



# Common Upland Survey Plants of the BLM Idaho Falls District IDAHO







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**U.S. Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**

Idaho Falls District Office  
1405 Hollipark Drive  
Idaho Falls, ID 83401  
208-524-7500

Produced by  
Daniel Lay  
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# Floral Formulas (A guide to the families)

Legend:

Ca – Calyx or sepals

F – Fused or connate

Co – Corolla or petals

P – Pistil (collective term for ovary)

A – Androecium or Stamens

1:1 – Locules:Carpels

G – Gynecium or ovary

Superior vs. Inferior – Placement of ovary

Apiaceae: Ca 5; Co 5; A5; G P1, 2:2F, inferior.

Asteraceae: Ca pappus; Co 5F, (zygomorphic in Ray flowers); A 5; G P1, 1:2F.

Berberidaceae: Ca 6 (3x2); Co 6 (3x2); A 6; G P1, 1:1F, superior.

Boraginaceae: Ca 5F; Co 5F; A5; G P1, 2:2F, appearing 4:4 or 1:2F in *Phacelia*, superior.

Brassicaceae: Ca 4; Co 4; A 4+2; G P1, 2:2F, superior.

Caryophyllaceae: Ca 4-5, Co 4-5, A 5-10, G P1, 1:3-5F, superior.

Chenopodiaceae: Ca 2-5, Co 0, A 1-5, G P1 1:2-3F, superior.

Crassulaceae: Ca 4-5; Co 4-5; A 4, 8, or 10; G P4-5, 1:1, superior.

Euphorbiaceae: (male) Ca 0; Co 0; A 1; G 0 and (female) Ca 0; Co 0; A 0; G P1, 3:3F, superior.

Fabaceae: Ca 5; Co 5, zygomorphic; A 5-10; G P1, 1:1 or Ca 5, zygomorphic; Co 5, zygomorphic; A 9F+1; G P1, 1:1, superior.

Grossulariaceae: Ca 4-5; Co 4-5; A 4-5; G P1, 2:2F, inferior.

Liliaceae: Ca 3; Co 3; A 6; G P1, 3:3F, superior.

Linaceae: Ca 5; Co 5; A 5F; G P1 10:5F, superior.

Malvaceae: Ca 5; Co 5 A ∞; G P5-∞, 5-∞:5-∞, superior.

Onagraceae: Ca 4; Co 4; A 8; G P1, 4:4F, inferior or partly inferior.

Poaceae: Ca 0; Co 0; A 3; G P1, 1:3F.

Polemoniaceae: Ca 5F; Co 5F; A 5; G P1, 3:3F, superior.

Polygonaceae: Ca 5; Co 3 or 5, 2+1F; A 8 (4x2)F or 9F ; G P1, 1:1-3, superior.

Portulacaceae: (Lewisia) Ca 2-9; Co 4-∞; A 5-∞; G 1:3-8, superior

Primulacaceae: Ca 5F; Co 5F; A 5; G P1, 1:5F, superior.

Ranunculaceae: Ca 3-6; Co 5; A ∞; G P3-∞, 1:1, superior.

Rosaceae: Ca 5; Co 5; A; G (P1, 2-5:2-5, inferior in *Amelanchier*), (P1, 1:1, superior in *Cercocarpus*), (P∞, 1:1, superior in *Fragaria*).

Saxifragaceae: Ca 4-5F; Co 4-5; A 4, 5, 8, 10 or more; G P1, 1:3, superior to partly inferior.

Scrophulariaceae: Ca 5F, zygomorphic; Co 5F, zygomorphic; A 4 or 2; G P1, 2:2F, superior.

Violaceae: Ca 5; Co 5; A 5; G P1, 1:3-5F, superior.

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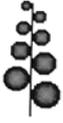
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# Illustrations

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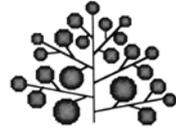
Inflorescence types:



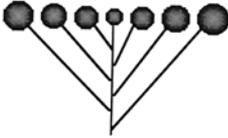
Spike



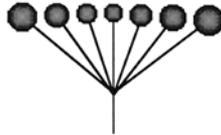
Raceme



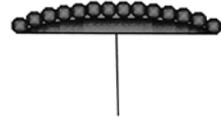
Panicle



Corymb



Umbel



Head or Capitulum



Spadix

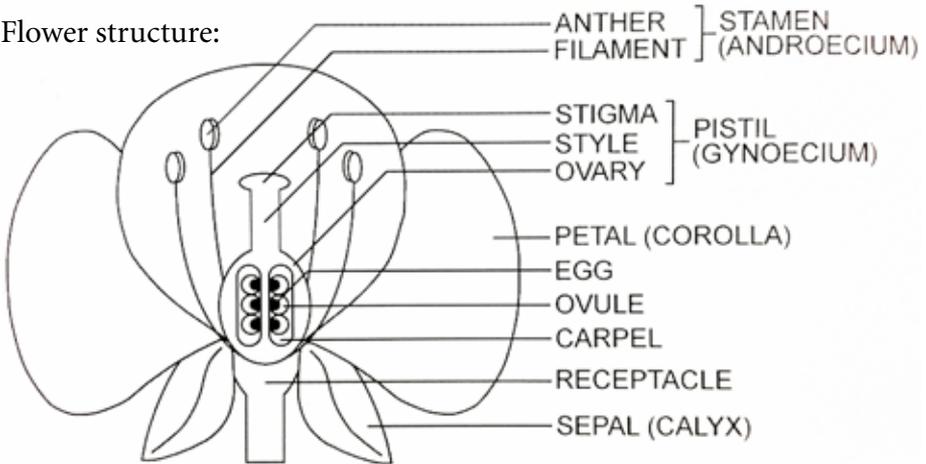


Catkin (Ament)



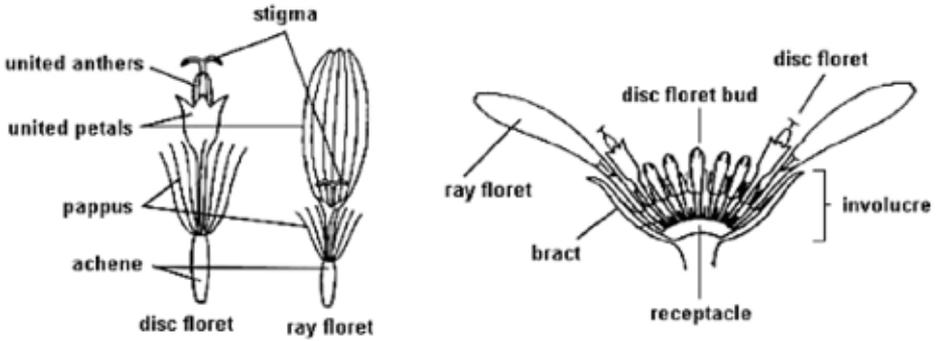
Spikelet

Flower structure:

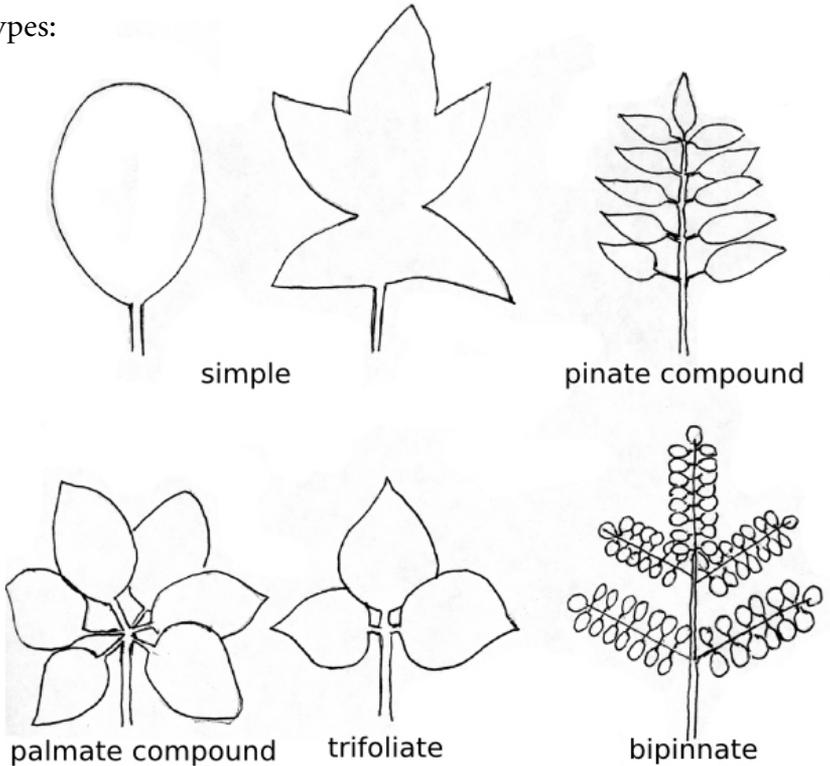


Composite flower structure:

**PARTS OF AN ASTER FLOWERHEAD**



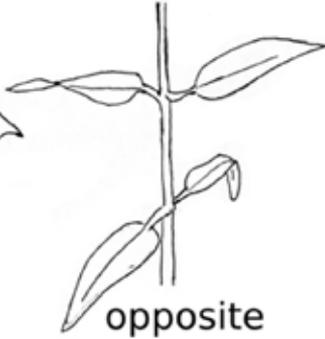
Leaf types:



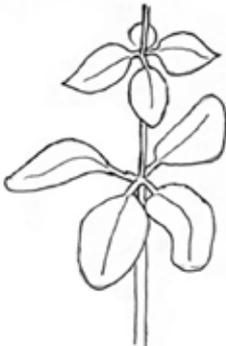
Leaf patterns:



alternate



opposite

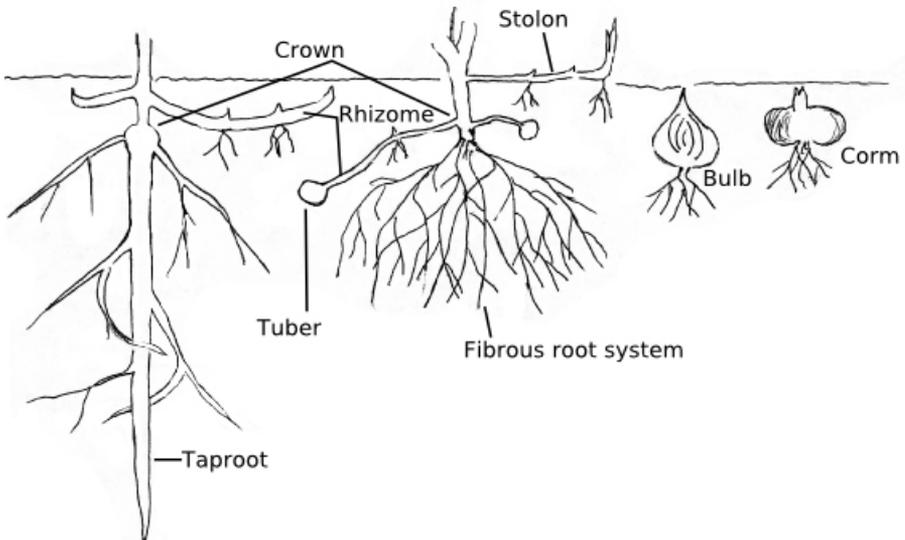


whorled



basal rosette

Root types:



*Cymopterus acaulis*

Common name: Plains spring-parsley

USDA Plants code: *Cymopterus acaulis* - **CYAC**

## Characteristics:

A. Acaulescent perennial, 2-7 in tall, arising from a simple fibrous taproot.

B. Leaves basal, or more often whorled and subtending the puduncles on top of the scape, 1-2 on the stem, 3 times pinnate.

C. Inflorescence an umbel; calyx 5, teeth about 0.2 mm long, green; petals 5, white, yellow, or purple; stamens 5, matching the color of the petals, alternate with the petals; pistil 1; styles 2, about 2.5 mm long; fruit a shizocarp, 5-10 mm long, the wings slightly longer than the body, 2 mm wide.

D. Commonly found in desert shrub, sagebrush, pinyon-juniper communities.



# Apiaceae

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*Lomatium triternatum*

Common name: Nineleaf biscuitroot

USDA Plants code: *Lomatium triternatum* - **LOTR2**

## Characteristics:

A. Perennial, stems scapose, prominent, 7-27 in tall, arising from a taproot.

B. Basal leaves 1-2 ternate (in 3s), pinnately compound; blades 3-8 in long, linear and entire.

C. Inflorescence an umbel; peduncle 6-20 in long; umbel ray flowers 4-20, 1-4 in long; involucre bracts 6-10, 1-10 mm long; petals and stamens bright yellow, fading to white with age; styles 1-1.6 mm long; fruit 6-22 mm long.

D. Commonly found on open ridges and sagebrush-grass, aspen, and dry meadow communities.







## *Lomatium grayi*

Common name: Gray's desert parsley, Milfoil lomatium

USDA Plants code: *Lomatium grayi* - **LOGR**

### **Characteristics:**

- A. Perennial, up to 20 in tall, arising from a thick taproot; strongly aromatic.
- B. Shiny leaves, ternate-pinnately dissected, 7-10 opposite pairs of primary leaflets; petioles to 4 in long; leaf blades 4-6 in long; leaflets narrow-linear, 1-11 mm long.
- C. Inflorescence an umbel; peduncle up to 8 in tall; bractlets of the involucre 3-5 mm long, linear, distinct; flowers yellow fading to white with age, pedicel 5-13 mm long; fruit 8-16 mm long.
- D. Commonly found in sagebrush, pinyon-juniper, and fir communities.





*Lomatium foeniculaceum*

Common name: Desert biscuitroot

USDA Plants code: *Lomatium foeniculaceum* - **LOFO**

## Characteristics:

A. Perennial, acaulescent, 2-10 in tall, arising from a thick taproot, densely tomentose.

B. Leaves ternate-pinnately dissected, 6-8 opposite pairs of primary leaflets; petioles to 6 in long; leaf blades up to 5 in long, dissected; leaflet segments numerous, 1-3 mm long, ovate in outline.

C. Inflorescence an umbel; peduncle up to 12 in tall; bractlets of involucre 2-5 mm long, linear, distinct; petals and anthers yellow and remaining yellow with age, or occasionally turning purplish; fruit 5-10 mm long.

D. Commonly found in black sagebrush, sagebrush, and pinyon-juniper communities.



# Asteraceae

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*Achillea millefolium*

Common name: Yarrow

USDA Plants code: *Achillea millefolium* - **ACMI2**

## Characteristics:

- A. Perennial, 6-40 in tall, rhizomatous, villous-tomentose.
- B. Leaves 2-10 in, 1-3 pinnately divided, numerous leaflets.
- C. Inflorescence corymbose cymes, multiple heads; involucre 4-6 mm long.
- D. Ray flowers usually 5, 2-4 mm long, white to pink-purple.
- E. Disk flowers 10-20.
- F. Commonly found in sagebrush, cottonwood, juniper, rabbitbrush, aspen, fir, and alpine communities.



## *Agoseris glauca*

Common name: False dandelion or Agoseris

USDA Plants code: *Agoseris glauca* - **AGGL**

### Characteristics:

A. Perennial, up to 2 ft tall.

B. Leaves and stems contain milky sap.

C. Leaf petiole purple in some varieties of *A. glauca*; in others, the petiole is white. This specific variety should be absent of purple in the petiole.

D. Scapose plant with only basal leaves up to 12 in tall.

E. Leaves lanceolate to linear, generally entire to weakly toothed.

F. Flowering heads 1.

G. Phyllaries usually green and sometimes rose-purple.

H. Flowers May through September.

I. Commonly found in moist alkaline meadows, including sagebrush communities.



# Asteraceae

---

*Antennaria rosea*

Common name: Pussytoes

USDA Plants code: *Antennaria rosea* - **ANR02**, Genus wide - **ANTEN**

## Characteristics:

- A. Perennial, mat-forming plants.
- B. Leaves grow up to 5 cm tall and are tomentosely hairy.
- C. Stalked inflorescence that appears to have cotton-ball like flowers.
- D. Flowers generally all pistillate (dioecious).
- E. Inflorescences are usually white with pinkish-white phyllaries.
- F. Inflorescences grow upwards of 16 in.
- G. Leaf margins usually fold inwards.
- H. Old growth leaves underneath present year leaves, and distinct stolons will indicate a perennial.
- I. Commonly found on dry ridges, meadow edges, and within sagebrush communities.



# Asteraceae

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*Arnica cordifolia*

Common name: Heart-leaved Arnica

USDA Plants code: *Arnica cordifolia* - **ARC09**, Genus wide - **ARNIC**

## Characteristics

- A. Perennial, growing up to 1.5 ft tall with cordate shaped leaves.
- B. Mostly solitary flowering stems.
- C. Heads radiate; phyllaries approximately 1 inch long, lanceolate.
- D. Densely hairy below flowering head.
- E. Leaves both basal and cauline, cauline leaves 2-4 pairs, petioled, reduced near apex.
- F. Flowers May through July.
- G. Ray pappus short barbed.
- H. Commonly found in sagebrush to high meadow communitie







*Artemisia arbuscula*

Common name: Low sagebrush

USDA Plants code: *Artemisia arbuscula* - **ARAR8**

**Characteristics:**

- A. Dwarf shrubs of valleys with restrictive layers of bedrock or clay.
- B. Usually less than 12 in tall.
- C. Gray leaves up to 4-19 mm long, slightly bell shaped.
- D. Shrub has many spreading stems.
- E. Crowns with uneven tops.
- F. Flowering heads with 5-11 florets.
- G. Flowers in August.
- H. Highly palatable to sage-grouse.
- I. Often misidentified as black sage.
- J. Commonly found in pinyon-juniper, sagebrush, white fir, aspen and spruce communities.



### *Artemisia frigida*

Common name: Fringed sagebrush

USDA Plants code: *Artemisia frigida* - **ARFR4**

#### **Characteristics:**

- A. Shrubs up to 1.5 ft tall, somewhat mat-forming and only woody at bases.
- B. Leaves are finely divided 2-3 ternately, linear, up to 0.8 mm wide, white pilose-tomentose throughout; feathery in appearance.
- C. Inflorescence paniculate or borne sessile on short peducles. Flowering stems arising from prostrate or erect woody offsets. Flowers yellow, discoid, typically nodding in bloom; involucre up to 3.5 mm high and 6 mm broad.
- D. Flowers in August.
- E. Commonly found in shallow soils with “frigid” soil temperatures, occurs in sagebrush, juniper, mountain brush, and alpine communities. Often found in windswept landscapes, and are available for wildlife in the winter.
- F. Moderately palatable.



## *Artemisia nova*

Common name: Black sagebrush

USDA Plants code: *Artemisia nova* - **ARN04**

### **Characteristics:**

A. Dwarf shrubs of shallow soils, generally 4-12 in tall.

B. Dark green leaves to gray-green, 3-20 mm long, bell shaped, generally 3 toothed and sometimes 5 toothed.

C. Main branches spreading.

D. Crowns with uneven tops.

E. Leaves with numerous glands on the surface, easily visible with a 10x hand lens.

F. Leaves sticky to the touch; when mashed between fingers, it yields a glossy green to black color.

G. Old flowering stems brown and persistent through following seasons.

H. Flowering heads with 3-5 florets.

I. Commonly found in rocky, windswept, greasewood, horsebrush, juniper, sagebrush, rabbitbrush, and mountain brush communities.





*Artemisia tridentata* ssp. *tridentata*

Common name: Basin big sagebrush

USDA Plants code: *Artemisia tridentata* ssp. *tridentata* - **ARTRT**

### Characteristics:

A. Shrub of valleys and ranges with deep soils.

B. Tallest of all sagebrush, growing upwards of 10 ft tall.

C. Leaves are long and narrow, 2-5 cm long.

D. Crowns with uneven tops.

E. Very columnar and single trunked, giving it a conspicuous Y shape or tree shape.

F. Most often found in ssp. *wyomingensis* communities where there are sources of moisture and deeper soils.

G. Often found along roadways where artificial moisture sites exist.

H. The least palatable sagebrush for sage-grouse.

I. Prolific seed producer.

J. Flowers in late August.





*Artemisia tridentata* ssp. *vaseyana*

Common name: Mountain big sagebrush

USDA Plants code: *Artemisia tridentata* ssp. *vaseyana* - **ARTRV**

### Characteristics:

A. Shrubs of mountains and higher elevations usually above 5,000 ft.

B. Generally grows up to 3 ft tall.

C. Leaves are 2-3 cm long, cuneate or wedge shaped.

D. Crowns with mostly even tops.

E. Floral stems rise uniformly above vegetative stems.

F. Commonly grows in high precipitation areas.

G. Plants are more or less columnar and also branch from the base, giving it a more inconspicuous U shape.

H. Highly palatable for sage-grouse.

I. Flowers in July.



### Additional Notes:

Because of the ecology and high precipitation amounts in Mountain sagebrush communities, this plant has an ecological advantage over other subspecies within the tridentata species.

Mountain sagebrush is a significant food source for sage-grouse in the winter months and it is crucial to preserve these communities from overgrazing and noxious weed infestations. (Rosentreter 2001)



*Artemisia tridentata ssp. wyomingensis*

Common name: Wyoming sagebrush

USDA Plants code: *Artemisia tridentata ssp. wyomingensis* - **ARTRW8**

## Characteristics:

A. Shrubs of valleys and arid rangelands with mostly shallow soils.

B. Generally 1 to 3 ft tall.

C. Leaves are 1 to 1.5 cm, more or less bell-shaped.

D. Crowns usually with uneven tops.

E. Most drought tolerant sagebrush.

F. Branches from the base, giving it a U-shape.

G. Non-degraded sites are highly suitable for wildlife in the winter months.

H. Flowers in August.

## Additional Notes:

Non-degraded and lightly grazed sites have a significant biological soil crust, which greatly inhibits cheatgrass establishment. These sites should be managed for the preservation of the biological soils (Hilty et al. 2003.) The use of fire and heavy grazing in these areas should be used with extreme caution. Moist soil conditions during late spring helps facilitate biological soil crust development and re-establishment after seasonal grazing (Rosentreter, 2004).





## *Artemisia tripartita*

Common name: Three-tip sagebrush

USDA code: *Artemisia tripartita* - **ARTR4**

### Characteristics:

- A. Perennial shrub up to 6 ft tall.
- B. Leaves glaucous to gray-green, very aromatic, up to 1-4 cm long, deeply three lobed.
- C. The three deep leaf-lobes are each no more than 1 mm wide.
- D. Shrubs have many spreading stems and even tend to layer with root sprouts.
- E. Crowns with uneven tops.
- F. 4-8 flowered in panicle-like arrays.
- G. Tends to be stimulated after wildfires and can dominate shrub communities.
- H. Commonly found in moderate to deep, well drained sandy or loamy soils.



# Asteraceae

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*Balsamorhiza sagittata*

Common name: Arrowleaf balsamroot

USDA Plants code: *Balsamorhiza sagittata* - **BASA3**

## Characteristics:

A. Perennial up to 31 in, arising from a large taproot, up to 9 ft long.

B. Leaves mostly basal, up to 18 in long and 6 in wide, sagittate, entire, hairy to tomentose.

C. Several flowering stems that contain a single flowering head; flowers both ray and disk; ray flowers 1-2.5 in long, disk flowers 6-8 mm long.

D. Commonly found in open forests, sagebrush, pinyon-juniper, ponderosa-pine, and fir communities.

E. Highly palatable for wildlife.



# Asteraceae

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*Centaurea stoebe*

Common name: Spotted knapweed

USDA Plants code: *Centaurea stoebe* - **CEST8**

## Characteristics:

A. Biennial, many branched, up to 4 ft tall.

B. Leaves have short, stiff hairs that are dotted with resin, deeply dissected leaves.

C. Basal leaf rosettes always present and upwards of 9 in long.

D. Cauline leaves are slightly lobed to linear, becoming smaller and more linear towards the apex.

E. Purple flowers radiant with many filament-like petals.

F. Phyllary tips are darkly colored giving it the name 'spotted knapweed'.

G. Usually many plants within proximity of each other.

H. Considered a noxious weed throughout North America.

I. Commonly found in disturbed areas; roadsides, fields, irrigation ditches.





# Asteraceae

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*Chaenactis douglasii*

Common name: Douglas' dusty-maiden

USDA Plants code: *Chaenactis douglasii* - **CHDO**

## **Characteristics:**

- A. Biennial to perennial, 2-20 in tall, arising from a taproot.
- B. Stems with many developed internodes, densely tomentose.
- C. Leaves up to 5 in long, 1-3 pinnatifid, the lobes up to 1 in long, tomentose to cobwebby.
- D. Inflorescence solitary or in corymbose cymes; flowers discoid, pink to white; phyllaries glandular-hairy; pappus of 10-16 scales in 2 series; achenes.
- E. Commonly found in gravelly soils, sagebrush, greasewood, juniper, fir, and limber pine communities.



# Asteraceae

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*Chrysothamnus viscidiflorus*

Common name: Yellow rabbitbrush or Green rabbitbrush

USDA Plants code: *Chrysothamnus viscidiflorus* - **CHVI8**

## Characteristics:

A. Shrub up to 5 ft tall, stems erect to spreading.

B. Leaves up to 3 in long and 8 mm wide, 1 to 5 nerved, linear to elliptic, twisted.

C. Inflorescence in terminal cymes; heads in flat tops or rounded clusters, generally cylindrical; phyllaries lanceolate and in 5 vertical ranks, keeled, yellow green, sticky.

D. Corollas yellow, 3-6 mm long.

E. Commonly found in greasewood, sagebrush, and juniper communities.



# Asteraceae

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*Cirsium arvense*

Common name: Canada thistle

USDA Plants code: *Cirsium arvense* - **CIAR4**

## Characteristics:

A. Perennial, up to 4 ft tall.

B. Strongly rhizomatous making this noxious weed difficult to control.

C. Leaves sessile, up to 12 in long, mostly cauline, reduced towards the apex of the stem.

D. Leaves lanceolate to irregularly lobed, 1-2 lobed with spines.

E. Outer phyllaries ovate, inner lanceolate.

F. Showy purple flowers, up to 1 inch in diameter.

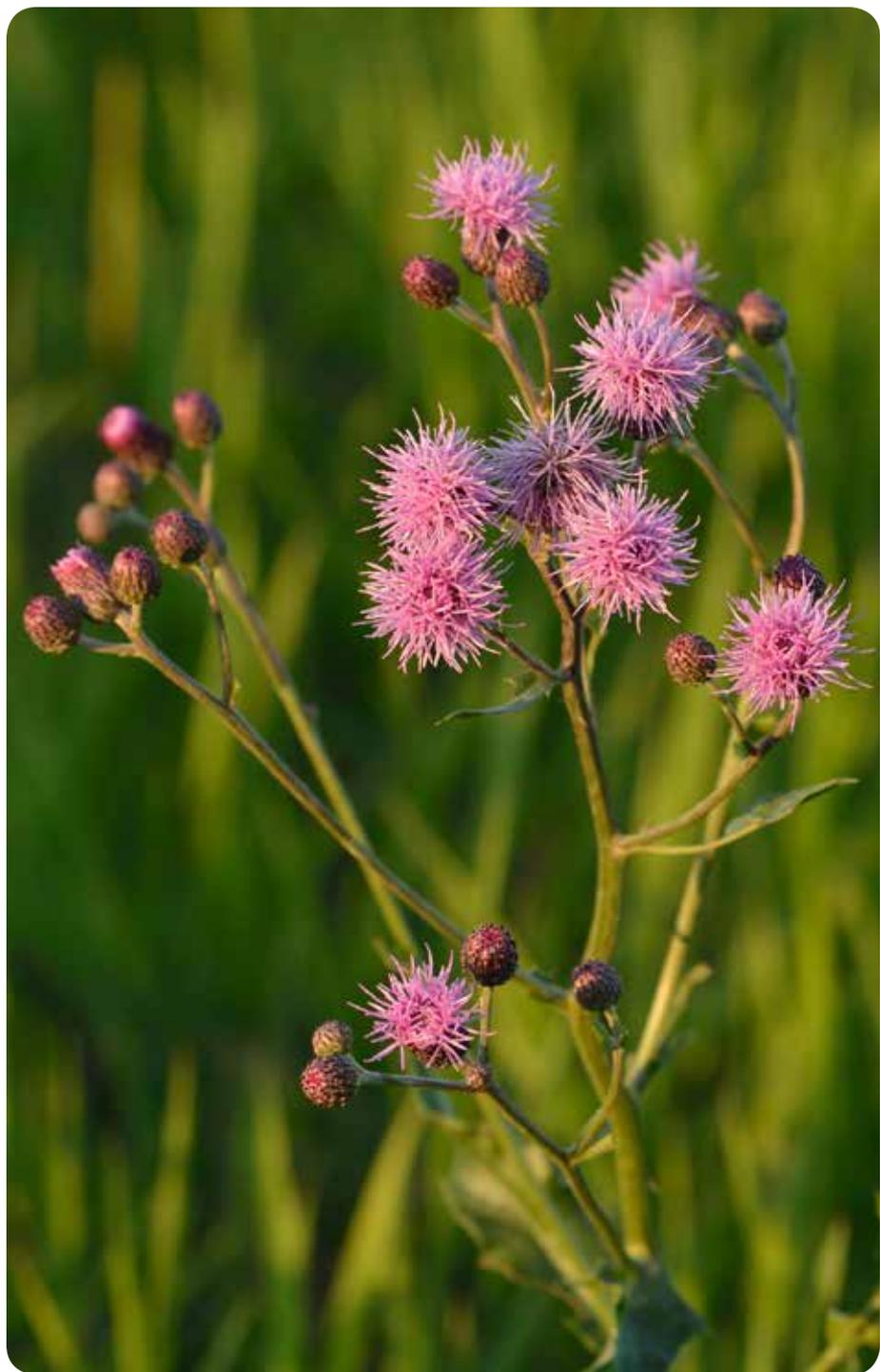
G. Relatively small thistle compared to other species.

H. Due to its highly rhizomatous nature, grouping of plants in close proximity is very common.

I. Commonly found in disturbed areas, roadsides, ditches, fields.

J. Idaho noxious weed.





# Asteraceae

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*Cirsium vulgare*

Common name: Bull thistle

USDA Plants code: *Cirsium vulgare* - **CIVU**

## Characteristics:

- A. Biennial, up to 5 ft tall with a deep tap root.
- B. Leaves are dark green, spiny, and contain a very bumpy texture on the top surface.
- C. Like most other thistles the leaves form a flat rosette.
- D. The stem is lightly winged and branches throughout.
- E. The inflorescence is pinkish-purple and is approximately 5 cm in diameter.
- F. Commonly found in disturbed areas, roadsides, ditches, fields.
- G. Idaho noxious weed.





# Asteraceae

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*Crepis acuminata*

Common name: Hawksbeard, Tapertip hawksbeard

USDA plant code: *Crepis acuminata* - **CRAC2**

## Characteristics:

- A. Perennial, 7 to 23 in tall with deep taproots and woody caudices.
- B. Stems 1-5 erect, tomentose.
- C. Basal and cauline leaves, up to 15 in long.
- D. Leaves long-acuminate, tapering towards the apex, deeply pinnately lobed.
- E. Flowers yellow, up to 1 inch in diameter.
- F. Phyllaries 5-8, lanceolate, 8-12 in long.
- G. Flowers May through August.
- H. Found on rocky hillsides, ridges, and grassy flats.



# Asteraceae

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*Erigeron compositus*

Common name: Shaggy fleabane, Cut-leaf daisy

USDA Plants code: Genus wide - **ERIGE2**, *Erigeron compositus* - **ERCO4**

## Characteristics

- A. Perennial, up to 14 in tall.
- B. Root a woody taproot and thick-branched caudex.
- C. Basal leaves erect, up to 3.5 in long, densely hairy; cauline leaves reduced towards apex of stem.
- D. Daisy-like heads with Ray and Disk flowers (radiate), heads up to 1 inch in diameter.
- E. Alternate leaves that are mostly sessile.
- F. Flowers may have multiple colors; pink to purple, and white to yellow are the most common.
- G. Each stem only bears one flowering head.
- H. Flowering heads generally drooping to nodding.
- I. Flowers in late spring, early summer.
- J. Commonly found on open slopes, meadows, sagebrush communities.



# Asteraceae

---

*Erigeron pumilus* var. *intermedius*

Common name: Shaggy fleabane, Cut-leaf daisy

USDA Plants code: Genus wide - **ERIGE2**,

*Erigeron pumilus* var. *intermedius* - **ERPUI**

## Characteristics

- A. Perennial herb, up to 7 in tall.
- B. Root composed of a woody taproot and caudex.
- C. Basal leaves up to 2 in tall, ternately lobed.
- D. Because of the short leaves, it gives an inconspicuous mat forming structure.
- E. Aster like flowers with both ray & disk flowers. (radiate)
- F. Flower colors vary from white, purple to blue.
- G. Leaves are minutely hairy and glandular (sticky).
- H. Flowers in late spring, early summer.
- I. Commonly found on rocky slopes, talus, and gravelly sagebrush communities.



# Asteraceae

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## *Ionactis alpina*

Common name: Lava aster

USDA Plants code: *Ionactis alpina* - **IOAL**

### **Characteristics:**

- A. Perennial herb, 1.5 to 5 inches tall.
- B. Root composed of a caudex and fibrous roots.
- C. Leaves 3-12 mm long, oblanceolate to elliptic, abruptly pointed, densely short-hairy; margins whitish hyaline.
- D. Inflorescence a head, 1 head per stem; phyllaries oblong to acuminate, green to purplish.
- E. Ray flowers 8-16; corolla 7-12 mm long, purple; disk flower 5-8 mm long; achene 5-6 mm long; pappus of bristles.
- F. Flowers May through July.
- G. Commonly found in dry, gravelly areas in sagebrush communities.



# Asteraceae

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*Onopordum acanthium*

Common name: Scotch thistle

USDA Plants code: *Onopordum acanthium* - **ONAC**

## Characteristics:

A. Biennial with a large taproot.

B. Large winged stems.

C. Large blue-gray leaves up to 1.5 ft long, dentate and shallowly lobed.

D. Plants up to 9 ft tall.

E. Phyllaries linear, puberulent.

F. Corolla up to 2 in in diameter.

G. Flowers violet to pinkish-purple.

H. Flowers from July to October.

I. Idaho noxious weed.

J. Commonly found in disturbed sites, roadsides, ditches, and fields.





# Asteraceae

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*Senecio integerrimus*

Common name: Ragwort, Groundsel

USDA Plants code: *Senecio integerrimus* - **SEIN2**

## Characteristics:

A. Many species within this genre and several varieties within this species.

B. Biennial or perennial, up to 2.2 feet tall, arising from a caudex and fibrous roots.

C. Stems 1 per plant, tomentose or long-hairy, sometimes glabrous with age.

D. Basal and lower cauline leaves petioled, 1-8 in long, up to 2.5 in wide, elliptical to lanceolate, entire to serrate; cauline leaves reduced upwards.

E. Inflorescence a corymb, few to several-flowered; flowers radiate (both ray and disk flowers), rays 8-13, 5-15 long, yellow; involucre 6-12 mm long and up to 18 mm broad, bracts (phyllaries) 13 to 21 with black tips.

F. Commonly found in open woodlands, sagebrush, juniper, aspen, and spruce-fir communities.





# Asteraceae

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*Stenotus acaulis*

Common name: Stemless goldenweed

USDA Plants code: *Stenoutus acaulis* - **STAC**

## Characteristics:

A. Perennial, up to 8 in tall, caespitose, arising from a thick taproot and caudex.

B. Basal leaves up to 2.3 in tall, 2-10 mm wide, rigid, sharply lanceolate, resinous.

C. Cauline leaves few and directed upwards along the stem.

D. Inflorescence yellow, radiate; involucre 6-10 mm long; ray flowers 6-10 mm long, 2-4 mm wide; pappus white to brownish.

E. Commonly found in sagebrush, pinyon-juniper ponderosa pine, and fir communities.



# Asteraceae

---

*Tetradymia canescens*

Common name: Spineless horsebrush or Gray horsebrush

USDA code: *Tetradymia canescens* - **TECA2**

## Characteristics:

- A. Shrubs, 1-3 ft tall.
- B. Branchlets some-what tomentose; leaves densely tomentose, appearing silvery, up to 4 cm long and 6 mm wide, linear to sharply lanceolate.
- C. Flowering heads 3-6 in flat topped clusters.
- D. Flowers yellow; pappus of several fine bristles.
- E. Commonly found in sagebrush scrub, pinyon-juniper communities.





# Asteraceae

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## *Tetraneuris grandiflora*

Common name(s): Four-nerve daisy, Woolly tetraneris, Alpine sunflower

USDA Plants code: *Tetraneuris grandiflora* - **TEGR3**

### Characteristics:

- A. Perennial, up to 12 in tall, arising from a woody caudex.
- B. Stems 1-10, conspicuously hairy.
- C. Woolly to cobwebby throughout most of plant, especially below the flowering head.
- D. Large, yellow, showy flowers borne single, around 2 in wide.
- E. Ray flowers 3 toothed.
- F. Phyllaries in 2-3 series, subequal and lanceolate to oblanceolate.
- G. Leaves blades simple or 3-15 lobed, hairy and gland dotted.
- H. Commonly found in mountain meadows to gravelly tundra.







### *Mahonia repens*

Common name: Oregon grape

USDA Plants code: *Mahonia repens* - **MARE11**

#### **Characteristics:**

- A. Perennial, widely stoloniferous, up to 12 in tall.
- B. Leaves alternate, pinnately compound, 5-7 leaflets, oblong to ovate-lanceolate.
- C. Leaves generally 3 in long, multiple spiny teeth on margins.
- D. Compound leaves, leaflets serrately toothed.
- E. Bright yellow flowers in clusters up to 3 in long.
- F. 6 petals, 3 sepals, 6 stamens.
- G. Fruits are berry-like and blue in color.
- H. Flowers between April and June.
- I. Commonly found in canyons, woodlands, chaparral, and conifer communities.



# Boraginaceae

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*Cryptantha glomerata*

Common name: Cryptantha

USDA Plants code: Genus wide - **CRYPT**

## **Characteristics:**

- A. Many species of *Cryptantha*.
- B. Annual to perennial, generally erect, 2 in to 24 in tall.
- C. White inflorescences that wrap around on each other into a scorpid or helicoid cyme.
- D. Generally covered in conspicuous stiff, bristly hairs throughout the whole plant.
- E. Generally unscented.
- F. Sepals fused at base; corolla generally 0.5 in in diameter, mostly white.
- G. 5 petals fused into a tube, 5 fused sepals, 5 stamens, 2 styles
- H. Ovary generally 4-lobed.
- I. Usually less than 18 in tall.
- J. Commonly found in dry, sandy, gravelly sites within sagebrush, juniper communities.



# Boraginaceae

---

*Lithospermum ruderale*

Common name: Western stoneseed

USDA Plants code(s): *Lithospermum ruderale* - **LIRU4**

## Characteristics:

- A. Perennial, arising from a woody caudex.
- B. Several stems up to 20 in tall and sparsely covered in minute hairs.
- C. Pale yellow to greenish, funnel shaped flowers with 5 petals in a cyme pattern.
- D. Corolla up to 0.5 in in diameter.
- E. Conspicuously hairy, especially towards stem.
- F. Abundantly leaved plant, crowded; blade to 3 in, lanceolate to linear.
- G. Commonly found in open, dry, sagebrush, and chaparral communities.





# Boraginaceae

---

*Mertensia oblongifolia*

Common name: Bluebells

USDA Plants code(s): Genus wide - **MERTE**,

*Mertensia oblongifolia* - **MEOB**

## Characteristics:

- A. Perennial, up to 15 in tall with a deep taproot and branching caudex.
- B. Purplish-blue bell shaped and tubular flowers up to 2 cm long.
- C. Leaves basal and cauline, lanceolate to oblanceolate shaped.
- D. Cauline leaves much longer than wide and somewhat clasping the stem.
- E. Inflorescences panicle-like and dense.
- F. Calyx up to 6 mm long, corolla up to 2 cm.
- G. Stamens included within corolla.
- H. Commonly found in sagebrush, chaparral, and aspen communities.





# Boraginaceae

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*Phacelia hastata*

Common name: Silverleaf phacelia

Family: Boraginaceae (new) or Hydrophyllaceae (old)

USDA Plants code: *Phacelia hastata* - **PHHA**

## Characteristics:

A. Perennial, up to 1.5 ft tall; 1 to several stems, erect, hispid.

B. Leaves mostly in a basal rosette, entire or 2-lobed near the base, lanceolate to elliptical; conspicuously veined.

C. Inflorescence a scorpioid cyme, densely hispid; calyx, 3-6 mm long, elliptical, hispid; corolla campanulate, lavender-white or purple, 4-6 mm long; stamens well exerted.

D. Commonly found in sagebrush, mountain brush, spruce-fir, and grass-forb communities and elevations of 4,000 to 11,500 ft.







## *Alyssum desertorum*

Common name: Desert madwort

Family: Brassicaceae or Cruciferae

USDA Plants code(s): *Alyssum desertorum* - **ALDE**

### **Characteristics:**

A. Annual, 2-8 in tall, arising from a small taproot, slightly decumbent at stem base to erect, simple or branched from the base.

B. Leaves simple, spatulate to linear, entire, 4-22 mm long, 2-3 mm wide, stellately haired on both surfaces.

C. Inflorescence a raceme, sepals 4; petals 4, yellow; stamens 6, 4 long, 2 short.

D. Sepals 1-2 mm long, often red tinted, stellate-haired; petals 2-3 mm long, yellow, fading white; siliques 3-4 mm long and about as broad.

E. Commonly found in disturbed areas, along with desert shrub, sagebrush, bunchgrass, and juniper communities.





*Arabis* sp.

Common name(s): Rockcress

Family: Brassicaceae or Cruciferae

USDA Plants code(s): Genus wide - **ARABI2**

## Characteristics:

A. Annuals, biennials, and perennials.

B. Minutely dense hairs simple or branched.

C. 4 sepals, 4 petals and 6 stamens.

D. Fruit a silique, erect to spreading.

E. Generally, with a basal rosette, entire to dentate.

F. Cauline leaves sessile, entire to dentate

G. Flowers generally deep purple and occasionally white-pink.

H. Commonly found in gravelly sagebrush and juniper communities.

Photos from left to right: fruit, plant with flower, and leaves.



# Brassicaceae

---

*Lesquerella occidentalis*

Common name: Western bladderpod

Family: Brassicaceae

USDA Plants code: *Lesquerella occidentalis* - **LEOC**

## Characteristics:

- A. Perennial, up to 4 in tall.
- B. Bright yellow flowers with 4 petals, 4 sepals, and 6 stamens.
- C. Basal rosette leaves round to oval-spatulate up to 3 in long, wavy dentate to entire.
- D. Cauline leaves oblanceolate to lanceolate, dentate to entire.
- E. Plant minutely densely hairy, glaucous.
- F. Commonly found in talus, gravelly soils, and barren hillsides.





# Caryophyllaceae

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*Arenaria sp.*

Common name: Sandwort

USDA Plants code: Genus wide - **ARENA**

## **Characteristics:**

- A. Annuals, biennials and perennials with both prostrate and erect stems, occasionally densely matted.
- B. Leaves opposite, mostly sessile, linear to ovate.
- C. Flowers borne in cymes.
- D. 5 sepals, 5 petals (white), stamens 10, styles 3.
- E. Distinct pink to yellow anthers.
- F. Widely spread from desert to tundra communities.



# Caryophyllaceae

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## *Silene douglasii*

Common name(s): Champion, Douglas's catchfly

USDA Plants code(s): Genus wide - **SILEN**, *Silene douglasii* - **SIDO**

### Characteristics:

- A. Perennial, arising from a caudex and taproot.
- B. Sepals 5, petals 5, stamens 10, styles 3.
- C. Stems grow to 2 ft tall, erect.
- D. Basal leaves smaller than cauline leaves.
- E. Cauline leaves up to 3 in long, broad-lanceolate.
- F. Flowers in open or closed cymes
- G. Conspicuously inflated and fused calyx with 10 or more pinkish-red nerves.
- H. Densely hairy to sticky-hairy.







### *Atriplex canescens*

Common name: Four-winged saltbush

USDA Plants code: *Atriplex canescens* - **ATCA2**

### **Characteristics:**

- A. Shrub, 2-7 ft tall, diecious, spineless.
- B. Leaves alternate, sessile, 10-40 mm long, 2-10 wide, linear to oblanceolate, entire. Leaves have a conspicuous canescent color (hence the name).
- C. Inflorescence a spicate-panicle; staminate flowers yellow, in clusters 2-3 mm wide; pistillate flowers borne in terminal panicles, 2-15 in long.
- D. Fruit is a conspicuous four-winged bladder, green fading to brown.
- E. Commonly found in blackbrush, greasewood, desert shrub, sagebrush, and juniper communities.





## *Atriplex confertifolia*

Common name: Shadscale

USDA Plants code: *Atriplex confertifolia* - **ATCO**

### **Characteristics:**

- A. Shrub, 1-2.5 ft tall, diecious, branchlets more or less spine-like.
- B. Leaves alternate with petioles up to 4 mm long; blades 9-26 mm long, 4-20 mm wide, orbicular to elliptical, entire, obtuse apically. Leaves have a conspicuous canescent color.
- C. Staminate flowers yellow, in axillary clusters 2-4 mm wide or in spike up to 10 mm long; pistillate flowers borne in terminal panicles, 1-6 in long.
- D. Each pistillate flower is enclosed in 2 fruiting bracteoles.
- E. Commonly found in greasewood, desert shrub, sagebrush, and juniper communities.
- F. Shadscale forms hybrids with *A. canescens* and others within the genre. It is a valuable browse plant for wildlife.



*Sarcobatus vermiculatus*

Common name: Greasewood

USDA Plants code(s): *Sarcobatus vermiculatus* - **SAVE4**

**Characteristics:**

- A. Shrubs, 3-7 ft tall; branches rigid, spreading, modified as thorn-like projections.
- B. Leaves 3-45 mm long, 1-3 mm wide, linear.
- C. Inflorescence a spike; staminate spikes catkin-like, 10-40 mm long; pistillate flowers fewer than staminate.
- D. Commonly found in seepweed, saltbush, and other saline substrate communities.

# Crassulaceae

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*Sedum lanceolatum*

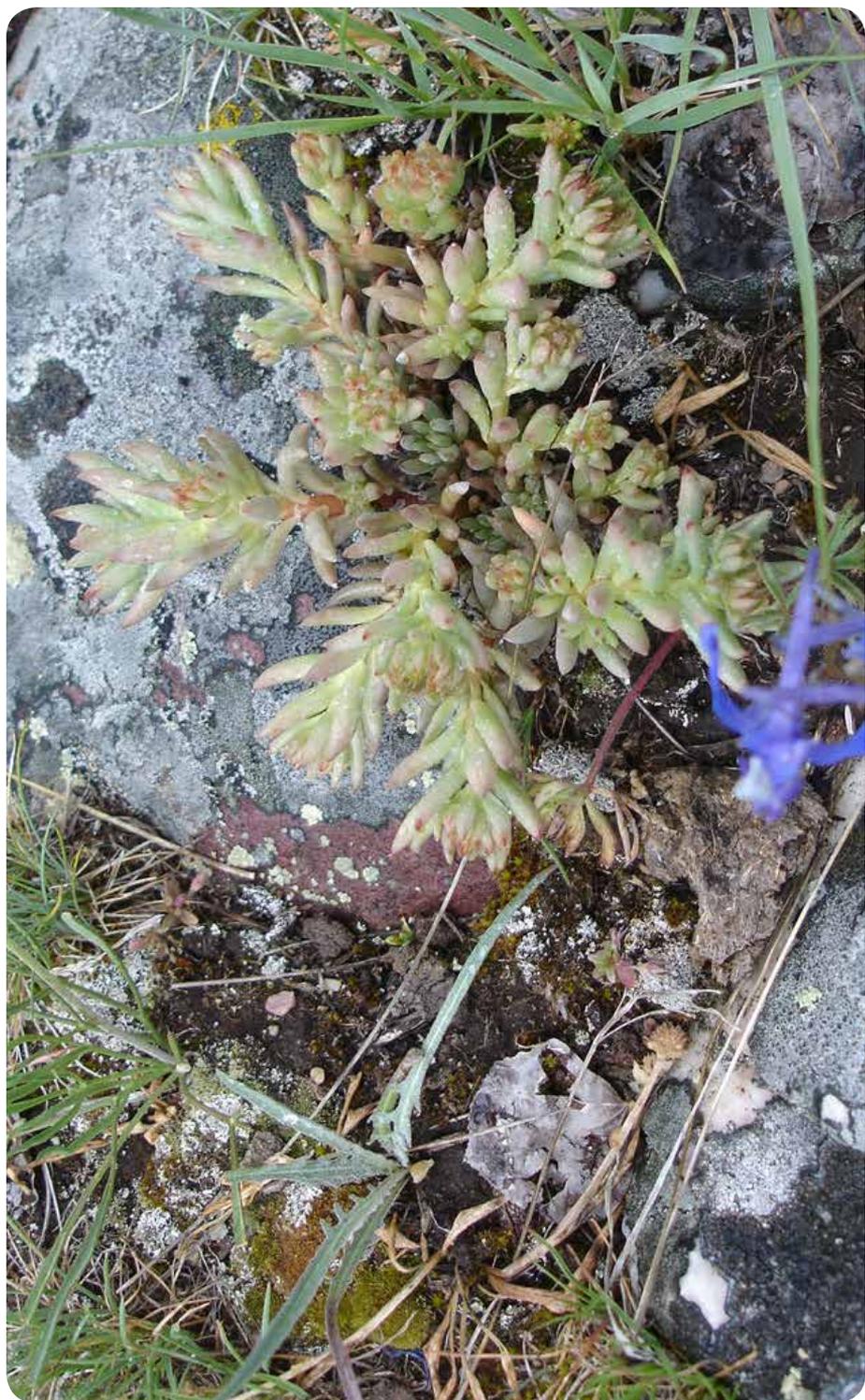
Common name: Stonecrop

USDA Plants code(s): *Sedum lanceolatum* - **SELA**, Genus wide - **SEDUM**

## Characteristics:

- A. Perennial arising from a stoloniferous caudex, growing upwards of 10 in tall.
- B. Plants caespitose or in tufts.
- C. Leaves alternate, sessile, lanceolate, succulent, and up to 20 mm long.
- D. Bright yellow, star-like flowers.
- E. Sepals 5, petals 5, stamens 10.
- F. Growing in rock outcrops and sagebrush communities.







*Euphorbia esula*

Common name: Leafy spurge

USDA Plants code: *Euphorbia esula* - **EUES**

## Characteristics:

- A. Perennials, arises from a caudex and horizontal rhizomes, up to 2.5 ft tall.
- B. Inconspicuous yellowish-green flowers.
- C. Leaves alternate, linear, entire, up to 3 in long.
- D. Entire plant contains poisonous milky sap.
- E. Noxious weed throughout Northern America.
- F. Often found along roadsides and open fields.



# Fabaceae

---

*Astragalus sp.*

*Astragalus purshii*

Common name(s): Milkvetch, Woollypod milkvetch

USDA Plants code(s): Genus wide - **ASTRA**, *Astragalus purshii* - **ASPU9**

**Characteristics:** *Astragalus sp.*

- A. Plants annuals and perennials, arising from a taproot.
- B. Odd-pinnately compound leaves.
- C. Flowers papilionaceous, usually pink, purple or white.
- D. Sepals 5; petals 5; stamens 10 (9+1); diadelphous.
- E. Fruit is a pod that varies in shape and size.





**Characteristics:** *Astragalus purshii*-

A. Perennial, acaulescent, up to 5 in tall.

B. *Purshii* species have conspicuous wholly fruits that resemble cotton balls.

C. Commonly found in sagebrush and desert shrub communities.

# Fabaceae

---

*Lupinus sp.*

Common name: Lupine

USDA Plants code: Genus wide - **LUPIN**

## Characteristics:

A. Annuals to perennials, up to 3 ft tall, but on average around 12 in tall.

B. Leaves alternate and palmately compound.

C. Inflorescence a terminal raceme; calyx bilabiate; corolla usually blue-purple to purple-white or yellow.

D. Flowers papilionaceous; stamens 10, monadelphous, 5 long filaments alternating with 5 short ones.

E. Fruit is a pod that is laterally compressed.

F. Many species in this genre, making it difficult for precise identification.

G. Broad distribution, desert shrub to alpine communities.



*Ribes aureum*

Common name(s): Wax currant

USDA Plants code(s): *Ribes aureum* - **RIAU**

### Characteristics:

A. Shrubs up to 10 ft tall.

B. Leaves strongly 3-lobed, lobes entire, glabrous.

C. Raceme with 6-9 bright yellow flowers.

D. Fruit a berry, black to red.

E. Thorn-less.

F. Can be found in both riparian areas and sagebrush communities.



# Grossulariaceae

---

*Ribes cereum*

Common name:

Golden currant

USDA Plants code:

*Ribes cereum* - **RICE**

## Characteristics:

A. Shrubs up to 7 ft tall with broadly fan-shaped leaves.

B. Leaves with 3-7 shallow lobes.

C. Flowers tubular, pinkish-white and hairy-sticky.

D. Fruits are red berries.

E. Thorn-less.

F. Found in Sagebrush communities and riparian areas, but is more drought tolerant than *R. aureum*.



*Ribes montigenum*

Common name: Gooseberry

USDA Plants code:

*Ribes montigenum* - **RIM02**

### Characteristics:

A. Shrub less than 3.5 ft tall with broadly fan-shaped leaves.

B. Branchlets armed with spines.

C. Leaves 10-37 mm long and 12-50 mm wide, orbicular, cordate at the base, usually 5-lobed.

D. Flower is a 1 mm long hypanthium, glandular hairy; sepals 3 mm long, pink to white; petals 1 mm long, pink to pinkish-purple; stamens 5, subequal to the petals.

E. Commonly found in fir, pine, aspen, snowberry, and sedge-grass communities.



# Liliaceae

---

*Allium sp.* (Wild onion)

*Allium brandegeei* (Brandegee's onion)

Common name: Wild onion

USDA Plants code(s): Genus wide - **ALLIU**, *Allium brandegeei* - **ALBR**

## Characteristics:

- A. Two long grass-like leaves that are linearly veined and basal.
- B. Scape erect, terete, up to 8 in tall.
- C. Root mass that is composed of a large bulb.
- D. White to pink flowers in umbels, 8-25 flowered.
- E. 3 petals and 3 sepals, 6 stamens, 3-lobed stigma.
- F. Commonly found in sagebrush, aspen, and fir communities.





# Liliaceae

---

*Calochortus nuttallii*

Common name: Sego lily

USDA Plants code(s):

Genus wide - **CALOC**,

*Calochortus nuttallii* -

**CANU**

## Characteristics:

A. Perennial, stems 3-20 in tall, simple, arising from a bulb.

B. Leaves typically 3, alternate; bracts subopposite, up to 3.5 in long, lance-linear.

C. Inflorescence mostly solitary or in umbellate clusters, 1-5 flowered; sepals lanceolate to ovate, greenish to purplish, often blotched with yellow or purple above the base; petals up to 2.5 in long truncate-rounded, white; the base of the petals forms a hairy bowl, yellow colored with purple v-shaped blotches on each petal base; anthers cream to purplish; fruit a capsule, 3-angled.

D. Because of its edible bulbs, pioneer settlers used this as a primary food source, and now has been named Utah's state flower.

E. Broad distribution, from low to high elevations; found in desert shrub, sagebrush, wheatgrass, aspen, and sub-alpine communities.





# Liliaceae

---

*Zigadenus venenosus*

Common name(s): Death camas

USDA Plants code(s): Genus wide - **ZIGAD**, *Zigadenus venenosus* - **ZIVE**, *Zigadenus paniculatum* - **ZIPA2**

## Characteristics:

- A. Perennial, up to 2.5 ft tall, arising from a bulb.
- B. Leaves mainly basal, linear.
- C. Flowers in racemes (in *venenosus*) and panicles (in *paniculatum*).
- D. 3 petals 3 sepals, 6 stamens.
- E. White to cream-white flowers, 10-50 flowered.
- F. Fruit 3 segmented.
- G. Commonly found in dry to wet meadows, sagebrush communities.





# Linaceae

---

*Linum lewisii*

Common name: Lewis flax

USDA Plants code: *Linum lewisii* - LILE3

## Characteristics:

- A. Perennial, glabrous, arising from a stout taproot up to 3 ft tall.
- B. Leaves alternate, simple, 4-30 mm long.
- C. 5 sepals, 5 petals, 5 stamens, 5 styles.
- D. Purple to white flowers with distinct purple veins along the petals.
- E. Commonly found in sagebrush, pinyon-juniper, aspen, and spruce-fir communities.





# Malvaceae

---

*Sphaeralcea munroana*

Common name: Munro's globemallow

USDA Plants code: *Sphaeralcea munroana* - **SPMU2**

## Characteristics:

- A. Perennial, subshrub, up to 2.5 ft tall, arising from a branched caudex.
- B. Leaves up to 2 in long and wide, ovate to orbicular, 3-5 lobed; the leaf base truncate to obtuse.
- C. Inflorescence a dense cyme, usually more than 1 flower per node; calyx stellate; petal 8-15 mm long, orange.
- D. Plant with a canescent color.
- E. Commonly found in desert shrub and sagebrush communities.





# Onagraceae

---

*Oenothera caespitosa*

*Oenothera villosa*

Common name(s): Evening-primrose, Hairy evening-primrose

USDA Plants code(s): *Oenothera caespitosa* - **OECA10**,

*Oenothera villosa* - **OEVI**

## Characteristics:

*Oenothera caespitosa* - **OECA10**

- A. Perennial arising from a taproot, up to 4 in tall.
- B. Basal rosettes without a stem (acaulescent).
- C. 4 sepals, 4 petals, 8 stamens, and a 4-branched stigma.
- D. The 4 sepals reflexed away from corolla.
- E. Plant pleasantly aromatic.
- F. Veins of basal rosette are usually pinkish-white.
- G. Leaves margins entire, toothed to pinnatifid, up to 12 in long.
- H. Flowers open in the evening-time for pollination by moth.
- I. Very widespread.



**Characteristics:**

*Oenothera villosa*- **OEVI**

- A. Tall biennial, up to 6 ft tall, glandular-hairy.
- B. Stems simple and sparsely branched.
- C. Basal and cauline leaves up to 7 in long, petiolate, becoming sessile towards the plant apex.
- D. Cream-yellow flowers, with a hypanthium up to 1.5 in long.
- E. Commonly found in disturbed sites with moisture.



# Poaceae

---

*Achnatherum hymenoides*

Common Name: Indian ricegrass

USDA Plant Code: *Achnatherum hymenoides* - **ACHY**

## Characteristics:

- A. Perennial bunchgrass, 10-30 in tall.
- B. Sheaths persisting and becoming fibrous in old clumps.
- C. Leaves mostly basal, glabrous to minutely scabrous, up to 1 mm wide.
- D. Inflorescence 10-20 cm long, branchlets dichotomous; lemma awned, hairy and straight.



*Elymus elymoides*

Common Name: Bottlebrush squirreltail

USDA Plant Code: *Elymus elymoides* - **ELEL5**

**Characteristics:**

*Elymus elymoides*

A. Perennial bunchgrass, stems erect, up to 26 in tall

B. Inflorescence a spike, 2-7 in long; spikelets usually in pairs or 3s, usually breaking away with age; glumes needle-like, extending into a scabrous awn, decumbent with age.

C. Leaves glabrous to hairy; auricles up to 1 mm long; ligule less than 1 mm long; blade 3-6 mm wide, flat, folded or slightly rolled.



# Poaceae

---

*Festuca idahoensis*

Common Name: Idaho fescue

USDA Plant Code: *Festuca idahoensis* - **FEID**

## Characteristics:

A. Perennial, up to 3 ft tall; leaves more than half the length of the culm, blades to 14 in long and less than 2 mm broad; ligule less than 0.5 mm long.

B. Inflorescence a compressed to loosely compressed panicle; spikelets 4-7 flowered; lemmas round, 5-7 mm long, awns 2-6 mm long.



*Hesperostipa comata* var. *comata*

Common Name: Needle and thread grass

USDA Plant Code:

*Hesperostipa comata* var. *comata* - **HECOC8**

**Characteristics:**

A. Perennial, up to 3.5 tall;  
leaves 4-12 in long, up to 4 mm  
wide, margins generally involute.

B. Inflorescence a closed to open  
(at maturity) panicle; awn 3-9 in  
long, distal segment curled with  
age.



# Poaceae

---

*Koeleria macrantha*

Common Name: Prairie junegrass

USDA Plant Code: *Koeleria macrantha* - **KOMA**

## Characteristics:

A. Perennial, up to 3 ft tall; leaves up to 8 in tall and 3 in wide, generally basal, tufted, ridged, glabrous to puberulent; ligule 1-2 mm long.

B. Inflorescence a shiny, spike-like panicle, cylindrical, interrupted at base, 1-6 in long, 10-20 mm broad; awnless.



## *Leymus cinereus*

Common Name: Basin wildrye

USDA Plant Code: *Leymus cinereus* - **LECI4**

### Characteristics:

- A. Large perennial bunchgrass, culms up to 7 ft tall; nodes hairy.
- B. Inflorescence a spike up to 8 in long, stiff and erect; spikelets 3-6 per node; awnless or with a short awn up to 5 mm long.
- C. Leaves flat, up to 18 in long and 15 mm wide, firm and strongly nerved; auricles to 1.5 mm long; ligule 3-7 mm long.
- D. Commonly found along roadsides and irrigation ditches.



# Poaceae

---

*Pascopyrum smithii*

Common Name: Western wheatgrass

USDA Plant Code: *Pascopyrum smithii*- - **PASM**

## Characteristics:

A. Perennial, arising from rhizomes, up to 3 ft tall, glaucous.

B. Leaves mostly basal, up to 10 in long and 4.5 mm wide, glaucous, scabrous; auricles 1-2 mm long; ligule membranous and clasping, less than 0.5 mm to absent.

C. Inflorescence a spike, 2-7 in long; spikelets sometimes 2 per node, 2-ranked, imbricate; spikelet 5-15 mm long; glumes sharply lanceolate; lemma glabrous and awn-tipped.





*Poa secunda*

Common Name: Sandberg's bluegrass

USDA Plant Code: *Poa secunda* - **POSE**

**Characteristics:**

A. Perennial, up to 20 in tall, tufted. Basal leaves short, up to 1/4<sup>th</sup> the height of the mature flowering stems, up to 3 mm wide, involute, prow-shaped tips, double groove down the center of the leaf; ligule 1 -2 mm long.

B. Inflorescence a closed panicle, 1-10 in long, often 1-sided spikelet cylindrical or little compressed, callus glabrous or with a ring of short hairs; lemma to 5 mm long, keeled to rounded, awnless.

# Poaceae

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*Pseudoroegneria spicatum*

Common Name: Bluebunch wheatgrass

*Pseudoroegneria spicatum* - **PSSP6**

## Characteristics:

A. Perennial, up to 4 ft tall, tufted; old sheaths persisting in large clumps, mostly cauline leaves, leaf blades 2-6 mm wide, flat to rolled; auricles well developed; ligule less than 0.5 mm long.

B. Inflorescence a loose to open spike, 3-8 in long; spikelets remote; lemmas glabrous, awns divergent with age, 10-20 mm long.



### *Linanthus pungens*

Common Name: Prickly phlox

*Linanthus pungens* - LIPU11

#### Characteristics:

A. Perennial, open sub-shrub to shrub, up to 20 in tall.

B. Leaves more or less aromatic, puberulent to glabrous, alternate, 3-9 cleft, sharp tipped to spinulose.

C. Inflorescence of terminal cymes; 5 sepals, 7-12 mm long; 5 petals, 12-25 mm long, cream to yellowish, funnel-shaped; lobes of petals, 5-15 mm long; 5 stamens; 3-lobed stigma.

D. Commonly found in shadscale, sagebrush, and pinyon-juniper communities.



# Polemoniaceae

---

*Phlox hoodii*

Common Name: Spiny phlox

USDA Plants code: *Phlox hoodii* - **PHHO**

## Characteristics:

A. Perennial, arising from a prostrate caudex, mat-forming, usually less than 3 in tall.

B. 5 sepals, 5 connate petals, 5 stamens, stigma 3-lobed.

C. Sepals 5-8 mm long, petals 4-8 mm long.

D. Plants spreading mat-like up to 12 in wide.

E. Flowers vary from Purple to white.

F. Leaves segments are very short (up to 5mm long) and sharp-tipped.

G. Densely hairy in between leaf segments.

H. Commonly found in sagebrush, pinyon-juniper, and ponderosa pine communities.





# Polemoniaceae

---

*Phlox longifolia*

Common Name: Longleaf phlox

USDA Plants code: *Phlox longifolia* - **PHL02**

## Characteristics:

- A. Perennial, arising from a rhizomatous caudex.
- B. Plants with erect stems, up to 12 in tall.
- C. Flowers are very similar to phlox hoodia; pink to purplish flowers with white flowers seemingly more abundant.
- D. 5 sepals, 5 connate petals, 5 stamens, stigma 3-lobed.
- E. Sepals 7-13 mm long, Petals 10-30 mm long.
- F. Leaves are relatively long (up to 3 in long) and linear to lance-ovate
- G. Commonly found in sagebrush, pinyon-juniper, ponderosa pine, spruce-fir, and aspen communities.



# Polygonaceae

---

*Eriogonum caespitosum*

Common Name: Matted buckwheat

USDA Plants code: *Eriogonum* Genus wide - **ERIOG**,

*Eriogonum caespitosum* - **ERCA8**

## Characteristics:

- A. Perennial, Mat-forming, arising from a caudex, 4-15 in across.
- B. Basal leaves up to 15 mm long, spatulate to oblanceolate, oval to elliptical and tomentose (giving it a pale green color).
- C. Inflorescence capitate or ball-like.
- D. Flower colors vary from redish-pink to yellow, often not exclusively.
- E. Commonly found in sagebrush and pinyon-juniper communities.



### *Eriogonum douglasii*

Common Name: Douglas' buckwheat

USDA Plants code: *Eriogonum* Genus wide - **ERIOG**,

*Eriogonum douglasii* - **ERDO**

#### **Characteristics:**

- A. Perennial, Mat-forming, arising from a caudex, up to 24 in across.
- B. Very similar to *Eriogonum c.*, however, this species contains a whorl of bracts on the stem just below the flowering head.
- C. Basal leaves up to 20 mm long, spatulate to oblanceolate, oval to elliptical and densely tomentose (giving it a pale green color).
- D. Flower colors vary from redish-pink to pure yellow.
- E. Stems are not scapose (bracts present in whorl around stem).
- F. Stems tomentose, usually rising no more than 6 in tall.



# Polygonaceae

---

*Eriogonum ovalifolium*

Common Name: Cushion buckwheat

USDA Plants code: *Eriogonum* Genus wide - **ERIOG**,

*Eriogonum ovalifolium* - **EROV**

## Characteristics:

- A. Perennial, pulvinate-caespitose (mound forming and mat-like), up to 16 in across.
- B. Inflorescence capitate or ball-like, and tomentose.
- C. Flowering stems scapose, rising to 12 in.
- D. Flower colors vary from cream-yellow to rose-pink.
- E. Basal leaves up to 2.5 in, round to spatulate, very tomentose.
- F. Commonly found in sagebrush, pinyon-juniper, winterfat, fringed sagebrush, and alpine meadow communities.





*Eriogonum umbellatum*

Common name(s): Sulphur-flower buckwheat

USDA Plants code: *Eriogonum* Genus wide - **ERIOG**,

*Eriogonum umbellatum* - **ERUM**

**Characteristics:**

- A. Perennial sub-shrub, up to 4 ft in diameter
- B. Flowering stems scapose, up to 24 in tall, tomentose or glabrous.
- C. Inflorescence umbellate or rarely capitate, subtended by leaf-like bracts.
- D. Flowers cream-white to yellow and sometimes suffused with red.
- E. Leaves 4-30 mm long, 2-20 wide, ovate to oblanceolate, tomentose or glabrous on one or both sides.
- F. Many varieties; distribution is throughout the western United States and occurs in the majority of upland communities.

# Portulacaceae

---

*Lewisia rediviva*

Common Name: Bitterroot

USDA Plants code: Genus wide - **LEWIS**, *Lewisia rediviva* - **LERE7**

## Characteristics:

- A. Fleshy perennial, arising from thick fleshy roots, up to 30 mm tall.
- B. Stems scapose, 1-flowered, erect to slightly drooping.
- C. Basal leaves that are club shaped and succulent, 1-2 in long.
- D. 5-8 bracts that appear as sepals, whorled and scarious.
- E. 4-8 sepals that appear as petals rose to white colored.
- F. Stamens upwards of 50; styles 3-8; fruit a 5 mm long capsule.
- G. Commonly found in sagebrush, juniper, mountain mahogany, and aspen communities.



## *Dodecatheon conjugens*

Common Name: Bonneville shootingstar

USDA Plants code(s): Genus wide - **DODEC**,

*Dodecatheon conjugens* - **DOCO**

### Characteristics:

A. Perennial, up to 6 inches tall, glabrous.

B. Leaves 1-6 inches, linear-oblongate to obovate, margins entire.

C. Inflorescence a terminal umbel, 1-7 flowered, nodding at anthesis; calyx cup-shaped, 5 lobed; corolla 5 lobed, the lobes much longer than the tube, magenta to white, reflexed, petal lobes 7-20 mm; stamens 5, anthers 5-9 mm long.

D. Commonly found on in moist meadows or in sagebrush scrub communities.



# Ranunculaceae

---

*Delphinium andersonii*

Common name: Anderson's larkspur

USDA Plants code(s): Genus wide - **DELPH**,

*Delphinium andersonii* - **DEAN**

## **Characteristics:**

- A. Perennial, arising from fibrous caudices, up to 2.5 ft tall.
- B. Compound leaves only present on lower  $\frac{1}{4}$  of plant, and forming a whorl with 7-30 lobes; leaves 1-6 cm wide, glabrous.
- C. Inflorescence a cylindrical raceme.
- D. Flowers deep purple to blue with a large spur on the posterior side.
- E. Commonly found on dry, sandy to gravelly sites within sagebrush, greasewood, rabbitbrush, pinyon-juniper, and mountain mahogany communities.





## Ranunculaceae

---

*Ranunculus andersonii*

Common name: Violet buttercup

USDA Plants code: *Ranunculus andersonii* - **RAAN**

### Characteristics:

- A. Perennial, arising from a short caudex, 3-7 in tall.
- B. Flowering stems scapose.
- C. Basal leaves compound, 1-2 ternate, 2-4 cm long, slightly wider than long.
- D. Leaflets lanceolate, usually reddish-green.
- E. 5 reddish sepals, 5-15 mm long, glabrous; 5 pink-white petals, 12-20 mm long, orbicular.
- F. Numerous stamens and pistils.
- G. Stamens usually exerting pistils.
- H. One of the most distinctive species in the genus.
- I. Commonly found on dry rocky slopes.

### *Ranunculus glaberrimus*

Common name: Sagebrush buttercup

USDA Plants code(s): *Ranunculus glaberrimus* - **RAGL**

#### Characteristics:

- A. Perennial, arising from thickened roots, 2-6 in tall.
- B. 5 green sepals, 4-8 mm long; 5 bright yellow petals, 6-13 mm long.
- C. Numerous stamens and pistils.
- D. Pistils forming a globulous-shaped mound with the stamens surrounding the outer circumference in a ring pattern.
- E. Basal leaves entire, becoming three-lobed at the apex.
- F. Commonly found within sagebrush communities and open woodlands.



# Rosaceae

---

## *Amelanchier alnifolia*

Common name(s): Saskatoon serviceberry

USDA Plants code(s): *Amelanchier alnifolia* - **AMAL2**

### Characteristics:

A. Large shrub, mostly 5-15 ft tall.

B. Petiolate leaves alternate, simple, mainly over 2.5 cm long, oval to oblong, truncate to rounded basally, apex acute to slightly rounded. Margins serrate on more than 3/4<sup>th</sup> the blade.

C. Inflorescence a raceme.

D. Star shaped flowers with 5 white petals, 10-16 mm long; 5 sepals, 3.5 mm long; 10 or more stamens; ovary inferior, 5 styles.

E. Berries purple to black



F. Commonly found along stream-sides and on mountain slopes in sagebrush communities.

## *Amelanchier utahensis*

Common name: Utah serviceberry

USDA Plants code(s): *Amelanchier utahensis* - **AMUT**

### **Characteristics:**

A. Small to large shrub, mostly 3-13 ft tall.

B. Petiolate leaves alternate, simple, mainly less than 2.5 cm long, oval to oblong, truncate to rounded basally, apex truncate to rounded. Margins serrate mostly near the apex to half of the blade.

C. Inflorescence a raceme.

D. Star shaped flowers with 5 white petals, 5-10 mm long; 5 sepals, 1-3 mm long; 10 or more stamens; ovary inferior, 2-4 styles.

E. Berries purplish to pinkish.

F. Commonly found along stream-sides, dry slopes, thickets of sagebrush, pinyon-juniper, and aspen communities.



# Rosaceae

---

*Cercocarpus ledifolius*

Common name: Mountain mahogany

USDA Plants code: *Cercocarpus ledifolius* - CELE3

## Characteristics:

A. Large shrub to small tree, 6-15 ft tall.

B. Curled elliptical leaves, 1-4 cm long.

C. Leaves slightly wedge shaped and leathery.

D. Fruit is a long feather tail-like feature; ovary superior.

E. Sepals 5; petals lacking; stamens 10 or more; pistil 1.

F. Commonly found in mountain brush, pinyon-juniper, aspen and fir communities.

G. Grows from 5,000 to 10,000 MSL.





*Fragaria virginiana*

Common name: Wild strawberry

USDA Plants code: *Fragaria virginiana* - **FRVI**

**Characteristics:**

A. Perennial, usually less than 12 in tall, mat-forming, highly stoloniferous.

B. Leaves compound, with 3 serrate leaflets; stipule attached to the base of the petiole.

C. Flowers solitary or in scapose cymes; hypanthium widely spreading; sepals 5, alternating with bractlets; petals 5, white or pinkish; stamens 20; pistils numerous, superior; fruit a red strawberry.

D. Commonly found in woodlands, riparian areas, fir, and aspen communities.

# Rosaceae

---

*Geum triflorum*

Common name: Prairie smoke

USDA Plants code: *Geum triflorum* - **GETR**

## Characteristics:

A. Perennial, arising from rhizomes, 10-50 cm tall.

B. Leaves are mainly basal and fern-like.

C. Leaves pinnately divided into many lobed leaflets, 5-25 cm long.

D. 5 sepals, alternating with 5 bractlets; 5 petals; stamens numerous; 1 style.

E. Light pink to purplish flowers that are mostly nodding and cup shaped.

F. Commonly found in sagebrush, aspen, and fir communities.



*Prunus virginiana*

Common name: Chokecherry

USDA Plants code: *Prunus virginiana* - PRVI

**Characteristics:**

A. Small tree, up to 20 ft tall.

B. Inflorescences cylindrical-like racemes, 4-20 cm long.

C. Flowers are cream-white, petals up to 7 mm long.

D. Leaves simple, alternate, 2-10 cm long, elliptic, finely serrate.

E. 2 prominent, reddish glands near base of blade.

F. Commonly found in sagebrush, pinyon-juniper, Rocky Mountain juniper, and aspen communities.



# Saxifragaceae

---

*Heuchera cylindrica*

Common Name: Round-leaf alumroot

USDA Plants code: *Heuchera cylindrica* - **HECY2**

## Characteristics:

- A. Perennial, arising from a woody caudex, 9-55 cm tall.
- B. Scapose stems reddish-white, glandular-hairy.
- C. Basal leaves round to obovate, 5-7 lobed. Petioles, 1-9 cm.
- D. Inflorescence a spike-like cluster.
- E. Sepals 5; petals 5, small entire, usually clawed; stamens 5; styles 2; fruit a capsule.
- F. Flowers cream to yellowish-green color.
- G. Commonly found on north aspects, riparian areas, and subalpine communities in rocky soils.



### *Lithophragma parviflorum*

Common name(s): Prairie star-flower, smallflower, woodland-star  
USDA Plants code: *Lithophragma parviflorum* - **LIPA5**

#### Characteristics:

- A. Perennial, 4-18 in tall, arising from fibrous roots and small bulblets.
- B. Stalks simply pubescent with minutely glandular hairs.
- C. Leaves significantly more pubescent than the stalk; basal leaves 9-35 mm long and 11-50 wide, orbicular, mostly 3-parted; basal leaf petioles 2-11 mm long; cauline leaves similar to basal leaves, but reduced up the stalk to a compound leaf with 5-7 linear leaflets.
- D. Both basal and cauline leaves glandular-hairy.
- E. Inflorescence a congested raceme, 10-20 mm long, 4-10 flowered; flower pedicels 1-5 mm long.
- F. Sepals 5, 0.7-1.5 mm long, white, clawed to 3.5 mm long; petals 5, 7-16 mm long, obovate, 3-lobed, white to pink, stamens 5; styles 3; fruit a capsule.
- G. Commonly found in maple, sagebrush, aspen, riparian, meadow, and fir communities.



# Scrophulariaceae

---

*Castilleja sp.*

Common name: Indian paintbrush

Family: Scrophulariaceae (old), Orobanchaceae (new)

USDA Plants code: Genus wide *Castilleja sp.* - **CASTI2**

## Characteristics:

- A. Perennials up to 3 ft tall, but more commonly around 10 in tall.
- B. Flowers of various colors; from scarlet to pink.
- C. Usually several erect stems, leaves alternate.
- D. 4-cleft calyx, corolla with two lobes on top and 3 lobes on bottom, stamens 4.
- E. Semi-parasitic on grass roots.
- F. Widespread and commonly found in sagebrush communities.



*Collinsia parviflora*.

Common name: Blue-eyed mary

Family: Scrophulariaceae (old), Plantaginaceae (new)

USDA Plants code: *Collinsia parviflora* - **COPA3**

### Characteristics:

A. Annual forb, 1-15 in tall.

B. Leaves 10-35 mm long, entire, the upper leaves whorled, clasping to sessile, the lower leaves small, petiolate, and orbicular.

C. Inflorescence bilabiate as in most species of scrophulariaceae; corolla 2-lobed on top and 3 lobed on bottom. Flowers 2-7 per cluster, blue to violet in the throat and three bottom lobes, white on the upper two lobes; flowering peduncle and calyx generally purple.

D. Commonly found in dry to moist montane environments.



# Scrophulariaceae

---

*Linaria dalmatica*

Common name: Dalmatian toadflax

USDA Plants code: *Linaria dalmatica* - **LIDA**

## Characteristics:

- A. Perennial, 20-120 cm tall, glabrous.
- B. Milky sap throughout stems and leaves.
- C. Yellow flowers with a significant spur on the ventral side.
- D. 5 sepals; corolla with two lobes on top and 3 lobes on bottom, strongly bilabiate, 4 stamens.
- E. Leaves ascending up the stem are alternating.
- F. Highly rhizomatous.
- G. Commonly found on roadsides and fields; sagebrush and riparian communities.
- H. Idaho noxious weed.





*Penstemon* sp.

Common name(s): Penstemon or Beardtongue

USDA Plants code: Genus wide - **PENST**, *Penstemon pumilus* - **PEPU12**

### Characteristics:

- A. Perennial, forbs to subshrubs, up to 3.5 ft, more commonly around 20 in.
- B. Many different species and varieties of Penstemon.
- C. Flowers blue to white, purple to pink, pink to red.
- D. Opposite leaves that alternate position along the stem.
- E. Calyx 5-cleft; corolla tubular to funnelform, bilabiate; stamens 4, didynamous, staminode 1.

# Scrophulariaceae

---

*Penstemon pumilus*

Common name(s): Penstemon or Salmon River beardtongue

USDA Plants code: *Penstemon pumilus* - **PEPU12**

## Characteristics:

A. Dwarf, up to 12 cm tall.

B. Leaves entire, narrow, lower-most up to 5 cm long, tomentose.

C. Flowers with blue lobes and a purplish tube.

D. Found in dry, gravelly sites.

E. Endemic to Idaho.





*Verbascum thapsus*

Common name(s): Woolly mullein

USDA Plants code: *Verbascum thapsus* - VETH

**Characteristics:**

A. Biennial, 2-6 ft tall.

B. Large basal rosettes, oblong-ovate to lanceolate, 10-50 cm long, densely hairy.

C. Cauline leaves sessile, alternate, lanceolate, entire, 5-30 cm long.

D. Inflorescence a dense raceme.

E. Calyx 5, deeply-lobed; corolla 5-lobed, yellow; stamens 5, exserted.

F. Flowers May through September.

G. Commonly found along roadsides and streambanks.



# Violaceae

---

*Viola nuttallii*

Common name(s): Nuttall's violet

USDA Plants code: *Viola nuttallii* - VINU2

## Characteristics:

A. Rhizomatous perennial, short caulescent to acaulescent, 5-25 cm tall.

B. Basal leaves elliptic, oblong, or lanceolate, 1-7 cm long.

C. Bright yellow flowers with deep purple veins, 9-17 mm long.

D. 5 sepals; 5 petals, the lowermost spurred; stamens 5; style 1.

E. Flowers have bi-lateral symmetry.

F. Commonly found in sagebrush, maple-serviceberry, aspen, and conifer communities.





# Glossary

---

Acuminate- Tapering to a fine point.

Acaulescent- Stems absent.

Alternate- Leaves that are arranged singly up the stem; not opposite each other.

Anthesis- The flowering period of a plant.

Auricle- lobelike structure at the collar of a grass leaf that partially wraps around the culm.

Awn- A stiff bristle situated at the tip of a glume or lemma.

Basal- at the base of the plant, or arising from the base.

Bract- leaf-like structure at the base of the leaves or flowers.

Bracteoles- A small bract.

Caespitose- Growing in clusters or tufts.

Canescent- Having a fine grayish-white pubescence.

Cauline- referring to being attached to the stem.

Ciliate- Referring to hairs.

Compound leaves- leaves with 2 or more leaflets.

Culm- The stem of a grass.

Decumbent- Curved or bent.

Discoid- A composite flower bearing only disk flowers and absent of ray flowers.

Dissected- deeply divided into smaller parts.

Divergent- Usually referring to the awn separating two different ways.

Elliptical- Less than ovate to egg-like.

Entire- Not toothed or lobed.

Erose- Sharp.

Filiform- Thread or filament like.

Floret- A single small flower, usually a member of a cluster, such as a spikelet or a head.

Geniculate- Usually culms or awns, meaning bent.

Glabrous- hairless to smooth.

Glume- The lowest two empty scales subtending the usually fertile scales in grass spikelets.

Hirsute- Spike like hairs.

Hispid- Covered with stiff hairs.

Hyaline- Transparent.

Imbricate- Usually referring to the spikelets overlapping.

Involucre- A whorl of bracts (also called phyllaries) at the base of an inflorescence.

Involute- Usually meaning of leaf blades, meaning rolled inward.

Keel- A sharp ridge (like the keel of a boat) feature usually on lemmas or glumes.

Lemma- The Lowermost of the two scales forming the floret in a grass spikelet. The uppermost, hardly visible, is the palea.

Ligule- An extension, often papery, of the summit of the leaf sheath.

Margin- The edge of a plant feature, most commonly a leaf blade.

Membranous- Thin and flexible.

Monadelphous- Filaments of stamens united.

Obovate- Ovate with the narrower end at the base.

Opposite- leaves arranged directly across the stem from each other.

Orbicular- Having the shape of a flat ring or disk.

Ovate- Having an oval outline, egg-like.

Nerve- A nerve is essentially a vein on a plant part.

Node- The point along a stem which gives rise to leaves, branches, or inflorescences.

Peduncle- The stalk bearing a flower or fruit.

Petiole- A leaf stalk.

Pilose- Covered with hair.

Pinnate- with 2 rows of leaflets.

Pinnatifid- A leaf pinnately divided, but not all the way to the central axis.

Pungent- Sharp tipped.

Radiate- consisting of ray and disk flowers on the same flowering head.

Rhizomes- Underground stem-like roots.

Rosette- A circular, basal, clump of leaves.

Scarious- Thin, dry appearing.

Scape- Leafless flowering stalk.

Scapose- Leafless stem.

Sessile- ex. A leaf connected directly to the culm, rather than attached to a pedicel.

Spikelet- A group of florets, composed of glumes, lemmas, paleas and the caryopsis.

Spur- An appendage on a flower (usually linear).

Stoloniferous- An above ground stem-like feature that roots randomly.

Taproot- A thick root with minimal branching.

Terete- Round or circular.

Ternate- Leaflets in 3's.

Tomentose- Matted hairs.

Truncate- Cut off, blunt

Tufted- Meaning the culms (stems) are very compact at the base.

Zygomorphic- Bilateral symmetry.

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### **Photography:**

Andrey Zharkikh, Salt Lake City, Utah

Carren Morgan, Range Management Specialist, Challis Field Office

Daniel Lay, Range Technician, Challis Field Office

Matt Lavin, Montana State University

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