

Bracted Lousewort)

- **Upper petal forms hood**
- **Blooms arranged in elongated spike**
- **Yellow**

Photo by Dave ShemaShema

Bracted Lousewort

- Leaves are ferny looking
- Tallest lousewort in the NW, 1'-4'
- Common





Mt Rainier Lousewort

- Blooms are clustered at the top
- Smaller than the Bracted Lousewort, 6"-14"
- Endemic to Mt. R. +

Photo by Dave Shema

Mt Rainier Lousewort

- Looks like a pinwheel from above
- Way cool



Photo by Dave Shema

Coiled Beak Lousewort)



- **Top Petal forms downward twisted beak**
- **Flower white with freckles**

Coiled Beak Lousewort

- Leaves are fern-like



Bird's Beak Lousewort

- Top petal forms a downward bird beak shape
- Blooms pink/purple



Bird's Beak Lousewort

- Blooms near top of stem
- Leaves near base of plant



Sickletop (or Rams Horn) Lousewort

- Flowers pinkish
- Top petal forms downward twist



Photo by Dave Shema Drawing by Ed Dominguez

Sickletop (or Rams Horn) Lousewort

- Leaves are lance-shaped – only one

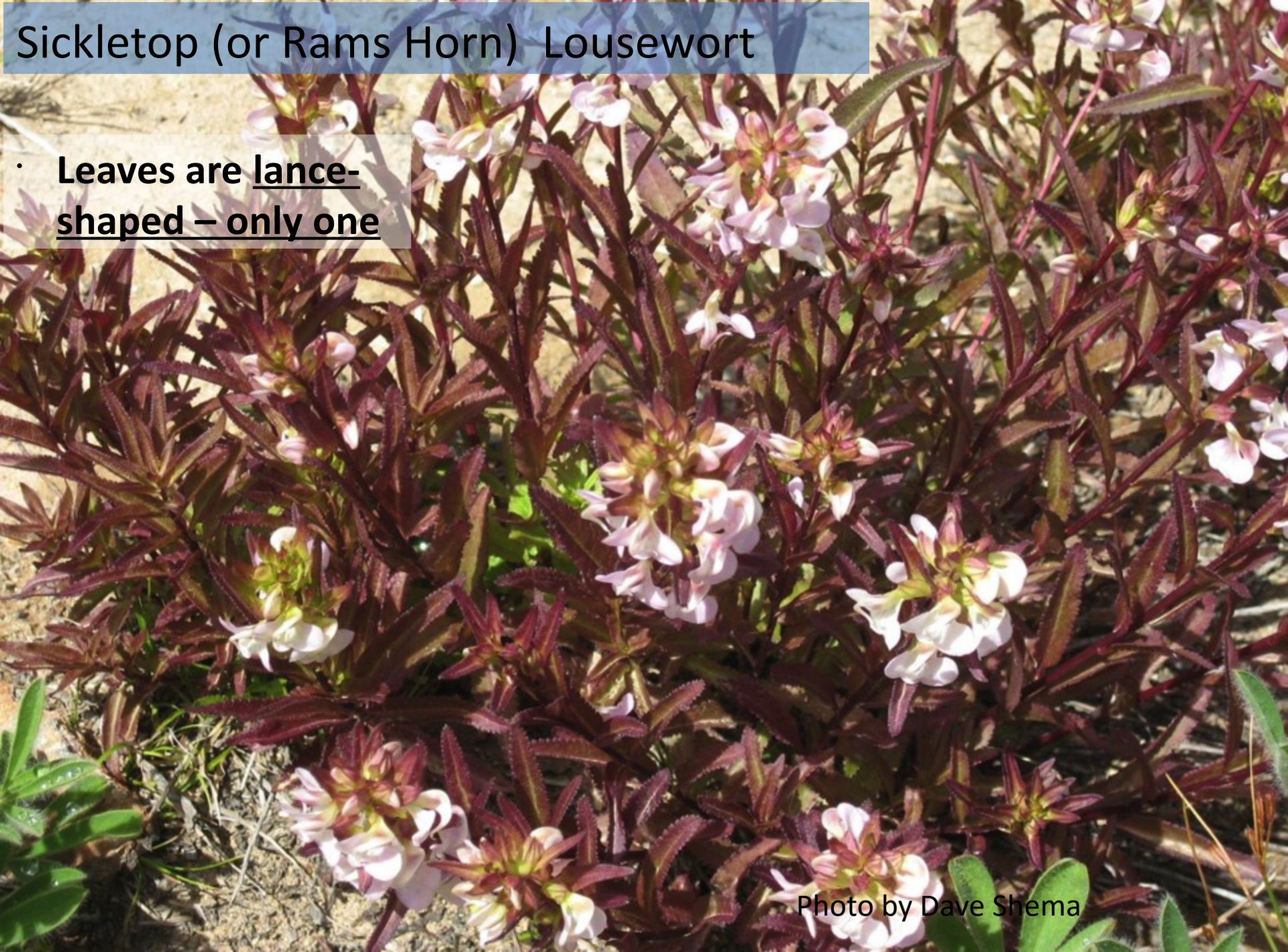


Photo by Dave Shema

Elephant's Head Lousewort

- Blooms pinkish-purple
- Top petal long and curling upward



Elephant's Head Lousewort



- Flowers dense
- Basal leaves, ferny



Figwort (Broomrape) Family

Paintbrushes (Castilleja)



Leaves

All along stem

Tip lobed or not



Flower

Crowded in axils of showy bracts.

Long, tubular with beaklike tip

Often greenish.

General

1 – 1 1/2' tall

Bracts

“Brush” is not flower. The leafy bracts surround flowers & resemble brush dipped in paint.

Yellowish or reddish.



Indian Paintbrush or *Castilleja* are also partially parasitic on other plant roots---hemiparasitic.

The flowers of Indian paintbrush are edible and sweet, and were consumed in moderation by various Native American tribes as a condiment with other fresh greens.

However, these plants absorb and concentrate selenium in their tissues from the soils in which they grow, and can be potentially very toxic if the roots or green parts of the plant are consumed. So, you need to be confident of the actual edible part before eating.

Hemiparasitic – a green plant that obtains nutrients via parasitism, but also manufactures its own food through photosynthesis.

**Several types of Paintbrush
(species & subspecies)**



Magenta Paintbrush

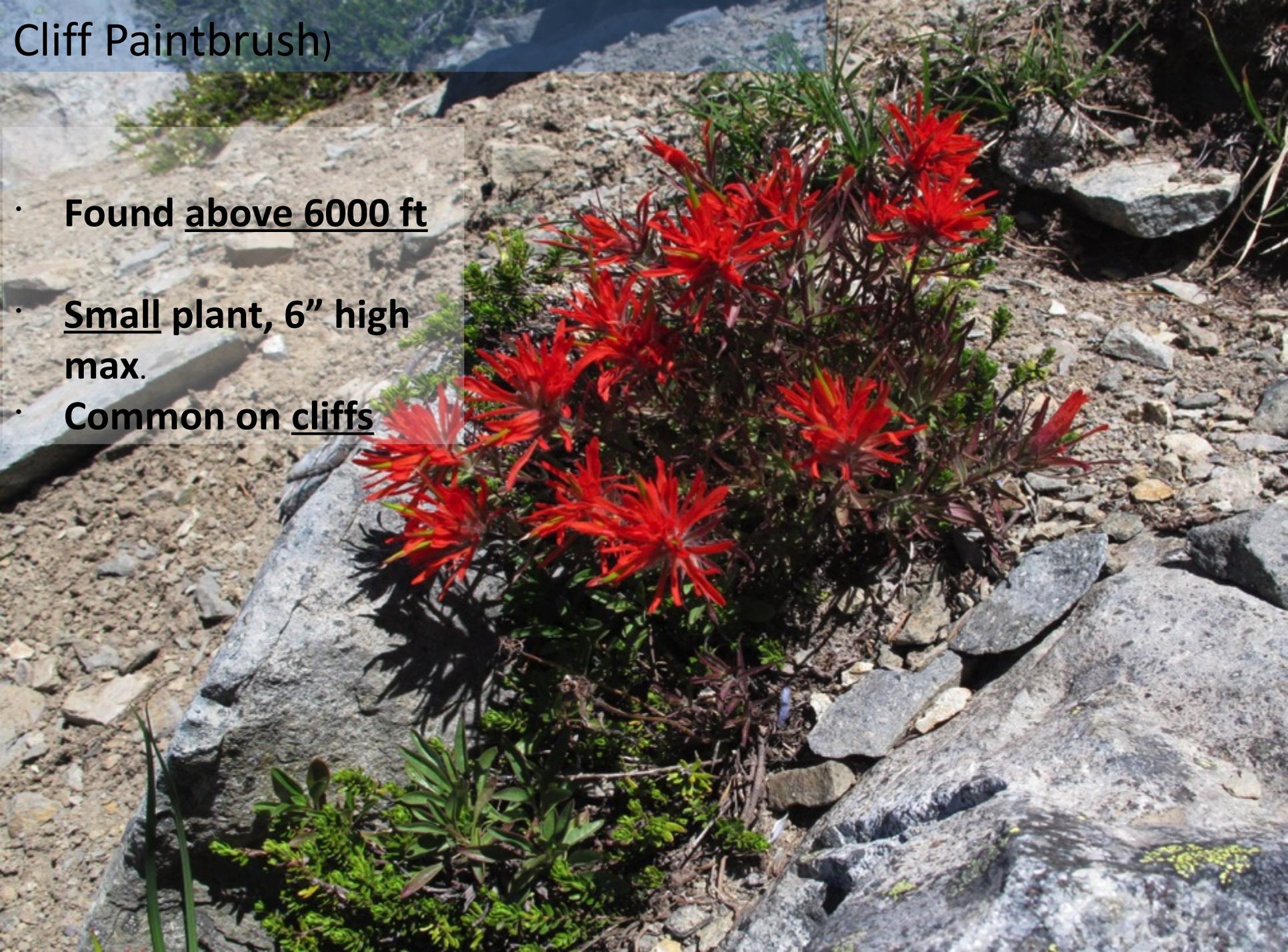


- Small plant 6"-12"

- Variety *oreopola* occurs only on Mt Rainier.

Cliff Paintbrush)

- Found above 6000 ft
- Small plant, 6" high max.
- Common on cliffs



Figwort (Lopseed) Family

Monkeyflower (Erythranthe)



General
Erect – 1-3'
Wet areas .



Leaves
Prominently veined.
Toothed.

Flower
Yellow or pinkish.
“Ahhhh” with
tongue out.

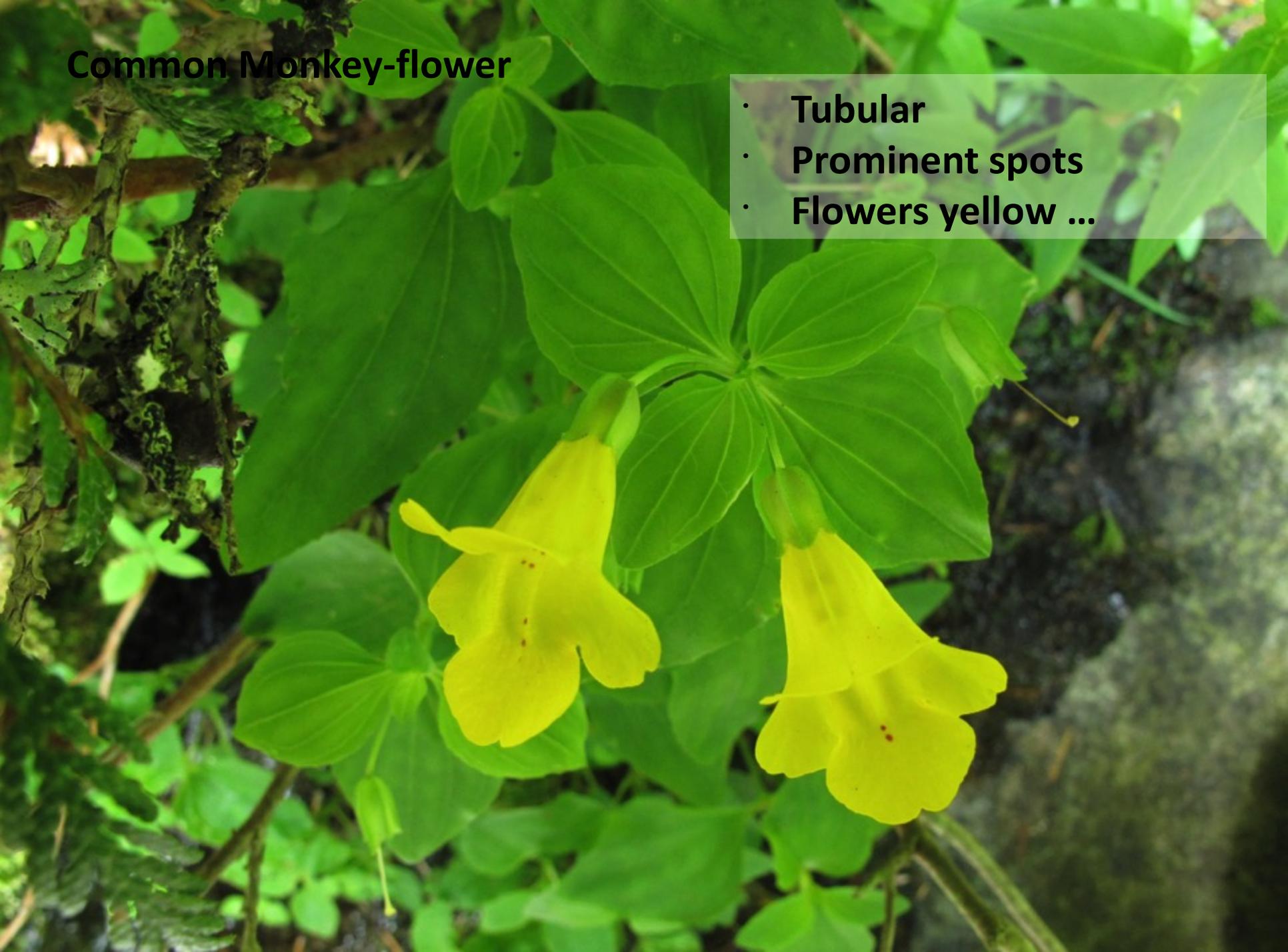


Monkeyflowers are a small group, concentrated in two centers of diversity, one in Australia, the other in western North America.

- Members of this group occur in diverse habitats including deserts, river banks and mountains.
- Mostly wet, wet, wet.
- Bearing tubular, bilaterally symmetric flowers---2 upper
3 lower

Common Monkey-flower

- Tubular
- Prominent spots
- Flowers yellow ...



**Lewis's monkey-flower-
Erythranthe lewisii)**

... and pink



Figwort (Plantain) Family

Penstemon (Penstemon)

General

Cushion to erect



Flower

Tubular

Blue to purple



Leaves

Opposite.

Toothed or not.

Small or large.



Penstemon

- 250 species in North America-They are difficult to identify.
- Native Americans used penstemon roots to relieve toothache.

Several types (species) of Penstemon



Coast Penstemon
or Cascade 2'



Small-Flowered Penstemon 1.3



Hot-Rock Penstemon 2



Davidson's Penstemon 4"

Cliff Penstemon



**Small plant, 2"-6"
mat forming**

**Blooms pink or
reddish to rose
purple**

**Oval, evergreen
leaves**

Shrubby Penstemon (*Penstemon fruticosus*)

- shrub up to 16 in tall, in clumps
- Blooms often lavender, or purple
- Leaves lance-shaped.



Woodland beardtongue to 2 ½'
Nothochelone nemorosa



Figwort (Plantain) Family

Speedwell (Veronica)

General

Erect . 4-8"
Wet areas .

Flower

More weakly bilateral.
4 lobed. 2 stamens.
Generally, long stamens & pistil.

Leaves

Opposite.
Ovate generally.



Cusick's Speedwell
Veronica cusickii

Saxifrage Family (5)

Leaves



Bare flower stems

Medium sized &
broad shaped

Leaves

Clearly basal



or tiny & linear

Saxifrage Family Flowers



Most often in clusters, loose or tight

Small.

White (usually).



Flowering parts in **3s** (or multiples)

Family Key

Lily, Orchid, & Iris

Leaves with parallel veins

Flowering parts in **4s**

Leaves with veins in branching pattern

Evening Primrose
Mustard

Flowering parts in **5s** (leaves with branching veins)

Flowers with bilateral symmetry

Petals fused

Mint
Figwort

Pea
Violet
Buttercup - some

Petals free

Flowers with radial symmetry

Many small flowers in tight bunches

Buckwheat
Parsley
Waterleaf
Valerian
Rose - some

Flowers not in tight bunches

Buttercup
Rose
Sunflower – technically belongs with "Many small flowers in tight bunches"

Flowers with central clusters or seemingly so
(more than 10 stamens crowding the center)

Normal flowers (10 or fewer stamens)
(or just use the "handles" to Id. these 7 Families)

Petals fused

Heath
Phlox
Primrose
Borage

Petals free (or nearly so)

Pink
Purslane
Saxifrage

Rusty Saxifrage 1+'

- Anthers have rusty/orange tips
- Petals have 2 yellow spots
- Flowers irregular---3 upper petals and 2 lower.



Tolmie's Saxifrage

- **White flower with firm green mound (ovary) at center**

- **Mat-forming plant with small fleshy leaves.**



Leatherleaf Saxifrage

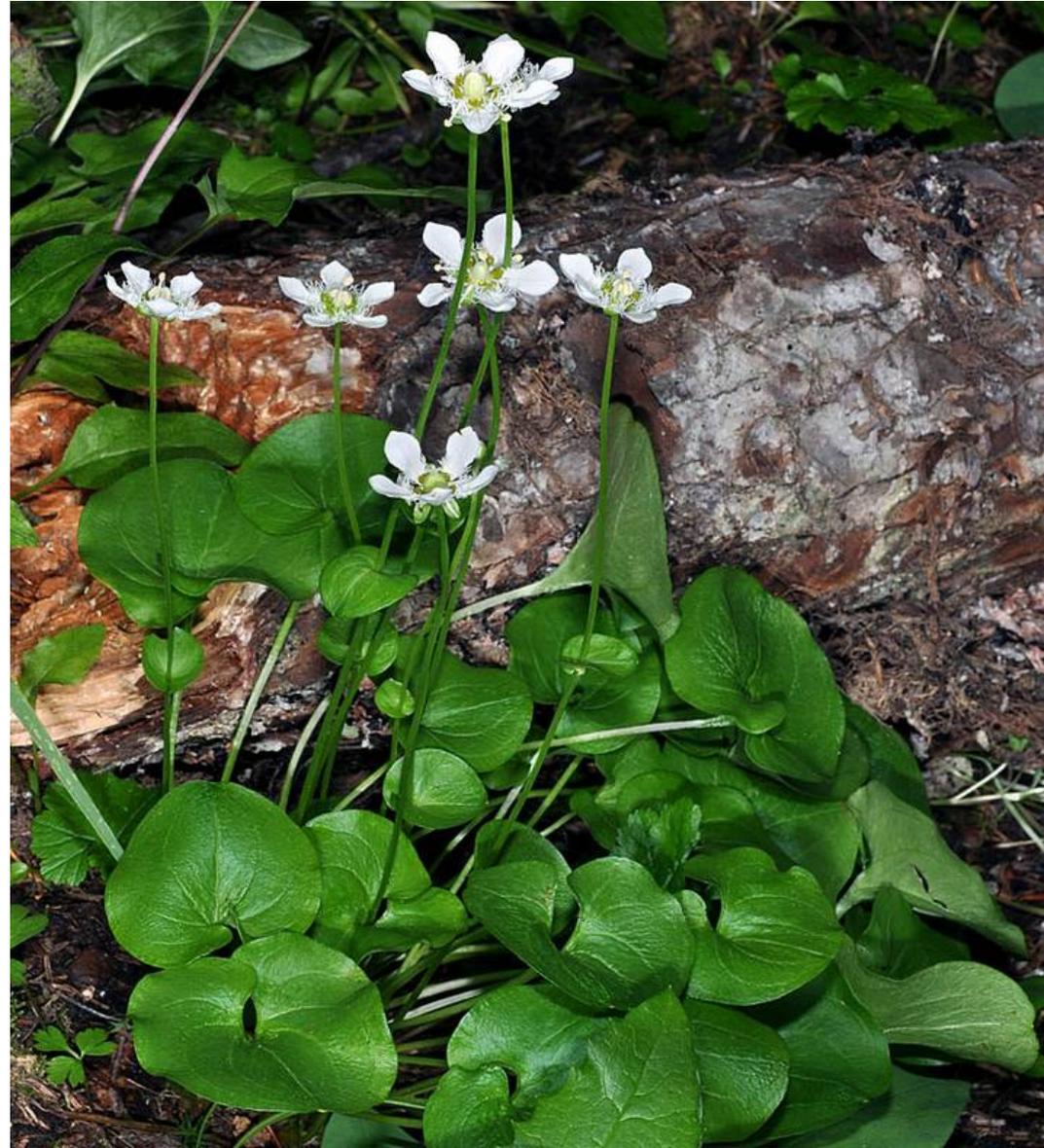
- Tough evergreen leaves that form rosette at base of plant
- Stems are reddish
- Congested fl. head
- Fruits are purplish red
- Found in streambanks, flushes, seepage areas



Fringed Grass of Parnassus)



- **Broad, kidney-shaped untoothed leaves**
- **Single flower on stalk**



Nelson's Brook Saxifrage

- Flowers in open clusters
- Leaves roundish, coarsely toothed all around



Family: Rose Family (5)

We have already discussed the Rose Family in past classes. Our intent here is to introduce you to some of the genus' that are unique to the alpine and sub-alpine areas.

Partidgefoot Rose Family

- Mats
- Upright stems
- White flowers in dense spikes
- Found where snow persists



Flowering parts in **3s** (or multiples)

Family Key

Lily, Orchid, & Iris

Leaves with parallel veins

Flowering parts in **4s**

Leaves with veins in branching pattern

Evening Primrose
Mustard

Flowering parts in **5s** (leaves with branching veins)

Flowers with bilateral symmetry

Petals fused

Mint
Figwort

Pea
Violet
Buttercup - some

Petals free

Flowers with radial symmetry

Many small flowers in tight bunches

Buckwheat
Parsley
Waterleaf
Valerian
Rose - some

Flowers not in tight bunches

Buttercup
Rose
Sunflower – technically belongs with "Many small flowers in tight bunches"

Flowers with central clusters or seemingly so
(more than 10 stamens crowding the center)

Normal flowers (10 or fewer stamens)
(or just use the "handles" to Id. these 7 Families)

Petals fused

Heath
Phlox
Primrose
Borage

Petals free (or nearly so)

Pink
Purslane
Saxifrage

Fan-leaved Cinquefoil Rose Family

- **Low perennial**
- **Flowers yellow** (not shiny).
Leaves a little like a strawberry leaf
- **Subalpine meadows, stream banks and seeps**



Subalpine Spirea

Rose Family

- 1-4 ft shrub
- **Flowers, rose-pink in showy flat-topped clusters**
- **Alternate leaves ovals**
- serrated $\frac{1}{2}$ length



Cascade Mountain Ash

Rose Family

- Large deciduous shrub – 16 ft
- 9-17 leaflets that are toothed along the full length and sharp pointed.
- White flower cluster.
- Red-orange berries in the fall



Sitka mountain-ash to 10'
Sorbus sitchensis



Shorter leaflets & rounded tips
Serrations no more than $\frac{1}{2}$ length

Family: Heath Family (4)

Mountain Heathers

Pink Mtn Heather

Yellow Mtn Heather

White Mtn Heather



Flowering parts in 3s (or multiples)

Family Key

Lily, Orchid, & Iris

Leaves with parallel veins

Flowering parts in 4s

Leaves with veins in branching pattern

Evening Primrose
Mustard

Flowering parts in 5s (leaves with branching veins)

Flowers with bilateral symmetry

Petals fused

Mint
Figwort

Pea
Violet
Buttercup - some

Petals free

Flowers with radial symmetry

Many small flowers in tight bunches

Buckwheat
Parsley
Waterleaf
Valerian
Rose - some

Flowers not in tight bunches

Buttercup
Rose
Sunflower – technically belongs with "Many small flowers in tight bunches"

Flowers with central clusters or seemingly so
(more than 10 stamens crowding the center)

Normal flowers (10 or fewer stamens)
(or just use the "handles" to Id. these 7 Families)

Pink
Purslane
Saxifrage

Petals fused

Heath
Phlox
Primrose
Borage

Petals free (or nearly so)

White-flowered Rhododendron



Without the flowers these two can look very similar.

- The Rhododendron leaf is shiny green on top.

False Azalea or Fools Huckleberry



Huckleberry, Blueberry (*Vaccinium* Sp)

- **Tasty fruit!!!!**
- **Range from low to tall**
- **Flowers are urn or bell-shaped.**
- **Fruits are red to blue-black**



And a few special mentions.....

Alpine false candytuft (*Smelowskia*)
Mustard Family



Mountain Bog Gentian
Gentian Family



Tongue-Leaf Rainiera
Aster Family

**Found only at Mt
Rainer
Disc flowers only**



Western Pasqueflower or Old Man of the Mountain Buttercup Family



Drummond's Anemone
Buttercup Family



Marsh Marigold

Buttercup Family



Sitka Valerian

Valerian Family

- Tall plant. To 3'
- Compound leaves, basal, opposite---leaves coarsely toothed



The End
Enjoy the flora
& fauna!!!!

