

**Herbs continued...**

*Epilobium minutum*..Small-flowered willow-herb  
*Epilobium palustre*..... Swamp willow-herb  
*Epilobium paniculatum* ..Tall annual willow-herb  
*Erigeron compositus* ..... Cut-leaved daisy  
*Erigeron leibergeri* ..... Leiberg's fleabane  
*Erigeron peregrinus* ..... Subalpine daisy  
*Eriogonum compositum*...Northern buckwheat  
*Eriogonum umbellatum*..Sulfur buckwheat  
*Erysimum arenicola*...Mountain wallflower  
*Erythronium grandiflorum*..... Glacier lily  
*Fragaria vesca*..... Wild strawberry  
*Galium bifolium*... Low mountain bedstraw  
*Galium triflorum* .....Fragrant bedstraw  
*Gayophytum diffusum* ..Spreading groundsmoke  
*Geum macrophyllum* ....Large-leaved avens  
*Goodyera oblongifolia*.. Rattlesnake-plantain  
*Heracleum lanatum* ..... Cow parsnip  
*Heuchera micrantha*..Small-flowered alumroot  
*Hieracium albiflorum* .White-flowered hawkweed  
*Hieracium gracile* ..... Slender hawkweed  
*Hieracium scouleri*..... Scouler's hawkweed  
*Hydrophyllum capitatum*.. Woolly breeches  
*Hydrophyllum fendleri*.. Fendler's waterleaf  
*Iliamna rivularis* .. Streambank globemallow  
*Ivesia tweedyi* ..... Tweedy's ivesia  
*Lathyrus nevadensis* .....Nuttall's peavine  
*Lewisia columbiana*.....Columbia lewisia  
*Ligusticum grayi* .....Gray's lovage  
*Linnaea borealis* ..... Twinflower  
*Lomatium brandegei*... Brandegee's lomatium  
*Lomatium canbyi* ... Canby's desert-parsley  
*Lomatium geyeri* ..... Geyer's desert-parsley  
*Luetkea pectinata* ..... Partridge foot  
*Luina hypoleuca* .....Silverback luina  
*Luina nardosmia* ..... Silvercrown luina  
*Luina stricta* ..... Tongue-leaf luina  
*Lupinus latifolius* ..... Broad-leaf lupine  
*Lupinus polyphyllus* .....Big-leaf lupine  
*Luzula parviflora* .Small-flowered woodrush  
*Mertensia paniculata*..... Tall bluebells  
*Microsteris gracilis*.....Pink microsteris  
*Mimulus guttatus* .. Common monkey-flower  
*Mimulus lewisii* ..... Lewis's monkey-flower  
*Mimulus moschatus* ..... Musk-flower  
*Mitella breweri*.....Brewer's miterwort  
*Mitella trifida* .....Three-tooth miterwort  
*Montia perfoliata*.....Miner's lettuce  
*Nothochelone nemerosa* .. Woodland beard-tongue  
*Orthilia secunda* .... One-sided wintergreen

*Osmorhiza chilensis* ..Mountain sweet-cicely  
*Osmorhiza occidentalis* ..Western sweet-cicely  
*Pachistima myrsinites* .....Mountain box  
*Pedicularis bracteosa* ..... Bracted lousewort  
*Pedicularis contorta* ..... Coiled lousewort  
*Pedicularis racemosa* ... Sickletop lousewort  
*Penstemon davidsonii*.. Davidson's penstemon  
*Penstemon fruticosus* ..Shrubby penstemon  
*Penstemon procerus* .. Small-flowered penstemon  
*Penstemon rupicola* ..... Cliff penstemon  
*Penstemon serrulatus* .. Cascade penstemon  
*Phacelia hastata* ..... White-leaf phacelia  
*Phacelia procera*..... Tall phacelia  
*Phlox diffusa* ..... Spreading phlox  
*Phyllodoce empetriformis* ..Red mountain heather  
*Platanthera dilatata*..... White bog-orchid  
*Platanthera saccata* ..... Slender bog-orchid  
*Polemonium pulcherrimum*...Showy Jacob's ladder  
*Polygonum douglasii*..... Douglas' knotweed  
*Polygonum minimum* ... Leafy dwarf knotweed  
*Potentilla glandulosa* ..... Sticky cinquefoil  
*Rubus lasiococcus* ..... Dwarf bramble  
*Rubus leucodermis*..... Blackcap  
*Rubus parviflorus* ..... Thimbleberry  
*Rubus spectabilis*..... Salmonberry  
*Rubus ursinus* ..... Wild blackberry  
*Sanguisorba occidentalis* .....Annual burnet  
*Sanicula graveolens* .....Sierra sanicle  
*Saussurea americana*.... American sawwort  
*Saxifraga bronchialis* ..... Spotted saxifrage  
*Saxifraga occidentalis* ..... Western saxifrage  
*Scirpus microcarpus*.. Small-flowered bulrush  
*Sedum lanceolatum* ..Lance-leaved stoncrop  
*Senecio integerrimus*.... Western groundsel  
*Senecio pauperculus*.... Canada butterweed  
*Senecio triangularis*... Arrowleaf groundsel  
*Silene parryi* ..... Parry's silene  
*Sitanion hystrix* ..... Squirreltail  
*Smilacina racemosa* .... False Solomon's seal  
*Smilacina stellata* .Star-flowered Solomon's seal  
*Solidago canadensis*..... Meadow goldenrod  
*Stellaria calycantha* .....Northern starwort  
*Stenanthium occidentale*.....Bronze bells  
*Streptopus amplexifolius* . Clasping-leaved twisted-stalk  
*Thalictrum occidentale* .. Western meadowrue  
*Thlaspi fendleri*..... Fendler's pennycress  
*Trientalis latifolia* .. Broadleaved starflower  
*Trillium ovatum*..... White trillium  
*Urtica dioica* .....Stinging nettle  
*Vaccinium deliciosum*.. Cascade huckleberry

**Herbs continued...**

*Vaccinium membranaceum*..Mountain huckleberry  
*Vaccinium scoparium* ..... Grouseberry  
*Valeriana sitchensis* ..... Sitka valerian  
*Veratrum viride* .....Green false hellebore  
*Verbena bracteata*.....Bracted vervain  
*Veronica americana*...American brooklime  
*Veronica serpyllifolia* .Thyme-leaf speedwell  
*Veronica wormskjoldii* ..... Alpine speedwell  
*Vicia americana* ..... American vetch  
*Viola glabella*..... Stream violet  
*Viola orbiculata* ..... Round-leaved violet  
*Viola purpurea*..... Goosefoot violet  
*Xerophyllum tenax* ..... Beargrass  
*Zigadenus paniculatus* ..Paniced death-camas

**Ferns and Fern Allies**

*Cryptogramma crispera* ..... Parsley fern  
*Cystopteris fragilis* ..... Fragile fern  
*Athyrium distentifolium* .. Alpine lady fern  
*Cheilanthes gracillima*.....Lace fern  
*Pteridium aquilinum*..... Bracken fern  
*Botrychium multifidum*.. Leathery grape-fern

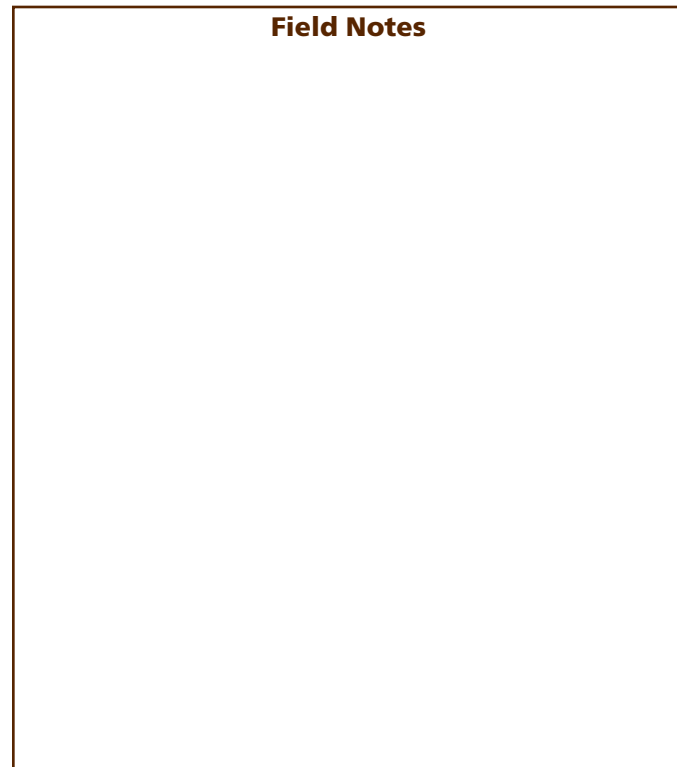
**Grasses and Grass-likes**

*Bromus carinatus* ..... California brome  
*Carex illoda*..... Sheep sedge  
*Carex mertensii*..... Merten's sedge  
*Elymus canadensis* ..... Nodding wildrye  
*Elymus glaucus* ..... Western ryegrass  
*Festuca viridula* ..... Green fescue  
*Juncus ensifolius*..... Daggerleaf rush  
*Juncus parryi* ..... Parry's rush

**Introduced**

*Centaurea diffusa* ..... Diffuse knapweed  
*Cirsium arvense* ..... Canada thistle  
*Dactylis glomerata* ..... Orchard grass  
*Hieracium aurantiacum* ..... King devil  
*Hypericum perforatum*.....Klamath weed  
*Phleum pratense*..... Timothy  
*Plantago lanceolata*..... English plantain  
*Plantago major*..... Common plantain  
*Rumex acetocella*..... Sheep sorrel  
*Spergularia rubra*..... Red sandspurry  
*Taraxacum officinale* ..... Dandelion  
*Tragopogon dubius* ..... Oysterplant  
*Trifolium hybridum*..... Alsike clover  
*Trifolium repens* ..... White clover  
*Verbascum thapsus*..... Common mullein

**Field Notes**



Please help protect this fragile environment by staying on the trail. Take only pictures. Flowers need to remain on site so seeds can provide future generations.

For additional information on plants, please refer to the following resources:

Plants of the Pacific Northwest Coast  
1994. Pojar and Mackinnon

Ferns & Fern-Allies  
1985. David B. Lellinger

Natural History of Olympics & Cascades  
1998. Daniel Mathews

Weeds of the West  
2001. Tom D. Whitson, editor

Special thanks to the  
Washington Native Plant Society

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United States Department of Agriculture  
Forest Service ■ Pacific Northwest Region

# Knox Creek Wildflower Trail



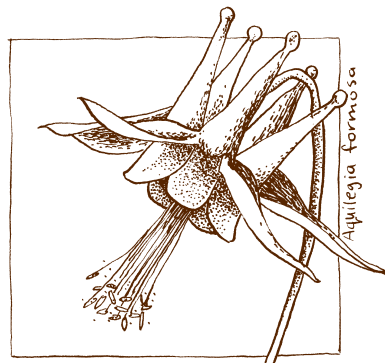
Castilleja hispida



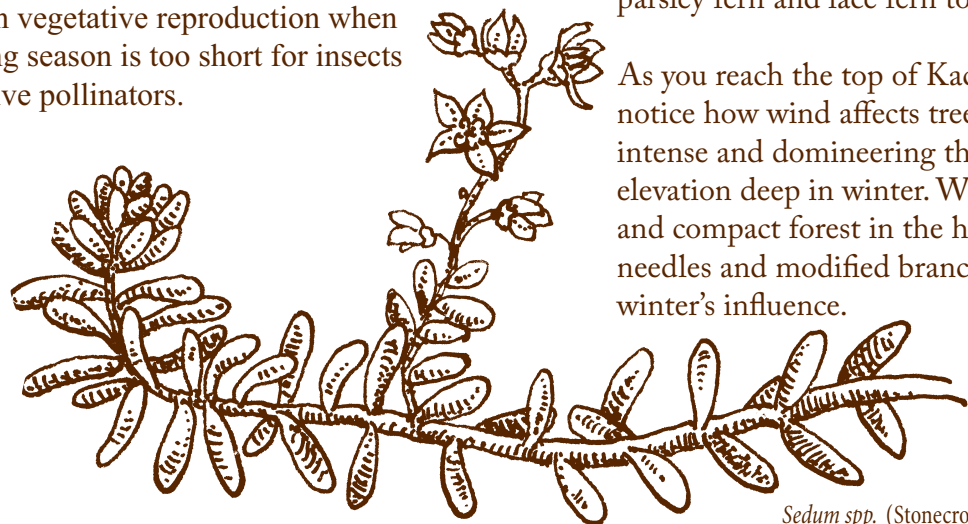
Okanogan and Wenatchee National Forests

The Knox Creek Wildflower Trail begins on a hillside meadow bursting with wildflowers. It climbs quickly out of the meadow through patchy sub-alpine forest onto open rocky outcrops; a surprising amount of diverse habitat in such a short distance. Opportunities along the trail abound for plant identification, photography, drawing or any other activity wildflowers inspire.

Plants are shaped by the short growing season, snow pack, wind, precipitation, soil composition, wildlife and human intervention.



Life changes year-round for the plants along the Knox Creek Trail. For most plants growth begins in spring when winter releases its chilly hold and plants begin to protrude through remaining snow. Plants have various strategies for survival. Early bloomers like spring beauties, *Claytonia lanceolata*, take advantage of super saturated soils. Others, for example *Antennaria spp.*, must rely on vegetative reproduction when the blooming season is too short for insects to be effective pollinators.



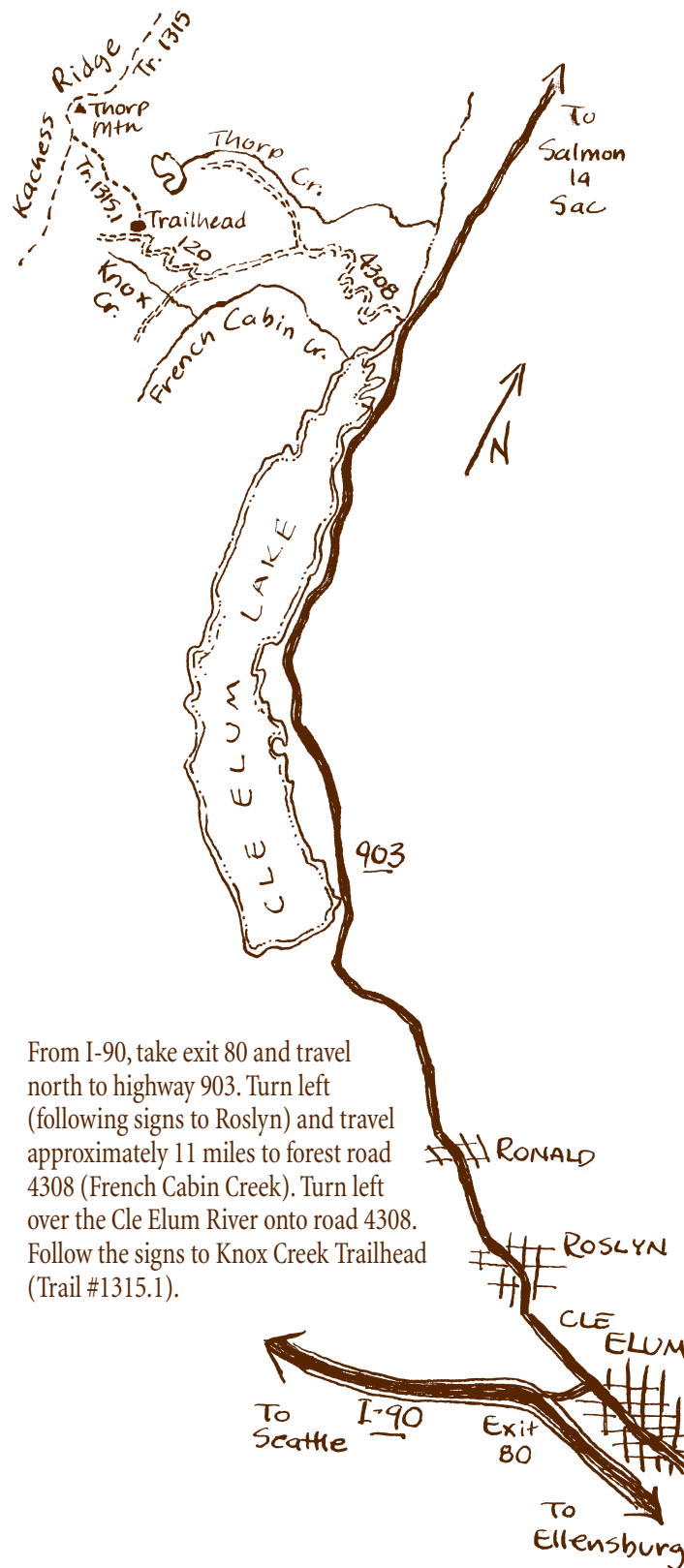
*Sedum spp.* (Stonecrop)



The upper dry rock faces do not hold snow, leaving a niche for plants specially adapted to dry habitat. Cushion plants like *Phlox spp.* have adapted to rocky areas that are lacking soil. Their clumpy growth habit traps windblown particles that will gradually become soil. Long taproots also characterize cushion plants; they send roots 8-15 inches below the surface in some cases to reach water.

Alpine habitats are arid. While the ridge top may receive its share of winter snow, most of it will blow away or slough off in small avalanches. Adaptations to the arid environment can be seen in the lace fern, *Cheilanthes gracillima*. It has roots up to 1.5 m long and its spores are resistant to desiccation for 18 months. Lichen and moss work diligently to slowly break down rock into soil. The accumulation of soil pockets will allow plants like parsley fern and lace fern to grow.

As you reach the top of Kachess Ridge you'll notice how wind affects tree growth. Imagine how intense and domineering the wind must be at this elevation deep in winter. Wind sculpts a stunted and compact forest in the hemlock and fir. Shorter needles and modified branches convey the story of winter's influence.



From I-90, take exit 80 and travel north to highway 903. Turn left (following signs to Roslyn) and travel approximately 11 miles to forest road 4308 (French Cabin Creek). Turn left over the Cle Elum River onto road 4308. Follow the signs to Knox Creek Trailhead (Trail #1315.1).

The list below includes plants found along the trails in the Knox Creek drainage.

**Trees**

- Abies amabilis*.....Pacific silver fir
- Abies grandis* .....Grand fir
- Abies lasiocarpa* ..... Sub-alpine fir
- Acer circinatum* ..... Vine maple
- Acer glabrum* ..... Douglas maple
- Acer macrophyllum*..... Big-leaf maple
- Prunella vulgaris* ..... Self-heal
- Prunus emarginata*..... Bitter cherry
- Pseudotsuga menziesii* ..... Douglas fir
- Alnus sinuata* ..... Sitka alder
- Picea engelmannii* ..... Engelmann spruce
- Populus trichocarpa*..... Black cottonwood
- Taxus brevifolia* ..... Western yew
- Thuja plicata* ..... Western red cedar
- Tsuga heterophylla* ..... Western hemlock
- Tsuga mertensiana*..... Mountain hemlock

**Herbs**

- Anaphalis margaritacea* . Pearly everlasting
- Angelica arguta*.....Sharp-tooth angelica
- Angelica geniflexa* ..... Kneeling angelica
- Antennaria lanata* ..... Woolly pussy-toes
- Antennaria luzuloides* . Woodrush pussy-toes
- Antennaria microphylla*..... Rosy pussy-toes
- Antennaria racemosa* .. Raceme pussy-toes
- Apocynum androsaemifolium* ... Spreading dogbane
- Aquilegia formosa*..... Red columbine
- Arabis divaricata* .. Spreadingpod rockcross
- Arabis hirsuta* ..... Hairy rockcross
- Arabis lyallii*..... Lyall's rockcross
- Arctostaphylos nevadensis* ..... Kinnikinnik
- Arenaria capillaris*.. Thread-leaved sandwort
- Arenaria macrophylla*..... Big-leaf sandwort
- Arnica diversifolia* ..... Sticky arnica
- Arnica latifolia*..... Mountain arnica
- Arnica parryi*..... Nodding arnica
- Artemisia ludoviciana*... Western mugwort
- Asarum caudatum*..... Wild ginger
- Aster foliaceus*..... Leafy aster
- Aster ledophyllus*..... Cascade aster
- Balsamorhiza sagittata* . Arrow-leaf balsamroot
- Berberis nervosa* ..... Cascade Oregongrape
- Berberis repens* ..... Creeping Oregongrape
- Caltha biflora*..... White marshmarigold
- Campanula rotundifolia* . Common harebell
- Cardamine bellidifolia* .... Alpine bittercress
- Castilleja hispida* ..... Harsh paintbrush
- Castilleja miniata* ..... Scarlet paintbrush
- Cerastium arvense* ..... Field chickweed
- Chimaphila umbellata* ..... Pipsissewa
- Cirsium edule*..... Horse thistle
- Claytonia lanceolata* . Western spring beauty
- Collinsia parviflora* ..... Blue-eyed Mary
- Collomia linearis* ..... Narrow-leaf collomia
- Corallorhiza maculata* ... Spotted coral-root
- Cornus unalaschensis* ..... Bunchberry
- Delphinium nuttallianum* . Upland larkspur
- Descurainia richardsonii*.. Mountain tansymustard
- Dicentra formosa* ..... Bleeding heart
- Dicentra uniflora* ..... Steer's head
- Disporum hookeri*..... Hooker fairy-bell
- Epilobium angustifolium* ..... Fireweed
- Epilobium glandulosum*.. Common willow-herb

**Herbs continued...**