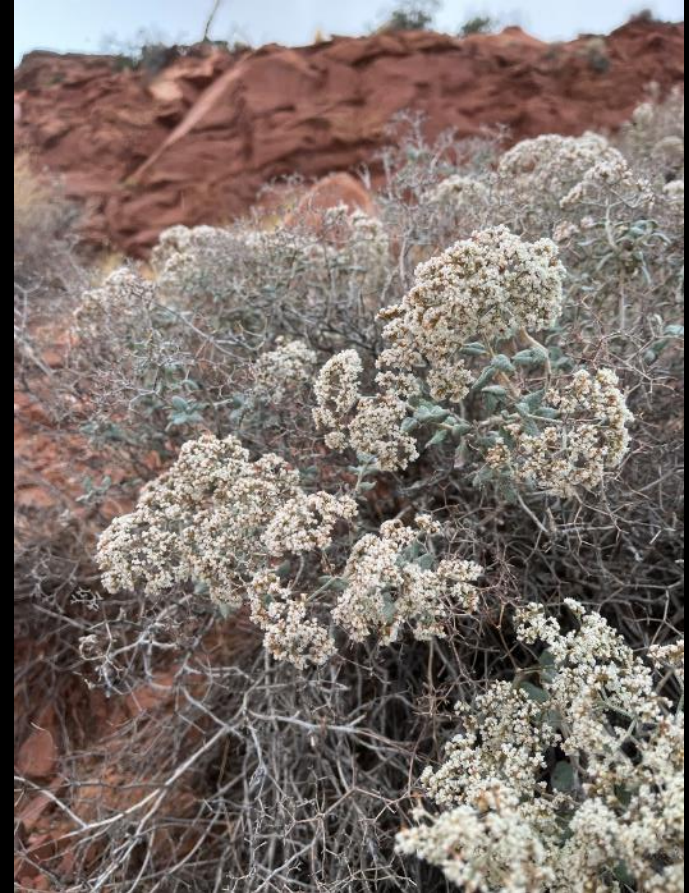


# Buckwheats All Around Us in Grand Staircase-Escalante Region

Web Staley, BLM Range Technician

Marc Coles-Ritchie, BLM Ecologist

Dec 2025

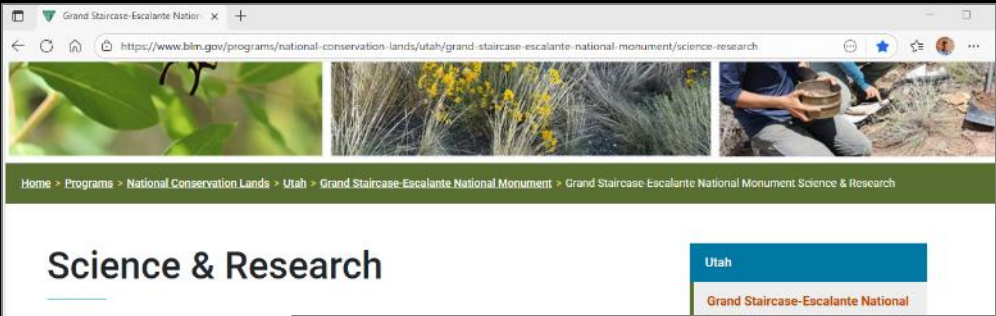


# Why Science Talks

## GSENM Science Coordinator:

“Leads the promotion and delivery of science education and public outreach programs to obtain and embrace appreciation for the protection of Monument resources, objects, and values.”

# Web Site



## Science & Research

### What's new?

Science Plan Update

### Science Lecture Series

The Grand Staircase-Escalante National Monument science program hosts a lecture series at the Kanab Library at 374 N Main St, Kanab, UT 84741. Times are 6pm unless noted otherwise, and the public is invited to attend these free events. If you have ideas for topics or speakers, contact Marc Coles-Ritchie at [mcolesritchie@blm.gov](mailto:mcolesritchie@blm.gov). See below for additional information.

- Upcoming Lectures
- Past Presentations

### Science Lecture Series

The Grand Staircase-Escalante National Monument science program hosts a lecture series at the Kanab Library at 374 N Main St, Kanab, UT 84741. Times are 6pm unless noted otherwise, and the public is invited to attend these free events. If you have ideas for topics or speakers, contact Marc Coles-Ritchie at [mcolesritchie@blm.gov](mailto:mcolesritchie@blm.gov). See below for additional information.

- Upcoming Lectures**
- December 10: Native buckwheat plants of GSENM (Web)
  - January 14, 2026: Geology and Plant Road Guide to Cottonwood Canyon
  - February 11, 2026: Utah Prairie dog impacts from new plantings
  - March 11, 2026: Wildlife (Joel Berger)
  - April 8, 2026: River restoration (Mark Briggs)
  - May, 2026: Amazing Earthfest has many science and nature activities
  - June 10, 2026
  - July 8, 2026
  - August 12, 2026
  - September 9, 2026
  - October 14, 2026: How to photograph in the desert responsibly
  - November 11, 2026
  - December 9, 2026

**Past Presentations**

- News and Stories
- Plan Your Visit
- Safety and Conditions
- Visitor Centers

### Science Lecture Series

The Grand Staircase-Escalante National Monument science program hosts a lecture series at the Kanab Library at 374 N Main St, Kanab, UT 84741. Times are 6pm unless noted otherwise, and the public is invited to attend these free events. If you have ideas for topics or speakers, contact Marc Coles-Ritchie at [mcolesritchie@blm.gov](mailto:mcolesritchie@blm.gov). See below for additional information about future and past presentations.

- Upcoming Lectures** +
- Past Presentations** -
- Did you miss a science presentation of ours or just wanted the slides from one? No problem! You can find them below.
- Plants +
  - Animals +
  - Archaeology & History +
  - Soils, Biocrust & Lichens +

- News and Stories
- Plan Your Visit
- Safety and Conditions
- Visitor Centers

**Past Presentations** -

Did you miss a science presentation of ours or just wanted the slides from one? No problem! You can find them below.

**Plants** +

**Animals** -

[Utah's Amazing Bees and How We Can Help Them](#) <sup>PDF</sup>  
Amy Dolan, Xerces Society  
Conservation Biologist Mountain States BBA Coordinator

[Wildlife in a challenged world](#) <sup>PDF</sup>  
Joel Berger

[Bats of GSENM](#) <sup>PDF</sup>  
Jackie Grant

**Archaeology & History** -

[Utah Cultural Site Stewardship](#) <sup>PDF</sup>  
Lexi Little, Operations Coordinator for the Utah Cultural Site Stewardship Program  
Caitlyn McAllister Grand Staircase-Escalante National Monument Archaeologist

[Enigmatic Traces of Sacred Water: Cup and Channel Petroglyphs of the Far West](#) <sup>PDF</sup>  
Michael L. Terlep, Archaeologist, North Kaibab Ranger District, Kaibab National Forest

**Soils, Biocrust & Lichens** +

- [Monument Homepage](#)
- [Working With Us](#)
- [Science Research Application](#)

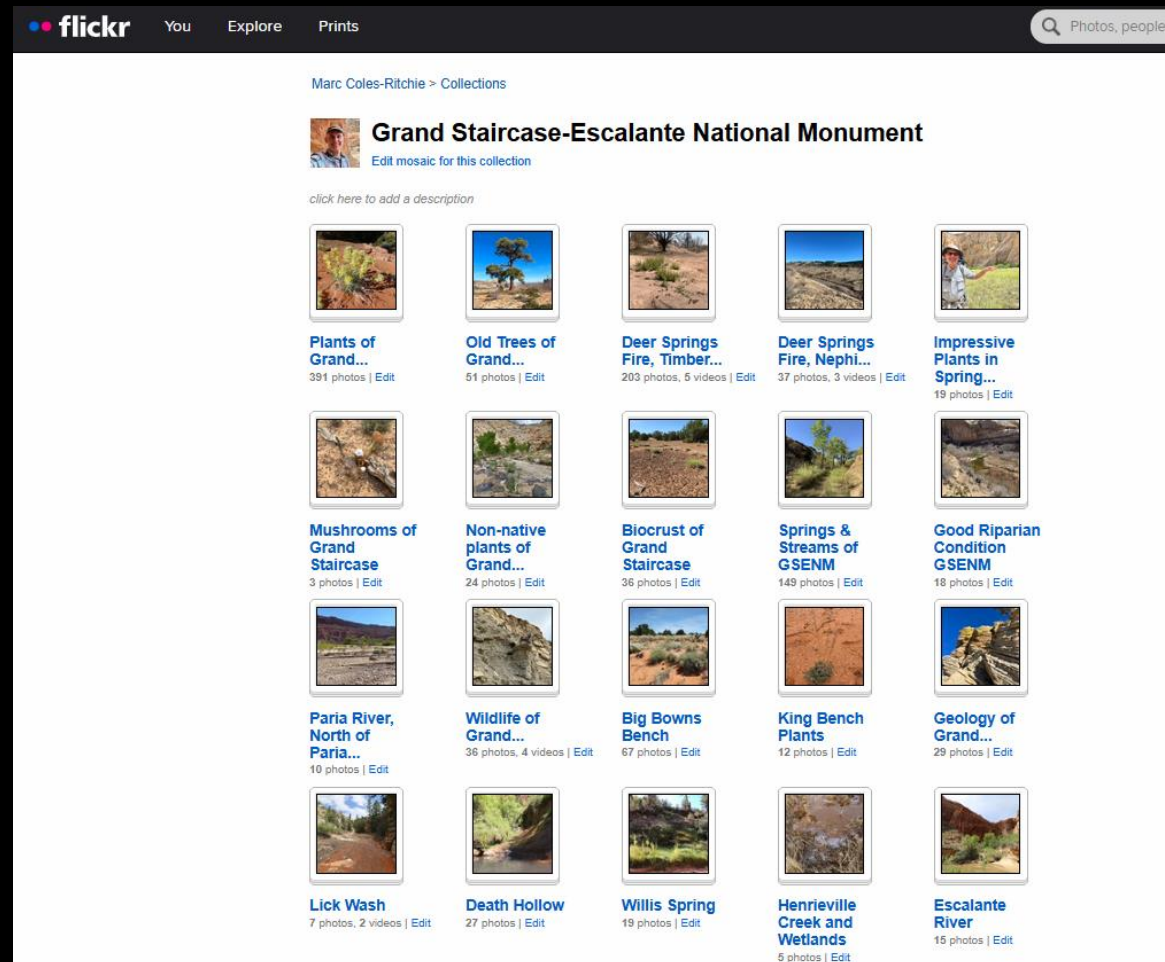
### Science Compilations

- [Deep Roots: A 10,000-year Indigenous History of GSENM \(2021\)](#)
- [Digital Collection at SUU Library](#) <sup>PDF</sup>
- [Science Symposium Proceedings 2016](#) <sup>PDF</sup>
- [Science Symposium Proceedings 2006](#) <sup>PDF</sup>
- [Science Symposium Proceedings 1997](#) <sup>PDF</sup>

### Partners

- [ARS - SW Watershed Research Center](#)
- [Denver Museum of Nature and Science](#) <sup>PDF</sup>
- [Glen Canyon Conservancy](#) <sup>PDF</sup>
- [Southern Utah University IIC](#) <sup>PDF</sup>

Photos are by Web and Marc (unless noted) in GSENM or nearby. Many of Marc's photos are in these [Flickr albums](#).



# Buckwheat Family

- *Polygonaceae*: Buckwheat family (aka Knotweed or Smartweed family)
  - 48 Genera in North America
    - 1,200 species
- *Eriogonum*: genus called “wild buckwheats”
  - 250 species in North America
  - Mostly in Western US
  - 25 species in GSENM (and varieties)

Sand dock (*Rumex hymenosepalus*)



Alpine sorrel (*Oxyria digyna*)



Crispleaf Buckwheat  
(*Eriogonum corymbosum*)



Desert Trumpet (*Eriogonum inflatum*)

# Buckwheat as Food

- *Fagopyrum esculentum*
- Cultivation began 6th millennium BC in China
- Large seeds (grain-like), can be ground into flour
- Not related to wheat; gluten free
- Used around world for food
  - Soba noodles
  - Italian pasta (pasta di grano saraceno)
  - Pancakes
  - Tea
  - many other uses...



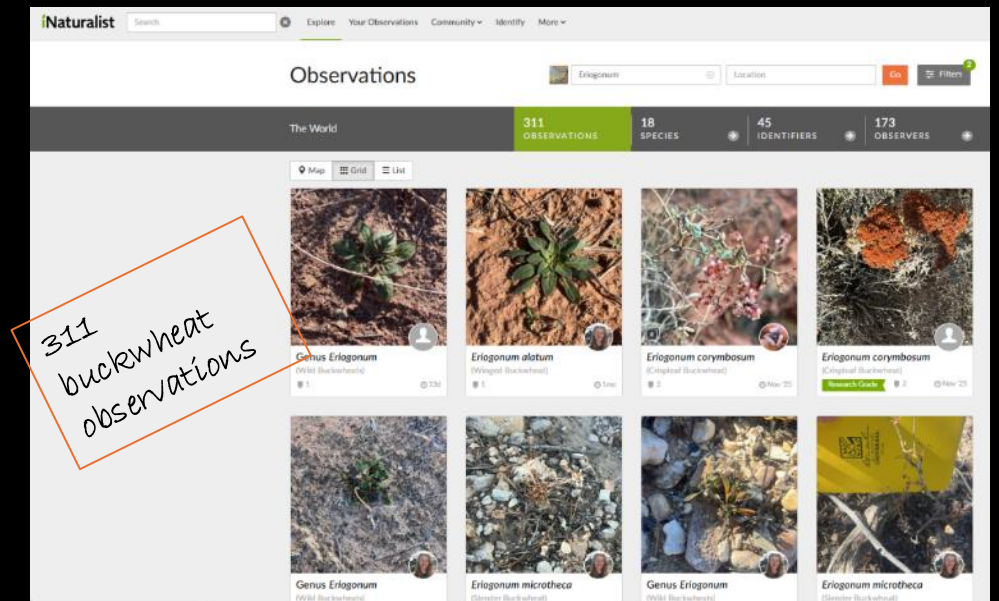
Photo by Andreas Rockstein in Germany



Photo by Tomasz Stramel in Poland

# Why a talk on buckwheats?

- Buckwheat: genus w 2nd most species (250) in Western US.
  - Penstemon has a few more
- Eriogonum Society
  - 89 attended last annual meeting in Bishop, CA
- iNaturalist has 311 *Eriogonum* observations in GSENM
  - 355 for penstemon
  - 256 for globemallow
- Beautiful shapes
- Colorful in Fall (and winter?)
- Grow in challenging conditions
- Challenge to identify



# Fall colors



Hwy 89 near Kanab, Dec 10



Greenhalgh, Oct 14

# Buckwheats in challenging settings



Deer Springs Burn, Sept 30



Sunset Crater Nat. Monument, Nov 8

Sunset Crater Nat.  
Monument,  
November 8

Two species of  
buckwheats:  
--Sorrel (linear)  
--Crispleaf (round)



# Buckwheats in challenging environments



Hole in the Rock Road, Sept 27



Burr Trail, Sept 26



Skutumpah Canyon,  
September 16

## The Blues (between Henrieville and Escalante) August 27



# Characteristics of Wild Buckwheats (*Eriogonum*)

- Often
  - Leaves
    - Simple (not compound with leaflets)
    - Margins smooth or wavy (not toothed)
    - Alternate
    - Leathery
    - Whitish (hairs)
  - Stems
    - Swollen joints (at nodes)
    - Upright and/or branching
    - Whitish (hairs)
  - Flowers
    - Small, papery
    - Clusters
    - or
    - Umbrella form (mobile)
    - Yellow, white, pink (often two-tone)
  - Fruits 3-angled or lens-shaped





Nodding Buckwheat (*Eriogonum cernuum*)

Skutumpah Canyon,  
September 16

# Ethnobotany

## Indigenous Use of Buckwheats

- Food (seeds, stems, roots)
- Medicine
  - for stomach-ache, lameness, rheumatism, colds, and more
- Skin application (lotion)
- Smoking instrument (pipe)
- Smoking material

Warning: only use plants for medicine if you are an expert



## References

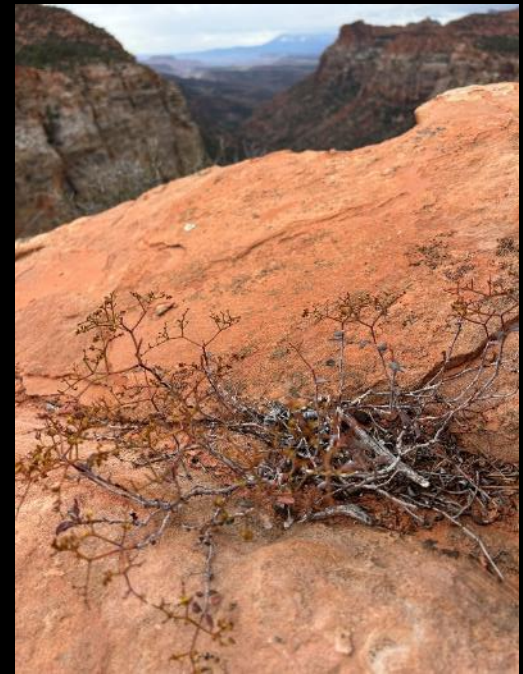
- Wyman, Leland Clifton, and Stuart Kimball Harris. 1951. The Ethnobotany of the Kayenta Navaho. The University of New Mexico Press
- Rhode, David. 2002. Native Plants of Southern Nevada: An Ethnobotany. The University of Utah Press
- [SEINet.org](http://SEINet.org) (Southwestern Environmental Information Network)
- [BRIT - Native American Ethnobotany Database](http://BRIT-NativeAmericanEthnobotanyDatabase)

# Indigenous Knowledge

- Tribes connected to this land include Paiute, Hopi, Zuni, Pueblo, Dine' (Navajo), Ute and others.
- Indigenous people lived off this land.
- Indigenous knowledge-holders continue to use Buckwheat and other plants.

# Rare Buckwheats in Southern Utah

- Soil specialists
- In low competition settings
- Isolation leads to speciation
  - Many varieties
- Rare:
  - Crisp-leaf buckwheat varieties (*Eriogonum corymbosum* varieties)
  - Bull Mountain Wild Buckwheat (*Eriogonum cronquistii*) in Henry Mountains
  - Zion wild buckwheat (*Eriogonum zionis*)
  - Many others...



# Annual vs. Perennial Buckwheats

| Characteristic | Annual   | Perennial                               |
|----------------|--|---|
| Roots          | Shallow and fibrous  | Deep and thick                          |
| Woody          | Not woody.<br>Plants die each year.<br>Only reproduce from seed. | Often woody.<br>Plants live many years. |
| Leaf           | Round  | Elongated                               |
| Size           | 1 to 3 feet tall<br>Spindly                                      | 1 to 7 feet tall.<br>Bushy              |



# Annual Buckwheats of GSENM

- In this presentation
  - Nodding buckwheat (*Eriogonum cernuum*)
  - Flatcrown buckwheat or skeletonweed (*Eriogonum deflexum*)
  - Spindle buckwheat (*Eriogonum fusiforme*)
  - Palmer's Buckwheat (*Eriogonum palmerianum*)
  - Kidney-shaped buckwheat (*Eriogonum subreniforme*)
- Not in this presentation
  - Bent
  - Wetherill's
  - Darrow's
  - Davidson's
  - Gordon's
  - Watson's
  - Smooth
  - Westwater

# Nodding Buckwheat (*Eriogonum cernuum*)



Small, basal leaves



Oct 9

Wait a few weeks from the rosette stage and behold the glory! A beautiful inflorescence with “nodding” flowers, like hanging streetlamps

Leaves  
tomentose on  
one or both  
sides

June 20

# Nodding Buckwheat (*Eriogonum cernuum*)



# Flatcrown buckwheat (*Eriogonum deflexum*)



Apple Valley, September 15  
By Braydon Lake

# Nodding Buckwheat (*Eriogonum cernuum*) vs.

- Outer perianth segments truncate to obtuse basally
- Leaf bases cuneate to slightly cordate
- Involucres usually stalked
- Tepals constricted below the middle, violin-shaped



# Flatcrown Buckwheat (*Eriogonum deflexum*)

- Leaves and outer perianth segments cordate at base
- Involucres usually sessile



Photo by Sue Rutman



Photo by Stan Shebs



Photo by Sue Rutman

# Spindle Buckwheat (*Eriogonum fusiforme*)



Following a wet winter, the Tropic shale north of Lake Powell can be covered in blankets of yellow from the flowers



- Annual
- Flowering stems and inflorescence branches greenish or yellowish green
- Leaves all basal and are orbicular to oblong or kidney-shaped with distinct venation
- Unmistakable inflated inflorescence stem segments

# Palmer's Buckwheat (*Eriogonum palmerianum*)

- Annual
- 6-25 cm tall
- leaves all basal
- branches of inflorescence diverge widely and have short woolly hairs
- Flowers sessile, white or pink
- The specimens pictured here are from the Kaipairowits Plateau, which is the most common place they are found on the GSENM



# Kidneyshape Buckwheat (*Eriogonum subreniforme*)

- Uncommon
- Leaves orbicular to kidney-shaped

Leaves all basal

Flowers white to rose

Photos Aug 31

Leaflike structures subtend bracts at  
base of inflorescence

# Perennial Buckwheats of GSENM

- Winged buckwheat (*Eriogonum alatum*)
- Crispleaf buckwheat (*Eriogonum corymbosum*)
- Desert trumpet (*Eriogonum inflatum*)
- Sand buckwheat (*Eriogonum leptocladon*)
- Slender buckwheat (*Eriogonum microthecum*)
- Cushion buckwheat (*Eriogonum ovalifolium*)
- Panguitch buckwheat (*Eriogonum panguicense*)
- Redroot buckwheat (*Eriogonum racemosum*)
- Shockley's Buckwheat (*Eriogonum shockleyi*)
- Thompson's Buckwheat (*Eriogonum thompsonae* var. *thompsonae*)
- Sulphur flower (*Eriogonum umbellatum*); varieties with Flat top and Round top
- Zion Buckwheat (*Eriogonum zionis* var. *zionis*)

# Winged Buckwheat (*Eriogonum alatum*)

Common on Ford Pasture  
(the valley at the E end of  
Glendale Bench Rd)



Seed pods have wings



Leaves long,  
oblanceolate at  
base distinguish it  
from other  
GSENM  
Buckwheats

Photos July 12-16



Overhead view of inflorescence



Ford Pasture

# Winged buckwheat (*Eriogonum alatum*)

Coral Pink Sands, Sept 1



# Crispleaf Buckwheat (*Eriogonum corymbosum*)



Sep 6

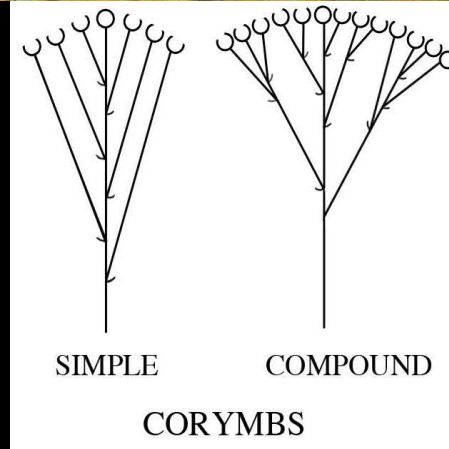
Aug-Sep the entire top of the dome-shaped exterior can be covered in tiny white/pink flowers



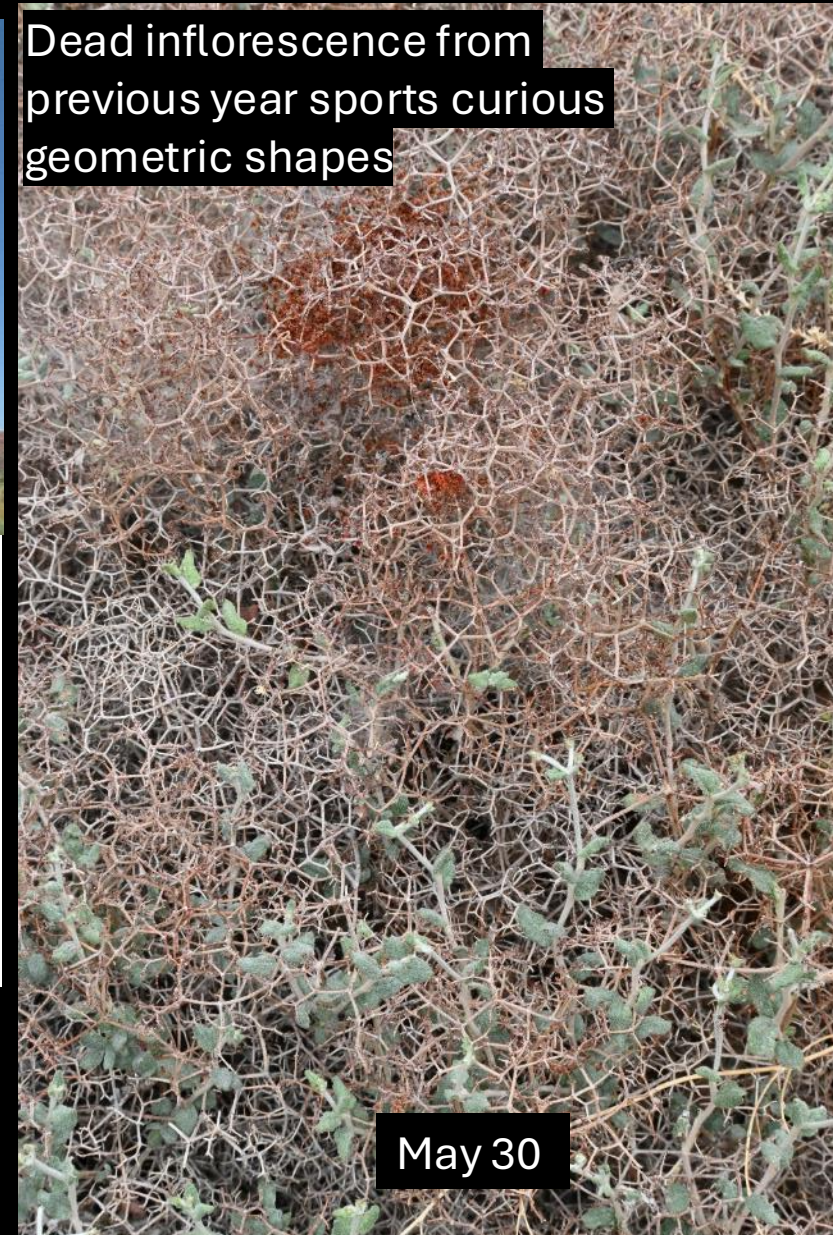
Aug 10



Aug 3



One of the largest, shrubbiest buckwheats in our area; sometimes grows to sagebrush size



Dead inflorescence from previous year sports curious geometric shapes

May 30

# Crispleaf Buckwheat (*Eriogonum corymbosum*)



Yellow-flowered Crispleaf  
Buckwheat  
(*Eriogonum corymbosum* var.  
*glutinosum*)

Photo by Bill Orman, Tuba City, AZ



# Desert Trumpet (*Eriogonum inflatum*)

Does it look familiar?

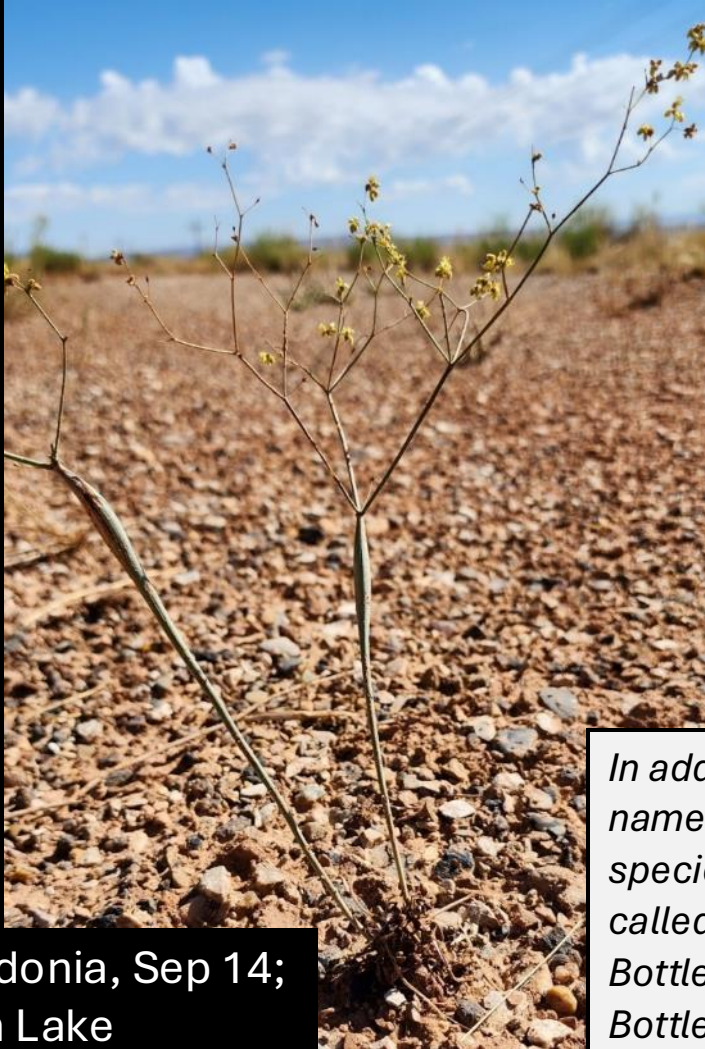


# Desert Trumpet (*Eriogonum inflatum*)

vs.

# Spindle Buckwheat (*Eriogonum fusiforme*)

- Perennial
- Flowering stems and inflorescence grayish
- Inflated part less pronounced
- Usually found on gravelly soils



Southwest of Fredonia, Sep 14;  
photo by Braydon Lake

*In addition to common names used here, these species have also been called: Bladderstem, Bottlestopper, Bottlebush and Indian Pipeweed*

- Annual
- Flowering stems and inflorescence branches greenish or yellowish green
- Inflated part more pronounced
- Usually found on fine-textured soils



On Tropic shale east  
of Big Water, May 14

# Sand Buckwheat (*Eriogonum leptocladon*)



Sep 4



- These specimens found in sandy near Hole In The Rock Rd
- Similar in size and shrubbiness to Crispleaf Buckwheat but Sand Buckwheat has leaves that are longer in relation to their width than those of Crispleaf

Sand Buckwheat  
(*Eriogonum*  
*leptocladon*)



Coral Pink Sands September 13



# Slender Buckwheat (*Eriogonum microthecum*)

Photos Aug 16-Sep 13



Woody lower stems & roots

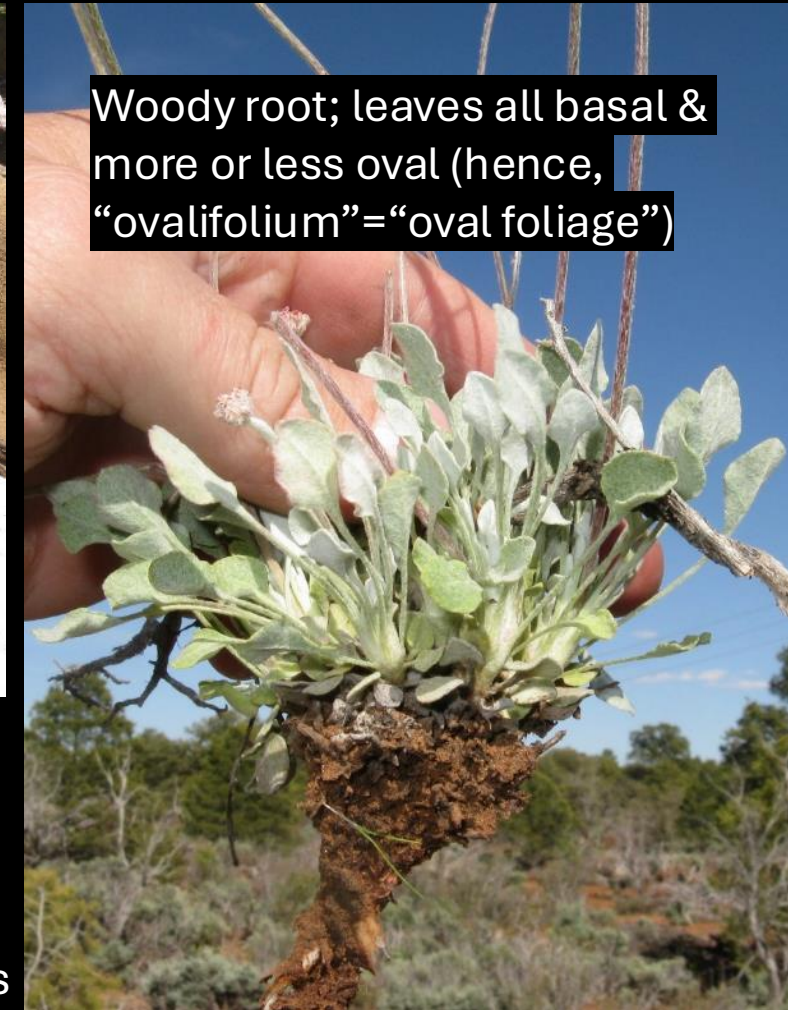


Leaves dark green on top, whitish (due to hairs) on underside, elliptic to linear, mostly revolute (edges curl downward), and small (usually about 1-2 cm in length)



Clusters of tiny flowers

# Cushion Buckwheat (*Eriogonum ovalifolium*)



Woody root; leaves all basal & more or less oval (hence, "ovalifolium"="oval foliage")



- Perennial
- A broad basal "cushion" of leaves
- Flower clusters on long stalks

Photos from Buckskin Mtn, May 24-Jun 6

# Cushion Buckwheat (*Eriogonum ovalifolium*)



May 10 at  
Tilted Mesa

# Panguitch Buckwheat (*Eriogonum panguicense*)

- Inflorescence unbranched
- Flowers white suffused with pink/purple
- Uncommon on GSENM



Photos by Braydon Lake



June 23, Bryce Canyon

# Panguitch buckwheat (*Eriogonum panguicense*)



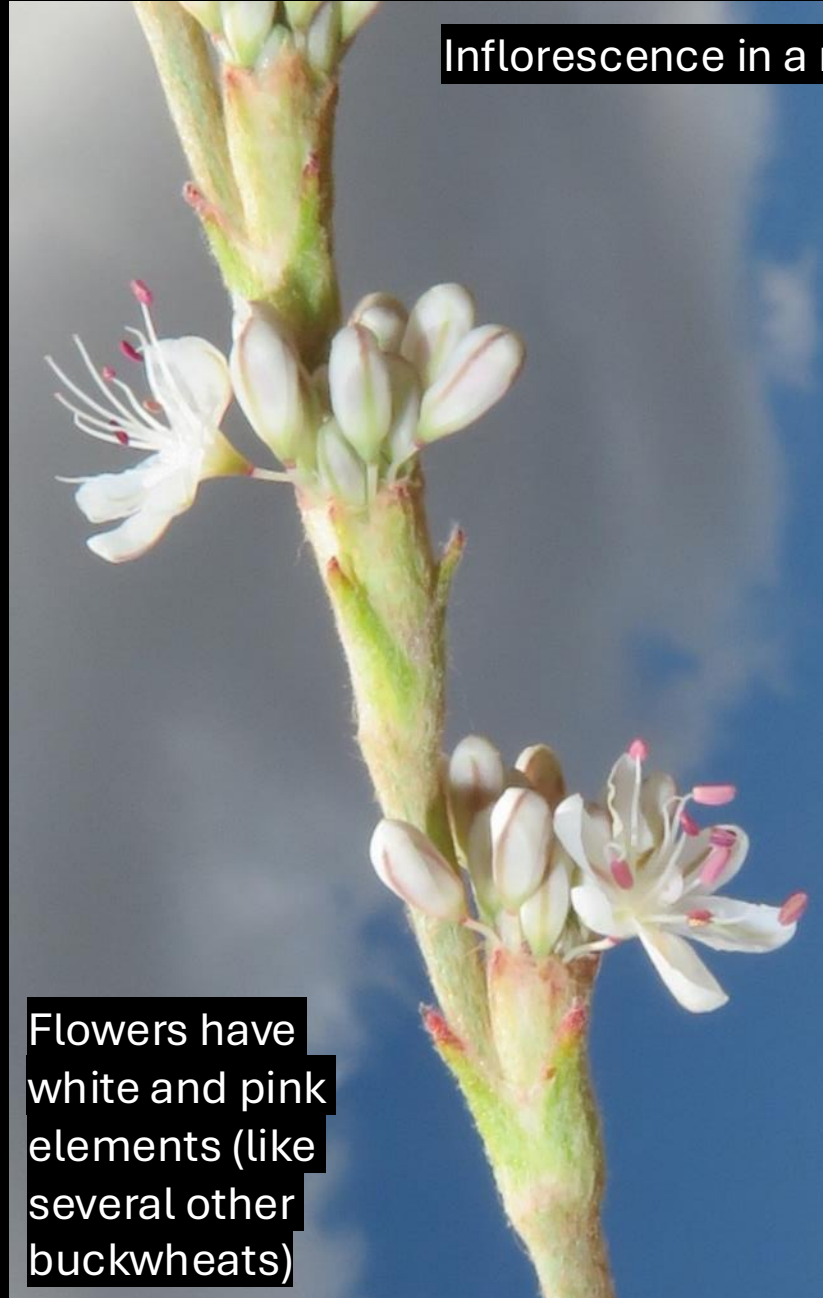
# Redroot Buckwheat (*Eriogonum racemosum*)



Leaves ovate to oblanceolate



Photos July 16 - Aug 20



Inflorescence in a raceme (elongated stalk)

Flowers have white and pink elements (like several other buckwheats)



# Shockley's Buckwheat (*Eriogonum shockleyi*)



- Plants caespitose (growing in dense tufts) and cushion- or mound-forming
- These photos are of a specimen growing on shallow soil and bedrock on the bench southwest of Crosby Canyon (Glen Canyon National Rec. Area) May 15

# Shockley's Buckwheat (*Eriogonum shockleyi*)

Photo by Christine Prins, June 3, Egypt Road



# Thompson's Buckwheat (*Eriogonum thompsonae* var. *thompsonae*)



Photos Aug 25 near  
Kanab Trail (north of  
Jacob Hamblin Park)

Similar to Crispleaf Buckwheat in that...

- Leaf blades are similar in size, shape, color and pubescence

But different in that...

- Thompson's leaf blades are all basal with long petioles; flowers yellow
- Crispleaf leaf blades are basal as well as cauline (on the stems) w/ very short petioles; flowers whitish/pink

# Thompson's Buckwheat (*Eriogonum thompsonae* var. *thompsonae*)



Mansard Trail on September 13

# Sulphur Flower Buckwheat (*Eriogonum umbellatum*)

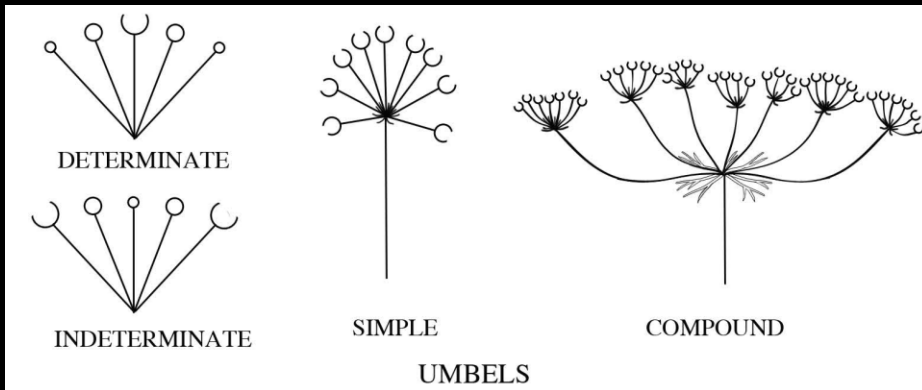


Photos  
Jun 29-  
Aug 8

Leaves medium to  
dark green, tomentose  
to glabrous



Along Skutumpah Rd



# Sulphur Flower Buckwheat (*Eriogonum umbellatum*)



# Zion Buckwheat (*Eriogonum zionis* var. *zionis*)

- Resembles Redroot Buckwheat (*E. racemosum*) but note slightly swollen inflorescence stems
- 2025 draft list of BLM State Sensitive Species
- Photos Jun 7-Aug 31



# Zion Buckwheat (*Eriogonum zionis* var. *zionis*)



# Acknowledgments

- Glenn Rink – botanist in Flagstaff, re-writing the Eriogonum treatment for Arizona
- Kris Valles – Intermountain Herbarium, USU
- Braydon Lake – botanist and photographer



