

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

Date: August 2-3, 4-5 2018
 Trip 9-10

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

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

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Family	Name	Ecosystem	Seen	
	Polygonum newberryi	Newberry's Knotweed	A & H	X
Montiaceae (Portulacaceae)				
	Lewisia triphylla	Lewisia	H	
	Montia perfoliata	Miner's Lettuce	Lower H to T	
	Spraguea umbellata	Pussy Paws	A & H	X
Ranunculaceae				
	Aconitum columbianum	Monkshood	A to AT	
	Anemone drummondii	Drummond's Anemone	H to A	X
	Anemone lyallii	Small Windflower	H to T	
	Anemone occidentalis	Mountain Pasque Flower	H	
	Aquilegia formosa	Columbine	H to T	
	Caltha leptosepala	Marsh Marigold	H	X
	Delphinium menziesii	Larkspur	H to T	X
	Delphinium sp.	Larkspur		
	Ranunculus alismaefolius	Marsh Buttercup	C to H	
	Ranunculus sp.	Marsh Buttercup		
Papaveraceae (Fumariaceae)				
	Dicentra formosa	Bleeding Heart	H to HT	
Brassicaceae (Cruciferae)				
	Arabis sp.	Rock Cress		
	Draba sp.	Draba		
Crassulaceae				
	Sedum sp.	Stonecrop		
Saxifragaceae				
	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	
Rosaceae				
	Fragaria spp.	Strawberry		
	Leutkea pectinata	Partridge Foot	H to A	X
	Potentilla breweri	Cinquefoil	Lower H and C	
	Potentilla flabellifolia	Cinquefoil	H	X
	Potentilla palustris	Swamp Potentilla		
	Potentilla sp.	Potentilla		
	Sibbaldia procumbens	Creeping Sibbaldia	A & H	

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

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Family	Name	Ecosystem	Seen
Primulaceae			
Dodecatheon jeffreyi	Shooting Star	H	X
Polemoniaceae			
Polemonium spp.	Polemonium		
Hydrophyllaceae			
Phacelia sp.	Phacelia		
Orobanchaceae (Scrophulariaceae)			
Castilleja arachnoidea	Paintbrush	H to A	X
Castilleja miniata	Paintbrush	H	X
Castilleja oreopola	Paintbrush	A & H	X
Castilleja suksdorfii	Paintbrush	H	X
Pedicularis attollens	Baby Elephant's Head	H & C	X
Pedicularis bracteosa	Cobra's Head	H & C	X
Pedicularis groenlandica	Elephant's Head	H & C	X
Phrymaceae (Scrophulariaceae)			
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	
Plantaginaceae (Scrophulariaceae)			
Penstemon cinicola	Penstemon	H to mostly AT	X
Penstemon davidsonii	Penstemon	A to H	X
Veronica sp.	Veronica, Speedwell		
Veronica wormskjoldii	Veronica, Speedwell	H	
Adoxaceae (Caprifoliaceae)			
Sambucus racemosa	Red Elderberry	H to HT	X
Linnaeaceae (Caprifoliaceae)			
Linnaea borealis	Twinflower	C	
Valerianaceae			
Valeriana sitchensis	Valerian	H	X
Asteraceae (Compositae)			
Achillea millefolium	Yarrow	H to T	X
Agoseris aurantiaca	Orange Mountain Dandelion	H	

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Family	Name	Ecosystem	Seen
Anaphalis margaritacea	Pearly Everlasting	H to T	
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	
Raillardella scaposa	Raillardella	H to A	
Senecio sp.	Groundsel		
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
August 2-3, 4-5, 2018

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