

# Shrubs of Grand Staircase-Escalante National Monument

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Grand Staircase-Escalante National  
Monument

Kanab Public Library Presentation October  
2024



# Recognizing Indigenous People and Knowledge

- Tribes with connection to this land include Paiute, Hopi, Zuni, Pueblo, Dine' (Navajo), Ute and others.
- Indigenous people lived off this land!

# Flora of Grand Staircase-Escalante National Monument

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Walt Fertig data:

- 1,003 species
- 26% of plants of Utah are in GSENM
- 43 endemic plants (to GSENM or vicinity)
- 135 shrub species (33 in this presentation)
  - All native, except kochia (tamarisk and Russian olive considered trees)



Cactus, Yucca, Vines often called shrubs, but not included here.

Cactus presentation: January 15, 2025

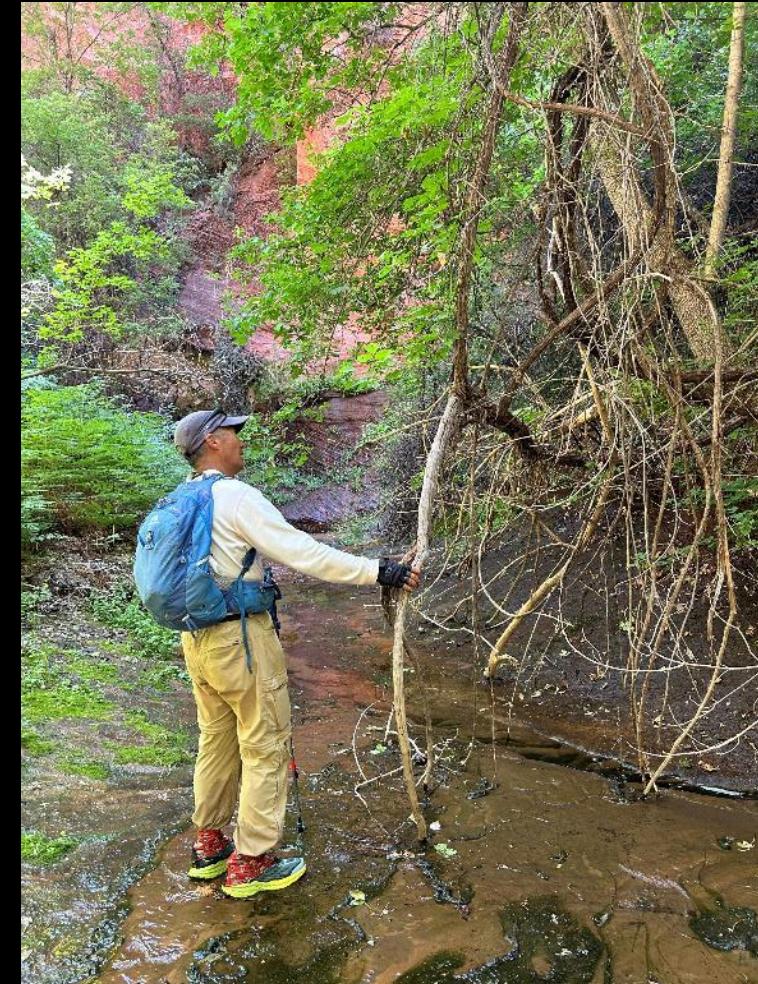
Yucca ?  
Vines ?



Scarlet hedgehog cactus



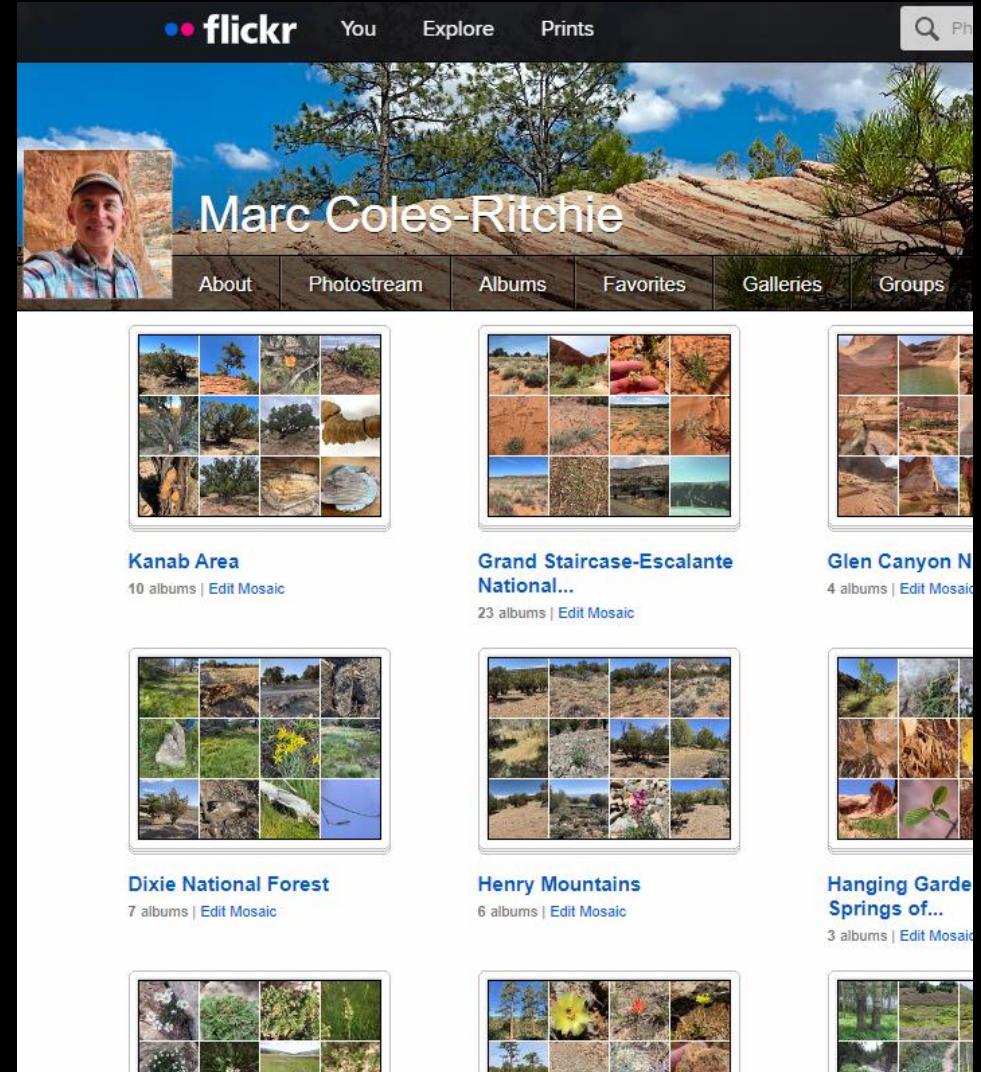
Narrowleaf yucca



Canyon grape

# Photos

- Most taken by Marc in GSENM; some in surrounding lands of southern Utah. Most of these are in my online Flickr albums.
  - [https://www.flickr.com/photos/marc\\_ecology/collections](https://www.flickr.com/photos/marc_ecology/collections)
- A few taken by colleagues, used with permission and attribution.



# What is a shrub? No perfect definition

## Shrub

- Woody plant
- Multiple stems
  - Creates more rounded shape
- Typically less than 10 feet tall
- Some can sprout (new stems)

## Tree

- Woody plant
- One main stem (or a few)
  - Creates taller, pointed shape
- Typically over 10 feet tall
- Often dies when main stem cut

# Notes

- Shrubs can be very short; few inches tall
- Shrubs can be taller than people
- Some shrubs produce edible fruit
- Some shrubs sprout from broken stems, some don't
- Wildlife eat shrubs (browse)
- This presentation, a sample of common or interesting upland (not riparian) shrubs, presented in alphabetical order (mostly) by common name (scientific name in parentheses); 1 or 2 slides per plant.

# Apache plume (*Fallugia paradoxa*)



Plumose styles



5 white petals



Can grow over 6 feet tall

# Broom snakeweed (*Gutierrezia sarothrae*)



Linear leaves



Usually less than 2 feet tall



Broom shape ?

# Bush penstemon (*Penstemon ambiguus*)



The most woody penstemon



White-pink, flat-faced flowers

# Bush (sand) penstemon (*Penstemon ambiguus*)



# Cliffrose (*Purshia stansburiana*)



Photo by Jonathan Barth



5-petal, cream-colored, fragrant flowers



# Cliffrose (*Purshia stansburiana*)



Photo by Andrey Zharkikh



Leaves are usually 5-lobed



# Fragrant sumac (*Rhus aromatica*)



3-lobed is variety *trilobata*



Simple (no lobe) leaf is variety *simplicifolia*

# Fragrant sumac (*Rhus aromatica*)



September 10 (Deer Springs Fire started July 7)

# Fremont mahonia (*Mahonia fremontii*)

Photos w flowers by Andrey Zharkikh



September 18 after Deer Springs Fire of July 7

# Frosted mint (*Poliomintha incana*)



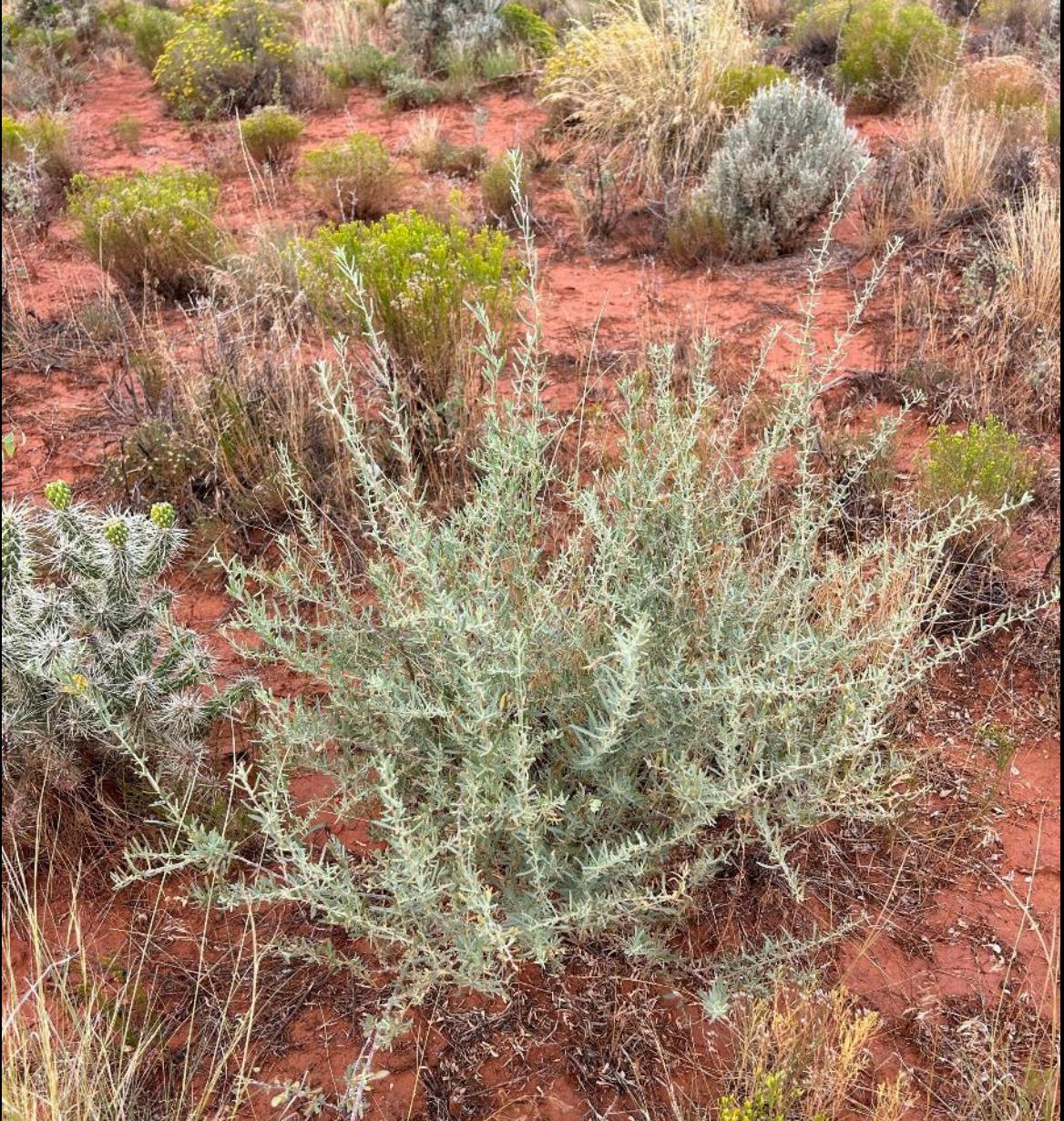
Leaves are very aromatic (minty) when crushed



# Fourwing saltbush (*Atriplex canescens*)

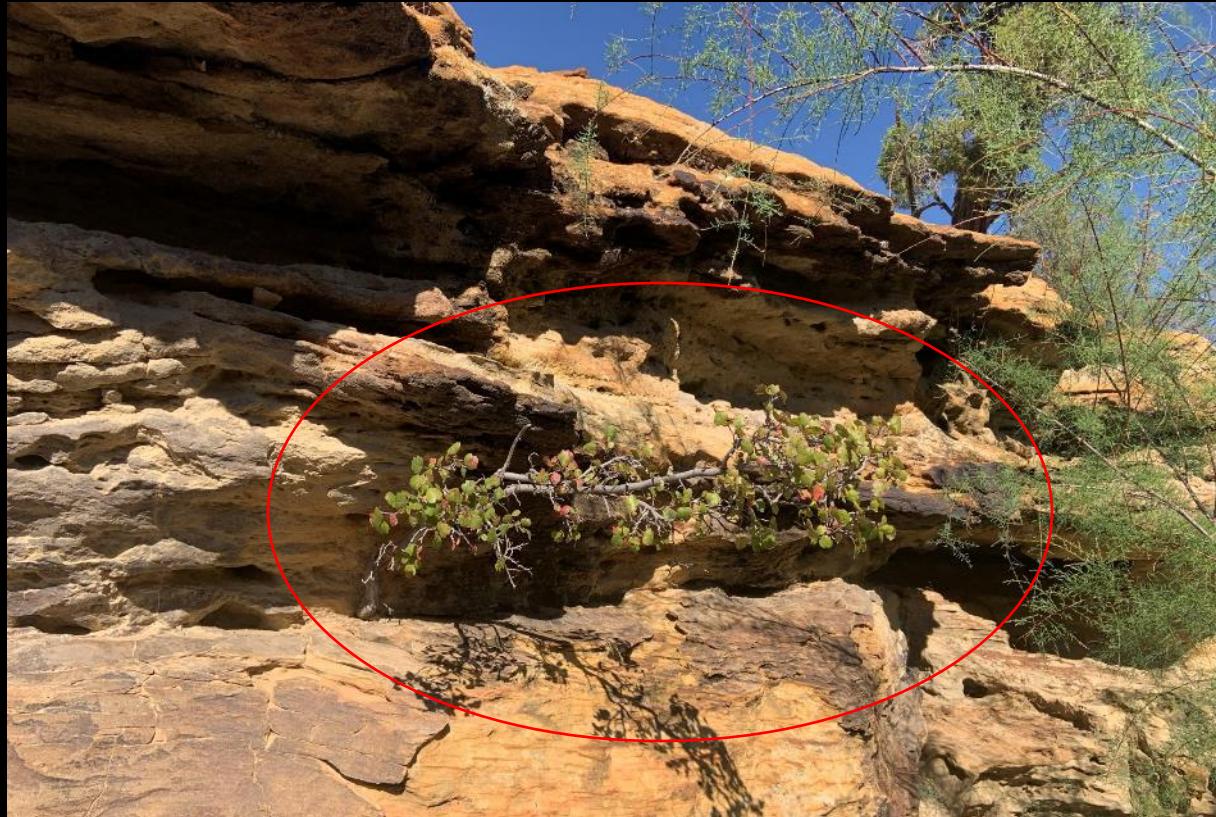


Fruiting bracteoles have 4 papery wings  
and enclose a single seeded fruit



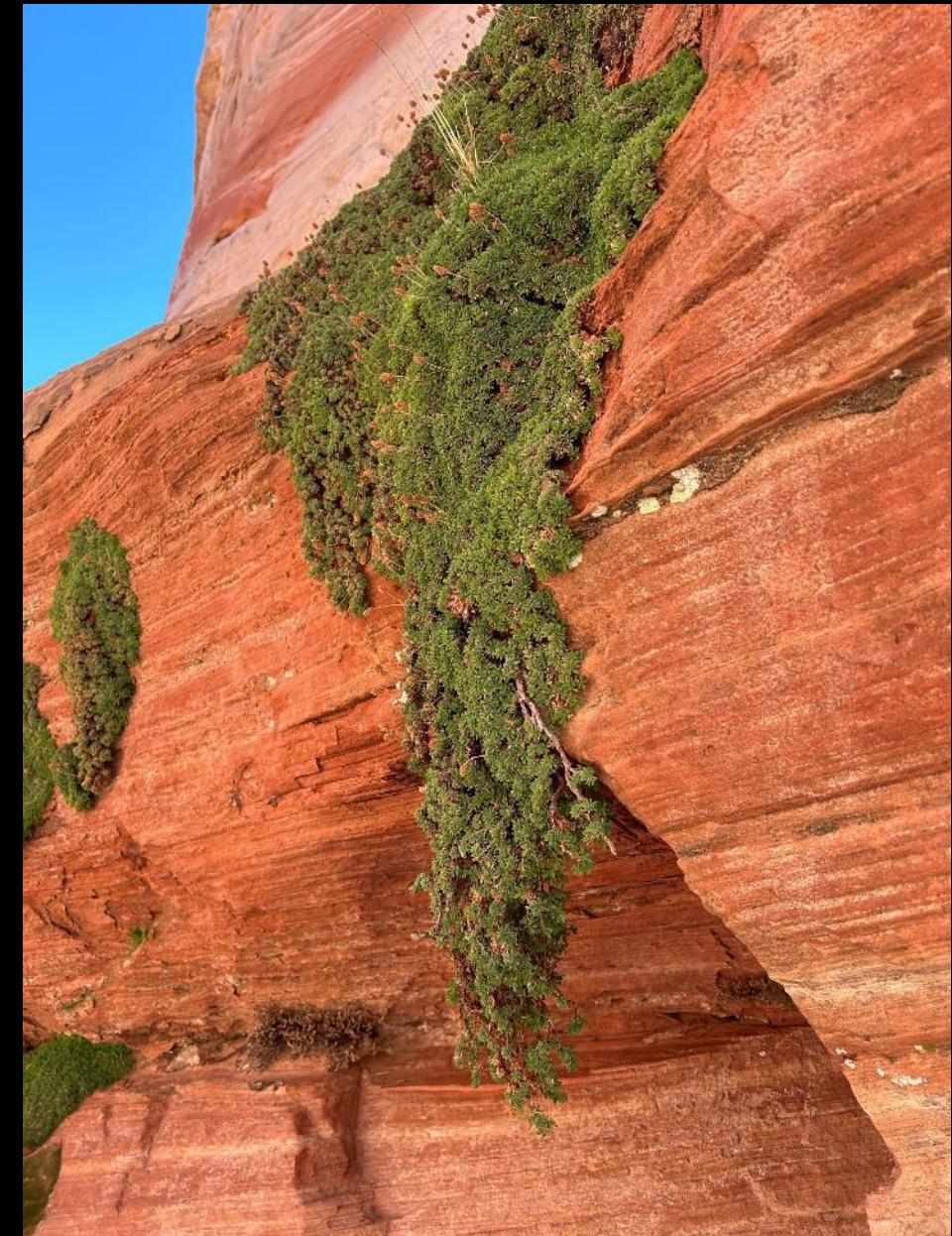
Grows to 6 feet tall.

# Golden currant (*Ribes aureum*)



Flowers are yellow (*aureum* = gold) and fruits are orange, red or black

# Mat rock spiraea (*Petrophytum caespitosum*)



Prostrate mat-like plant, usually less than 1-foot tall.

# Mat rock spiraea (*Petrosymum caespitosum*)



# Mat saltbush (*Atriplex corrugata*)



Low, spreading shrub, less than 1-foot tall, grows on clay soils; important forage in winter.

# Mormon tea (*Ephedra viridis*)



Green stems perform photosynthesis; moderately nutritious forage for native & domestic herbivores.

# Mountain mahogany (*Cercocarpus*)



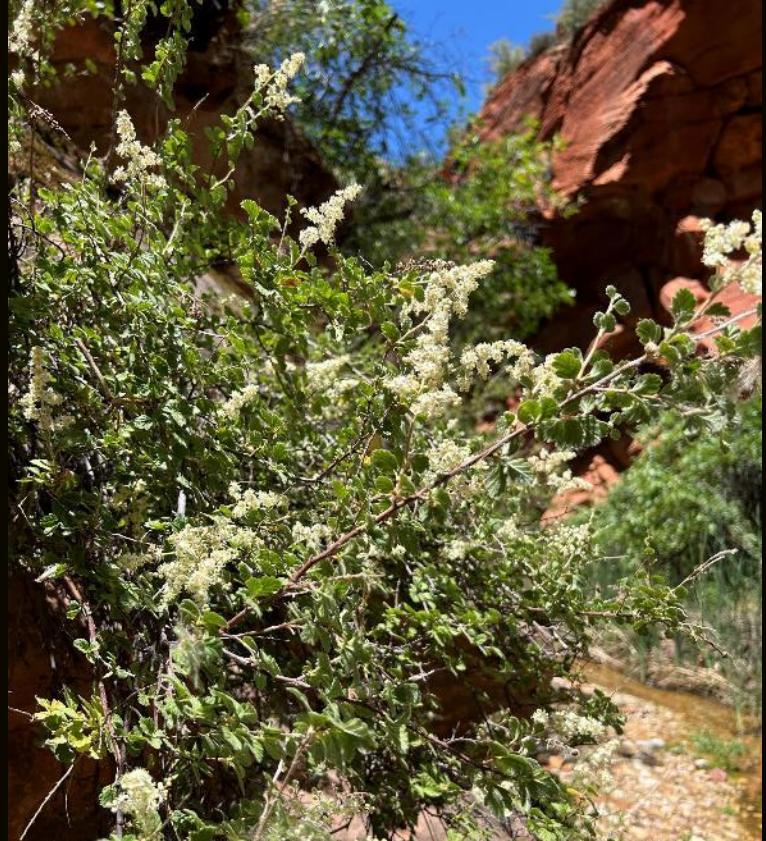
Alderleaf mountain mahogany; leaves broader, like alder.



narrow-leaf mountain mahogany, slightly larger than dwarf mountain mahogany

Alderleaf mountain mahogany  
(*Cercocarpus montanus*)

# Mountain spray (*Holodiscus dumosus*)



“Spray” inflorescence up to 6 inches



Grows on rocky outcrops



Up to 5 feet tall

# Oak (*Quercus*)



Sonoran scrub oak (*Quercus turbinella*)



Wavy-leaf oak (*Quercus welshii*)

# Oaks (Quercus)



*Quercus turbinella* (shrub live oak)



*Quercus welshii* (Tucker oak)



# Gambel oak (*Quercus gambelii*)



July 30 (fire started July 7)



September 18 (fire started July 7)

Photo by Jonathan Barth

# Purple sage (*Salvia dorrii*)



**Leaves are grayish-blue, rounded and opposite (mint family characteristic); purple and blue flowers; aromatic leaves.**

# Purple sage (*Salvia dorrii*)

Common on slopes of Vermillion Cliffs around Kanab.



# Pale wolfberry (*Lycium pallidum*)



**Thorny shrub, up to 6 feet tall; flowers are green-white (pale); found at Ancestral Pueblo cultural sites.**

# Redberry desert-thorn

*(Lycium andersonii)*



**Simple (no lobes), spatulate, thickened leaves; fruits are succulent red-orange berry**

# Roundleaf buffaloberry (*Shepherdia rotundifolia*)



Photo by Andrey Zharkikh

**Stems and leaves are silver-white, hairy; fruits hairy too, drupe (similar to Russian olive)**

# Rubber rabbitbrush (*Ericameria nauseosa*)



September 10 (fire started July 7)



**Many varieties, stems often hairy and white.**



# Single-leaf ash

*(Fraxinus anomala)*



Photo by Andrey Zharkikh



Simple (no lobes or leaflets), ovate, opposite leaves; up to 13 feet tall

# Threadleaf ragwort or hairy senecio (*Senecio flaccidus*)



**Hairs on stems and linear leaves; alkaloids can cause liver damage for livestock.**

# Utah serviceberry (*Amelanchier utahensis*)



**Robust shrub up to 15 feet tall; leaves have serrations on outer part of blade more than at base; white flowers, fruit is orange-brown**

# Utah serviceberry (*Amelanchier utahensis*)



September 18 (fire started July 7)

# Winterfat

*(Krascheninnikovia lanata)*



Hairy (*lanata* means wooly) leaves appear white-silver; fruiting bracts obscured by long hairs; highly desirable forage in winter

# Sagebrush (*Artemisia*)

# Mountain big sagebrush (*Artemisia tridentata* subsp. *vaseyana*)

**Leaf tips have 3 lobes  
(tri-dentate); grows to 3-  
feet tall; crushed leaves  
have camphor-like odor  
(terpenoid).**



# Basin big sagebrush

*(Artemisia tridentata* subsp. *tridentata*)

**Leaf tips have 3 lobes (tri-dentate); grows in more fertile sites (valleys) and to 10-feet tall; crushed leaves have camphor-like odor (terpenoid).**



# Sand sagebrush (*Artemisia filifolia*)



**Linear leaves (no lobes); grows to 4-feet tall. Grows in deep sandy soil.**

# Free Sagebrush Guide

**Artemisia tridentata subsp. vaseyana — Mountain Big Sagebrush**

**Description:** Medium-sized to tall shrubs, mostly 2–4 ft tall, but sometimes taller; crowns flat-topped. Not resprouting. Evergreen. Strongly aromatic.

**Vegetative leaves:** Broadly wedge-shaped and shallowly 3-lobed (rarely entire), 3–7 mm wide X 12–15 mm long, lobes rounded with side lobes slightly flared, gray-green. \*Less than 4 times longer than wide.

**Leaves of the flowering stems:** Mostly shorter than vegetative leaves, entire or 3-lobed.

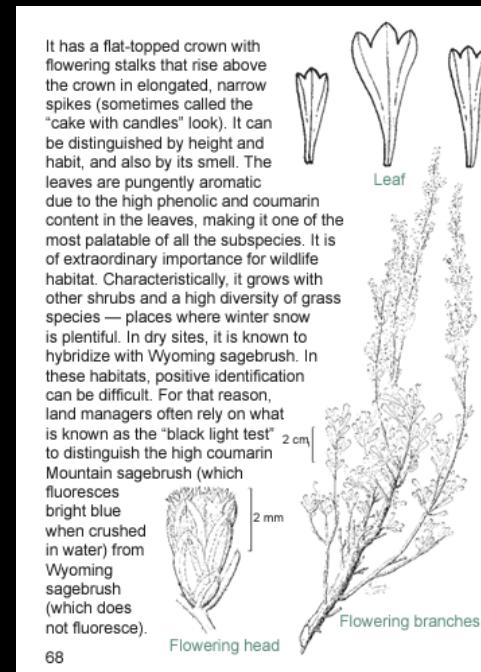
**Inflorescences:** Narrow with erect side branches, mostly 2–6 cm wide X 10–15 cm long.

**Flowering heads:** Bell-shaped, 1.5–3 mm wide X 2–3 mm high, erect; florets 3–9 per head, involucral bracts hairy.

**Flowering period:** Late summer to late fall.

Mountain big sagebrush grows at mid to high elevations throughout the western mountains and by most estimates, it is the most abundant of the subspecies of Big sagebrush.

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## Pocket Guide to Sagebrush

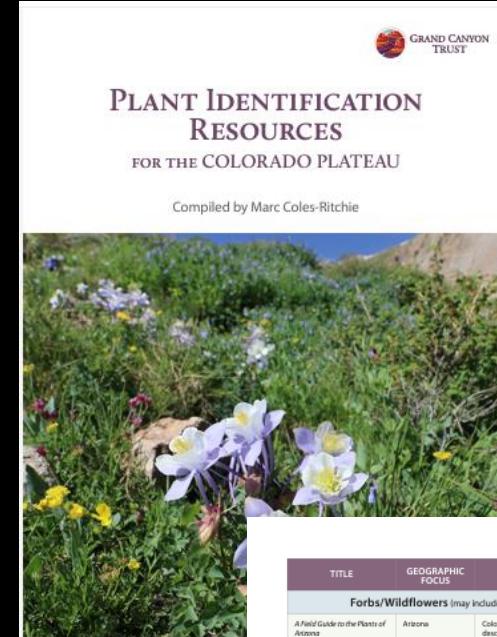


Download here:  
<https://nrcspad.sc.egov.usda.gov/distributionCenter/pdf.aspx?productID=1425>

PRBO Conservation Science

# Plant Identification Tools

- iNaturalist – post and others will identify
- List of books, apps and websites:  
<https://www.grandcanyontrust.org/plant-identification-resources>
- Send me photos



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 Espie, Falcon Guides, 1992.
<i>* Capitol Reef Wildflowers</i>	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 Photography 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 of the Colorado Plateau: A Field Guide to the Wildflowers of the Mimbres Region and Beyond</i>	Southeast Utah and adjacent states	Descriptions and color photos for 100 of the common wildflowers and shrubs of the foothills and mountains of southwestern Utah.	Anne Durt and Dave Montgomery, Red Shoe Guides, 2016.
<i>* Sandstone Country Wildflowers: The Red Shoe Guide</i>	Southeast Utah and adjacent states	Descriptions and color photos for top 100 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	Featuring 100 common wildflowers, grasses of the red rock desert with photographs and full descriptions of about half these plants.	Peter Lesica and Walter Terry, Published by Trilium Press, 2018.
<i>* Wildflowers &amp; Other Common Plants of Utah Highdeserts: A Field Guide</i>	Utah	A handy booklet, descriptions and color photos of 85 of the common wildflowers in Utah.	Roger Barnes, Mindy Pratt, James Barnes, 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, JayCee Gurnell, Jerry L. Goodspeed, Utah State University Press, Logan, UT, 2012.

# Observations



Poales

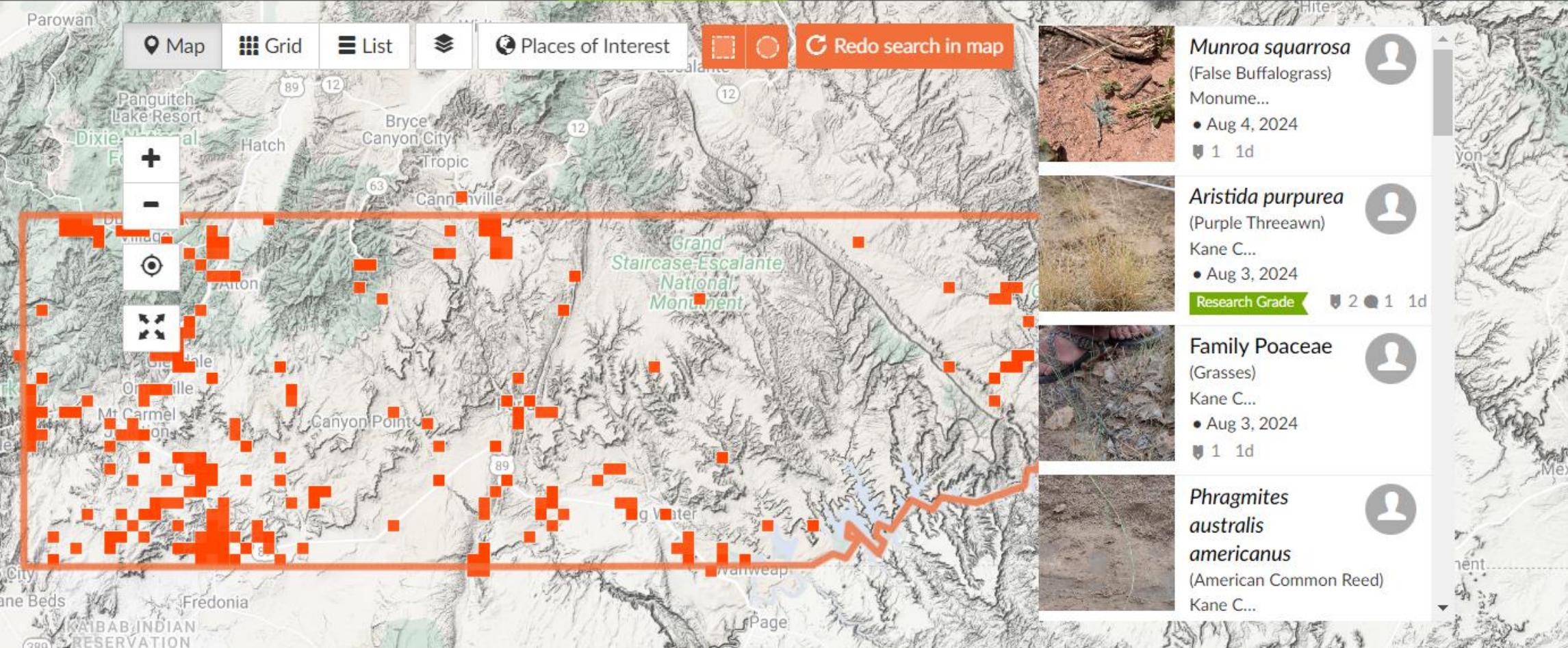


Kane County, UT, USA



Filters

Kane

738  
OBSERVATIONS94  
SPECIES82  
IDENTIFIERS275  
OBSERVERS

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App available for iPad

# Woody Plants of Utah

*A Field Guide with Identification Keys to Native and  
Naturalized Trees, Shrubs, Vines, and Cacti*



Renée Van Buren, Janet G. Cooper,  
Leila M. Shultz, and Kimball T. Harper

Photographs by R. Van Buren et al., Plant Diagrams by J. G. Cooper

# 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 ->



# Upcoming Events

## Talks at Kanab Library on Science (6pm)

- November 13: Cultural Site Stewardship (Lexi Little)
- December 11: Lichens (Steve Leavitt)
- January 15: Cactus (Marc & Jared)
- February 12: Riparian and wetland plants (Marc)
- February 26: Wildlife (Joel Berger)
- March 12: Tyrannosaurs (Dr. Alan Titus)
- April 9: Landscaping with native Plants (Marc and Tim)
- April 16: Bumblebees & Citizen Science (Amy Dolan)

## Other ecology events

- March 20-22, 2025: Symposium on Grand Staircase-Escalante Region; Escalante Visitor Center and Zoom
- Amazing Earthfest May 8-11 in Kanab

End

# Greenleaf manzanita (*Arctostaphylos patula*)

