

# Summer Blooms on the North Slope, Huluhula River

June 27- July 8, 2015



Photos by Paul & Susan Ballinger  
and Jill LaRue









Speed field botany, while waiting for a bush plane to take us north, over the Brooks Range















# Primulaceae: *Dodecatheon frigidum* Northern shooting star

Habitat:  
Streamside, at  
melting snow  
bank with  
ground willow.  
July 4, 2014

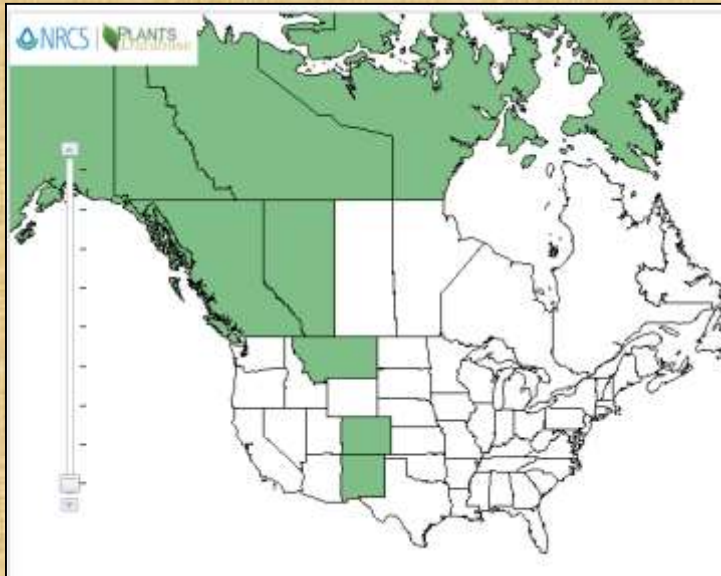


Jill LaRue





Primulaceae: *Androsace chamaejasme* ssp. *lehmanniana*  
Rock-jasmine





**Cruciferae: *Smelowskia* – 2 species in the Western Arctic:**  
*S. calycina* and *S. borealis*.- Hulten flora's key based on silique shape.



*S. borealis* endemic skycrest

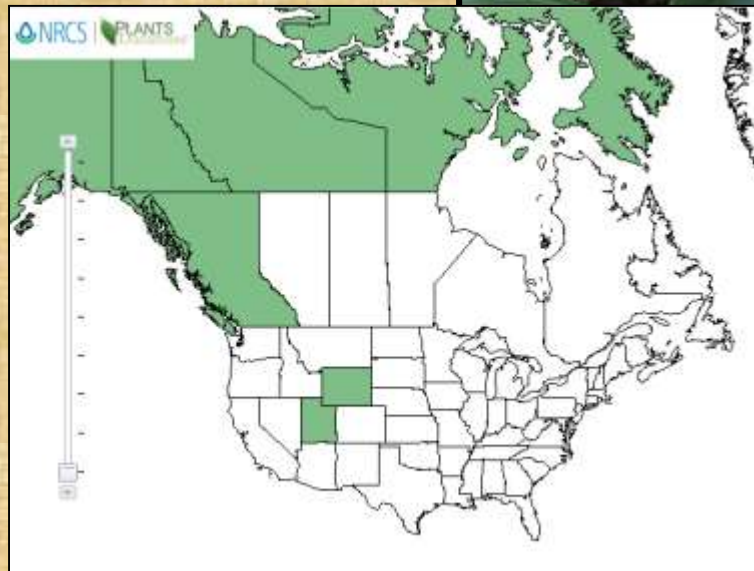
Jill & Susan  
photographed  
Two different plants  
in the same habitat,  
but did not collect a  
specimen to key



*S. calycina* – more widespread species



# Cruciferae: *Parrya nudicaulis* naked stem wallflower





# Fabaceae: *Oxytropis deflexa* Stemmed locoweed (keyed using Hulten- this an extremely variable species)

In Arctic – 2 look-alike Genera  
with many species:

*Astragalus* : leafy flowering  
stalk & keel not toothed

*Oxytropis*: no leaves on flower  
stalk, toothed keel





# Fabaceae: *Oxytropis nigrescens* Blackish locoweed

In Arctic – 2 look-alike Genera  
with many species:

*Astragalus* : leafy flowering  
stalk & keel not toothed

*Oxytropis*: no leaves on flower  
stalk, toothed keel





# Fabaceae: *Astragalus umbellatus* Tundra milkvetch

Habitat:

Moist to mesic-stony slopes to tundra ; arctic coasts to alpine



In Arctic – 2 look-alike Genera with many species:  
*Astragalus* : leafy flowering stalk & keel not toothed  
*Oxytropis*: no leaves on flower stalk, toothed keel



# Fabaceae: *Astragalus nutzotinensis* Sickle Milkvetch

Endemic

Habitat: mesic to moist gravel terraces, outwash, rocky slopes

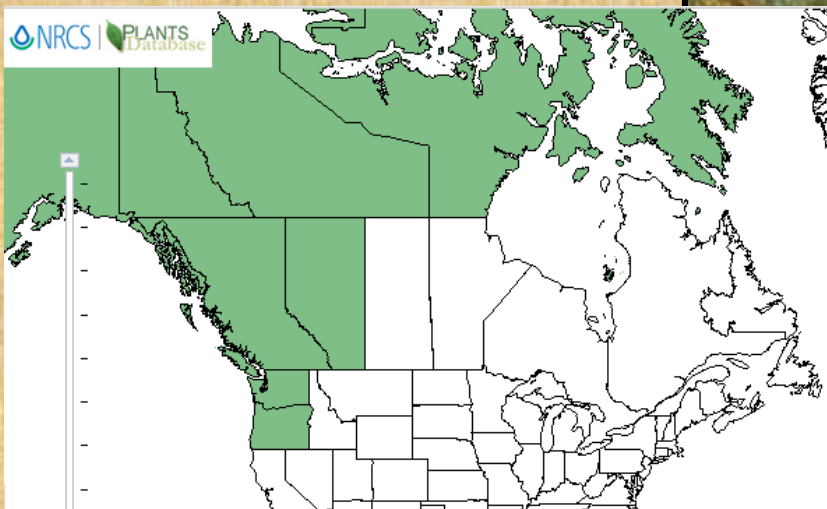
Pods: Semi-circle, curved, red-purple flattened lying on the ground



In Arctic – 2 look-alike Genera with many species:  
*Astragalus* : leafy flowering stalk & keel not toothed  
*Oxytropis*: no leaves on flower stalk, toothed keel



Fabaceae: *Lupinus arcticus* arctic lupine



Only 1 arctic *Lupinus* species



# Fabaceae: 2 *Hedysarum* species      licorice root

*Hedysarum mackenzii*    **Wild Sweet Pea:**  
Roots are Poisonous



*Hedysarum alpinum* **Bear root:** grizzly bears dig and eat roots as a preferred food. Back of leaflet has dark veins *NOT PICTURED*

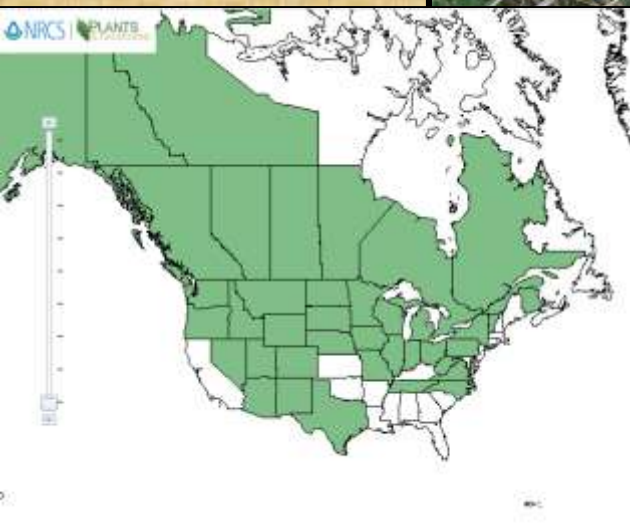


Where a Grizzly bear dug for roots

Both photos: : Canning River, 8/2013



# Liliaceae: *Zygadenus elegans* Mountain death camas





**Ericaceae:** *Vaccinium vitis-idaea* mountain cranberry,  
Lingonberry



Last year's fruit is still on the plant on July 1, with this year's flowers

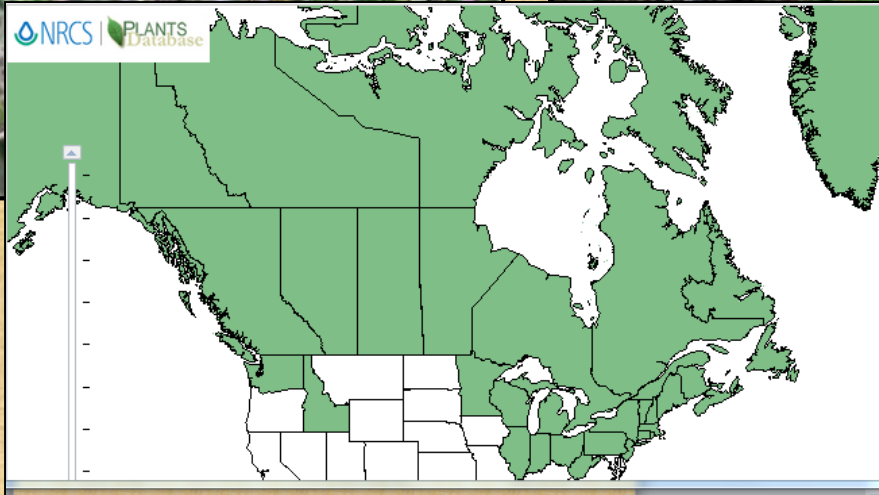


**Ericaceae: *Rhododendron lapponicum*** Lapland rosebay





# Ericaceae: *Andromeda polifolia* Bog rosemary



Note: The Burke Herbarium listed this species as likely in N. WA but has no mapped locations. . Habitat: Sphagnum bogs and other acidic wetlands



**Ericaceae:** *Ledum palustre*, *Ledum decumbens*; newer-  
*Rhododendron tomentosum* Northern Labrador tea





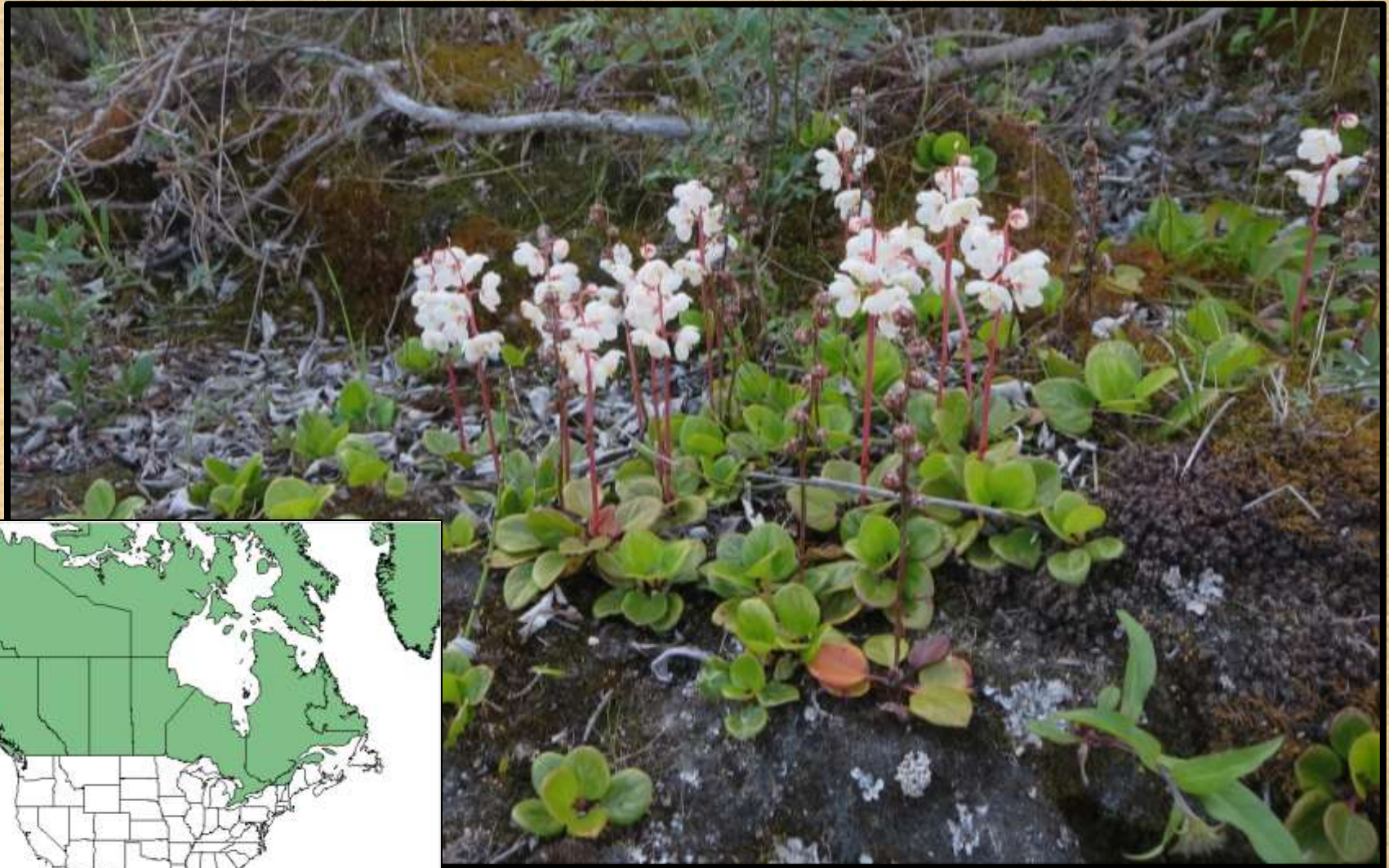
# Ericaceae: *Cassiope tetragona* Arctic white heather

Low sub-shrub  
Quadrangular-dark  
green branches  
with 4 rows of  
scale-like leaves  
that overlap like  
roof tiles.





Ericaceae: *Pyrola grandiflora* large-flowered wintergreen





**Onograceae:** *Chamerion latifolium* (older: *Epilobium latifolium* )  
River beauty or dwarf fireweed

All leaves alternate, plant decumbent

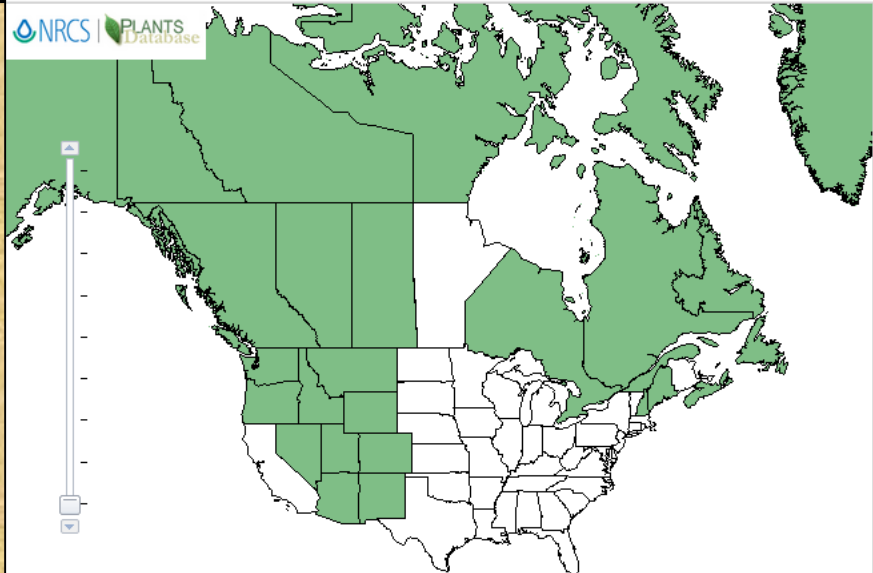


Canning River, 8/2013





# Caryophyllaceae: *Silene acaulis* moss campion





**Rosaceae: *Dryas integrifolia* Entire-leaved mountain avens**



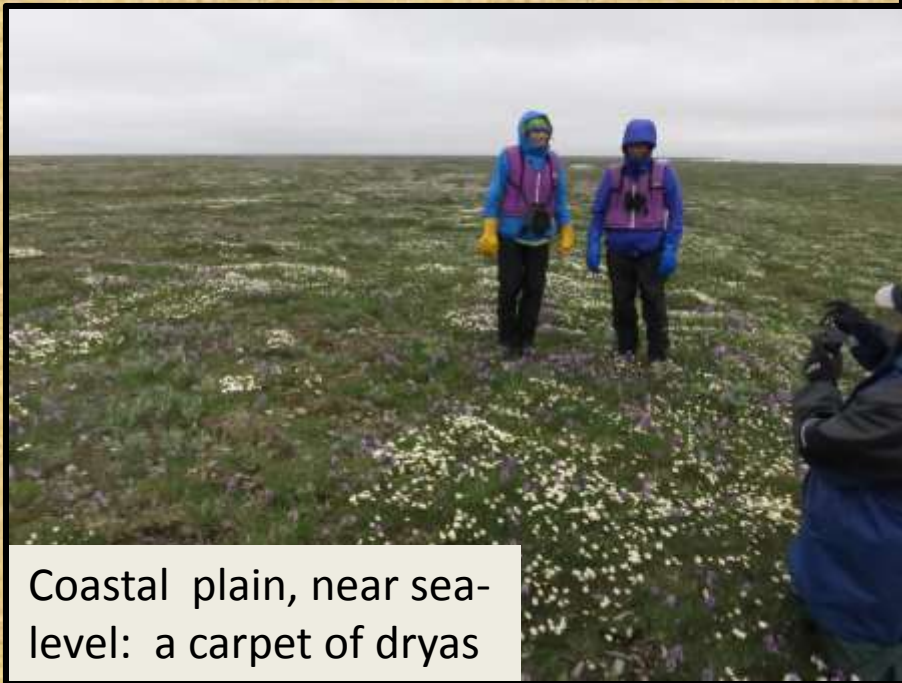


# Rosaceae: *Dryas integrifolia* Entire-leaved mountain avens

Long-lived (100+ years) dwarf shrub that is mat-forming

Most abundant and wide-spread Arctic plant, from coastal plain to alpine.

in AK, there are 2 white *Dryas* species that commonly hybridize. Each have distinct subspecies too: *D. octopetala*, & *Dryas integrifolia*



Coastal plain, near sea-level: a carpet of dryas



Dryas and heather, 5000 ft.  
North slope, Brooks Range

Dryas is food for lemmings, ground squirrels, and caribou



**Rosaceae: *Geum glaciale***  
glacier avens

2 species of *Geum* in Arctic





# Rosaceae: *Potentilla* genus- 20 species in the Arctic!



*Potentilla fruticosa*- only shrubby species in AK



# Rosaceae: *Rubus chamaemorus* cloudberry



Male & Female  
flowers on  
different plants

Male flowers are  
larger and  
produce more  
nectar.

Flowers fade from  
white to pink as  
they age





**Boraginaceae: *Myosotis asiatica* (older: *M. alpestris*)**  
Asian forget-me-not- Alaska state flower





**Polygonaceae: *Bistorta plumosa***  
**(*Polygonum bistorta*) Bistort**





## Papaveraceae: 2 AK species w/ uncertain taxonomy

*Papavera lapponicum (radicatum)* Arctic poppy  
*Papavera macounii ssp. discolor* Macoun's poppy



Poppy flowers move to continuously face the sun. The reflective corolla disc focus heat on the flower's center, increasing rate of seed development.



# Ranunculaceae: *Anemone*

Hulten flora has 6 *Anemone* species in Western arctic

(key is based on the fruits: achenes: glabrous or villous)



The bluish-cast to the outer sepals and the habitat of wet tundra at a melting snowbank allowed us to key this to *Anemone parviflora* as a “best guess” from a photo.



# Saxifragaceae: *Boykinia richardsonii* Bear flower

Alaska endemic

A relic species from the ice age





**Saxifragaceae: *Saxifraga tricuspidata***  
Prickly saxifrage



14+ *Saxifraga* species in Arctic- flower color is a good starting place to key.



**Saxifagaceae: *Saxifraga oppositifolia* purple saxifrage**





**Polemoniaceae: *Polemonium caeruleum* (acutiflorum)**  
Tall Jacob's ladder



3 Jacob's ladder  
species in Arctic

Canning River Coastal Plain , 8/2013



# Polemoniaceae: *Polemonium boreale* Northern Jacob's ladder

3 Jacob's ladder species in Arctic

*P. boreale* has

- yellow-centered flowers,
- The calyx is covered with dense soft hairs
- Leaves have fewer than 10 pairs of leaflets



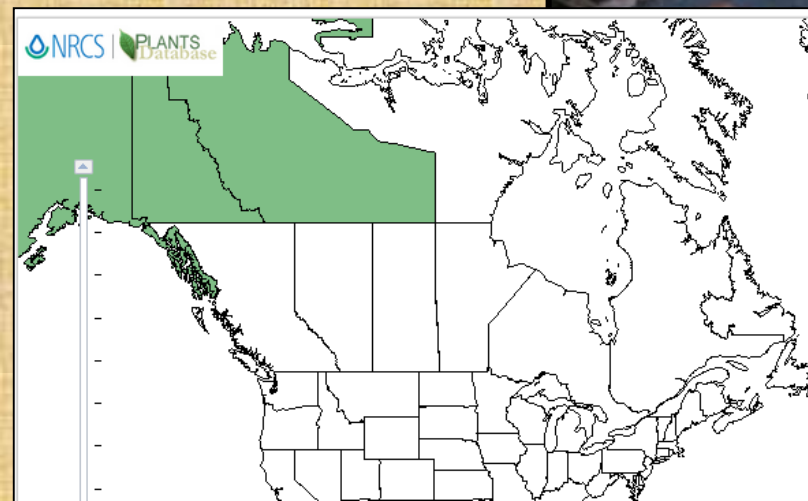


# ***Polemoniaceae:***

*Phlox richardsonii* ssp. *alaskensis* (older *P. siberica*) Alaskan phlox

Endemic

Only other species  
In Alaska, south of  
Brooks range, is  
*Phlox hoodii*.





# Scrophulariaceae: *Pedicularis labradorica* Labrador lousewort

Habitat: rocky slopes,  
tundra, montane to  
subalpine; circumpolar

The Hulten key has 22  
different lousewort  
species in the Arctic (US &  
Canada)- we keyed 5





# Scrophulariaceae: *Pedicularis lanata* ssp. *lanata* (kanei) Woolly lousewort

Habitat: tundra, Fell fields,  
Rocky slopes, especially on  
Calcium-rich sites;

The Hulten key has 22  
different lousewort  
species in the Arctic (US  
& Canada)- we keyed 5





# Scrophulariaceae: *Pedicularis capitata* Capitata lousewort

The Hulten key has 22 different lousewort species in the Arctic (US & Canada)- we keyed 5





# Scrophulariaceae: *Lagotis glauca* little weasel snout

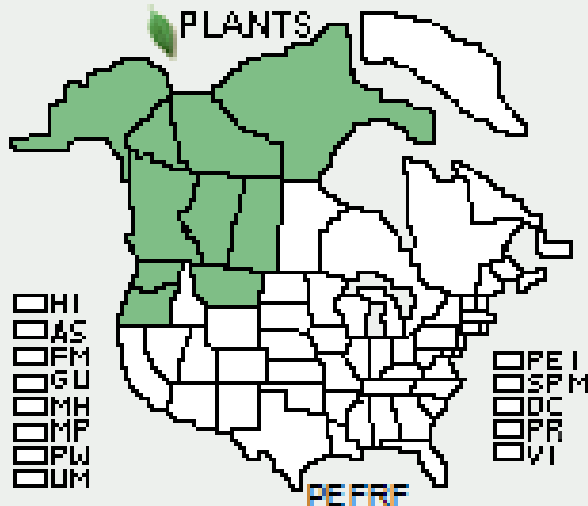
Habitat: Arctic coast lowlands to alpine zones  
In tundra, stony slopes, and seeps.





# Asteraceae: *Petasites frigidus* Arctic sweet coltsfoot

Habitat: Wet tundra  
Streamside, at melting snow bank with ground willow.  
July 4, 2014





# Asteraceae: 3 *Arnica* Arctic species

*Arnica frigida* ssp. *frigida*  
**snow arnica** (*Arnica louiseana*  
Lake Louise Arnica): nodding  
head; disc is yellow



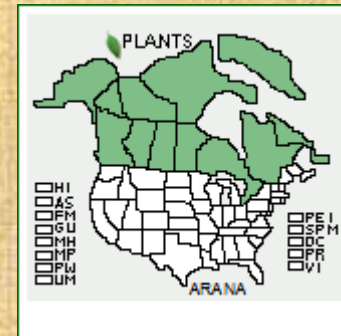
Snow arnica

*Arnica angustifolia* ssp.  
*angustifolia* (alpina) **Alpine**  
**arnica**: Flower stem has a pair of  
leaves growing opposite at same  
level on stem.



Alpine arnica

Not pictured  
*Arnica lessingii* **Lessing's**  
**Arnica**: nodding head, disc is  
dark purple





# Asteraceae: *Crepis nana* Dwarf alpine hawkbeard



Canning River, 8/2013

Photo: Jill LaRue





Many plants we didn't successfully key in the field....next time!



28 Artemesia species & subspecies in key



56 Salix species & subspecies in the key







Jill's favorite lichens







Susan's favorite lichens









