



LEARN 10 Forbes (Wildflowers & Grasses) of the Wenatchee Watershed

Wenatchee Naturalist Course

Text and photos by Susan Ballinger.

Portulacaceae Purslane Family

springbeauty

Claytonia lanceolata

Radial
symmetry



flowers: White to pink, often with deep pink veins. 5 petals, 2 sepals. Often in clusters of 3-20 flowers.

habitat: Widely scattered, mid-to-high elevations in open, moist grassy areas often under conifers or shrubs. Often in large patches. Perennial. Early spring bloomer.



Flowering stalks have a single pair of stalk-less leaves below the flower.



Portulacaceae Family ID traits:

- **Plants** often succulent with fat stems & small fat leaves(fleshy & juicy). Often grow in intense sunlight
- **Flowers:** bi-sexual (perfect)
- Sepals usually 2
- Petals: usually 4-6; some have 18
- Stamens: often = or double petal #
- Pistil: Superior (or $\frac{1}{2}$ -inferior ovary
- **Fruits:** A dry capsule with many seeds

Leaves: 1-several lance-shaped basal leaves. Somewhat fleshy. Largely have underground stalks.

Ranunculaceae –**Buttercup Family**
Ranunculus glaberrimus
sagebrush buttercup

Radial
symmetry



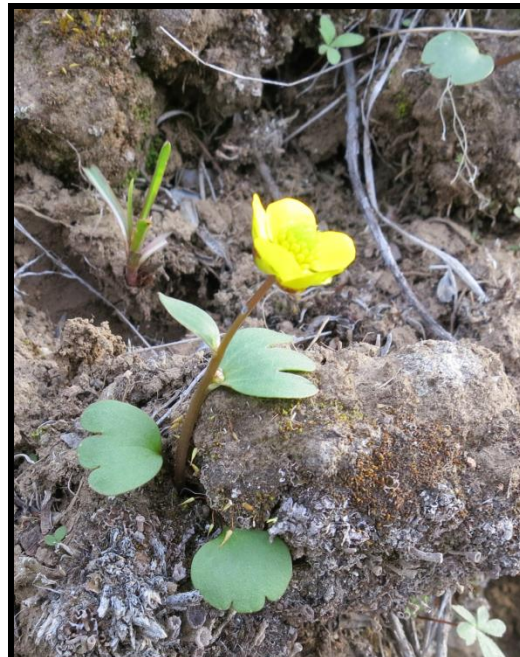
habitat: shrub-steppe & conifer forest & rocky ridges, mid- to high elevation. Perennial. One of earliest spring bloomers

Family ID traits:

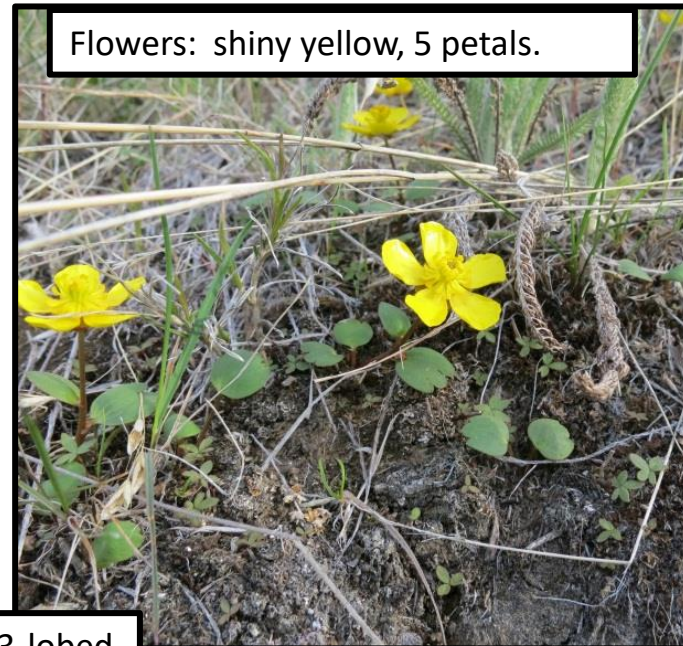
- All floral parts *all independently attached* & all of an indefinite number (Primitive, ancestral)
- Sepals and Petals- all separate from one-another, 3 to numerous in number.
- Stamens & Pistils: Spirally inserted into cone-like receptacle (hard to see)
- Pistil: Multiple pistils at center of flower w/ hooked tips. Superior ovary.
- Other family with many pistils is Rose, but Rose lacks hooked tips



Low perennial w/ fleshy roots



Leaves mainly basal; stem leaves often 3-lobed



Flowers: shiny yellow, 5 petals.

Ranunculaceae **Buttercup Family**
Delphinium nuttallianum upland larkspur



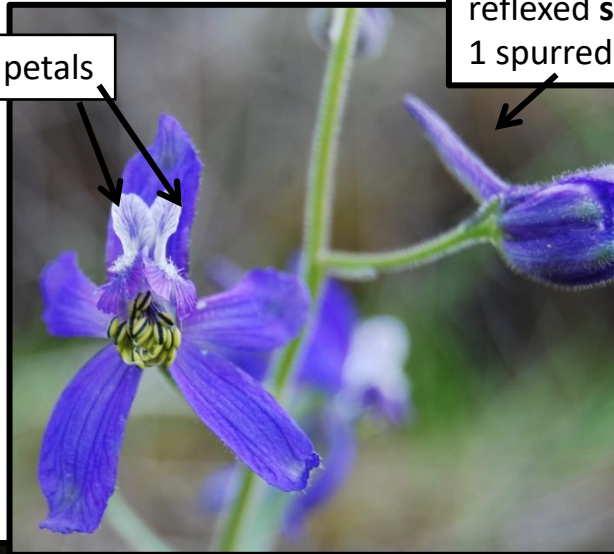
Bilateral
symmetry
perennial



5 showy blue sepals

flowers: irregular, **petals**
white to bluish
3-15 flowers on the stalk

petals



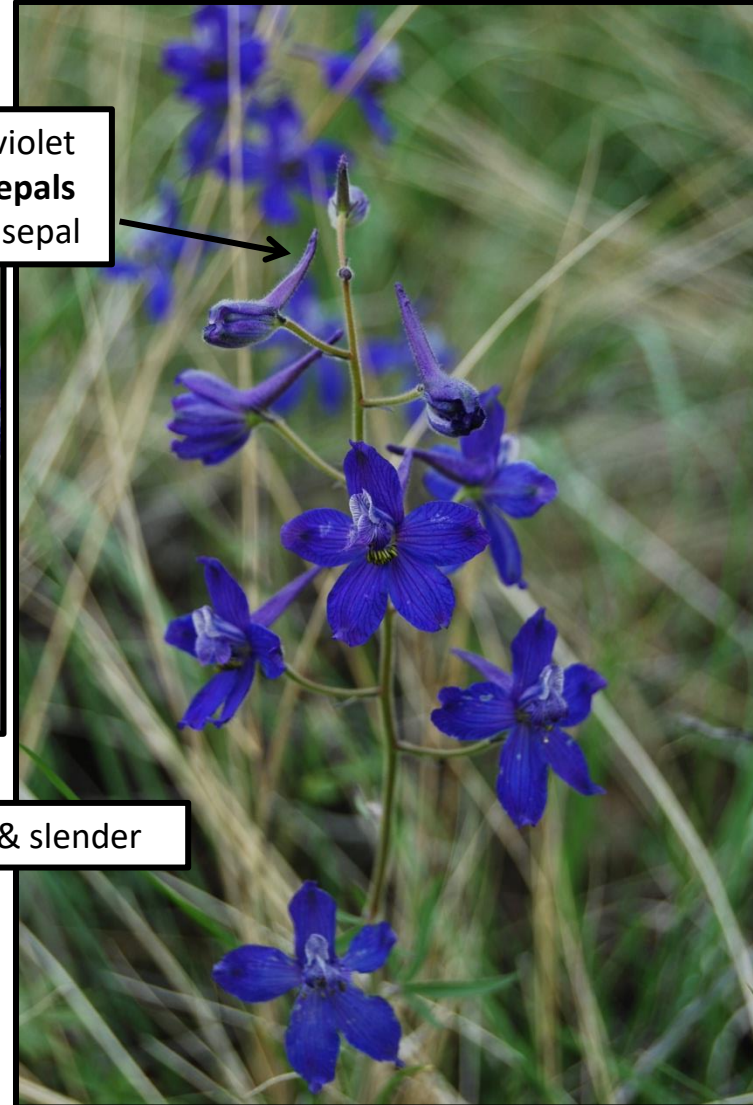
5 blue to violet
reflexed **sepals**
1 spurred sepal

Habitat: widespread in
shrub-steppe and moist low
elevation montane forests.
Low-to mid elevations.
Perennial. Spring bloomer.



stem: very erect, hairless, & slender

leaves: mostly on lowest
part of stem, divided or
lobed into 6-25 narrow
lobes, hairless.



Liliaceae LILY Family

yellow bells *Fritillaria pudica*

Liliaceae family has flower parts in 3s, parallel veins in leaves, usually petals & stamens look the same, 6 stamens, 3—parted stigma

Stem: erect, unbranched.

Leaves: elongate, fleshy. Grow in pairs or in whorls of 3+ mid-height of stem.



Flowers: usually 1 (sometimes 2) at stem top. Nodding bell-shaped flower faces outward to hanging down. Color: clear yellow to orange to deep red (as it ages)

Habitat: low to high elevations in shrub-steppe and forests in soils that are moist in spring. Early spring bloomer.

Perennial plant, growing from a bulb.



Liliaceae Lily Family

Triteleia grandiflora (formerly *Brodiaea douglasii*)

Douglas' brodiaea Also called large-flower triteleia



Radial
symmetry



Narrow erect perennial with 1-2 long narrow grass-like leaves.

habitat: widespread in shrub-steppe and dry forest. Perennial. Early spring bloomer

Family ID Traits:

- Parallel veins in leaves
- Bi-sexual (perfect) flower with parts in “3s”
- Usually, 6 tepals (petals & sepals) look the same
- 6 stamens
- Pistil: 3-parted stigma (tip of pistil)
- Grows from a bulb



flowers: in a 2-15 in a cluster at top of stem;
Pale to dark blue, tubular, 6 tepals with wavy margins

Primulaceae **PRIMROSE Family**
shooting star *Dodecatheon conjugens*



Primulaceae Primrose family traits: flower parts in 5s, sepals united at base, stamens aligned in middle of petals, plants in moist soils, leaves usually basal or opposite

Leaves: all basal, elliptical, strap-like, non-toothed.

Flowers: 5 sepals & 5 petals reflexed backwards away from colorful stamensl. Color: purplish-lavender to white



Stamens fused into a tube surrounding the style

Perennial



habitat: montane forest & shrub-steppe flat areas with poor drainage where moisture persists. Perennial Early spring bloomer.

Boraginaceae Borage Family

Key Words: radially symmetrical with 4 nutlets

Hackelia diffusa sagebrush (spreading or diffuse) stickseed



Family ID traits:

Plant: Entire plant may be hairy, prickly, or sticky overall.

Flower: Bi-sexual (perfect) Flower structure often coiled like a scorpion tail.

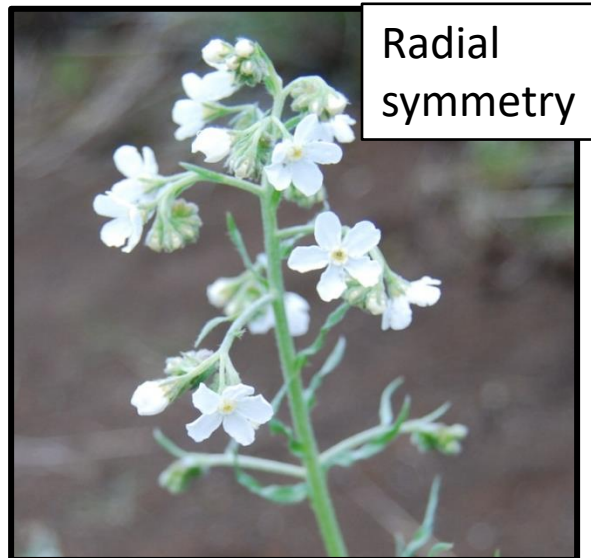
Inner throat of tubular corolla marked by fornicies (protruding structure)

Sepals: 5, separate

Petals: 5 united

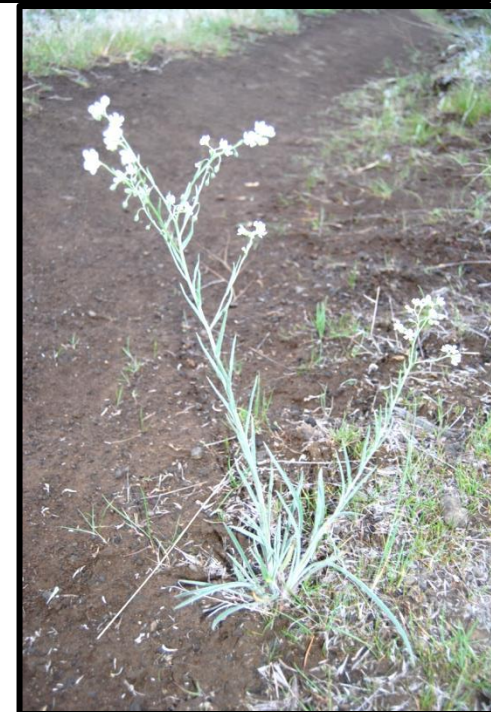
Stamens: 5 attached to corolla tube, alternate with petals.

Pistil: Superior ovary Fruit 4 nutlets around base of style.



habitat:

common in shrub-steppe and low elevation dry forest. Perennial. Spring bloomer.



Boraginaceae Borage Family

Key Words: radially symmetrical with 4 nutlets



Radial
Symmetry

Mertensia longiflora small (sagebrush) bluebells

Family ID traits:

Plant: Entire plant may be hairy, prickly, or sticky overall.

Flower: Bi-sexual (perfect) Flower structure often coiled like a scorpion tail.

Inner throat of tubular corolla marked by fornices (protruding structure)

Sepals: 5, separate

Petals: 5 united

Stamens: 5 attached to corolla tube, alternate with petals.

Pistil: Superior ovary Fruit 4 nutlets around base of style.



Habitat: common in shrub-steppe, often under a shrub canopy. Perennial. Early spring bloomer



Leaves: leathery with a bluish cast

stems: fleshy, support drooping flower clusters

Apiaceae Parsley or Carrot Family

Lomatium nudicaule barestem lomatium

Also called a biscuitroot, or desert parsley



Family ID Traits:

- Compound Umbel- all stems of the flower cluster radiate from a single point
- Stems usually hollow



Green seeds still ripening



Radial symmetry

Habitat: common in dry open shrub-steppe. Perennial. Early spring bloomer.



Prior year's seeds have all been dispersed

Family ID traits: Mostly small plants adapted to arid environments

- **Leaves:** Simple , narrow- opposite or alternate
- **Flowers:** regular bi-sexual (perfect), tubular with flat face
 - Sepals: 5 united (part-way)
 - Petals: 5 united; twisted in bud stage.
 - Stamens: 5 attached to corolla & alternate w/ petals
 - Pistil: Style- usually 3-parted; superior ovary

Polemoniaceae Phlox Family



Phlox species phlox

Habitat: widespread in shrub-steppe. Perennial, Spring bloomer.

Radial symmetry



Showy Phlox (*Phlox speciosa*) is a similar species, often found in the same habitat.

Differences include

- usually notched petal tips that look heart-shaped
- wider & larger lance-shaped leaves
- Very short style



Long-eaf phlox (*Phlox longifolia*) is the most common phlox in the shrub-steppe.

Leaves: linear, narrow, and long (1-2 inches)

Flowers: pink, with very long style



Fabaceae Pea Family *Lupinus species* lupine

Difficult to distinguish species, but all have palmately-compound leaves (4-8 leaflets) from single point



**Bilateral
symmetry**

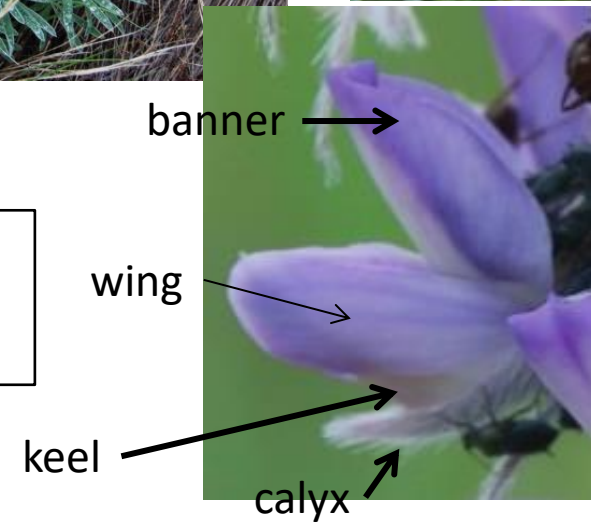


Habitat

Shrub-steppe &
dry forests.
Perennial, spring
bloomer.

Family ID Traits:

- Irregular flower (dissimilar petals)
- Pea-like pods with seeds inside



Asteraceae Aster or Sunflower Family

(also known as the Composite Family: Compositae)

Achillea millefolium yarrow



Key Words: Composite Flowers in disk-like heads

Family ID traits:

- What seems to be a “flower” is really a bouquet of many flowers
- can have either DISK or RAY flowers, or both in a “flower head”
- Have green modified leaves – bracts – surrounding the flower head.



habitat: widespread, low to high elevations, shrub-steppe & open forest. Perennial. Late spring bloomer



Heads have both RAY & DISK Flowers, ray flowers-white, pink, purple, red, or blue

Asteraceae Aster or Sunflower Family

(also known as the Composite Family: Compositae)

Key Words: Composite Flowers in disk-like heads

***Balsamorhiza saggitata* arrow-leaf balsamroot**

Family ID traits:

- What seems to be a “flower” is really a bouquet of many flowers
- can have either DISK or RAY flowers, or both in a “flower head”
- Have green modified leaves – bracts – surrounding the flower head.



Habitat: shrub-steppe to low montane forest.
Widespread. Perennial. Spring bloomer



Heads have both RAY & DISK Flowers, ray flowers-orange or yellow

Asteraceae Aster or Sunflower Family

(also known as the Composite Family: Compositae)

Centaurea diffusa diffuse knapweed

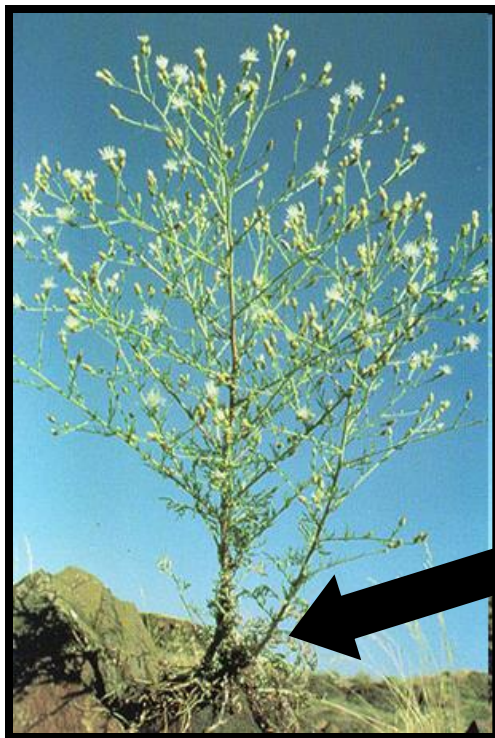
Non-native, Noxious weed

*Be a Weed Warrior & TAKE TEN (minutes)
stop DIFUSE KNAPWEED in its tracks!*

Wear gloves

Pull or dig out the plant, including the long tap root

When pulling prior to flowering, you can leave plant on ground



It is
easiest to
pull up
once the
stem has
elongated

Hold
here and
pull!



Diffuse knapweed is a non-native noxious weed. It competes with native plants for limited water and nutrients.

A single plant can produce up to 18,000 wind dispersed seeds. Pulling plants prior to blooming prevents seed formation.



Mustard Family Brassicaceae

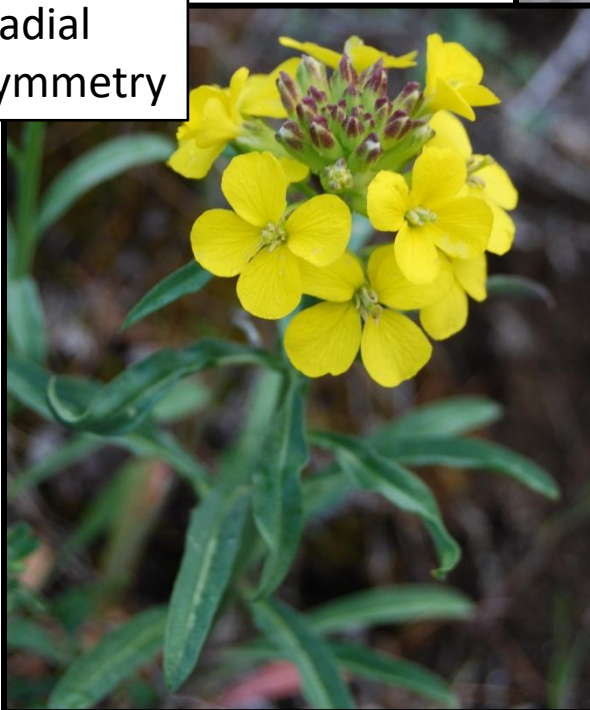
Erysimum asperum (Cascade) wallflower

Habitat: dry, rocky soils in shrub-steppe.
Plant biennial. Spring bloomer.

Family ID Traits:

- 4 sepals
- 4 petals – arranged like either “X” or “H”
- 4 tall stamens, 2 short stamens
- Seeds pods arranged like a spiral staircase – a raceme –
- Pods split open from both sides- with a clear membrane in the middle

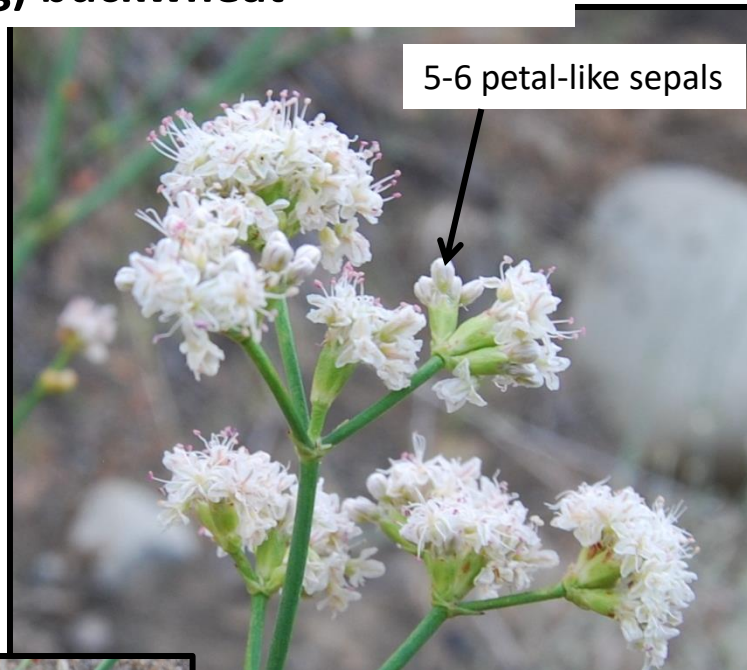
Radial
symmetry



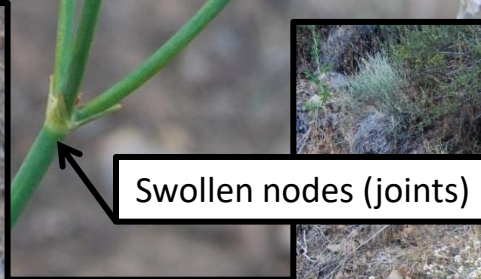
***Polygonaceae* Buckwheat Family**

Key words: small flowers with colored sepals, no petals, often triangular seeds

***Eriogonum elatum* tall (big) buckwheat**



habitat: common in shrub-steppe sandy or gravel soils & dry rocky places . Perennial, summer bloomer

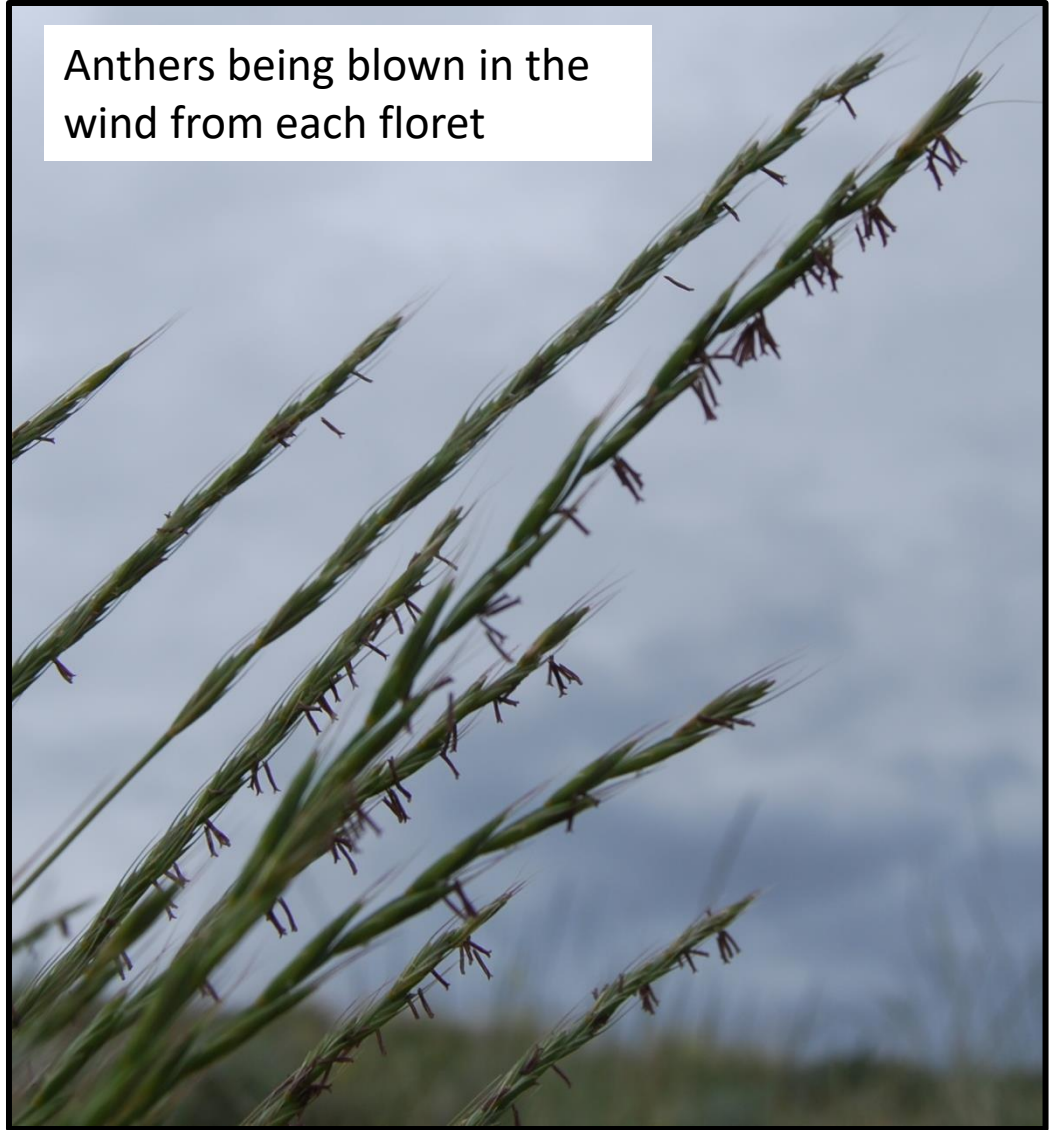




Poaceae (Gramineae) **Grass Family**
Pseudoregnaria spicata **blue-bunch wheatgrass**



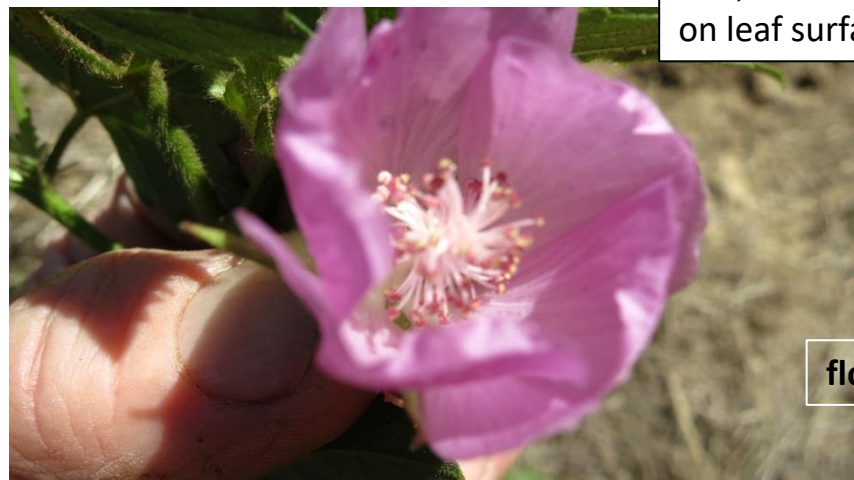
Anthers being blown in the
wind from each floret



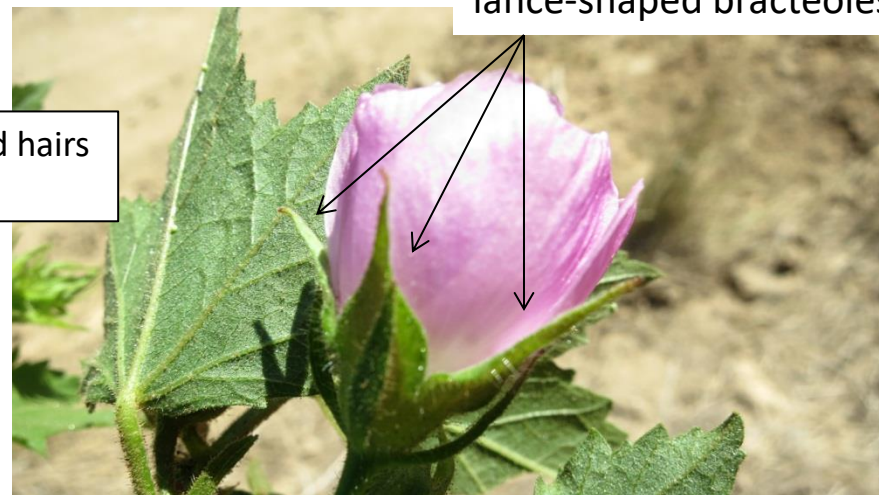
Malvaceae Mallow Family

Iliamna longisepala long-sepal globemallow

Habitat: shrub-steppe to low elevation ponderosa pine forest. summer-late fall bloomer. Perennial-endemic to central Washington

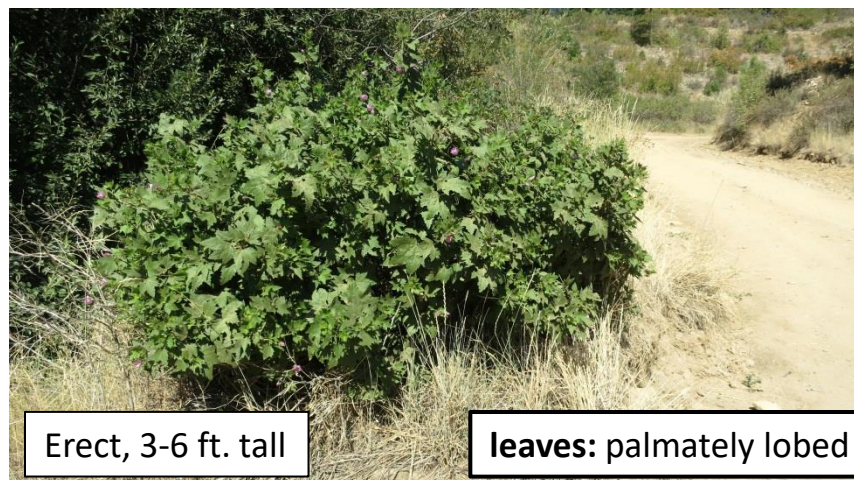


fine, star-shaped hairs on leaf surfaces



Calyx 3-parted with long lance-shaped bracteoles

flowers: rose to purplish; in leaf axils on slender pedicels (1-5 cm.)



Erect, 3-6 ft. tall



leaves: palmately lobed into 5-7 triangular-shaped segments with rounded serrated teeth

***Lamiaceae* Mint Family**
***Salvia dorrii* purple sage**

Bilateral
symmetry



Family ID traits:

- Square stems
- Opposite leaves
- Usually aromatic
- Irregular flower (dissimilar petals)
- seeds- 4 nutlets in capsule



Small shrub, extensively branched



Habitat: along stable talus slopes or on rock outcrops or on rocky plains in shrub-steppe. Perennial, spring bloomer.