

# VASCULAR PLANTS OF BROWNE LAKE ECOLOGICAL RESERVE

Peter Courtney, March 2021

## INTRODUCTION

At the request of Don Guild, warden of the Browne Lake Ecological Reserve (BLER), the Central Okanagan Naturalists' Club (CONC) began cataloguing the vascular plants of the BLER in 2015. Typically 2-4 visits were made per year by members of CONC, often accompanied by the warden. Photographs were used to assist with initial plant identification and later verification. This report includes a working list of the vascular plants and summarizes counts done on moonworts (*Botrychium* and *Sceptridium* spp).

## VASCULAR PLANT SURVEY

According to the Purpose Statement "The primary role of the Browne Lake Ecological Reserve is to protect a small wet meadow ecosystem and surrounding forest in the Interior Douglas-fir-Montane Spruce transition. The wet meadow, once used as pasture, is reverting to the original sedge community. A rock outcrop on the central hill holds a small seepage-influenced community ...."

CONC identified 229 species during the 2014-2019 (June 13-Aug 29) periods as listed in the Appendix. The area surveyed included the meadow, the runoff area from the meadow to McCulloch Road, forested areas immediately surrounding the meadow and the hillside nearest the meadow, including the seepage-influenced area (Figure 1). Much of the forested portion of the reserve is covered in dense deadfall making getting around in those areas difficult, and there are no trails. There are large forested portions of the BLER that CONC has not visited.

The greatest diversity of plants was found in the transition zone between meadow and forest and in the runoff area between the meadow and McCulloch Road. There are small pockets of plants unique to the seepage-influenced area on the hillside, such as *Lewisia pygmaea*, *Sanicula graveolens*, *Saxifraga occidentalis*, *Polygonum polygaloides* ssp *kelloggii*, *Hydrophyllum capitatum*, *Eremogone capillaris*, and *Orobanche uniflora*. Even in dry years there was at least a small area of standing water containing aquatic plants such as *Nuphar* sp., *Persicaria amphibia* var. *stipulacea*, *Ranunculus gmelini*, and *Sparganium emersum*.

## MOONWORT SURVEY

While no red-listed species of vascular plants were found, six species of moonwort were identified (Figure 2). One of these, *Botrychium michiganense*, is currently blue-listed. Moonworts are a group of ferns in the Ophioglossaceae family that bear their spore sacs on a specialized stalk rather than on green leaves as in most of the true ferns. Zika et al. (1995) recommended that any site with five or more *Botrychium* taxa should be considered highly significant and worthy of special management and conservation. Recognizing this uniqueness we have given special attention to determining numbers and distribution of moonworts in the BLER.

Detailed counts of moonworts were made in 2019 and 2020, often using tapes to section off areas where necessary. An initial visit in late May-early June helped locate growing areas

before seasonal vegetation growth made finding moonworts difficult. Detailed counts were done in June-early July. A final survey in mid-August was done in shaded areas where growth was slower (eg. along the meadow's edge) to find any late-blooming previously undetected individuals. Moonworts in all areas were checked for spore casting condition.

Most of the moonworts were found within the meadow but some also grew along its edge with the surrounding forest (Figure 1). *Sceptridium multifidum* (aka *Botrychium multifidum*) was found in all survey years and was by far the most abundant species. *Botrychium lanceolatum* was the second most numerous in most years, while fewer numbers of *Botrychium michiganense*, *Botrychium minganense*, and *Botrychium pinnatum* were found in some years. *Botrychium neolunaria* (aka *Botrychium lunaria*) was found in 2015 only. Particularly low numbers were observed in 2017 and 2018, then high numbers in 2019 and 2020. The greatest number and diversity of moonworts occurred in 2020 when 217 *Sceptridium multifidum*, 149 *Botrychium lanceolatum*, 83 *Botrychium michiganense*, and 14 *Botrychium pinnatum* were counted.

The moonwort counts are summarized by area in Table 1. The area descriptions follow:

**Northwest:** mostly unshaded meadow with grasses (*Calamagrostis canadensis*, *Phleum pretense*, *Agrostis spp.*), *Trifolium aureum*, *Fragaria virginiana*, *Symphyotrichum foliaceum*, *Solidago lepida*, *Lupinus arcticus*, and *Antennaria sp.*

**Southwest:** mostly shaded forest edge with mosses, *Fragaria virginiana*, *Pyrola asarifolia*, *Orthilia secunda*, *Athyrium filix-femina*, *Pseudotsuga menziesii*, *Arnica cordifolia*, *Symphyotrichum foliaceum*, and *Salix sp.*

**East:** mostly unshaded meadow with grasses, mosses, *Fragaria virginiana*, *Solidago lepida*, *Lupinus arcticus*, *Castilleja miniata*, and *Achillea millefolium*.

Photos of the ground cover in areas East, Southwest and Northwest are shown in Figures 3, 4, 5, and 6. In the meadow, grasses predominated whereas along the meadow's edge, mosses were the main plant associate.

## DISCUSSION

Competition with grasses may be a limiting factor for moonworts. Ahlenslager and Potash (2007) note meadow populations of moonworts in Washington and Oregon are maintained by cattle grazing. They suggested that removal of grazing may be detrimental especially if succession to woody vegetation occurs. Cattle and hay making occurred in the reserve before it was established in 1973. Therefore, the BLER has been recovering now for at least 47 years. Encroachment of *Pinus contorta*, and to a lesser extent *Picea engelmannii* into the Northwest area and *Pseudotsuga menziesii* into the Southwest and East areas, may eventually give rise to forest and the disappearance of the moonworts. *Botrychium minganense* is shade tolerant and a forest dweller and while it has been found in the meadow, it has not yet been found in the adjacent forest.

We have found that doing surveys too early or too late produces inaccurate results and that 2 or 3 counts spread throughout the growing season produce the best results. Early

blooming/early senescing individuals may not show up on late surveys, and late blooming individuals may not show up on early surveys. Early counts underestimated peak numbers in the East area and along the meadow's edge, where growth was slowed due to shading effects.

When there is significant herbivory, multiple counts can provide perspective on low numbers. In 2019 and 2020 there was little visible evidence of significant herbivory (i.e. partially chewed plants, missing plant parts) or missing plants when areas were recounted. We saw no evidence of rodents, a common predator of moonworts (Ahlenslager, K. and L. Potash. 2007). Few insects were observed except for ants, which were abundant in many of the moonwort areas. Their relationship to the moonworts is unknown.

The meadow-forest edge survey found almost entirely *Sceptridium multifidum* with a few *Botrychium lanceolatum* in area East. Of the 217 *Sceptridium multifidum* found in 2020, 40% were found in the partially shaded meadow edge, 8% were in shaded forest edge and 52% were in open unshaded meadow. While it appears *Sceptridium multifidum* grows best in full sunlight, we have seen them growing and maturing in heavily shaded areas at another Kelowna area site and at Manning Park. Typically their growth and spore production was slower in shaded areas than in full sunlight.

Spore casting represents the seasonal end of a moonwort's development, after which it senesces and withers away. At BLER, we saw *Botrychium lanceolatum* and *Botrychium michiganense* cast relatively early and *Sceptridium multifidum* late, and the rest were in the middle. *Sceptridium multifidum* and *Botrychium lanceolatum* cast spores later in shaded areas than in fully exposed areas.

Moonwort surveys at BLER continue to be done in conjunction with moonwort surveys at several other locations in the Kelowna area.

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## REFERENCES

Ahlenslager, K. and L. Potash. 2007. Conservation Assessment for 13 Species of Moonworts (*Botrychium* Swartz Subgenus *Botrychium*). USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington

Zika, P. K., R. Brainerd, and B. Newhouse. 1995. Grapeferns and Moonworts (*Botrychium*, *Ophioglossaceae*) in the Columbia Basin. US Forest Service, Washington

## ACKNOWLEDGEMENTS

Frank Lomer vetted the plant list. George Scotter reviewed the text.



Table 1. Counts of moonwort numbers by area at Browne Lake Ecological Reserve

Location	Area (see Fig 1)	Species	2015	2018	2019	2020
Browne Lake Ecological Reserve	Northwest	<i>Botrychium minganense</i>	√		0	0
		<i>Botrychium pinnatum</i>			3	9
		<i>Botrychium michiganense</i>	√		20	83
		<i>Botrychium lanceolatum</i>	√	√	28	58
		<i>Sceptridium multifidum</i>	√	√	143	201
		<i>Botrychium neolunaria</i>	√		0	0
	Southwest	<i>Sceptridium multifidum</i>	√	√	9	5
		<i>Botrychium pinnatum</i>			6	5
		<i>Botrychium lanceolatum</i>			35	91
	East	<i>Sceptridium multifidum</i>			3	11
	Totals	All species			247	463



FIGURE 2: MOONWORTS OF BROWNE LAKE ECOLOGICAL RESERVE



Common Moonwort  
(*Botrychium neolunaria*)



Mingan Moonwort  
(*Botrychium minganense*)



Michigan Moonwort  
(*Botrychium michiganense*)



Triangle Moonwort  
(*Botrychium lanceolatum*)



Leathery Grapefern  
(*Sceptridium multifidum*)



Northwestern Moonwort  
(*Botrychium pinnatum*)





Figure 3: Area Northwest containing *B. lanceolatum*, *B. michiganense* and *S. multifidum*



Figure 4: Area Northwest containing *B. lanceolatum*, *B. pinnatum* and *S. multifidum*





Figure 5: Area East containing *B. lanceolatum*, *B. pinnatum* and *S. multifidum*



Figure 6: Area Southwest containing only *S. multifidum*

# APPENDIX: Browne Lake Ecological Reserve Plant List (Dec 2020)

FAMILY	SPECIES	COMMON NAME
APIACEAE	<i>Angelica arguta</i>	Sharptooth Angelica
APIACEAE	<i>Cicuta douglasii</i>	Douglas' Water-Hemlock
APIACEAE	<i>Heracleum maximum</i>	Cow-Parsnip
APIACEAE	<i>Lomatium ambiguum</i>	Swale Desert-Parsley
APIACEAE	<i>Osmorhiza berteroi</i>	Mountain Sweet-Cicely
APIACEAE	<i>Sanicula graveolens</i>	Sierra Sanicle
ARALIACEAE	<i>Aralia nudicaulis</i>	Wild Sarsaparilla
ARALIACEAE	<i>Oplopanax horridum</i>	Devil's-Club
ASPARAGACEAE	<i>Marianthemum racemosum</i>	False Solomon's-Seal
ASPARAGACEAE	<i>Marianthemum stellatum</i>	Star-Flowered False Solomon's-Seal
ASTERACEAE	<i>Achillea millefolium</i>	Yarrow
ASTERACEAE	<i>Adenocaulon bicolor</i>	Pathfinder
ASTERACEAE	<i>Agoseris aurantiaca</i>	Orange Agoseris
ASTERACEAE	<i>Anaphalis margaritacea</i>	Pearly Everlasting
ASTERACEAE	<i>Antennaria luzuloides</i>	Silvery-Brown Pussytoes
ASTERACEAE	<i>Antennaria racemosa</i>	Racemose Pussytoes
ASTERACEAE	<i>Antennaria rosea</i>	Rosy Pussytoes
ASTERACEAE	<i>Arnica chamissonis</i>	Meadow Arnica
ASTERACEAE	<i>Arnica cordifolia</i>	Heart-Leaved Arnica
ASTERACEAE	<i>Arnica latifolia</i>	Mountain Arnica
ASTERACEAE	<i>Cirsium arvense</i>	Canada Thistle
ASTERACEAE	<i>Cirsium foliosum</i>	Leafy Thistle
ASTERACEAE	<i>Hieracium albiflorum</i>	White Hawkweed
ASTERACEAE	<i>Hieracium aurantiacum</i>	Orange-Red King Devil
ASTERACEAE	<i>Hieracium gracile</i>	Slender Hawkweed
ASTERACEAE	<i>Matricaria discoidea</i>	Pineapple Weed
ASTERACEAE	<i>Microseris nutans</i>	Nodding Microseris
ASTERACEAE	<i>Packera pseud aurea</i>	Streambank Groundsel
ASTERACEAE	<i>Petasites frigidus</i> var <i>frigidus</i>	Palmate Coltsfoot
ASTERACEAE	<i>Petasites frigidus</i> var <i>palmaris</i>	Palmate Coltsfoot
ASTERACEAE	<i>Senecio triangularis</i>	Arrow-Leaved Groundsel
ASTERACEAE	<i>Solidago lepida</i> var <i>salebrosa</i>	Canada Goldenrod
ASTERACEAE	<i>Symphyotrichum foliaceum</i>	Leafy Aster
ASTERACEAE	<i>Symphyotrichum subspicatum</i>	Douglas's Aster
ASTERACEAE	<i>Taraxacum officinale</i>	Common Dandelion
ASTERACEAE	<i>Tragopogon dubius</i>	Yellow Salsify
BERBERIDACEAE	<i>Mahonia aquifolium</i>	Tall Oregon-Grape
BETULACEAE	<i>Alnus incana</i>	Gray Alder
BETULACEAE	<i>Alnus viridis</i> ssp <i>sinuata</i>	Sitka Alder
BORAGINACEAE	<i>Cryptantha</i> sp	Cryptantha
BORAGINACEAE	<i>Myosotis laxa</i>	Small-Flowered Forget-Me-Not
BRASSICACEAE	<i>Cardamine pensylvanica</i>	Pennsylvania Bitter-Cress
BRASSICACEAE	<i>Rorippa curvisiliqua</i>	Curvepod Yellowcress
CAPRIFOLIACEAE	<i>Linnaea borealis</i>	Twinflower
CAPRIFOLIACEAE	<i>Lonicera involucrata</i>	Black Twinberry
CAPRIFOLIACEAE	<i>Lonicera utahensis</i>	Utah Honeysuckle



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CAPRIFOLIACEAE	<i>Sambucus racemosa</i>	Red Elderberry
CAPRIFOLIACEAE	<i>Symphoricarpos albus</i>	Common Snowberry
CAPRIFOLIACEAE	<i>Viburnum edule</i>	Highbush-Cranberry
CARYOPHYLLACEAE	<i>Cerastium fontanum</i>	Mouse-Ear Chickweed
CARYOPHYLLACEAE	<i>Eremogone capillaris</i>	Slender Mountain Sandwort
CARYOPHYLLACEAE	<i>Stellaria borealis</i>	Boreal Starwort
CARYOPHYLLACEAE	<i>Stellaria crispa</i>	Crisp Starwort
CARYOPHYLLACEAE	<i>Stellaria graminea</i>	Grass-Leaved Starwort
CARYOPHYLLACEAE	<i>Stellaria longipes</i>	Long-Stalked Starwort
CELASTRACEAE	<i>Paxistima myrsinites</i>	Falsebox
CLUSIACEAE	<i>Hypericum perforatum</i>	Common St. John's-Wort
CORNACEAE	<i>Cornus canadensis</i>	Bunchberry
CORNACEAE	<i>Cornus stolonifera</i>	Red-Osier Dogwood
CUPRESSACEAE	<i>Juniperus communis</i>	Common Juniper
CUPRESSACEAE	<i>Thuja plicata</i>	Western Redcedar
CYPERACEAE	<i>Carex aquatilis</i>	Water Sedge
CYPERACEAE	<i>Carex atheroides</i>	Awned Sedge
CYPERACEAE	<i>Carex aurea</i>	Golden Sedge
CYPERACEAE	<i>Carex brunnescens</i>	Brownish Sedge
CYPERACEAE	<i>Carex canescens</i> var <i>canescens</i>	Grey Sedge
CYPERACEAE	<i>Carex disperma</i>	Soft-Leaved Sedge
CYPERACEAE	<i>Carex hoodii</i>	Hood's Sedge
CYPERACEAE	<i>Carex kelloggii</i> var <i>kelloggii</i>	Kellogg's Sedge
CYPERACEAE	<i>Carex lasiocarpa</i>	Slender Sedge
CYPERACEAE	<i>Carex pachystachya</i>	Thick-Headed Sedge
CYPERACEAE	<i>Carex preslii</i>	Presl's Sedge
CYPERACEAE	<i>Carex utriculata</i>	Beaked Sedge
CYPERACEAE	<i>Eleocharis palustris</i>	Common Spike-Rush
DRYOPTERIDACEAE	<i>Athyrium filix-femina</i>	Lady Fern
DRYOPTERIDACEAE	<i>Cystopteris fragilis</i>	Fragile Fern
DRYOPTERIDACEAE	<i>Dryopteris expansa</i>	Spiny Wood Fern
DRYOPTERIDACEAE	<i>Woodsia oregana</i>	Western Cliff Fern
EQUISETACEAE	<i>Equisetum arvense</i>	Common Horsetail
ERICACEAE	<i>Arctostaphylos uva-ursi</i>	Kinnikinnick
ERICACEAE	<i>Chimaphila umbellata</i>	Prince's Pine
ERICACEAE	<i>Ledum glandulosum</i>	Trapper's Tea
ERICACEAE	<i>Moneses uniflora</i>	Single Delight
ERICACEAE	<i>Orthilia secunda</i>	One-Sided Wintergreen
ERICACEAE	<i>Pterospora andromedea</i>	Pinedrops
ERICACEAE	<i>Pyrola asarifolia</i>	Pink Wintergreen
ERICACEAE	<i>Pyrola minor</i>	Lesser Wintergreen
ERICACEAE	<i>Vaccinium caespitosum</i>	Dwarf Blueberry
ERICACEAE	<i>Vaccinium membranaceum</i>	Black Huckleberry
ERICACEAE	<i>Vaccinium scoparium</i>	Grouseberry
FABACEAE	<i>Lupinus arcticus</i>	Arctic Lupine
FABACEAE	<i>Trifolium aureum</i>	Yellow Clover

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FABACEAE	<i>Trifolium hybridum</i>	Alsike Clover
FABACEAE	<i>Trifolium pratense</i>	Red Clover
GENTIANACEAE	<i>Gentianella amarella</i>	Northern Gentian
GROSSULARIACEAE	<i>Ribes hudsonianum</i>	Northern Blackcurrant
GROSSULARIACEAE	<i>Ribes oxycanthoides</i>	Northern Gooseberry
HYDROPHYLLACEAE	<i>Hydrophyllum capitatum</i>	Dwarf Waterleaf
JUNCACEAE	<i>Juncus balticus</i>	Baltic Rush
JUNCACEAE	<i>Juncus ensifolius</i> var <i>ensifolius</i>	Dagger-Leaf Rush
JUNCACEAE	<i>Juncus filiformis</i>	Thread Rush
JUNCACEAE	<i>Juncus tenuis</i>	Slender Rush
JUNCACEAE	<i>Luzula comosa</i>	Pacific Wood-Rush
JUNCACEAE	<i>Luzula hitchcockii</i>	Hitchcock's Wood-Rush
JUNCACEAE	<i>Luzula multiflora</i> ssp <i>multiflora</i>	Many-Flowered Wood-Rush
LAMIACEAE	<i>Mentha arvensis</i>	Field Mint
LAMIACEAE	<i>Prunella vulgaris</i>	Self-Heal
LILIACEAE	<i>Clintonia uniflora</i>	Queen's Cup
LILIACEAE	<i>Fritillaria affinis</i>	Chocolate Lily
LILIACEAE	<i>Lilium columbianum</i>	Columbia Lily
LILIACEAE	<i>Prosartes trachycarpa</i>	Rough-Fruited Fairybells
LILIACEAE	<i>Streptopus amplexifolius</i>	Clasping Twisted-Stalk
LYCOPODIACEAE	<i>Lycopodium annotinum</i>	Stiff Club-Moss
MELANTHIACEAE	<i>Trillium ovatum</i>	Western Trillium
MELANTHIACEAE	<i>Veratrum viride</i>	Indian Hellebore
MELANTHIACEAE	<i>Zigadenus venenosus</i>	Meadow Death-Camas
MONTIACEAE	<i>Claytonia lanceolata</i>	Western Springbeauty
MONTIACEAE	<i>Lewisia pygmaea</i>	Alpine Lewisia
NYMPHAEACEAE	<i>Nuphar</i> (polysepala?)	Pond-Lily
OLEASTER	<i>Shepherdia canadensis</i>	Soopolallie
ONAGRACEAE	<i>Epilobium angustifolium</i>	Fireweed
ONAGRACEAE	<i>Epilobium ciliatum</i>	Purple-Leaved Willowherb
ONAGRACEAE	<i>Epilobium palustre</i>	Marsh Willowherb
OPHIOGLOSSACEAE	<i>Botrychium lanceolatum</i>	Triangle Moonwort
OPHIOGLOSSACEAE	<i>Botrychium michiganense</i>	Michigan Moonwort
OPHIOGLOSSACEAE	<i>Botrychium minganense</i>	Mingan Moonwort
OPHIOGLOSSACEAE	<i>Botrychium neolunaria</i>	Common Moonwort
OPHIOGLOSSACEAE	<i>Botrychium pinnatum</i>	Northwestern Moonwort
OPHIOGLOSSACEAE	<i>Sceptridium multifidum</i>	Leathery Grape Fern
ORCHIDACEAE	<i>Calypso bulbosa</i>	Fairyslipper
ORCHIDACEAE	<i>Corallorhiza maculata</i>	Spotted Coralroot
ORCHIDACEAE	<i>Goodyera oblongifolia</i>	Rattlesnake-Plantain
ORCHIDACEAE	<i>Listera cordata</i>	Heart-Leaved Twayblade
ORCHIDACEAE	<i>Piperia unalascensis</i>	Alaska Rein Orchid
ORCHIDACEAE	<i>Platanthera aquilonis</i>	Northern Green Bog Orchid
ORCHIDACEAE	<i>Platanthera dilatata</i>	Fragrant White Bog Orchid
ORCHIDACEAE	<i>Spiranthes romanzoffiana</i>	Hooded Ladies' Tresses
OROBANCHACEAE	<i>Castilleja hispida</i>	Harsh Paintbrush



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OROBANCHACEAE	Castilleja miniata	Common Red Paintbrush
OROBANCHACEAE	Euphrasia nemorosa	Eastern Eyebright
OROBANCHACEAE	Orobanche uniflora	Naked Broomrape
OROBANCHACEAE	Pedicularis bracteosa	Bracted Lousewort
OROBANCHACEAE	Pedicularis racemosa	Sickletop Lousewort
OROBANCHACEAE	Rhinanthus minor	Yellow Rattle
PHRYMACEAE	Erythranthe moschatus	Musk-Flower
PINACEAE	Abies lasiocarpa	Subalpine Fir
PINACEAE	Larix occidentalis	Western Larch
PINACEAE	Picea engelmannii	Englemann Spruce
PINACEAE	Pinus contorta	Lodgepole Pine
PINACEAE	Pseudotsuga menziesii	Interior Douglas-Fir
PLANTAGINACEAE	Collinsia parviflora	Small-Flowered Blue-Eyed Mary
PLANTAGINACEAE	Hippuris vulgaris	Common Mare's-Tail
PLANTAGINACEAE	Penstemon confertus	Yellow Penstemon
PLANTAGINACEAE	Penstemon fruticosus	Shrubby Penstemon
PLANTAGINACEAE	Plantago major	Common Plantain
PLANTAGINACEAE	Veronica americana	American Brooklime
PLANTAGINACEAE	Veronica serpyllifolia	Thyme-Leaved Speedwell
POACEAE	Agrostis scabra	Hair Bentgrass
POACEAE	Agrostis stolonifera	Creeping Bentgrass
POACEAE	Alopecurus aequalis	Little Meadow-Foxtail
POACEAE	Bromus ciliatus	Fringed Brome
POACEAE	Calamagrostis canadensis	Bluejoint
POACEAE	Calamagrostis rubescens	Pinegrass
POACEAE	Cinna latifolia	Nodding Wood-Reed
POACEAE	Deschampsia elongata	Slender Hairgrass
POACEAE	Elymus glaucus ssp glaucus	Blue Wildrye
POACEAE	Elymus repens	Quackgrass
POACEAE	Festuca occidentalis	Western Fescue
POACEAE	Glyceria elata	Tall Mannagrass
POACEAE	Melica subulata	Alaska Oniongrass
POACEAE	Phalaris arundinacea	Reed Canarygrass
POACEAE	Phleum pratense	Timothy
POACEAE	Poa palustris	Fowl Blue Grass
POACEAE	Poa pratensis	Kentucky Blue Grass
POACEAE	Poa wheeleri	Wheeler's's Blue Grass
POACEAE	Trisetum canescens	Tall Trisetum
POLEMONIACEAE	Collomia linearis	Narrow-Leaved Collomia
POLEMONIACEAE	Microsteris gracilis	Pink Microsteris
POLEMONIACEAE	Polemonium pulcherrimum	Showy Jacob's-Ladder
POLYGONACEAE	Persicaria amphibia var stipulacea	Water Smartweed
POLYGONACEAE	Polygonum polygaloides ssp kelloggii	Kellogg's Knotweed
POLYGONACEAE	Rumex acetosella	Sheep Sorrel
PRIMULACEAE	Dodecatheon pulchellum	Few-Flowered Shootingstar
RANUNCULACEAE	Aconitum columbianum	Columbia Monkshood

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RANUNCULACEAE	<i>Actaea rubra</i>	Baneberry
RANUNCULACEAE	<i>Aquilegia formosa</i>	Red Columbine
RANUNCULACEAE	<i>Clematis occidentalis</i>	Blue Clematis
RANUNCULACEAE	<i>Delphinium nuttallianum</i>	Upland Larkspur
RANUNCULACEAE	<i>Ranunculus acris</i>	Meadow Buttercup
RANUNCULACEAE	<i>Ranunculus gmelini</i>	Small Yellow Water- Buttercup
RANUNCULACEAE	<i>Ranunculus macounii</i>	Macoun's Buttercup
RANUNCULACEAE	<i>Ranunculus uncinatus</i>	Little Buttercup
RANUNCULACEAE	<i>Thalictrum occidentale</i>	Western Meadowrue
ROSACEAE	<i>Amelanchier alnifolia</i>	Saskatoon
ROSACEAE	<i>Comarum palustre</i>	Marsh Cinquefoil
ROSACEAE	<i>Fragaria virginiana</i>	Wild Strawberry
ROSACEAE	<i>Geum macrophyllum</i>	Large-Leaved Avens
ROSACEAE	<i>Potentilla biennis</i>	Biennial Cinquefoil
ROSACEAE	<i>Potentilla gracilis</i> var <i>fastigiata</i>	Graceful Cinquefoil
ROSACEAE	<i>Rosa nutkana</i>	Nootka Rose
ROSACEAE	<i>Rosa woodsii</i>	Prairie Rose
ROSACEAE	<i>Rubus parviflorus</i>	Thimbleberry
ROSACEAE	<i>Rubus pedatus</i>	Five-Leaved Bramble
ROSACEAE	<i>Rubus pubescens</i>	Dwarf Red Raspberry
ROSACEAE	<i>Sorbus scopulina</i>	Western Mountain Ash
ROSACEAE	<i>Spiraea betulifolia</i>	White Meadow-Sweet
RUBIACEAE	<i>Galium trifidum</i>	Small Bedstraw
RUBIACEAE	<i>Galium triflorum</i>	Sweet-Scented Bedstraw
SALICACEAE	<i>Populus balsamifera</i>	Black Cottonwood
SALICACEAE	<i>Populus tremuloides</i>	Trembling Aspen
SALICACEAE	<i>Salix sitchensis</i>	Sitka Willow
SANTALACEAE	<i>Geocaulon lividum</i>	False Toadflax
SAPINDACEAE	<i>Acer glabrum</i>	Douglas Maple
SAXIFRAGACEAE	<i>Heuchera cylindrica</i>	Round-Leaved Alumroot
SAXIFRAGACEAE	<i>Lithophragma glabrum</i>	Smooth Fringecup
SAXIFRAGACEAE	<i>Micanthes occidentalis</i>	Western Saxifrage
SAXIFRAGACEAE	<i>Mitella breweri</i>	Brewer's Mitrewort
SAXIFRAGACEAE	<i>Mitella nuda</i>	Common Mitrewort
SAXIFRAGACEAE	<i>Mitella trifida</i>	Three-Toothed Mitrewort
SAXIFRAGACEAE	<i>Saxifraga bronchialis</i>	Spotted Saxifrage
SAXIFRAGACEAE	<i>Tiarella trifoliata</i>	One-Leaved Foamflower
SCROPHULARIACEAE	<i>Verbascum thapsus</i>	Great Mullein
SPARGANIACEAE	<i>Sparganium emersum</i>	Emerald Bur-Reed
UTRICACEAE	<i>Urtica dioica</i>	Stinging Nettle
VIOLACEAE	<i>Viola adunca</i>	Early Blue Violet
VIOLACEAE	<i>Viola canadensis</i>	Canada Violet
VIOLACEAE	<i>Viola glabella</i>	Stream Violet
VIOLACEAE	<i>Viola nephrophylla</i>	Northern Bog Violet
VIOLACEAE	<i>Viola palustris</i>	Marsh Violet