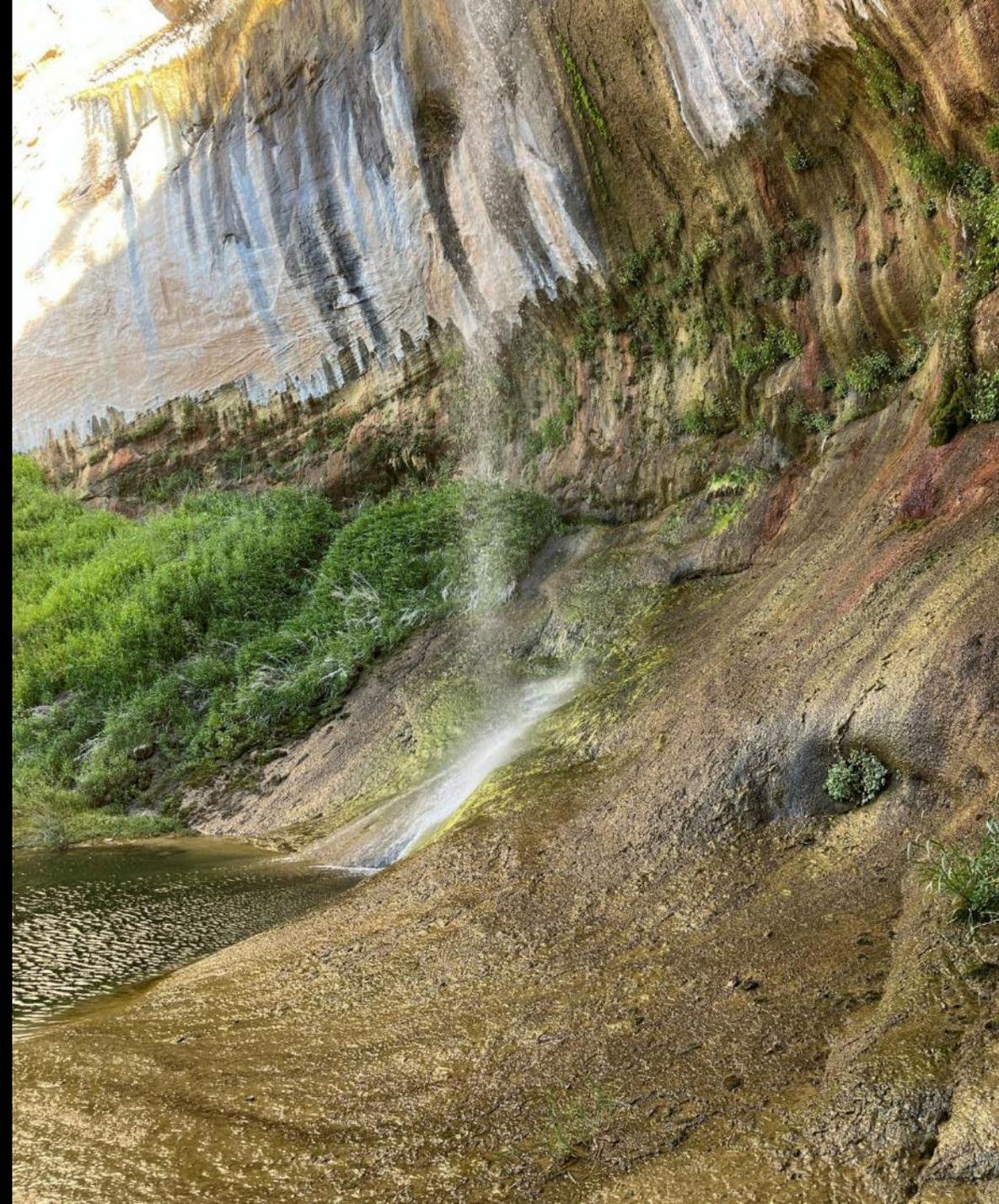
# Recognizing Indigenous People and Knowledge

- 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

File Edit View Insert Format Tools Extensions Help

100% Normal text Arial 15

## 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 Hangin' 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)

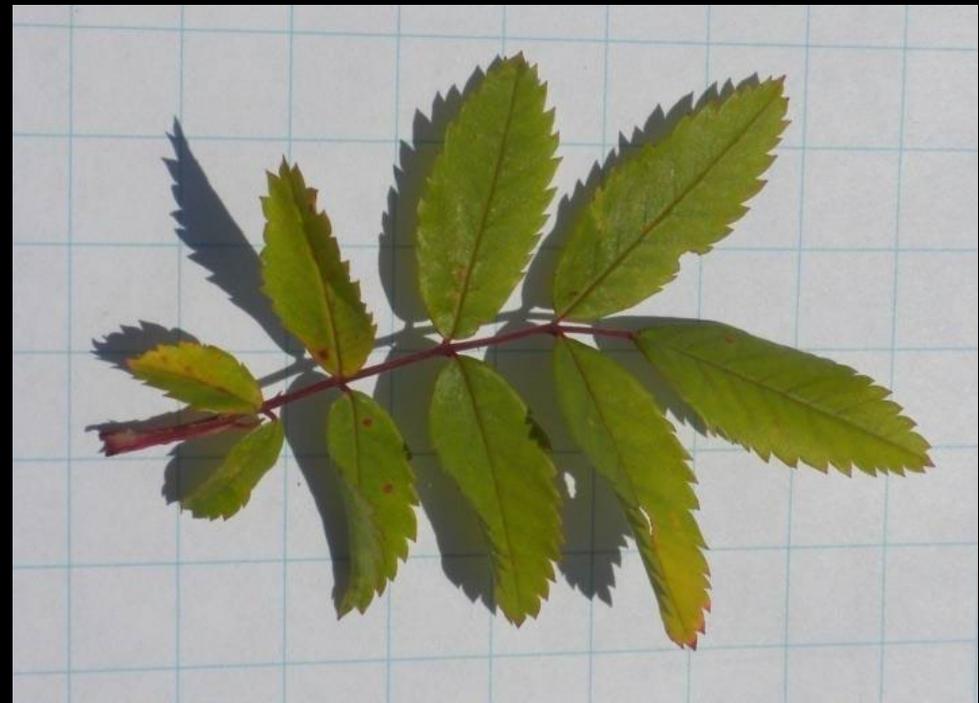


# *Cornus sericea* Red-osier dogwood

- 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

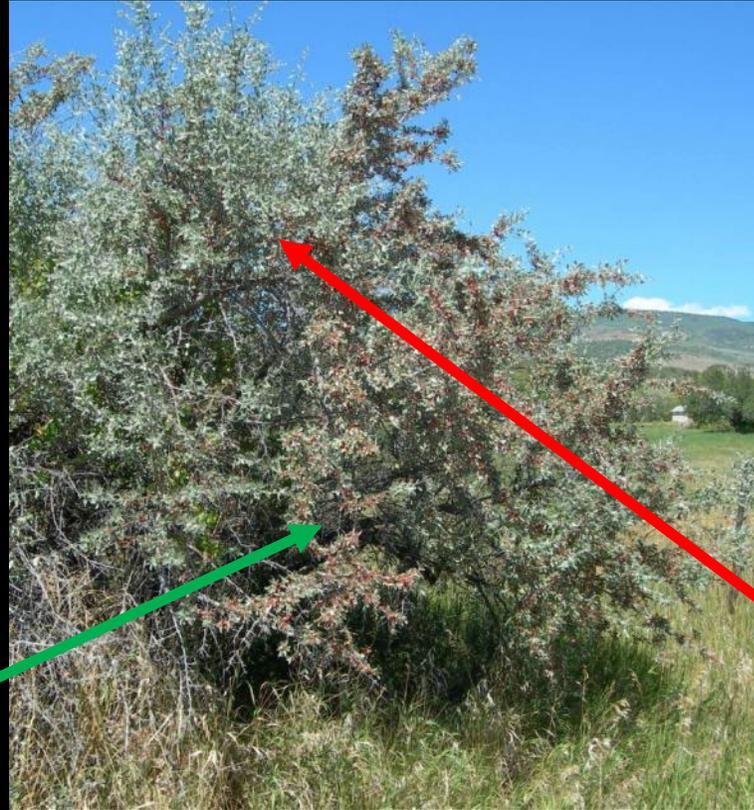
Branches alternate



# *Shepherdia argentea* vs *Elaeagnus angustifolia*

## *Shepherdia argentea*

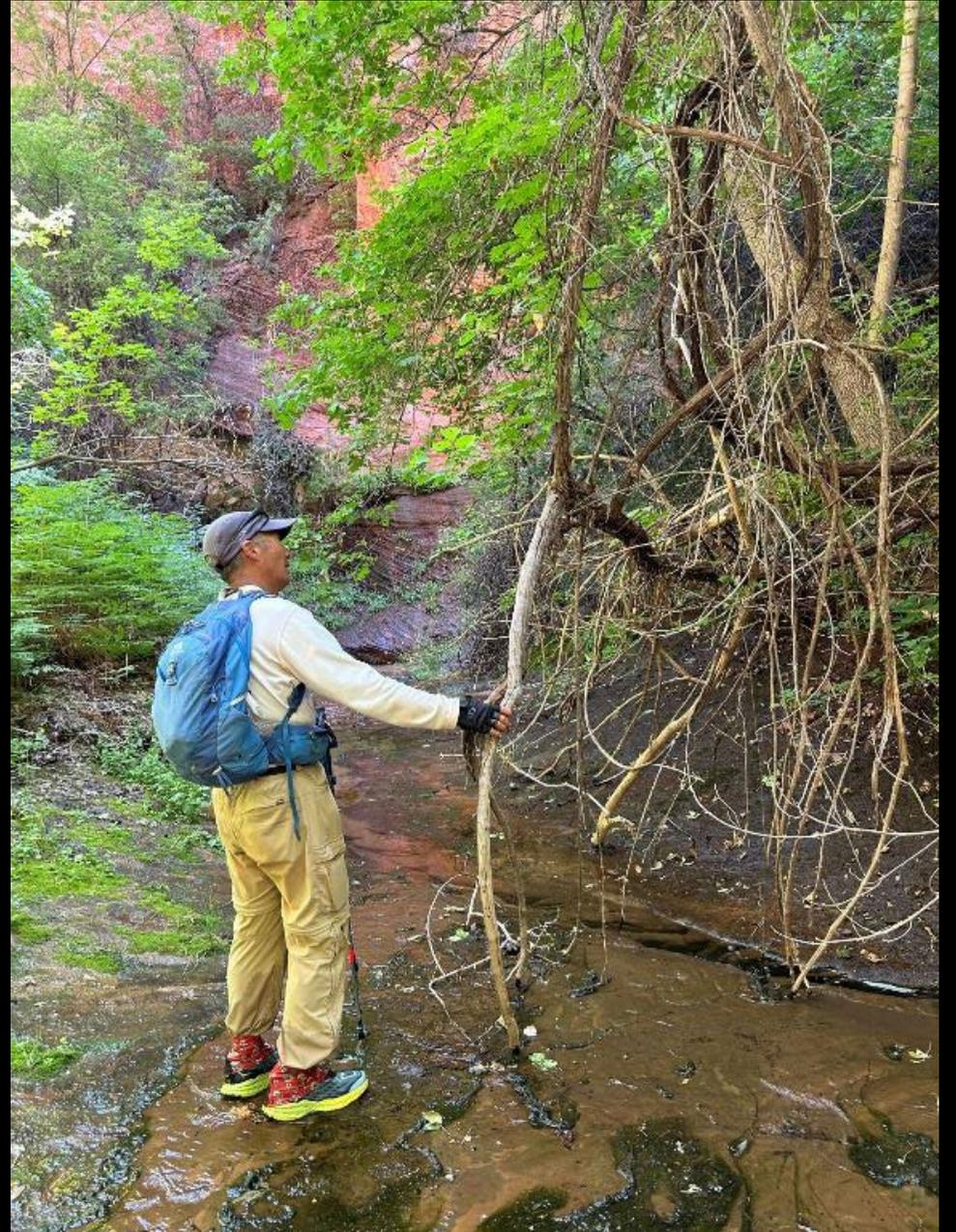
- Opposite branches
- Fruit Red, (edible)



## *Elaeagnus angustifolia*

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

# *Vitis arizonica* (Canyon grape)

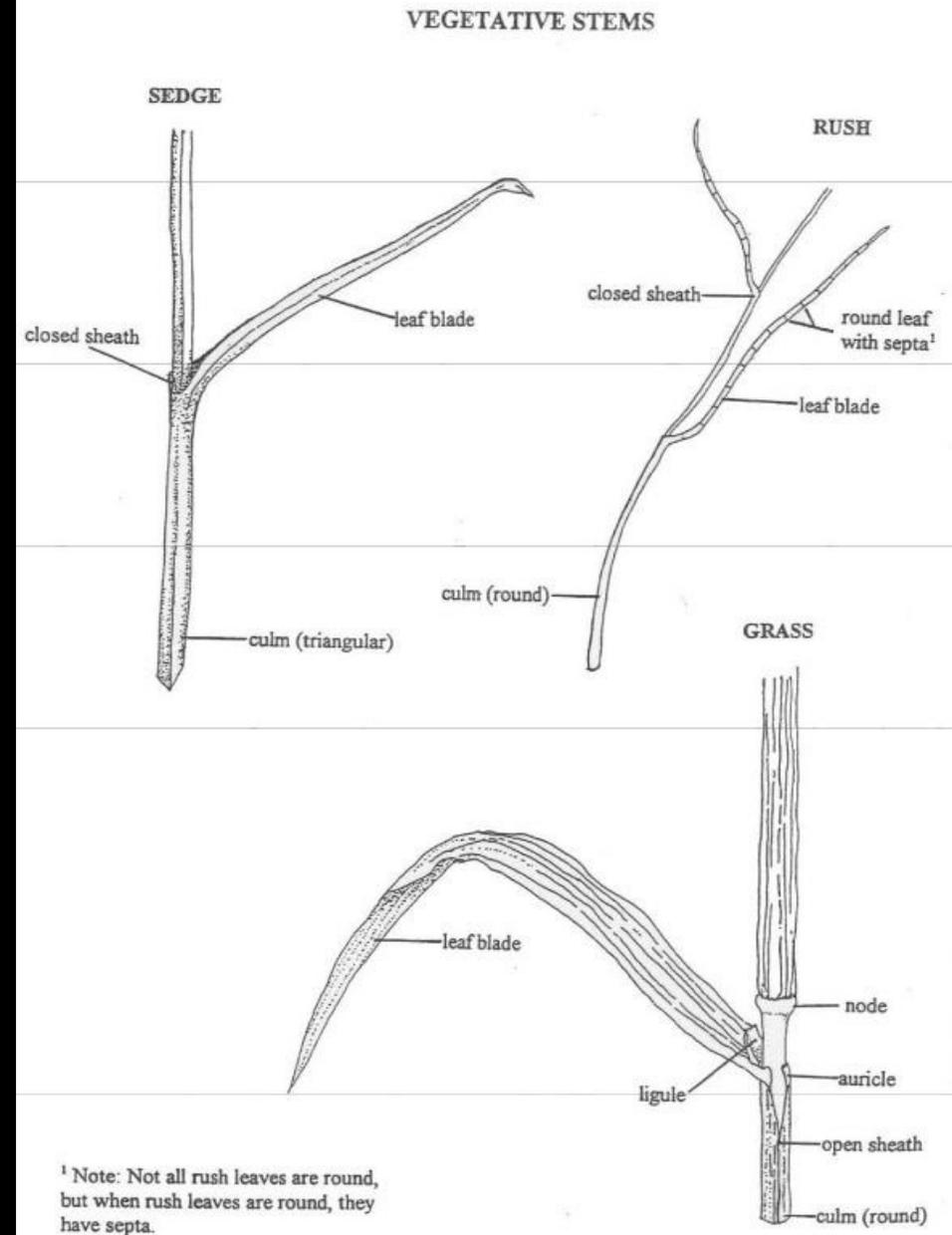


# Riparian Grasses and Grass-like



# 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*

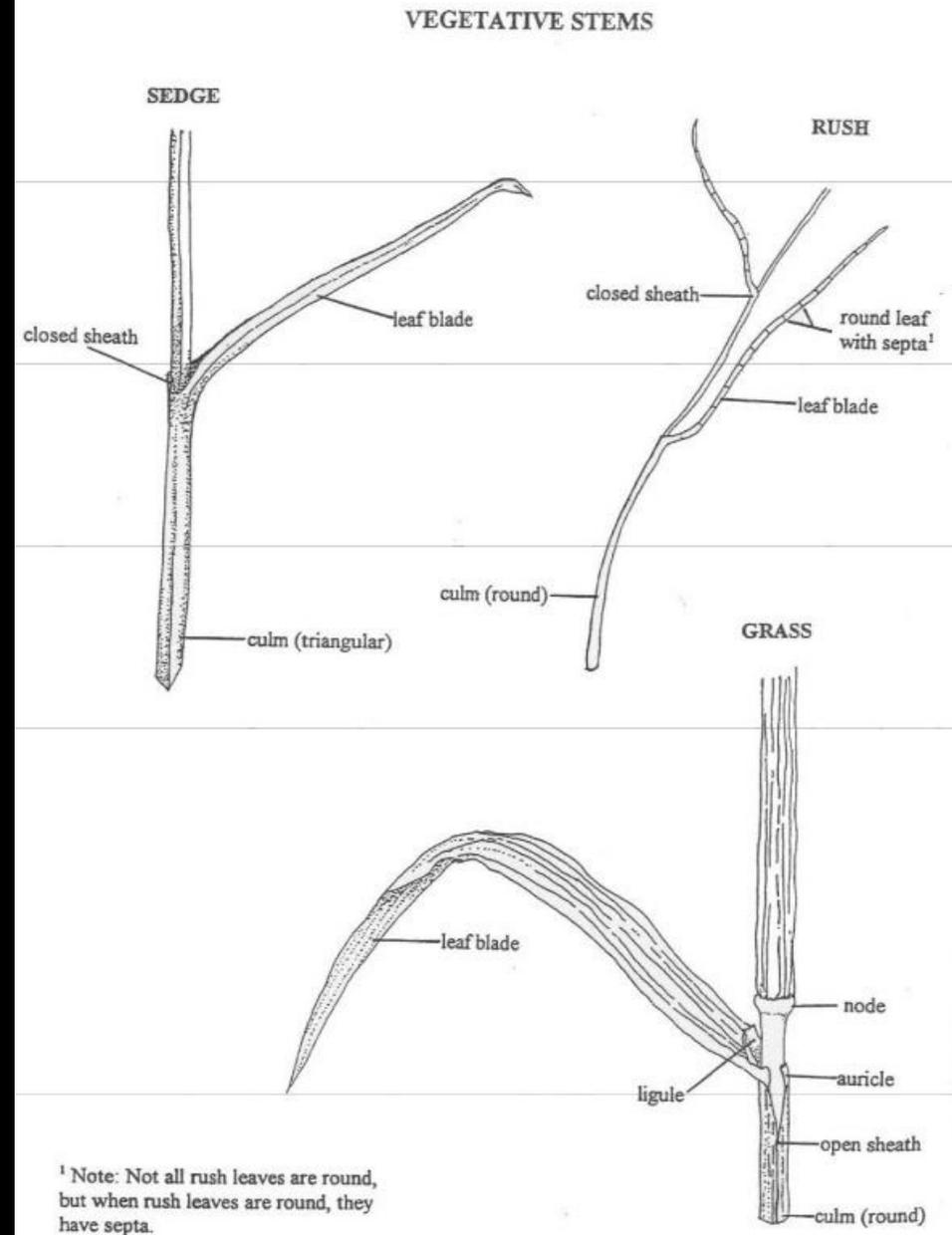
of spikelets aggregated into racemes, spikes,  
panicles, or umbels

## *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

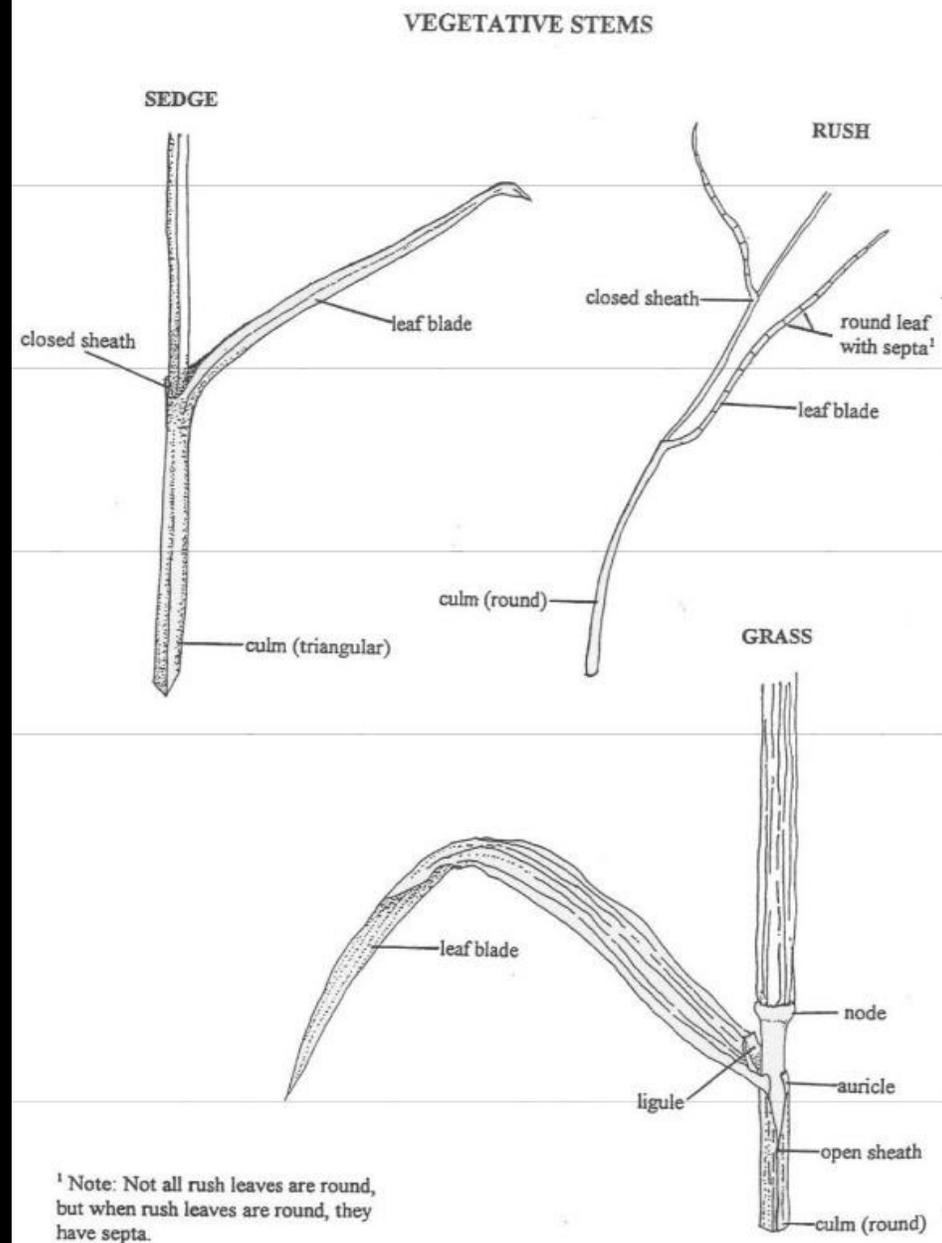
sheathing, 3-ranked or represented by  
sheaths only

## *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)

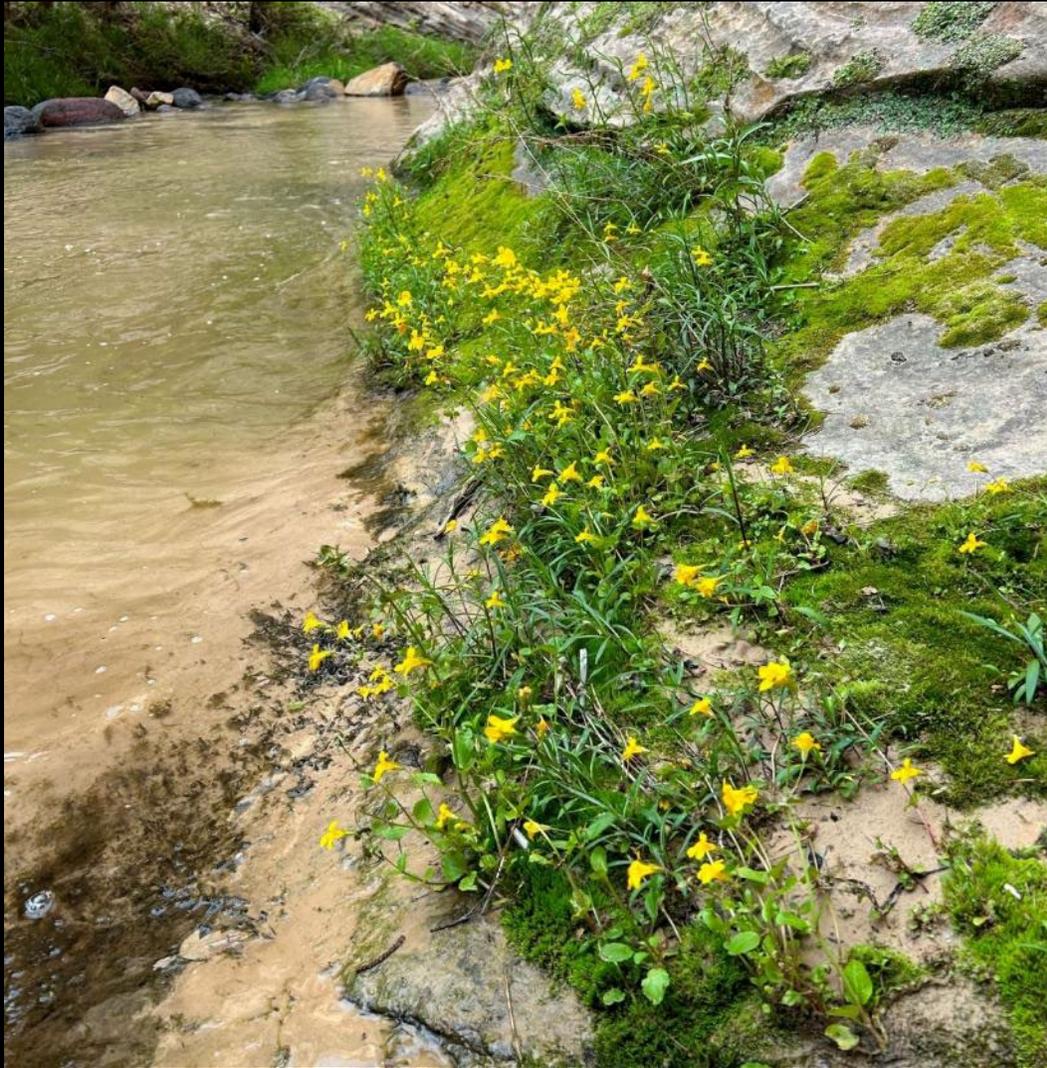


# Other grasslikes of riparian areas

- 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


**GRAND CANYON TRUST**

## PLANT IDENTIFICATION RESOURCES

### FOR THE COLORADO PLATEAU

Compiled by Marc Coles-Ritchie




**GRAND CANYON TRUST**

TITLE	GEOGRAPHIC FOCUS	DESCRIPTION	AUTHORS AND PUBLISHER
<b>Forbs/Wildflowers</b> (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.
* <i>Capital Reef Wildflowers</i>	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>Sansstone 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 Duri and Dave Montgomery, Red Shoe Guides, 2018.
* <i>Sansstone 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 Duri 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 Lesica and Walter Fertig, Published by Trillium Press, 2018.
* <i>Wildflowers &amp; Other Herbaceous Plants of Utah: Binghamland: 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 Bowers, 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, JayDoe Gummel, Jerry L. Goodspeed, Utah State University Press, Logan, UT, 2012.

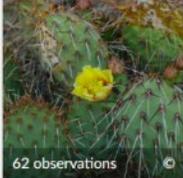
3

# Plants Identification Tools

iNaturalist – post and others will identify

**iNaturalist** Explore Community More Log In or Sign Up

Observations Cacti Location Go Filters

Category	756 OBSERVATIONS	15 SPECIES	88 IDENTIFIERS	323 OBSERVERS
	165 observations	CC0		
	136 observations	CC		
	120 observations	CC0		
	62 observations			
	35 observations	CC		

**Kingcup Cactus** (*Echinocereus triglochidiatus*)  
**Plains Pricklypear** (*Opuntia polyacantha*)  
**Smallflower Fishhook Cactus** (*Sclerocactus parviflorus*)  
**Brown-spined Pricklypear** (*Opuntia phaeacantha*)  
**Golden Pricklypear** (*Opuntia aurea*)

**iNaturalist** Explore Community More Log In

Observations Cacti Location Go Filters

Category	756 OBSERVATIONS	15 SPECIES	88 IDENTIFIERS	323 OBSERVERS
----------	------------------	------------	----------------	---------------

Map Grid List Places of Interest Redo search in map

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

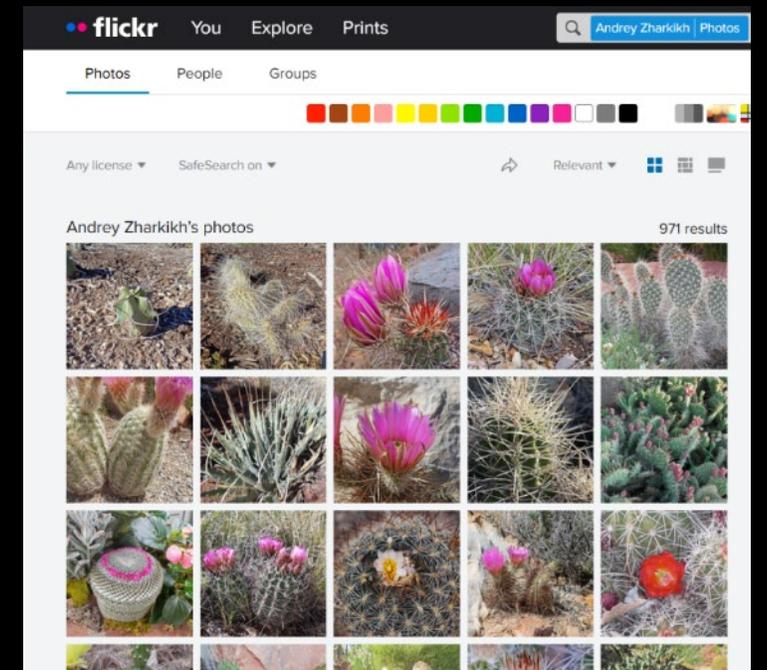
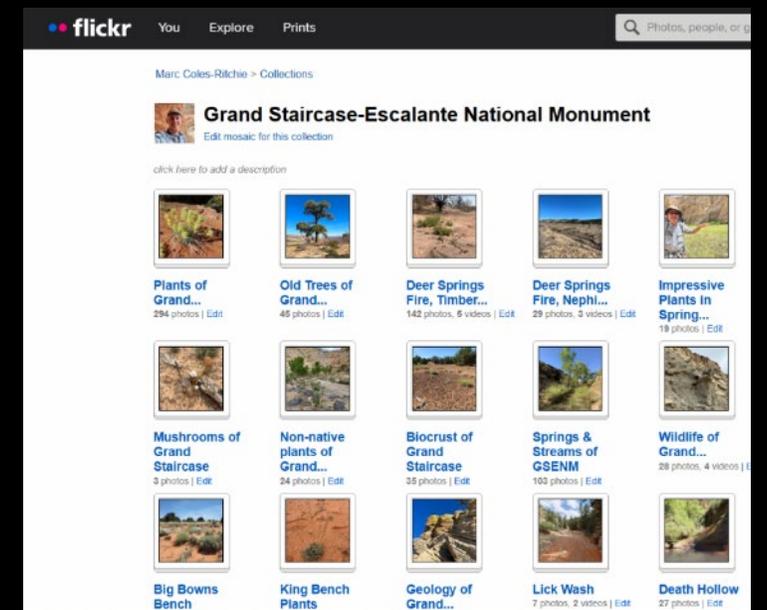
- GSENM Citizen Science website:  
<https://www.blm.gov/working-us> -
- GSENM Science & Research website:  
<https://www.blm.gov/programs/national-conservation-lands/utah/grand-staircase-escalante-national-monument/science-research> -



# 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

