

Columbines School of Botanical Studies  
 Second Year Apprenticeship Program  
 Trip #9-10 Alpine Zone

Date: July 29-30, 2017  
 Trip 9, 10

Subalpine to Alpine Zone 6225' to 8002'  
<http://www.botanicalstudies.net/botany/plantlists.php>

Family	Name	Ecosystem	Seen
<b>Ophioglossaceae</b>			
Sceptridium multifidum (Botrychium silaifolium)	Grape Fern	H	
<b>Pinaceae</b>			
Pinus albicaulis	Whitebark Pine	H	X
<b>Cyperaceae</b>			
Carex spp.	Sedge		
<b>Liliaceae</b>			
Clintonia uniflora	Queen's Cup	Lower H to T	
Erythronium grandiflorum	Glacier Lily	H & C	
<b>Asparagaceae (Liliaceae)</b>			
Maianthemum stellatum (Smilacina stellata)	Small False Solomon's Seal	Lower H to T	
<b>Melanthiaceae (Liliaceae)</b>			
Trillium ovatum	Trillium	Lower H, mostly C & T	
Veratrum viride	False Hellebore	H	X
<b>Tofieldiaceae (Liliaceae)</b>			
	Tofieldia	H	
	Triantha occidentalis (Tofieldia occidentalis)		
<b>Orchidaceae</b>			
Platanthera dilatata (Habenaria dilatata)	White Rein Orchid	H to T	X
Platanthera stricta (Habenaria saccata)	Green Rein Orchid	H to T	X
Spiranthes romanzoffiana	Twisted Sister	H to T	
<b>Salicaceae</b>			
Salix spp.	Willow		
<b>Polygonaceae</b>			
Eriogonum pyrolifolium	Alpine Buckwheat	H	X
Eriogonum umbellatum	Sulfur Flower	H to T	X
Polygonum bistortoides	Mountain Bistort	H & C	
Polygonum newberryi	Newberry's Knotweed	A & H	X

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Family	Name	Ecosystem	Seen
<b>Montiaceae (Portulacaceae)</b>			
	Lewisia triphylla	H	X
	Montia perfoliata	Lower H to T	X
	Spraguea umbellata	A & H	X
<b>Ranunculaceae</b>			
	Aconitum columbianum	A to AT	
	Anemone drummondii	H	X
	Anemone lyallii	H to T	
	Anemone occidentalis	H	
	Aquilegia formosa	H to T	
	Caltha leptosepala	H	X
	Delphinium menziesii	H to T	X
	Delphinium sp.		
	Ranunculus alismaefolius	C to H	
	Ranunculus sp.		X
<b>Papaveraceae (Fumariaceae)</b>			
	Dicentra formosa	Bleeding Heart	H to HT
<b>Brassicaceae (Cruciferae)</b>			
	Arabis sp.	Rock Cress	
	Draba sp.	Draba	
<b>Crassulaceae</b>			
	Sedum sp.	Stonecrop	X
<b>Saxifragaceae</b>			
	Mitella breweri	Small Bishop's Cap	H & C
	Mitella pentandra	Five Point Mitrewort	H & C
	Saxifraga oregana	Oregon Saxifrage	H to HT
	Saxifraga tolmiei	Alpine Saxifrage	A and upper H
<b>Rosaceae</b>			
	Fragaria spp.	Strawberry	
	Leutkea pectinata	Partridge Foot	H to A
	Potentilla breweri	Cinquefoil	Lower H and C
	Potentilla flabellifolia	Cinquefoil	H
	Potentilla palustris	Swamp Potentilla	
	Potentilla sp.	Potentilla	
	Sibbaldia procumbens	Creeping Sibbaldia	A & H
	Sorbus occidentalis	Mountain Ash	H

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<b>Fabaceae (Leguminosae)</b>			
	Lupinus andersonii	H to AT	X
	Lupinus lepidus spp. lyallii	H	X
	Lupinus sp.	Lupine	
	Trifolium longipes	Wild Clover	X
	Trifolium spp.	Clover	
<b>Celastraceae (Saxifragaceae)</b>			
	Parnassia cirrata (intermedia)	Grass of Parnassus	H & C
<b>Hypericaceae</b>			
	Hypericum anagaloides	Bog St. John's Wort	Lower H to HT
<b>Violaceae</b>			
	Viola sp.	Violet	
<b>Onagraceae</b>			
	Epilobium angustifolium	Fireweed	Lower H to T
	Epilobium sp.	Willow Herb	
<b>Apiaceae (Umbelliferae)</b>			
	Ligusticum grayi	Oshala	H & C
	Lomatium martindalei	Biscuit Root	H X
	Osmorhiza chilensis	Sweet Cicely	H to T X
	Unidentified white Umbelliferae		X
<b>Cornaceae</b>			
	Cornus canadensis	Bunch Berry	H to HT
<b>Ericaceae</b>			
	Arctostaphylos nevadensis	Kinnikinnik	H & C
	Cassiope mertensiana	Mountain Heather	A to Lower H
	Chimaphila umbellata	Pipsissewa	Lower H to T
	Gaultheria humifusa	Alpine Gaultheria	H
	Hypopitys fimbriata	Fringed Pine Sap	H to T
	Kalmia microphylla	Kalmia	H X
	Phyllodoce empetriformis	Pink Mountain Heather	A to H X
	Pterospora andromedea	Pine Drops	
	Pyrola secunda	One Sided Pyrola	H & C
	Vaccinium scoparium	Grouse Berry	H & C X
	Vaccinium spp.	Huckleberry	

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Family	Name	Ecosystem	Seen
<b>Primulaceae</b>			
Dodecatheon jeffreyi	Shooting Star	H	X
<b>Polemoniaceae</b>			
Polemonium spp.	Polemonium		
<b>Hydrophyllaceae</b>			
Phacelia sp.	Phacelia		
<b>Orobanchaceae (Scrophulariaceae)</b>			
Castilleja arachnoidea	Paintbrush	H	X
Castilleja miniata	Paintbrush	H	X
Castilleja oreopola	Paintbrush	A & H	X
Castilleja suksdorfii	Paintbrush	H	X
Pedicularis attolens	Baby Elephant's Head	H & C	X
Pedicularis bracteosa	Cobra's Head	H & C	X
Pedicularis groenlandica	Elephant's Head	H & C	X
<b>Phrymaceae (Scrophulariaceae)</b>			
Mimulus guttatus	Monkeyflower	H to T	X
Mimulus lewisii	Great Purple Monkeyflower	H & C	X
Mimulus moschatus	Musk Monkeyflower	Lower H to T	
Mimulus primuloides	Primrose Monkeyflower	H to T	
<b>Plantaginaceae (Scrophulariaceae)</b>			
Penstemon cinicola	Penstemon	H to mostly AT	X
Penstemon davidsonii	Penstemon	A to H	X
Veronica sp.	Veronica, Speedwell		
Veronica wormskjoldii	Veronica, Speedwell	H	X
<b>Adoxaceae (Caprifoliaceae)</b>			
Sambucus sp.	Red Elderberry	H to HT	X
<b>Linnaeaceae (Caprifoliaceae)</b>			
Linnaea borealis	Twinflower	C	
<b>Valerianaceae</b>			
Valeriana sitchensis	Valerian	H	X
<b>Asteraceae (Compositae)</b>			
Achillea millefolium	Yarrow	H to T	X
Agoseris aurantiaca	Orange Mountain Dandelion	H	
Anaphalis margaritacea	Pearly Everlasting	H to T	

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Family	Name	Ecosystem	Seen
Antennaria sp.	Everlasting		X
Arnica mollis	Hairy Arnica	H	X
Aster alpigenus	Aster	A to H	X
Aster shastensis	Shasta Aster	H	
Aster sp.	Aster		
Chrysanthemum leucanthemum	Ox Eye Daisy		
DYC	Damn Yellow Compositae		
Erigeron peregrinus	Daisy	H	
Hieracium albiflorum	White Hawkweed	H to T	
Hieracium gracile	Alpine Hawkweed	H	
Microseris alpestris	Alpine Dandelion	H	X
Raillardella scaposa	Raillardella	H to A	
Senecio sp.	Groundsel		X
Senecio triangularis	Arrow Leaf Groundsel	Lower H & C	X

Columbines School of Botanical Studies  
Second Year Field Program  
Trip # 9-10 Highlights  
Arctic-Alpine Zone  
July 29-30, 2017

Middle Elevation Coniferous Woods and Riparian, Subalpine, and Arctic-Alpine Zones

Located, harvested, processed *Anemone drummondii* for tincture

Uses and tasting *Anemone drummondii*

Keyed out numerous plants in the *Flora of the Three Sisters Region*

Adrenaline Stress Review

Ecology of the Subalpine and Arctic Alpine Zones