Hunter Creek

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magine you can "apparate" (disappear from one place and reappear almost instantly in another, like the wizards and witches in the Harry Potter series) to the middle of Hunter Creek Bog. As you slowly sank into the bog, you'd find yourself surrounded by California pitcherplant, pleated and Mendocino gentians, Labrador tea, western tofieldia, California bog asphodel, sedges, Columbia and Vollmer's lilies, and Pacific reed grass. Outside of this watery jungle, you would see dry, bare, red rocky slopes and a scattering of Port Orford cedar and Jeffrey pine. Luckily, "muggles" (the non-magical community) don't need to "apparate" to get to Hunter Creek Bog. We can turn off Highway 101, just south of Gold Beach in Curry County, and drive east about 10.5 miles to visit this public land botanical jewel managed by the Bureau of Land Management (BLM).

ACEC Status

There are two Areas of Critical Environmental Concern (ACEC) at Hunter Creek: Hunter Creek Bog ACEC and the North Fork Hunter Creek ACEC, which together total about 2,300 acres. In 1982 the Kalmiopsis Audubon Society and the Innominata Garden Club nominated Hunter Creek Bog (Section 13) and Hunter Springs Bog (Section 24) for ACEC status (Bowen and others 1982). In 1994, 570 acres in those sections and 1,730 acres of North Fork Hunter Creek were proposed as a separate ACEC. In 1995, both ACEC proposals were designated, including lands located in Sections 1, 2, 11, 12, 13, 14, and 24, Township 37 South, Range 14 West (BLM 1995). The ACECs are bordered by Siskiyou National Forest land to the east and South Coast Lumber Company lands to the north, west, and south. The BLM is currently pursuing land acquisitions and exchanges to consolidate ownership, as provided in the final management plan (about 280 BLM

acres in exchange for 320 South Coast Lumber acres). If the exchange is completed, the acquired lands will be included in the ACEC as public domain.

The Hunter Creek ACECs were designated for four natural resource values: 1) special status species, 2) natural systems and plant community, 3) fish and wildlife habitat, and 4) historic and cultural resources. Twelve special status plant species (see list at



Jeffrey pine and Port Orford cedar surround a watery jungle of California pitcherplant in Hunter Creek Bog. Photo by Veva Stansell.

end of article) and five special status animal species are documented. No federally listed wildlife species have been found, but potential habitat is present for northern spotted owl, marbled murrelet, and American peregrine falcon. The North Fork of Hunter Creek is productive for resident trout and anadromous fish populations such as the fall chinook salmon and winter steelhead. Hunter Creek ACEC fills ecological and special species cells in the Oregon Natural

Ecological and special species cells identified in the 2003 Oregon Natural Heritage Plan for Hunter Creek ACECs

Ecoregion	Ecological Cell	Special Species Cell
Coast Range	• Port Orford cedar (<i>Chamaecyparis lawsoniana</i>) forest types on ultramafic soils	• Gasquet manzanita (Arctostaphylos hispidula)
Klamath Mountains	 California pitcherplant (<i>Darlingtonia californica</i>) fen on serpentine-peridotite, with Port Orford cedar Coastal oak-conifer woodland and meadow mosaic 	 Mendocino gentian (<i>Gentiana setigera</i>) and Siskiyou checkerbloom (<i>Sidalcea malviflora</i> ssp. <i>patula</i>) Gasquet manzanita and Siskiyou trillium (<i>Trillium angustipetalum</i>)

Heritage Plan for the Coast Range and Klamath Mountains Ecoregions (Allan and others 2001).

Because the Hunter Creek ACECs lie inland from the coastal fog belt zone, summer days are typically warm and sunny. Annual precipitation averages about 80 to 100 inches, primarily as rain falling between November and May. The elevation ranges from about 800 feet along the creek bottom to nearly 3,000 feet; transient

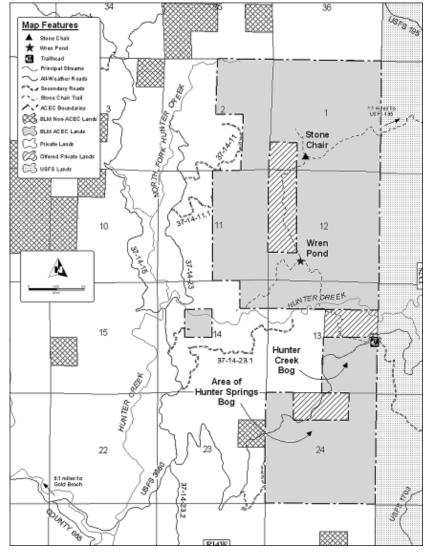
snow falls above 2,500 feet elevation. In this maritime climate, the elevation gradient and geology provide habitat for mixed evergreen forest, rocky prairies, serpentine outcrops, fens, oak savannas, and riparian hardwood forests. It is unusual to find such extensive stands of Jeffrey pine, Oregon white oak, and rubber rabbitbrush (Ericameria nauseosa var. speciosa) only ten miles from the ocean. Hunter Creek Bog contains stands of Port Orford cedar. Unfortunately, the stand is infected with Port Orford cedar root rot (Phytophthora lateralis), a waterborne fungal root disease that may be transferred from one watershed to another by livestock, wildlife, recreationists, and motor vehicles. One can avoid spreading the spores by washing shoes and vehicle tires with a dilute solution of household chlorine bleach.

Hunter Creek and Hunter Springs Bogs

The Hunter Creek Bog ACEC contains three wetlands: one at Hunter Creek Bog and two at Hunter Springs Bog. The former, located in Section 13 and adjacent to USFS Road 3680, is most accessible. The site supports a multitude of hydric plants, including California pitcherplant, roundleaf sundew (Drosera rotundifolia), and Mendocino gentian, but no sphagnum moss. Jeffrey pine and Port Orford cedar grow on the upper slopes. Several small springs in the upper part of the basin drain into a central pond. The water has been found to be either acidic or alkaline, depending upon where the samples were taken. The reason why very few phytoplankton, periphyton, macroinvertebrates, and aquatic plants are present is not known. A yearround stream draining the pond exits through a culvert under the roadbed, flows down a rocky creek

bed to the north, and empties into Hunter Creek. The pond is situated in a depression in an ancient landslide deposit, surrounded on the east, south, and west by scarps caused by movement of the slide material away from undisturbed ground of sedimentary rocks. The roadbed follows the northern or frontal portion of the landslide. A small area of non-ultramafic rocks sits in the center of the basin.

Access to Hunter Springs Bog is steeper and brushier than that



Map of Hunter Creek ACECs. Map prepared by Jay Flora.



California pitcherplant beneath a canopy of Jeffrey pine on the upper slopes of Hunter Creek Bog. Photo by Bruce Rittenhouse.

to Hunter Creek Bog. There are two spring areas, one each on the north- and south-facing sides of the ridge. California pitcherplant and roundleaf sundew are both present. The soils are deep and water movement is not as well defined as in Hunter Creek Bog (Bowen and others 1982).

The wetlands at Hunter Creek share the characteristics that define fens and bogs (see sidebar in the White Rock Fen article, on page 31). Technically, Hunter Creek Bog is a fen (John Christy, pers. comm.). It lacks sphagnum, the topography is sloping to flat, and there is contact with groundwater (seepage and the flowing stream). Bogs typically have a pH lower than 5.5, are dominated by sphagnum, and have raised hummocks or the entire peatland domed and elevated above the influence of groundwater so incoming moisture is limited to precipitation. An intermediate situation is called "poor fen" in places where pH is below 5.5 and topography is flat, but sphagnum is present (John Christy, pers. comm.). Thorough and systematic measurements of pH as well as conductivity data would be useful. Conductivity indirectly measures how mineral-rich the water is, fens being mineral-rich and bogs being mineral-poor.

North Fork Hunter Creek

North Fork Hunter Creek empties into Hunter Creek, which drains westward into the Pacific Ocean south of Gold Beach. Five vegetation types can be found adjacent to the North Fork. Along the ridges and upper slopes are open, park-like Jeffrey pine savannas with an understory of wildflowers and bunchgrasses, including onion-grasses (*Melica harfordii*, *M. spectabilis*, and *M. subulata*) and California oatgrass (*Danthonia californica*). An Oregon white oak (*Quercus garryana* var. *garryana*) savanna is also found on the open upper slopes.

The lower slopes are covered by a mixed conifer forest composed of western white pine, Douglas fir, Jeffrey pine, and Port Orford cedar with an understory of shrubs, including huckleberry oak (*Quercus vaccinifolia*), California coffeeberry (*Rhamnus californica* ssp. occidentalis), and red huckleberry (*Vaccinium parvifolium*). A

successional scrubland of knobcone (*Pinus attenuata*) and lodgepole pine (*P. contorta*) covers areas that have burned in the last 50 years or where fires have burned repeatedly over time (Agee 1993). These fire-affected areas support an extremely dense understory of shrubs, including California coffeeberry, canyon live oak (*Quercus chrysolepis*), and tan oak (*Lithocarpus densiflorus* var. *densiflorus*). Along the streams one can walk through western sword fern (*Polystichum munitum*) shaded by Port Orford cedar, 200-year-old Douglas fir, and hardwoods such as red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), Oregon myrtle (*Umbellularia californica*), and tanoak.

Botanical Gems

Seventy-three vascular plant families are represented in the Hunter Creek ACECs with a total of 327 species, of which 7% are non-native. (A species list follows the article.) The largest family

is Asteraceae (35 species), followed by Poaceae (26 species).

Present are twelve special status vascular plant species (Oregon Natural Heritage Program (ONHP) 2001): Del Norte willow (Salix delnortensis), Mendocino gentian, Siskiyou checkerboom, Siskiyou trillium, Bolander's onion (Allium bolanderi), Gasquet manzanita, serpentine sedge (Carex serpenticula), Bolander's hawkweed (Hieracium bolanderi), Piper's bluegrass (Poa piperi), California lady slipper (Cypripedium californicum), California pitcherplant, and pink fawnlily (Erythronium revolutum).

Other rare or uncommon plants to look for at Hunter Creek ACECs are Vollmer's lily (*Lilium pardalinum ssp. vollmeri*), serpentine phacelia (*Phacelia corymbosa*), Howell's bicuitroot (*Lomatium howellii*), roundleaf sundew, fringed pinesap



Mendocino gentian growing in Hunter Creek Bog. Photo by Veva Stansell.



Riparian woodland of Port Orford cedar, Douglas fir, red alder, bigleaf maple, California laurel, and tanoak along the North Fork of Hunter Creek. Photo by Veva Stansell.

(Pleuricospora fimbriolata), evergreen everlasting (Antennaria suffrutescens), brook wakerobin (Trillium rivale), fairy slipper

(Calypso bulbosa), silky horkelia (Horkelia sericata), golden iris (Iris innominata), giant chainfern (Woodwardia fimbriata), Oregon fawnlily (Erythronium oregonum), Del Norte pea (Lathyrus delnorticus), and Scouler's woollyweed (Hieracium scouleri).

Surveys have found a total of 107 nonvascular species (26 lichens, 36 fungi, 14 liverworts, 1 hornwort, and 30 mosses) in the Hunter Creek ACECs (Wagner 2000, Clinch 2003, Mayor 2003). Two are special status species: the liverwort Calypogeia sphagnicola and the moss Pseudoleskeella serpentinensis. The present fungi list is incomplete because surveys were conducted during a dry fall when few fungi were fruiting. About 80% of our local fungi fruit only in the fall. Additional vascular and nonvascular species are likely to be added to the list when botanists survey more of the area. These lists are available online at http://www.npsoregon.org/lists/plantlists/hunter_creek.htm.

Serpentine Vegetation

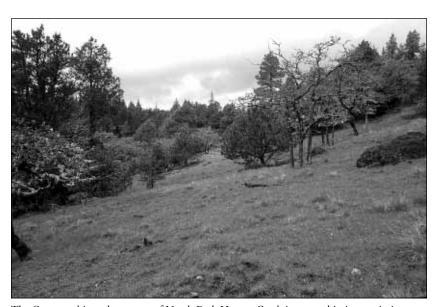
Serpentine affiliated plants in the Hunter Creek ACECs include silky horkelia, Howell's biscuitroot, bigseed biscuitroot (*L. macrocarpum*), evergreen everlasting (*Antennaria suffrutescens*), leafy fleabane (*Erigeron foliosus* var. *confinis*), Jeffrey pine, knobcone pine, common beargrass (*Xerophyllum tenax*), Siskiyou bedstraw (*Galium ambiguum ssp. siskiyouense*), western azalea (*Rhododendron occidentale*), and California pitcherplant (Brooks 1987, Kruckeberg 1984a, b, Whittaker 1960). Additional ultramafic endemics include serpentine sedge (*Carex serpenticola*), serpentine arnica (*Arnica cernua*), redwood toothwort (*Cardamine nuttallii* var. *gemmata*), Piper's bluegrass, Del Norte willow, and wedgeleaf violet (*Viola cuneata*) (Zika and others 1998). Also, Jeffrey pine and Indian's dream (*Aspidotis densa*) generally indicate ultramafic substrates in southwestern Oregon.

Wildlife

Hunter Creek ACECs have five special status wildlife species (ONHP 2001): clouded salamander, mountain quail, red-legged frog, southern torrent salamander, and winter steelhead. Over 120 wildlife species are known or have potential habitat at Hunter Creek ACECs: 16 amphibians, 12 reptiles, 63 birds, 28 mammals, and 2 fish. The list includes black-tailed deer, Roosevelt elk, black bear, cougar, bobcat, fringed myotis, lump-nosed bat, red tree vole, ringtail cat, American marten, tailed frog, and California mountain king snake.

Soils and Geology

The streams entering Hunter Creek and Hunter Spring Bogs drain over rock that contains unusually high concentrations of magnesium and iron. This rock type is sometimes referred to as ultramafic rock, from *ultra* meaning high, and *mafic* (meaning composed of magnesium [*magnesium*] and iron [Latin ferrum] + *ic*) (Kruckeberg



The Oregon white oak savanna of North Fork Hunter Creek is unusual in its proximity to the Pacific Ocean. Photo by Bruce Rittenhouse.



An open Jeffrey pine woodland with an understory of Piper's bluegrass (*Poa piperi*) on the upper slopes of North Fork Hunter Creek. Photo by Veva Stansell.

1984a, Brooks 1987). The ultramafic parent materials are serpentinite and its parent rock, periodotite. Serpentinite formed at the subduction zone of the continental plate when water released from the seafloor combined with the mantle rock (Bishop 2003). Serpentinite has a shiny green surface, polished under the pressure of slow, constant movement of continental plates. High in magnesium, but destitute of plant-sustaining elements such as potassium and sodium, serpentinite and perioditite zones support only meager vegetative cover.

The soils in the Hunter Creek ACECs are deep, fine, cobbly, silty, clay loams formed in materials weathered from serpentine and peridotite. Depth to bedrock is at least 40 inches. Serpentinite readily flakes apart and weathers to clay-sized particles, which are red from the oxidized iron. Thus, soils are reddish brown to red in color, and contain about 10 to 30 percent rock fragments. The soil in the bog is probably only a few feet deep. Though not described as a soil series, it is a black, poorly drained organic soil (histosol), influenced by the perched water table flowing over the ultramafic bedrock.

Human History

Cultural resources found within the Hunter Creek ACECs include a prehistoric stone tool manufacturing site on a ridge top near Hunter Creek Bog and a temporary campsite on a riverside bench near North Fork Hunter Creek (BLM 1996). When Europeans began exploring the region, Athapascan-speaking people called the Tututni lived there. The temporary camp site along North Fork Hunter Creek was probably where Tututni gathered and processed resources, such as acorns from Oregon white oak and roots of brodiaea and small camas. The main Tututni village was located on the Rogue River, about five miles to the north. Tututni people were killed, scattered, or removed to the Siletz Reservation following the Rogue Indian Wars (1855 and 1856). Today, the Confederated Tribes of Siletz Indians is the federally-recognized tribe for descendants of Tututni people.

Signal Butte, a high point to the north of the ACEC on National Forest land, was named for the stone rings found on top that early pioneers believed were remnants of signal fire pits. Some think that the stone circles were spirit quest sites where young Tututni men fasted in seclusion for several days (Curtis 1924).

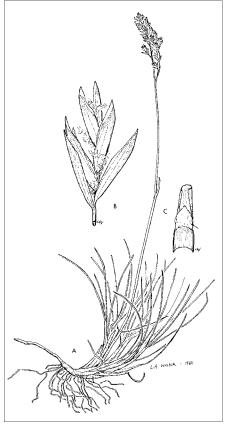
During the late 1800s and the early 1900s, homesteaders came to the North Fork Hunter Creek area. Two cabin locations are documented (BLM 1996). The Wren family built a cabin, grazed sheep and cattle, and dammed a small spring for livestock water, an impoundment now known as Wren Pond. Portions of several historic trails are still traceable, forming a network linking the homesteads along Hunter Creek to the Rogue River valley. The Crook family grazed sheep and cattle in the area until the 1960s. In past decades, trespass cattle have grazed the meadows and efforts are underway to remove them. McKinley Mine, located on the western slope of Signal Butte on National Forest land, is a copper, gold, silver and iron mine dating from the 1930s and 1940s. Other nearby chromite mines were also active during that time and during World War II.

Visiting Hunter Creek ACECs

Spring, summer, and early fall are good times to visit the Hunter Creek ACECs. South of Gold Beach, turn east near Milepost 331 on County Road 665, then right onto Hunter Creek Road. Follow the paved road for 4.9 miles, when it turns to dirt and is called USFS Road 3680. The dirt road crosses the Hunter Creek drainage. Continue west about 5.6 miles, up the mountain slope through an

old clearcut. Past the top, a basin of bare red soil will catch your eye. If you'd like to see the Hunter Creek Bog, park at a pullout on the south side of the road. Rubber boots or waders are recommended to enter the bog, though you can observe it from the ridgeline to the west. The entry is made difficult by dense brush, but the interior is more open.

To visit the forested zones of North Fork of Hunter Creek you will need a day pack, good boots, a map, and plenty of time, as the area can be visited only on foot. The southern terminus of the



Piper's bluegrass is a dioecious, rhizomatous perennial found in serpentine forest openings. A, habit; B, spikelet; C, opened leaf sheath showing ligule. Illustration by Linda Ann Vorobik.

Stone Chair trailhead is located just past the Hunter Creek Bog, but it is difficult to find as it is unmarked. Easier access and the advantage of walking downhill from the highest point are gained via the northern terminus of the Stone Chair trail. The trail is named for rocks grouped in the shape of a chair. The unmarked trailhead is located off of USFS Road 195, approximately 6.4 miles past Hunter Creek Bog. The trail winds through the open Jeffrey pine forest. Hikers are eventually rewarded with distant views of the Pacific Ocean. Visitor etiquette calls for taking nothing but pictures and leaving nothing but footprints. Off-road vehicles are not permitted.



Lichen-covered rocks in the shape of a chair, for which the Stone Chair trail is named, sit in a California oatgrass opening among Jeffrey pine. Photo by Bruce Rittenhouse.

Acknowledgments

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The species lists for Hunter Creek Bog and North Fork Hunter Creek ACECs were compiled from the following sources: BLM (1996), Zika and others (1998), Forest Service (1997), and Veva Stansell. Nomenclature for vascular plants follows the checklist for the Oregon Flora Project. Names of taxa native to Oregon are printed in italic *Garamond*; alien taxa are in italic *Gill Sans*, a sans-serif type. The symbol * indicates Special Status Species and # indicates serpentine affiliate.

Vascular Plant Species List

FERNS AND THEIR ALLIES

BLECHNACEAE (Deer Fern Family)

Blechnum spicant (L.) Sm. (deer fern)

Woodwardia fimbriata Sm. (giant chainfern)

DENNSTAEDTIACEAE (Bracken Family)

Pteridium aquilinum (L.) Kuhn var. pubescens L. Underw. (bracken)

DRYOPTERIDACEAE (Wood Fern Family)

Athyrium filix-femina (L.) Mert. ssp. cyclosorum Rupr.

(northwestern ladyfern)

Polystichum imbricans (D.C. Eaton) D.H. Wagner ssp. imbricans (narrowleaf swordfern)

Polystichum munitum (Kaulf.) C. Presl (western swordfern)

EQUISETACEAE (Horsetail Family)

Equisetum arvense L. (field horsetail)

Equisetum telmateia Ehrh. ssp. braunii (Milde) Milde (giant horsetail)

POLYPODIACEAE (Polypody Family)

Polypodium glycyrrhiza D.C. Eaton (licorice fern)

PTERIDACEAE (Brake Family)

Adiantum aleuticum (Rupr.) C.A. Paris (northern maidenhair fern)

Aspidotis densa (Brack.) Lellinger (podfern)

Cheilanthes gracillima D.C. Eaton (lace lipfern)

Pentagramma triangularis (Kaulf.) Yatsk., Windham, E.

Wollenw. (goldback fern)

SELAGINELLACEAE (Spike-Moss Family)

Selaginella wallacei Hieron. (Wallace's spikemoss)

GYMNOSPERMS

CUPRESSACEAE (Cypress Family)

Chamaecyparis lawsoniana (A. Murray bis) Parl. (Port Orford cedar) *Juniperus communis* L. var. *saxatilis* Pall. (common juniper)

PINACEAE (Pine Family)

#Pinus attenuata Lemmon (knobcone pine)

Pinus contorta Douglas ex Loudon var. contorta (shore pine)

Pinus contorta Douglas ex Loudon var. latifolia Engelm.

(lodgepole pine)

#Pinus jeffreyi Balf. (Jeffrey pine)

Pinus lambertiana Douglas (sugar pine)

#Pinus monticola D. Don (western white pine)

Pseudotsuga menziesii (Mirb.) Franco var. menziesii (Douglas fir)

Tsuga heterophylla (Raf.) Sarg. (western hemlock)

TAXACEAE (Yew Family)

Taxus brevifolia Nutt. (Pacific yew)

DICOTYLEDONS

ACERACEAE (Maple Family)

Acer circinatum Pursh (vine maple)
Acer macrophyllum Pursh (bigleaf maple)

ANACARDIACEAE (Sumac Family)

Toxicodendron diversilobum (Torr. & A. Gray) Greene (poison oak)

APIACEAE (Carrot Family)

Angelica arguta Nutt. (shining angelica)

Heracleum lanatum Michx. (cowparsnip)

Ligusticum apiifolium (Nutt.) A. Gray (celery leaved lovage)

Lomatium hallii (S. Watson) J.M. Coult. & Rose (Hall's biscuitroot)

#Lomatium howellii (S. Watson) Jeps. (Howell's biscuitroot)

#Lomatium macrocarpum (Nutt.) J.M. Coult. & Rose (bigseed biscuitroot)

Lomatium martindalei J.M. Coult. & Rose (cascade desertparsley)

Lomatium triternatum (Pursh) J.M. Coult. & Rose var.

triternatum (nineleaf bisuitroot)

Lomatium utriculatum (Nutt.) J.M. Coult. & Rose (common lomatium)

Oenanthe sarmentosa C. Presl ex DC. (water parsley)

Osmorhiza berteroi DC. (sweetcicely)

Perideridia oregana (S. Watson) Mathias (squaw potato)

Sanicula bipinnatifida Dougl. ex Hook. (purple sanicle)

Sanicula crassicaulis Poepp. (Pacific snakeroot)

Sanicula laciniata Hook. & Arn. (coast snakeroot)

APOCYNACEAE (Dogbane Family)

Apocynum androsaemifolium L. (spreading dogbane)

ARALIACEAE (Ginseng Family)

Aralia californica S. Watson (elk clover)

ARISTOLOCHIACEAE (Birthwort Family)

Asarum caudatum Lindl. (wild ginger)

ASTERACEAE (Sunflower Family)

Achillea millefolium L. (common yarrow)

Adenocaulon bicolor Hook. (trailplant)

Anaphalis margaritacea (L.) Benth. & Hook. f. (pearly everlasting)

Anisocarpus madioides Nutt. (woodland madia)

#Antennaria suffrutescens Greene (evergreen everlasting)

#Arnica cernua Howell (serpentine arnica)

Arnica cordifolia Hook. (heartleaf arnica)

Baccharis pilularis DC. (coyotebrush)

Bellis perennis L. (lawndaisy)

Cirsium remotifolium (Hook.) DC. (fewleaf thistle)

Crepis pleurocarpa A. Gray (naked hawksbeard)

Crocidium multicaule Hook. (common spring-gold)

Ericameria nauseosa (Pall. ex Pursh) G.L. Nesom & G.I. Baird var. speciosa (Nutt.) G.L. Nesom & G.I. Baird (rubber rabbitbrush)

Erigeron eatonii A. Gray var. plantagineus (Greene) Cronquist

(plantain leaved daisy)

#Erigeron foliosus Nutt. var. confinus (Howell) Jeps. (leafy fleabane)

Eriophyllum lanatum (Pursh) J. Forbes (common woolly sunflower)

Aster radulinus A, Gray (rough leaved aster)

Grindelia nana Nutt. (gumweed)

Hieracium albiflorum Hook. (white hawkweed)

*Hieracium bolanderi A. Gray (Bolander's hawkweed)

Hieracium scouleri Hook. (Scouler's woollyweed)

Hypochaeris radicata L. (hairy catsear)

Lactuca saligna L. (willowleaf lettuce)

Leucanthemum maximum (Ramond) DC. (max chrysanthemum)

Luina hypoleuca Benth. (littleleaf silverback)

Micropus californicus Fisch. & C.A. Mey. (slender cottonweed)

Microseris laciniata (Hook.) Sch. Bip. ssp. leptosepala (Nutt.)

K.L. Chambers (cutleaf silverpuffs)

Petasites frigidus (L.) Fr. var. palmatus (Aiton) Cronquist (arctic sweet coltsfoot)

Rudbeckia glaucescens Eastw. (waxy coneflower)

Senecio bolanderi A. Gray var. bolanderi (Bolander's groundsel)

Senecio canus Hook. (woolly groundsel)

Senecio jacobaea L. (stinking willie)

Senecio macounii Greene (Puget butterweed)

Senecio triangularis Hook. (arrowleaf ragwort)

Taraxacum officinale Weber ex F.H. Wigg. (common dandelion)

BERBERIDACEAE (Barberry Family)

Achlys triphylla (Sm.) DC. (vanillaleaf)

Berberis aquifolium Pursh (tall Oregon grape)

Berberis nervosa Pursh (Cascade Oregon grape)

Berberis repens Lindl. (creeping Oregon grape)

Vancouveria hexandra (Hook.) C. Morren & Decne. (white insideout flower)

Vancouveria planipetala Calloni (small insideout flower)

BETULACEAE (Birch Family)

Alnus rubra Bong. (red alder)

Corylus cornuta Marshall var. californica (A. DC.) W.M. Sharp (California hazelnut)

BORAGINACEAE (Borage Family)

Cynoglossum grande Douglas ex Lehm. (Pacific hound's tongue)

Myosotis discolor Pers. (yellow and blue scorpion grass)

BRASSICACEAE (Mustard Family)

#Cardamine nuttalli Greene var. gemmata (Greene) Rollins (redwood toothwort)

Streptanthus tortuosus Kellogg (mountain jewel flower)

CAMPANULACEAE (Harebell Family)

Campanula prenanthoides Durand (California harebell)

CAPRIFOLIACEAE (Honeysuckle Family)

Linnaea borealis L. var. longiflora Torr. (western twinflower)
 Lonicera ciliosa (Pursh) Poir. ex DC. (orange honeysuckle)
 Lonicera hispidula (Lindl.) Douglas ex Torr. & A. Gray (hairy honeysuckle)

Symphoricarpos albus (L.) S.F. Blake var. laevigatus Fernald (common snowberry)

CARYOPHYLLACEAE (Pink Family)

Cerastium arvense L. (field chickweed)

Moehringia macrophylla (Hook.) Fenzl (bigleaf sandwort)

Silene campanulata S. Watson ssp. glandulosa C.L. Hitchc. & Maguire (slender campion)

Silene gallica L. (windmill pink)

CONVOLVULACEAE (Morning Glory Family)

Calystegia atriplicifolia Hallier f. (nightblooming false bindweed) Calystegia occidentalis (A. Gray) Brummitt (pale morning glory)

CRASSULACEAE (Stonecrop Family)

Sedum laxum (Britton) A. Berger ssp. laxum (rose flowered stonecrop) Sedum spathulifolium Hook. (broadleaf stonecrop)

CUCURBITACEAE (Gourd Family)

Marah oreganus (Torr. & A. Gray) Howell (old man in the ground)

DROSERACEAE (Sundew Family)

Drosera rotundifolia L. (roundleaf sundew)

ERICACEAE (Heath Family)

Allotropa virgata Torr. & A. Gray ex A. Gray (sugar stick)

Arbutus menziesii Pursh (Pacific madrone)

Arctostaphylos columbiana Piper (hairy manzanita)

*Arctostaphylos hispidula Howell (Gasquet manzanita)

#Arctostaphylos nevadensis A. Gray (pinemat manzanita)

Arctostaphylos uva-ursi (L.) Spreng. (kinnikinnick)

Chimaphila menziesii (R. Br.) Spreng. (little prince's pine)

Chimaphila umbellata (L.) W. Bartram (pipsissewa)

Gaultheria shallon Pursh (salal)

Ledum glandulosum Nutt. (western Labrador-tea)

Monotropa hypopitys L. (pinesap)

Pleuricospora fimbriolata A. Gray (fringed pinesap)

Pyrola picta Sm. (whiteveined wintergreen)

Rhododendron macrophyllum D. Don ex G. Don (Pacific rhododendron)

#Rhododendron occidentale (Torr. & A. Gray) A. Gray (western azalea)

Vaccinium ovatum Pursh (evergreen blueberry)

Vaccinium parvifolium Sm. (red huckleberry)

FABACEAE (Legume Family)

Lathyrus delnorticus C.L. Hitchc. (Del Norte pea)

Lathyrus nevadensis S. Watson var. nevadensis (Sierra pea)

Lotus formosissimus Greene (seaside lotus)

Lupinus bicolor Lindl. (minature lupine)

Lupinus sp. (lupine)

Medicago lupulina L. (black medic)

Pediomelum californicum (S. Wats.) Rydb. (California Indian breadroot)

Thermopsis gracilis Howell (golden pea)

Trifolium albopurpureum Torr. & A. Gray var. dichotomum

(Hook. & Arn.) Isely (branched Indian clover)

Trifolium longipes Nutt. (longstock clover)

Trifolium subterraneum L. (subterranean clover)

Vicea americana Muhl. ex Willd. ssp. americana (American vetch)

FAGACEAE (Oak Family)

Chrysolepis chrysophylla (Douglas ex Hook.) Hjelmq. (golden chinquapin)

Lithocarpus densiflorus (Hook. & Arn.) Rehder var. densiflorus (tan oak)

#Quercus chrysolepis Liebm. (canyon live oak)

Quercus garryana Douglas ex Hook. var. garryana (Oregon white oak)

Quercus sadleriana R. Br. (deer oak)

Quercus vaccinifolia Kellogg (huckleberry oak)

FUMARIACEAE (Fumitory Family)

Dicentra formosa (Andrews) Walp. (Pacific bleeding heart)

GARRYACEAE (Silk Tassel Family)

Garrya buxifolia A. Gray (dwarf silktassel)

Garrya fremontii Torr. (bearbrush)

GENTIANACEAE (Gentian Family)

Gentiana affinis Griseb. (pleated gentian)

*Gentiana setigera A. Gray (Mendocino gentian)

GROSSULARIACEAE (Gooseberry Family)

Ribes menziesii Pursh (coast prickly gooseberry)

Ribes roezlii Regel var. cruentum (Greene) Rehder (shinyleaf currant)

Ribes sanguineum Pursh (redflower currant)

HYDRANGEACEAE (Hydrangea Family)

Whipplea modesta Torr. (whipplevine)

HYDROPHYLLACEAE (Waterleaf Family)

Eriodictyon californicum (Hook. & Arn.) Torr. (yerba santa)

Nemophila menziesii Hook. & Arn. var. atomaria (Fisch. & C.A.

Mey.) H.P. Chandler (baby blue eyes)

Nemophila parviflora Dougl. ex Benth. (smallflower nemophila)

Phacelia bolanderi A. Gray (Bolander's phacelia)
Phacelia corymbosa Jeps. (serpentine scorpionweed)

LAMIACEAE (Mint Family)

Prunella vulgaris L. (common selfheal)

Satureja douglasii (Benth.) Briq. (yerba buena)

LAURACEAE (Laurel Family)

Umbellularia californica (Hook. & Arn.) Nutt. (Oregon myrtle)

LINACEAE (Flax Family)
Linum bienne Mill. (pale flax)
MALVACEAE (Mallow Family)

*Sidalcea malviflora (DC.) A. Gray ssp. patula C.L. Hitchc.

(mallow sidalcea)

MYRICACEAE (Wax Myrtle Family)

Myrica californica Cham. & Schltdl. (Pacific wax myrtle)

OLEACEAE (Olive Family)

Fraxinus latifolia Benth. (Oregon ash)

ONAGRACEAE (Evening-Primrose Family)

Epilobium brachycarpum C. Presl (tall annual willowherb)

Epilobium minutum Lindl. (small flowered willowherb)

OROBANCHACEAE (Broom-Rape Family)

Boschniakia strobilacea A. Gray (California groundcone)

Orobanche uniflora L. (oneflowered broomrape)

OXALIDACEAE (Oxalis Family)

Oxalis oregana Nutt. ex Torr. & A. Gray (redwood sorrel)

Oxalis suksdorfii Trel. (Suksdorf's woodsorrel)

PARNASSIACEAE (Grass of Parnassus Family)

Parnassia californica (A. Gray) Greene (California grass of Parnassus)

PLANTAGINACEAE (Plantain Family)

Plantago lanceolata L. (narrowleaf plantain)

POLEMONIACEAE (Phlox Family)

Collomia heterophylla Hook. (variableleaf collomia)

Gilia capitata Sims (bluehead gilia)

Linanthus bicolor (Nutt.) Greene (bicolored linanthus)

Phlox diffusa Benth. (spreading phlox)
Phlox gracilis (Hook.) Greene (slender phlox)

POLYGALACEAE (Milkwort Family)

Polygala californica Nutt. (California milkwort)

POLYGONACEAE (Buckwheat Family)

Eriogonum ternatum Howell (ternate buckwheat)

Rumex acetosella L. (common sheep sorrel)

PORTULACACEAE (Purslane Family)

Claytonia sibirica L. (candy flower)

Montia parvifolia (Moç. ex DC.) Greene (littleleaf minerslettuce)

PRIMULACEAE (Primrose Family)

Dodecatheon hendersonii A. Gray (Henderson's shooting star)

Trientalis latifolia Hook. (broadleaf starflower)

RANUNCULACEAE (Buttercup Family)

Anemone oregana A. Gray (blue windflower)

Aquilegia formosa Fisch. ex DC. (western columbine)

Coptis laciniata A. Gray (Oregon goldthread)

Ranunculus aquatilis L. (whitewater crowfoot)

Ranunculus californicus Benth. (California buttercup)

Ranunculus occidentalis Nutt. (western buttercup)

RHAMNACEAE (Buckthorn Family)

#Ceanothus pumilus Greene (dwarf ceanothus)

Ceanothus thyrsiflorus Eschsch. (blueblossom)

Rhamnus californica Eschsch. ssp. occidentalis (Howell) C.B.

Wolf (California coffeeberry)

Rhamnus purshiana DC. (cascara)

ROSACEAE (Rose Family)

Amelanchier alnifolia (Nutt.) Nutt. ex M. Roem. var.

semiintegrifolia (Hook.) C.L. Hitchc. (Saskatoon serviceberry)

Aphanes arvensis L. (field parsley piert)

Fragaria vesca L. (woodland strawberry)

Fragaria virginiana Duchesne (Virginia strawberry)

Holodiscus discolor (Pursh) Maxim. (oceanspray)

#Horkelia sericata S. Watson (silky horkelia)

Physocarpus capitatus (Pursh) Kuntze (Pacific ninebark)

Rosa gymnocarpa Nutt. (dwarf rose)

Rubus leucodermis Douglas ex Torr. & A. Gray (western blackcap)

Rubus parviflorus Nutt. (thimbleberry) Rubus spectabilis Pursh (salmonberry)

Rubus ursinus Cham. & Schltdl. (Pacific dewberry)

Sanguisorba officinalis L. (great burnet)

Spiraea douglasii Hook. (rose spirea)

RUBIACEAE (Madder Family)

#Galium ambiguum W. Wight var. siskiyouense Ferris (Siskiyou bedstraw)

Galium aparine L. (stickywilly)

Galium triflorum Michx. (fragrant bedstraw)

Sherardia arvensis L. (blue fieldmadder)

SALICACEAE (Willow Family)

*Salix delnortensis C.K. Schneid. (Del Norte willow)

Salix sitchensis Sanson ex Bong. (Sitka willow)

SARRACENIACEAE (Pitcherplant Family)

#*Darlingtonia californica Torr. (California pitcherplant)

SAXIFRAGACEAE (Saxifrage Family)

Boykinia occidentalis Torr. & A. Gray (coast boykinia)

Chrysosplenium glechomifolium Nutt. (Pacific golden saxifrage)

Mitella sp. (mitrewort)

Saxifraga howellii Greene (Howell's saxifrage)

Tolmiea menziesii (Pursh) Torr. & A. Gray (piggyback plant)

SCROPHULARIACEAE (Figwort Family)

Castilleja pruinosa Fernald (frosted paintbrush)

Collinsia grandiflora Douglas ex Lindl. (large flowered blue eyed Mary)

Collinsia rattanii A. Gray (sticky blue eyed Mary)

Digitalis purpurea L. (purple foxglove)

Mimulus guttatus DC. (seep monkeyflower)

Mimulus moschatus Douglas ex Lindl. (musk monkeyflower)

Penstemon anguineus Eastw. (Siskiyou beardtongue)

Penstemon azureus Benth. ssp. azureus (azure penstemon)

Penstemon laetus A. Gray (mountain blue penstemon)

Synthyris reniformis (Douglas ex Benth.) Benth. (snowqueen)

Triphysaria pusilla (Benth.) T.I. Chuang & Heckard (dwarf owl clover)

VALERIANACEAE (Valerian Family)

Plectritis ciliosa (E. Greene) Jeps. ssp. ciliosa (longspur seablush)

Plectritis congesta (Lindl.) DC. (shortspur seablush)

VIOLACEAE (Violet Family)

Viola adunca Sm. (hooked spur violet)

#Viola cuneata S. Watson (wedgeleaf violet)

Viola glabella Nutt. ex Torr. & A. Gray (pioneer violet)

Viola lanceolata L. (lance leaved violet)

Viola sempervirens Greene (redwoods violet)

VISCACEAE (Mistletoe Family)

Arceuthobium monticola Hawksw., Wiens & Nickrent (western white pine dwarf mistletoe)

Arceutobium siskiyouense Hawksw., Wiens & Nickrent (knobcone pine dwarf mistletoe)

MONOCOTYLEDONS

CYPERACEAE (Sedge Family)

Carex concinnoides Mack. (northwestern sedge)

Carex deweyana Schwein. ssp. leptopoda (Mack.) Calder & Roy

L. Taylor (Dewey's sedge)

Carex echinata Murray (stellate sedge)

Carex hendersonii L.H. Bailey (Henderson's sedge)

Carex leptalea Wahlenb. (bristly stalked sedge)

Carex mendocinensis Olney (Mendocino sedge)

Carex obnupta L.H. Bailey (slough sedge)

Carex pachystachya Cham. ex Steud. (thick headed sedge)

Carex rossii W. Boott (Ross' sedge)

Carex scabriuscula Mack. (Cascade sedge)

#Carex serpenticola Zika (serpentine sedge)

Carex tumulicola Mack. (foothill sedge)

Scirpus criniger A. Gray (fringed cottongrass)

Scirpus sp. (bulrush)

IRIDACEAE (Iris Family)

Iris innominata L.F. Hend. (golden iris)

Iris tenax Douglas ex Lindl. (Oregon iris)

Sisyrinchium bellum S. Watson (beautiful blue eyed grass)

Sisyrinchium californicum (Ker Gawl.) Dryand. (golden eyed grass) Sisyrinchium idahoense E.P. Bicknell (Idaho blue eyed grass)

JUNCACEAE (Rush Family)

Juncus bolanderi Engelm. (Bolander's rush)

Juncus effusus L. (common rush)

Juncus oxymeris Engelm. (pointed rush)

Juncus tenuis Willd. (slender rush)

Luzula comosa E. Mey. (Pacific woodrush)

LILIACEAE (Lily Family)

Allium amplectens Torr. (narrowleaf onion)

*Allium bolanderi S. Watson var. bolanderi (Bolander's onion)

Allium bolanderi S. Watson var. mirabile (L.F. Hend.) McNeal

(potato bulb Bolander's onion)

Allium siskiyouense Ownbey ex Traub (Siskiyou onion)

Allium validum S. Watson (swamp onion)

Brodiaea elegans Hoover (harvest brodiaea)

Calochortus tolmiei Hook. & Arn. (Oregon mariposa lily)

Camassia quamash (Pursh) Greene var. quamash (small camas)

Dichelostemma congestum (Sm.) Kunth (ookow)

Erythronium oregonum Applegate (Oregon fawnlily)

*Erythronium revolutum Sm. (pink fawnlily)

Fritillaria affinis (Schult.) Sealy (checker lily)

Hastingsia alba (Durand) S. Watson (white rushlily)

Lilium columbianum Hanson (Columbia lily)

Lilium paradalinum Kellogg ssp. vollmeri (Eastw.) M.W. Skinner, ined. (Vollmer's lily)

Maianthemum racemosum (L.) Link ssp. amplexicaule (Nutt.)

LaFrankie (western Solomon plume)

Maianthemum stellatum (L.) Link (starry false Solomon's seal)

Narthecium californicum Baker (bog asphodel)

Prosartes hookeri Torr. (Oregon fairybells)

Prosartes smithii (Hook.) Utech, Shinwari & Kawano

(largeflower fairybells)

Triantha glutinosa (Michx.) Baker (sticky tofieldia)

*Trillium kurabayashii J.D. Freeman (giant purple wakerobin)

Trillium ovatum Pursh (western trillium)

Trillium rivale S. Watson (brook wakerobin)

Triteleia bridgesii (S. Watson) Greene (Bridges' triteleia)

Triteleia hyacinthina (Lindl.) Greene (white brodiaea)

#Xerophyllum tenax (Pursh) Nutt. (beargrass)

Zigadenus micranthus Eastw. (smallflower death camas)

ORCHIDACEAE (Orchid Family)

Calypso bulbosa (L.) Oakes (fairy slipper)

Corallorhiza maculata (Raf.) Raf. (spotted coralroot)

Corallorhiza mertensiana Bong. (Pacific coralroot)

*Cypripedium californicum A. Gray (California lady slipper)

Goodyera oblongifolia Raf. (western rattlesnake plantain)

Listera cordata (L.) R. Br. (heartleaf twayblade)

Piperia unalascensis (Spreng.) Rydb. (Alaska rein orchid)

Platanthera sparsiflora (S. Watson) Schltr. (sparse-flowered bog orchid)

POACEAE (Grass Family)

Achnatherum lemmonii (Vasey) Barkworth (Lemmon's needlegrass)

Aira caryophyllea L. (European silver hairgrass)

Anthoxanthum odoratum L. (sweet vernalgrass)

Bromus carinatus Hook. & Arn. (California brome)

Bromus vulgaris (Hook.) Shear (Columbia brome)

Calamagrostis nutkaensis (J. Presl) Steud. (Pacific reedgrass)

Cynosurus echinatus L. (hedgehog dogtail)

Dactylis glomerata L. (orchardgrass)

Danthonia californica Bol. (California oatgrass)

Deschampsia cespitosa (L.) P. Beauv. (tufted hairgrass)

Deschampsia elongata (Hook.) Munro (slender hairgrass)

Elymus glaucus Buckley (blue wildrye)

Festuca californica Vasey (California fescue)

Festuca idahoensis Elmer (Idaho fescue)

Festuca roemeri Yu.E. Alexeev (Roemer's fescue)

Festuca rubra L. (red fescue)

Hierochloe occidentalis Buckley (California sweetgrass)

Koeleria macrantha (Ledeb.) Schult. (prairie Junegrass)

Melica harfordii Bol. (Harford's oniongrass)

Melica spectabilis Scribn. (purple oniongrass)

Melica subulata (Griseb.) Scribn. (Alaska oniongrass)

*Poa piperi Hitchc. (Piper's bluegrass)

Poa pratensis L. (Kentucky bluegrass)

Schedonorus phoenix (Scop.) Holub (tall fescue)

Trisetum canescens Buckley (tall trisetum)

Vulpia bromoides (L.) Gray (six weeks fescue)

POTAMOGETONACEAE (Pondweed Family)

Potamogeton sp. (pondweed)

TYPHACEAE (Cattail Family)

Typha latifolia L. (broadleaf cattail)

Nancy J. Brian has been the District Botanist for the Coos Bay District since 2001. Prior to that, she was the Botanist for Grand Canyon National Park.