

# Shrubs of Grand Staircase- Escalante National Monument

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Grand Staircase-Escalante National  
Monument

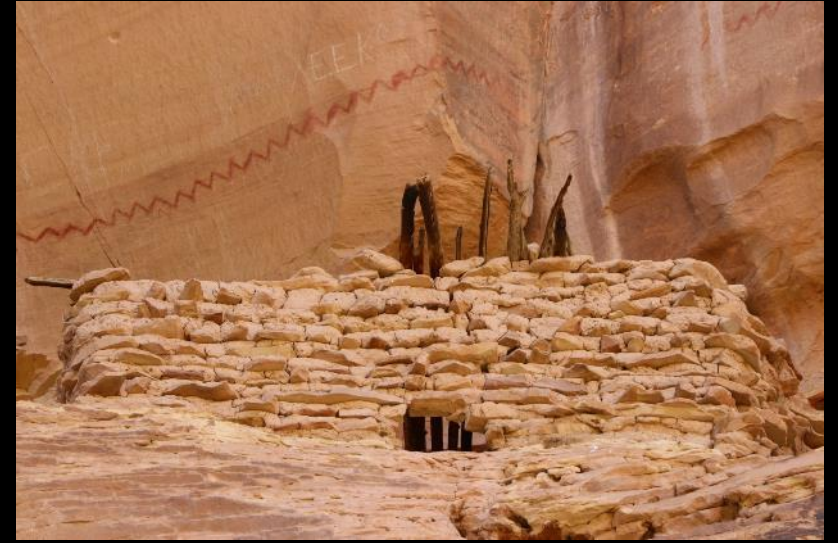
Kanab Public Library Presentation  
October 2024





# 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)





# Plant Presentations at Kanab Library

## Past (pdf available)

- Wildflowers
- Grasses

## Future

- December 11: Lichens (Steve Leavitt)
- January 15: Cactus (Marc & Jared)
- February 12: Riparian plants (Marc)
- April 9: Landscaping with native Plants (Marc and Tim)
- Trees ?
- Weeds ?
- Zion National Park Plants (Darrin Gobble) ?
- Rare plants ?
- Other ?



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

Cactus presentation: January 15, 2025

Yucca ?

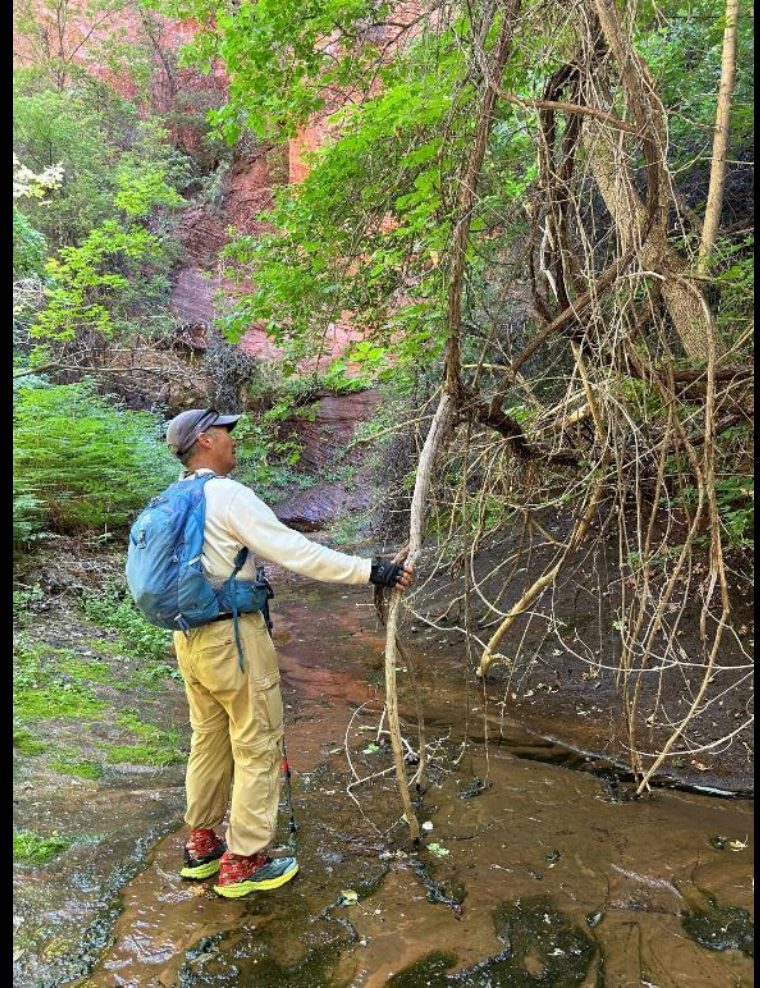
Vines ?



Scarlet hedgehog cactus



Narrowleaf yucca

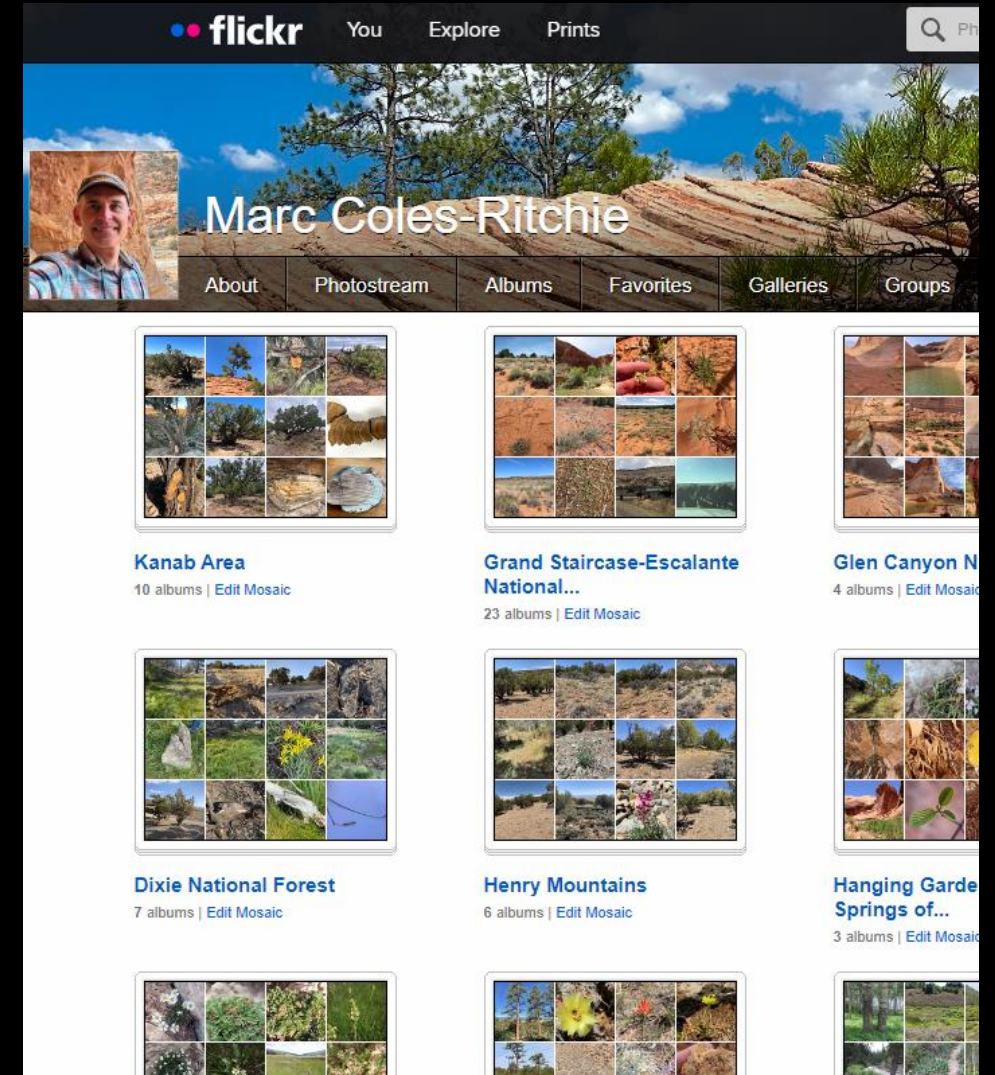


Canyon grape



# 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.



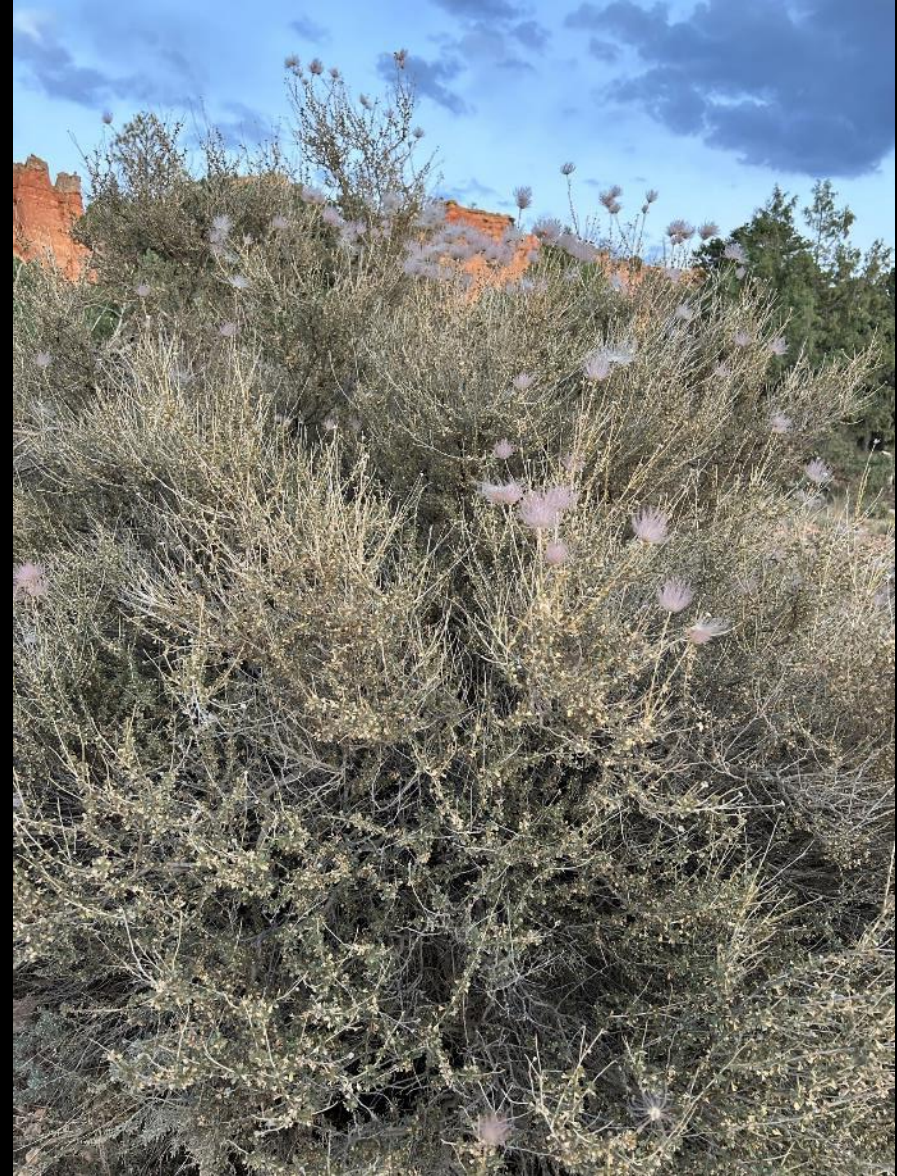
# Apache plume (*Fallugia paradoxa*)



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



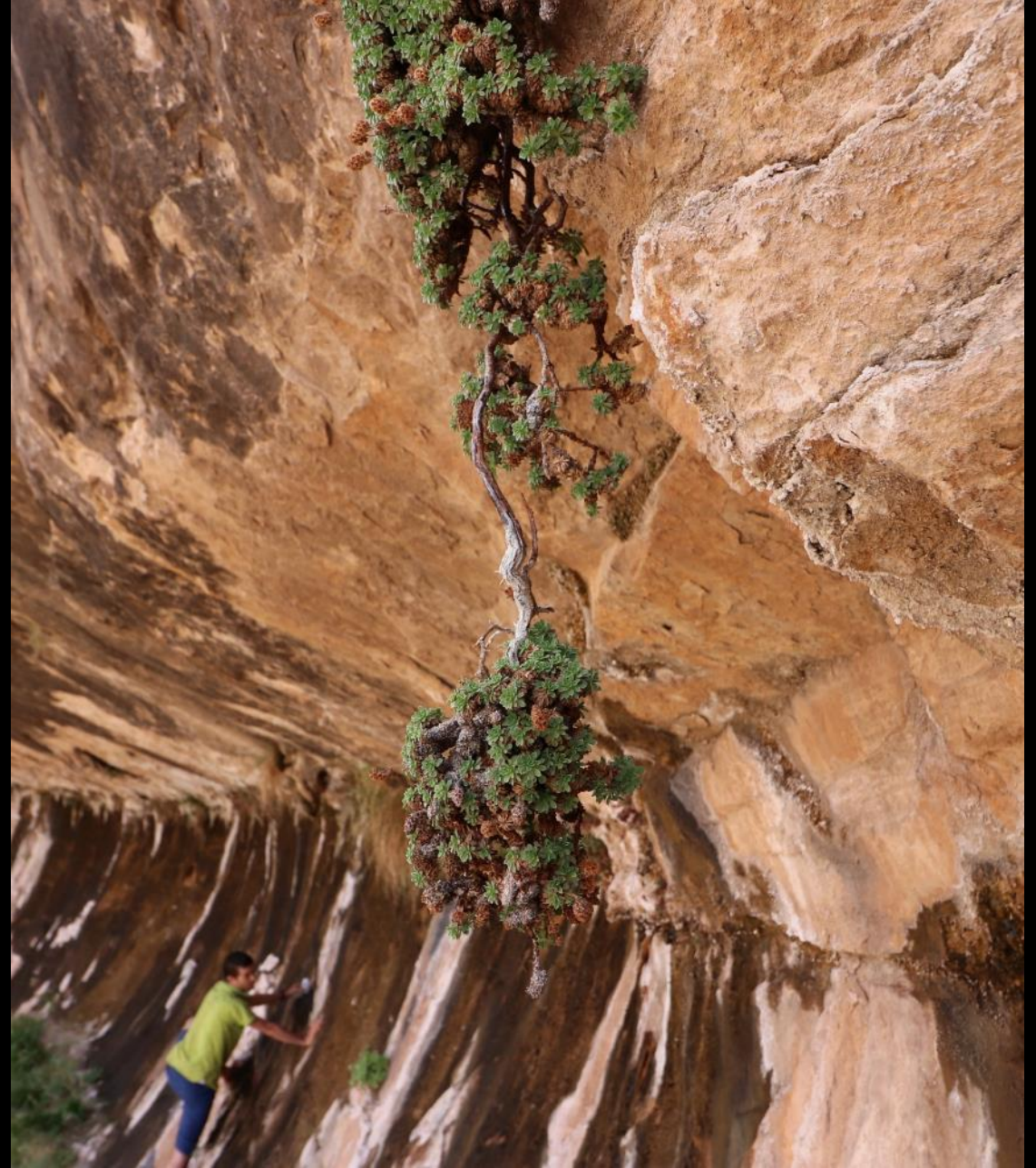
# Mat rock spiraea (*Petrophytum caespitosum*)



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



# Mat rock spiraea (*Petrophytum 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*)



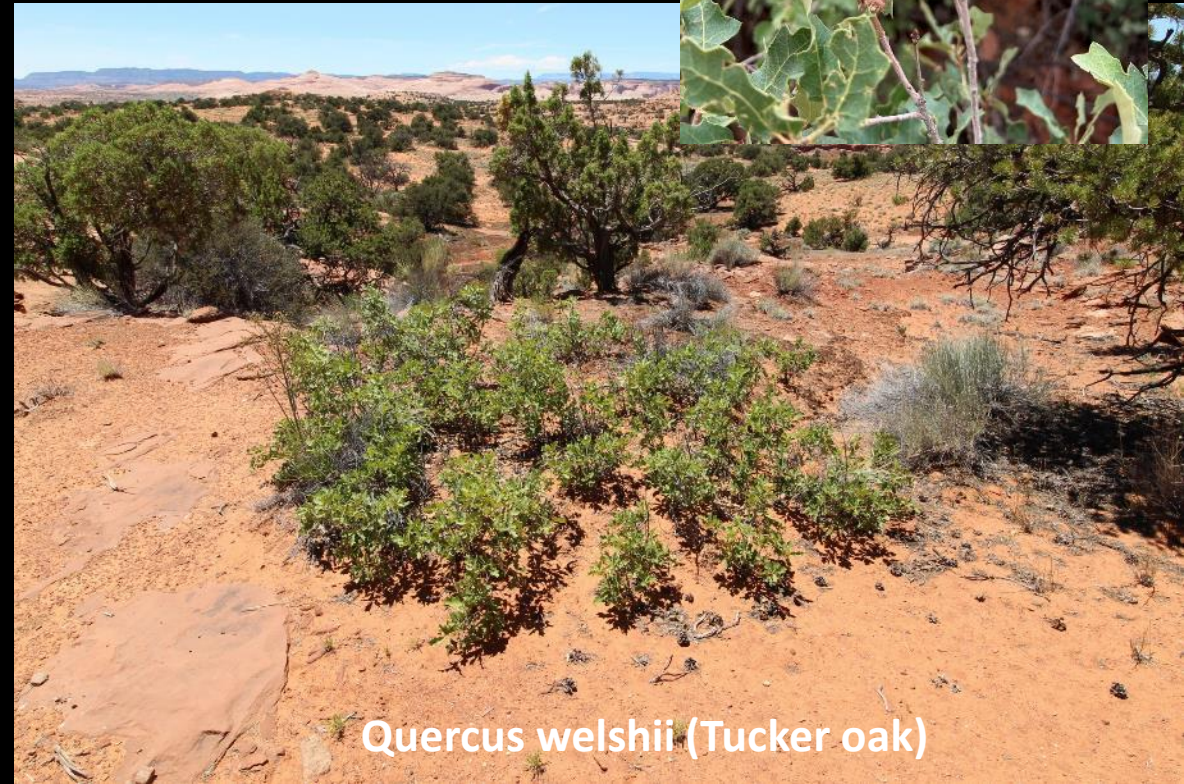
Sonoran scrub oak (*Quercus turbinella*)



Wavy-leaf oak (*Quercus welshii*)



# Oaks (Quercus)





# Gambel oak (*Quercus gambelii*)



July 30 (fire started July 7)



September 18 (fire started July 7)



# Purple sage (*Salvia dorrii*)

Photo by Jonathan Barth



Photo by Andrey Zharkikh

**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*)



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, involucre bracts hairy.

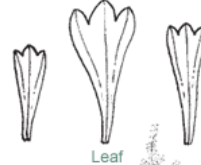
**Flowering period:** Late summer to late fall.



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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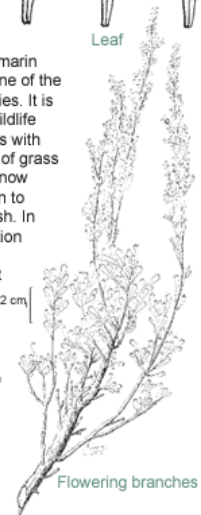
It has a flat-topped crown with flowering stalks that rise above the crown in elongated, narrow spikes (sometimes called the “cake with candles” look). It can be distinguished by height and habit, and also by its smell. The leaves are pungently aromatic due to the high phenolic and coumarin content in the leaves, making it one of the most palatable of all the subspecies. It is of extraordinary importance for wildlife habitat. Characteristically, it grows with other shrubs and a high diversity of grass species — places where winter snow is plentiful. In dry sites, it is known to hybridize with Wyoming sagebrush. In these habitats, positive identification can be difficult. For that reason, land managers often rely on what is known as the “black light test” to distinguish the high coumarin Mountain sagebrush (which fluoresces bright blue when crushed in water) from Wyoming sagebrush (which does not fluoresce).



Leaf



Flowering head



Flowering branches

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## Pocket Guide to Sagebrush



PRBO Conservation Science

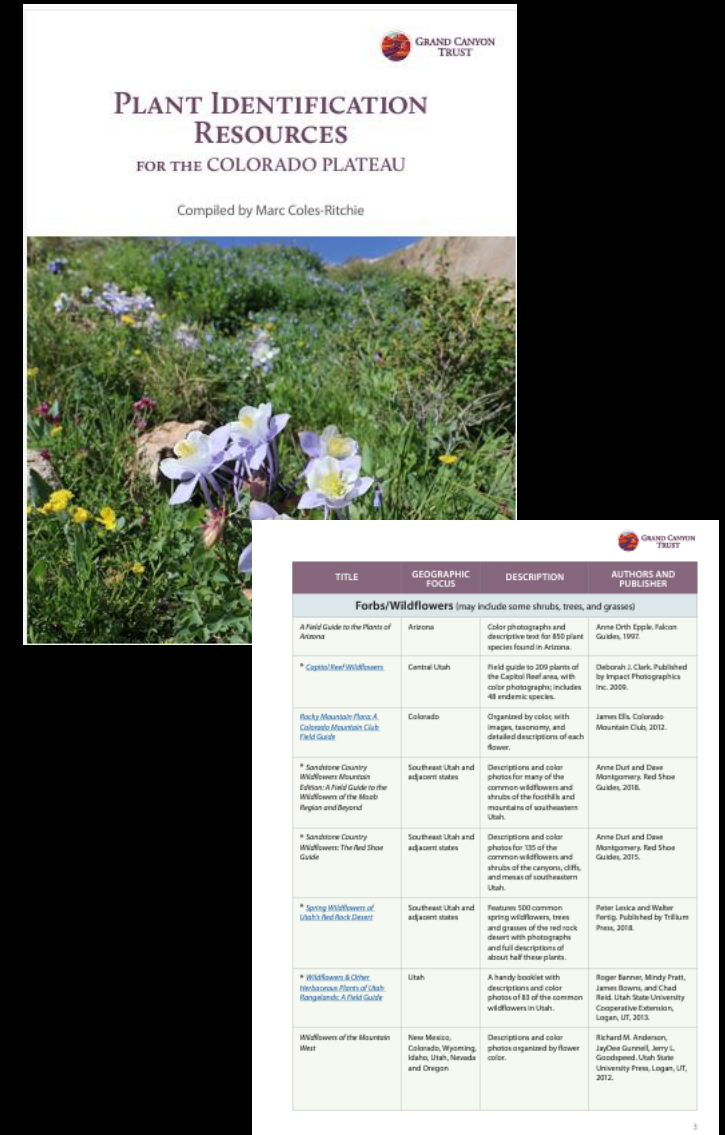
Download here:

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



# 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





Observations

Poales Kane County, UT, USA Go Filters

Kane 738 OBSERVATIONS 94 SPECIES 82 IDENTIFIERS 275 OBSERVERS

Map Grid List Places of Interest Redo search in map

Munroa squarrosa (False Buffalograss) Monume... Aug 4, 2024 1 1d

Aristida purpurea (Purple Threeawn) Kane C... Aug 3, 2024 Research Grade 2 1 1d

Family Poaceae (Grasses) Kane C... Aug 3, 2024 1 1d

Phragmites australis americanus (American Common Reed) Kane C...



Download pdf free at:

[https://digitalcommons.usu.edu/wild\\_facpub/1645/](https://digitalcommons.usu.edu/wild_facpub/1645/)

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> -
- 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*)

