# OREGON PLANTS, OREGON PLACES

# Marys Peak Scenic Botanical Area

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Marys Peak from Fitton Green Natural Area near Corvallis at sunset. Marys Peak is the highest point (4,097 feet) in the Oregon Coast Range. Photo by Phillip Hays.

t 4,097 ft, Marys Peak¹ is the highest mountain in the Coast Range of Oregon and is a prominent landmark in the central Willamette Valley. Its summit offers panoramic views of the Cascade Mountains, Willamette Valley and the Pacific Ocean. The paved roads and extensive trails allow easy access for recreation on the peak. Marys Peak is located 15 miles southwest of Corvallis at the western edge of the Willamette Valley and 25 miles from the Pacific Ocean. It is about an hour drive from Philomath and Corvallis by U.S. Highway 34 and the Marys Peak Forest Roads 30 and 3010. It is less than three hours driving time from the large metropolitan centers of Portland, Eugene, and Salem.

In 1989 the Siuslaw National Forest established the Marys Peak Scenic Botanical Special Interest Area (SBSIA) in recognition of its scenic, botanical and recreational values. The 924-acre SBSIA is located on the higher elevations of the peak. There are about 130 acres of grass meadows on the top of the mountain. A xeric rock garden is to the southwest of the summit and pure stands of noble fir (*Abies procera*) grow on the peak. The headwaters of Parker Creek start as a spring in the dense noble fir forest just below the summit.

## Vegetation

Marys Peak is on the eastern edge of the Coast Range Physiographic Province (Baldwin 1992, Franklin and Dyrness 1988) and located in the Coast Range Ecoregion (Loy *et al.* 2001). The vegetation of the lower elevations of Marys Peak is typical of the Coast Range Province, however the higher elevation plant communities on the peak are unusual in the Coast Range. The SBSIA encompasses several vegetation types, including noble fir forest, Douglas fir forest, riparian, grassland and rock garden.

<sup>1</sup> Place names in the United States generally do not use the possessive apostrophe on federal maps and signs. The United States Board on Geographic Names, which has responsibility for formal naming of municipalities and geographic features, has deprecated the use of possessive apostrophes since 1890 so as not to show ownership of the place.

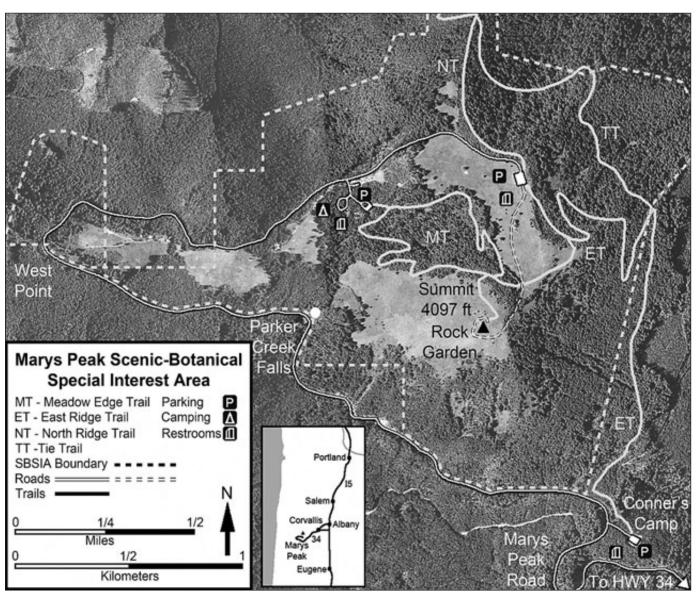
Marys Peak is of special botanical interest because of its many diverse plant communities. In a study of disjunct species with xeric affinities west of the Cascades, Detling (1953) examined several Coast Range and western Cascade mountains, including Marys Peak. He hypothesized that during the warm dry period that prevailed between 6,000 and 4,000 years ago, a xeric flora advanced from southern and eastern Oregon into more mesic northwestern Oregon. Subsequently, when conditions became moister and cooler, these xeric species persisted in thin-soil habitats on mountain tops. For example, prostrate lupine (*Lupinus lepidus*) was thought to have originated in central Oregon, and sulphur flowered buckwheat (Eriogonum umbellatum) from the Rogue area. The affinities of the flora with more northern and more montane elements is evident in the dominance of noble fir and small assemblages of plants that emerge at the edge of melting snow, such as glacier lily (Erythronium grandiflorum).

**Floristics** 

#### Forest Types

The moist north slopes are dominated by noble fir near the top, and by Douglas fir (*Pseudostuga menziesii*) and western hemlock (*Tsuga heterophylla*) at lower elevations. Trees on the lower ridges are younger because of past fires, but some larger trees have survived in the valleys. The drier east slopes support old growth Douglas fir at lower elevations, which is gradually replaced by noble fir near the top. Douglas fir also dominates the south-facing slopes at lower elevations, with a band of vine maple at the border with the meadows near the top. The windward west slopes, wet in winter and dry in summer, sustain forests of hemlock and Douglas fir.

Although the lower slopes of the mountain have been logged extensively, the only logging in the summit area was a small salvage operation in the 1980s to remove wind-thrown trees from a campground. The mountain has been burned occasionally as evidenced by tree age structure, snags, charcoal and fire scars. Two



Marys Peak is located 15 miles southwest of Corvallis and about 25 miles from the Pacific Ocean. At the top of the mountain is the Marys Peak Scenic Botanical Special Interest Area. Map prepared by Phillip Hays.

fires, one on the north-facing slope in 1908 and another on the west-facing slope in 1932, did not reach the summit (Merkle 1951).

The almost pure noble fir forest at the summit of Marys Peak is the most extensive stand of this species in the Coast Range. First described by Merkle (1951), this stand extends in elevation slightly above the Western Hemlock Zone. The noble fir forest is about 150 to 200 years old with only a few sentinels of 250 years. These huge trees form a closed canopy high above a dense carpet of Oregon woodsorrel (*Oxalis oregana*) and other herbaceous flowering plant species. Wind damage to the forest is apparent, especially as gaps created by windfalls at the forest-meadow edge.

Noble fir rarely forms extensive stands and its distribution is limited to elevations above 3,500 ft (Franklin and Dyrness 1988) in the Cascade and Coast ranges in the Pacific Northwest and northern California. It is found mostly in the Cascade Range with isolated populations on peaks in the Willapa Hills of southwestern Washington extending south into the Coast Range of Oregon.

## Riparian

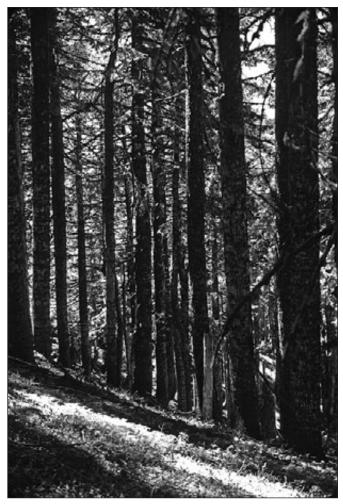
Parker Creek originates in the noble fir forest on the north slope of the peak. A narrow riparian strip lines the creek which plunges west and southward from the summit. Many species grow only in or near the stream, including slender bog orchid (*Platanthera stricta*), star-shaped mitrewort (*Mitella caulescens*), false bugbane (*Trautvetteria carolinensis*), twisted stalk (*Streptopus amplexifolius*), and trillium-leaved oxalis (*Oxalis trilliifolia*). The creek cascades down to Parker Creek Falls, bordered in the summer with the yellow flowers of clasping arnica (*Arnica amplexicaulis*).

# Grassland Types

A grass bald of about 130 acres forms a prominent feature at the top of the mountain. Growing among the dense grasses are many showy forbs, including an extensive population of tiger lilies (*Lilium columbianum*) that color the meadow orange in summer. Western fritillaries, swallowtails and blue butterflies gather nectar from lilies, violets, yarrow and other perennials in the meadows.

Snow (1984) identified three grass and forb associations in the bald: a Festuca roemeri/Agrostis diegoensis/Carex californica community, an arrowleaf groundsel (Senecio triangularis) community and an Oregon iris (Iris tenax) community. The fescue/bentgrass/ sedge community dominates most of the bald area; prominent forbs in it include tiger lily and western longspur violet (Viola adunca). This community has three phases: a species-poor dry phase on south slopes, a forb-rich assemblage on west slopes that is dominated by bracken fern (Pteridium aquilinum), and a disturbed phase with forbs, grasses and some ruderal species. The arrowleaf groundsel community grows on the north-facing slopes and in sheltered areas at meadow edges. In this type, areas around deep snowbanks have large populations of glacier lily, which is unusual in the Coast Range. These meadows are dotted with these bright yellow lilies in late spring just after the snow melts. The iris meadow in the saddle between the peak and the west point is home to wild strawberry (Fragaria virginiana) and field chickweed (Cerastium arvense).

The originally expansive, inter-connected meadow system has been significantly reduced in size by the encroachment of noble fir. This trend of shrinking grassland/meadow extent has been observed over the entire Pacific Northwest region during the past



The almost pure forest of noble fir (*Abies procera*) on Marys Peak is the largest stand in the Coast Range. Photo by Bob Frenkel.

century. Five open grassy meadows in the Oregon Coast Range, including those on Marys Peak, decreased by 66% during the past 50 years, primarily from trees establishing along the margins (Zald 2009). Even so, among the mountains studied, Marys Peak had the smallest relative decline in grass bald area (~34%). Recently, this forest encroachment has been relatively rapid, at 0.3 to 1.6 feet per year (Hadley and Savage 1996).

Tree invasion is controlled by environmental factors (soil, light and moisture) as well as by plant competition factors. Peak years for tree seedling establishment coincide with abundant rain during the growing season, mineral soil exposure, deep snow, reduced meadow vegetation and proximity to already established trees (a seed source). In a study of the stability of the boundary between the noble fir forest and grassland on Marys Peak, Magee and Antos (1992) recognized four ecotones in which noble fir trees are actively invading the meadows. The type most susceptible to tree invasion was the moist forb/grass type, Festuca roemeri/Elymus glaucus/Agrostis diegoensis, in which forbs and graminoids share dominance almost equally. Also fairly susceptible were a red fescue/sedge type with Maianthemum stellatum and Viola glabella, and the grass-dominated meadow with bracken fern and Cardwell's penstemon (Penstemon cardwellii). The type least susceptible to tree invasion was the grass/sedge type dominated by Festuca roemeri/Carex californica, likely because a deep accumulation of graminoid litter formed a thatch over the soil surface. However,



Lomatium martindalei in the rock garden. Photo by Phillip Hays.

distance to seed sources and plant competition also play a role.

Although tree invasion increased during the past 100 years of fire suppression, the role of fire in maintaining the distinctiveness of the grassland is unclear, because it can't be separated from other factors (e.g., reduced ignitions by Native Americans, grazing and cessation of grazing associated with European settlement). It is believed that "even infrequent fires. . . could maintain the meadow" (Magee and Antos 1992). Federal land management agencies (Forest Service and BLM) are removing small trees to restore the meadows to what is

believed to be the size before fire suppression and to improve the area for scenic viewing. Where the meadows have been segmented by narrow strips of forest, the infilling trees will be removed (McCain 2011, pers. comm.).

#### Rock Garden

One of the most botanically interesting features of Marys Peak is the summit rock garden of subalpine wildflowers, a lithosolic community on thin gravelly soil with a south to southwestern exposure. The rock garden is an area of steep slopes just below the summit that is exposed to direct hot sunlight and steady westerly breezes in summer that produce arid conditions. Winter storms blow away most of the snow, leaving scant snowpack to moisten the ground in spring. Vegetation is sparse on the gravelly soil and includes spreading phlox (Phlox diffusa), harsh Indian paintbrush (*Castilleja hispida*), scalloped onion (*Allium crenulatum*), cascade desert parsley (*Lomatium martindalei*), prostrate lupine and Cardwell's penstemon. Paintbrush and penstemon display splashes of vivid scarlet and purple among the rocks.

In contrast to the rock garden, a particularly lush community of native forbs and grasses thrives in the area around the rock garden and extending to the top of the peak. In late spring and early summer the area around the summit is a breathtaking display of colorful flowers, abounding with bluefield gilia (Gilia capitata), rough wallflower (Erysimum capitatum), Menzies' larkspur (Delphinium menziesii), spreading phlox, Douglas' silene (Silene douglasii), sickle keeled lupine (Lupinus albicaulis), western

woolly sunflower (*Eriophyllum lanatum*), western groundsel (*Senecio integerrimus*), Oregon fescue (*Festuca roemeri*) and many others. On warm sunny days, blooming wallflowers fill the air with a fragrant scent.

#### **Botanists**

Many botanists have collected on Marys Peak. In July 1881 Louis Henderson wrote that he was surprised to find many of



Allium crenulatum in the rock garden. Photo by Phillip Hays.

the grasses and some flowers of eastern Oregon on top of Marys Peak (Henderson 1881). Morton Peck who wrote the only flora of Oregon, *A Manual of the Higher Plants of Oregon*, collected on Marys Peak as did Helen Gilkey who wrote the *Handbook of Northwestern Plants* with LaRea Dennis. Other botanists who have visited and collected on the peak include Francis Ownbey, a specialist in *Calochortus* and *Allium*, Judith Jernstedt who specializes in the systematics of Liliaceae and Kenton Chambers, a taxonomist at Oregon State University who specializes in the Asteraceae.

### History

The stories and original name of Marys Peak used by the early American Indians are not well documented. Marys Peak was a sacred place for spirit quests for the Kalapuya tribe, a native people of western Oregon (Juntunen *et al.* 2005). Early European settlers drove cattle, sheep and goats to the meadows on the peak for summer forage.

In 1906 Corvallis started using water from the Rock Creek watershed on the eastern side of Marys Peak. This watershed area was almost all private land; logging operations threatened the water

quality so after World War I the city of Corvallis began purchasing land in the watershed to ensure a clean water supply for the future. The lands in the Marys Peak area were added to the Siuslaw National Forest in 1940 following a purchase and land exchange. The Rock Creek Municipal Watershed on the east slope of the mountain currently supplies 40% of the city's water. The watershed encompasses about 10,000 acres and is publicly owned; it is managed by the city of Corvallis, the Forest Service and the Bureau of Land Management (BLM). The BLM portion within the SBSIA is designated an Area of Critical Environmental Concern (ACEC).

A three-level log fire lookout constructed in 1942 at the summit of Marys Peak was replaced with a newer structure in 1959. The Air Force extended the road to the

summit in 1958 and built a radar station as part of the Cold War Continental Air Defense System. The site was completed in 1959, but before the radar could be put into operation a storm blew away the antenna, so the site was abandoned in early 1960. The Air Force removed all the equipment and transferred the building to the Forest Service. This was the start of the current electronics site on the peak. The fire lookout structure was removed and two structures remain on the peak for radio communications. Currently there are two primary users of the buildings on the summit, Bonneville Power Administration (BPA) and the Forest Service. BPA operates their own equipment and the Forest Service building houses a number of permit users. Two other electronic sites on the mountain are

visible from the summit: a Federal Aviation Administration site near the campground and one owned by the City of Corvallis on the west point.

In the fall of 2011 the Forest Service installed a fence and lightning protection around the communication site on the summit. They trenched and bulldozed a large area of the protected native plant community on the peak, enlarging the disturbed area by about four times. Removal of topsoil and native vegetation has opened the area to erosion and weed invasion. The work ignored the goals of minimal disturbance to the native plant communities that are stated in all applicable management plans (USDA Forest Service 1989). The Forest Service now promises to restore the fragile habitat. We hope that they are successful, so that future visitors will be able to enjoy the native wildflowers as we have for so many years.

## Recreation

Throughout the year Marys Peak SBSIA is used by a variety of recreationists. There are an estimated 93,900 visitor days to the area annually. A road initiated by the crews of Work Projects Administration (WPA) and the Civilian Conservation Corps



Phlox diffusa grows on the rocks in the rock garden at the top of Marys Peak. Photo by Bob Frenkel.

(CCC) was completed in 1941 and provides public access to a campground, a trail complex and a parking area below the summit. Four established trails on the mountain top provide hiking, biking and access for the public through the forests and native plant communities. Bikes are restricted in the summit area.

In 1981 extreme wind storms struck the Coast Range and buried the old campground under fallen trees. The campground and picnic area were moved to the present site. A local group called the Helonskis Ski Club operated a ski tow on the summit from 1942 to 1952 but abandoned it because the snow pack is unpredictable from year to year. Between 1946 and 1984 the Shriners held an "Annual Trek to Marys Peak" each August. The



*Lilium columbianum* in the meadows at the top of Marys Peak. Photo by Phillip Hays.

event eventually became a fund raiser to help support the Shriners Crippled Children Hospitals. Estimates of up to 12,000 people attended this event and there is still evidence of barbecue pits and other uses from the past in the meadow below the parking area at

the top. Special use permits have been issued for different activities including research projects, noble fir cone collection and recreation events. In order to protect the sensitive scenic and botanical values the Forest Service created the Meadow Edge Trail to minimize the impacts on the fragile plant communities in the meadow area. In 1986, snowmobile use was restricted on Marys Peak. Activities on the summit such as unauthorized off road vehicles and vandalism constitute major disturbances to the area today.

#### Geology and Soils

The geology of Marys Peak creates the environment for the plant communities on the mountain. The determining factor is the position of the Oregon Coast Range at the western edge of the North American Tectonic Plate. The tectonic plates that form the Pacific Ocean floor and the Juan de Fuca Plate to the west of the Coast Range are moving northeastward. As these oceanic plates collide with the North American plate they plunge beneath it, causing uplift and generating volcanic activity.

A string of undersea volcanoes (seamounts) and volcanic islands that had formed offshore about 60 to 50 million years ago collided with and were accreted to the North American plate to produce the core of today's Coast Range. These newly arrived oceanic rocks had formed as thick basalt lava flows on the ocean floor. Today, they include the Siletz River volcanics that compose much of the base of Marys Peak (Baldwin 1955, 1992). Erosion of onshore rocks produced sediments that flowed into the ocean to form thick layers on the ocean floor that overlie the older basalts and appear today as the sandstone and siltstone beds of the Tyee Formation (Fluornoy Formation) and Kings Valley Siltstone (Ryu et al. 1996, Wells et al. 2000).

Uplifting and faulting of the Oregon Coast Range began about 40 million years ago as it was accreted to North America. By 30 million years ago, this subduction process also produced magma that was injected as younger basalt intrusions (e.g., sills and dikes) into the Coast Range sedimentary rocks and older oceanic basalt. Differential erosion of the softer Tyee Formation sandstones and Kings Valley siltstones from around the resistant basalts of the ancient sea floor and younger intrusions have formed the Coast Range peaks. Marys Peak is the highest of these mountains, with an approximately 1,000-foot thick cap of erosion resistant coarsely crystalline basalt or gabbro sill of one of these intrusions. The sill that forms the upper part of Marys Peak is about 30 million years old (Orr et al. 1992).

Baldwin (1993) examined the Oregon Coast Range for evidence of glaciations and on Marys Peak he identified four cirque-like features in the gabbro of the summit with unconsolidated debris



Erythronium grandiflorum var. grandiflorum growing in the meadows at the top of Marys Peak. Common in the Cascades, this species is found only on a few of the highest peaks in the Coast Range. Photo by Esther McEvoy.

accumulation at the base of each. He speculated that this topography on the northeast exposure was probable early stages of glaciation, during the end of the last ice age about 12,000 years ago. However, no clear evidence of glaciation on Marys Peak has been reported.

The older Siletz River volcanic rocks can be observed as pillow basalt, basaltic breccia, and some columnar-jointed basalt sills and dikes in cuts along the first few miles of the Marys Peak Road. An example of thick-bedded finegrained Tyee Formation sandstone and intervening thin-bedded siltstone is exposed 6.5 mi. from the beginning of the Marys Peak Road. Parker Creek waterfall (at 6.7 mi.) displays the erosion resistant gabbro cap of Marys Peak. The intrusive gabbro elsewhere grades into a granophyric diorite

comprising the coarse parent material for the soils of the grassland and rock garden (Lawrence *et al.* 1980).

The two primary soil series in the SBSIA are the Mulkey Series in the open meadows and the Maryspeak Series on the slopes (Fillmore 2009). The Mulkey Series are moderately deep well-drained loamy soils derived from coarse-grained intrusive igneous rock. These soils are rich in organic matter because they developed under grasslands, but contain gravels and cobbles from rocks disintegrating in place or sliding downslope (residuum and colluvium).

The Maryspeak Series are well-drained sandy loams that formed on ancient deposits from sandy colluviums derived from a mixture of sandstone and coarse-grained intrusive igneous rock. Maryspeak soils are found under forests surrounding the meadows and on mountain slopes (Fillmore 2009).

#### Climate

The high elevation and proximity to the Pacific Ocean are the dominant features influencing the climate and weather on Marys Peak. The climate is maritime with an annual precipitation of 100 to 120 inches; mostly falling as rain or snow and rain from October to May. Less than 5% of the yearly precipitation arrives in the summer. Winter temperatures range between 20 and 50°F and snow falls occasionally from November to June, but there is no such thing as a normal snow year on the Peak. Summer temperatures range between 40 to 90°F with winds typically no more than 20 mph.

The elevation of Marys Peak causes extremes in weather conditions that affect the distribution of the vegetation. Powerful winds up to 100 mph and periods of winter thaw prevent snow accumulation on the south and west slopes, but snowdrifts up to 10 feet deep pile up on sheltered north and east slopes. Some plants are found only where the deepest snow packs melt late in



Noble fir (*Abies procera*) is slowly encroaching into the meadows at the top of Marys Peak. The Forest Service is removing young trees at the edge of the meadows to preserve the open habitat. Photo by Esther McEvoy.

the spring. Thick rime accumulations build up on objects near the summit in winter. The upper reaches of the noble fir forests on the north side of the peak show stunted growth caused by significant breakage due to strong winds and heavy accumulations of snow and ice. Magnificent old growth Douglas fir trees on the relatively sheltered eastern slopes benefit from heavy rainfall in the winter and collect moisture from frequent fogs and clouds in the summer. All around the top of the peak variations of exposure to wind, sun and moisture create numerous micro habitats each with its own distinct assemblage of plants. For example, xeric conditions prevail on shallow soils on the southwest side of the summit that are exposed to direct summer sunlight and constant desiccating breezes from the west.

# Planning a Wildflower Walk on Marys Peak

Marys Peak has four primary trails for access to different parts of the mountain (shown on map). The shortest and easiest route is from the parking area near the top of the mountain along a dirt road to the summit. This trail gains 350 feet in two thirds of a mile to the top, where there are many beautiful native wildflower gardens in June and July.

The Meadow Edge trail starts at the parking area of the Marys Peak Campground 8.6 miles from the junction of Highway 34. It is a fairly easy loop of 1.6 miles with an elevation gain of about 500 feet. The trail crosses Parker Creek and climbs through the almost pure noble fir stand. A short side trail leads to the summit. You can also access this trail from the dirt road leading up from the parking lot at the top.

The East Ridge trail starts from Connors Camp parking lot on Marys Peak Road 5.5 miles from the junction with Highway 34. The trail is 3.5 miles with a 1400-foot elevation gain. The trail climbs through old growth Douglas fir forests at low elevations into noble fir forest at the top. Part way up the Tie Trail forks to the



Beargrass (*Xerophyllum tenax*) grows in a small area of the meadows at the top of Marys Peak. It is much more common on the lower slopes of the mountain. Photo by Phillip Hays.

north and crosses the steep east face of the mountain to connect to the upper end of the North Ridge Trail. Near the top of the East Ridge Trail a side trail leads to the parking area, or one can continue to the summit.

The North Ridge Trail is accessed from the Woods Creek Road by proceeding west on US 20 (Corvallis-Newport Highway) for 1.7 miles from the junction of US 20 and Highway 34 at the west end of Philomath, turning south on the Woods Creek Road and continuing 7.5 miles to a parking area at the gated trailhead. The trail gains 2,200 feet in elevation over 5.5 miles to the parking lot near the top. This is a more difficult trail, but it climbs through a beautiful old growth Douglas fir forest.

Sunny days from spring through summer are the best times to visit the mountain to observe the diversity of plants in the Scenic Botanical Area. Keep in mind, however, that the weather varies greatly from year to year, so the flowering periods can shift by a month or more, and sometimes the peak is sunny when it is raining or snowing at lower elevations

There are three periods during the spring and summer that provide the best floral displays. The first is in late spring from early May to late June. Most of the snow will have melted and the roads will be open, but the last snow banks usually remain on the northeastern slopes of the peak. As the snow pack recedes,

glacier lilies emerge by pushing through the thin snow and ice. This display lasts barely a week. This is a good time to walk the East Ridge Trail, Tie Trail and North Ridge Trail loop to view the early spring flowers. It can be very chilly and windy at the top with snow flurries and chilling winds, so come prepared with warm clothing, raingear, waterproof boots, food and water.

The second is from the middle to late June through July which has spectacular flowering, especially in the meadows around the very top of the peak. This is when the rock garden is at its best with plants such as scalloped onion, harsh Indian paintbrush, Cardwell's penstemon, and spreading phlox. The noble fir forest floor along Parker Creek is lush with a carpet of Oregon wood sorrel and many other plant species. Parker Creek is lined with a variety of flowering plants including arrowleaf grounsel. This is a good time to walk the Meadow Edge Trail. There is an illustrated pocket guide to the wildflowers of Marys Peak with colored photos of some of the common plants (Carpenter 2009).

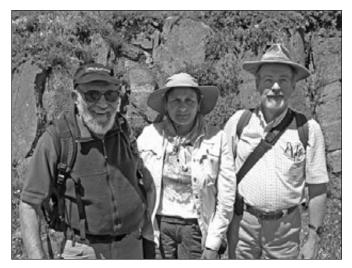
The third display is a bit later in July, when the meadows may be filled with tiger lilies and other summer flowers. The abundance of tiger lily flowers appears to depend on an interaction of spring weather and deer populations: during nice springs large deer populations eat the lily buds, while inclement spring weather keeps the deer lower on the mountain. On a really clear day one can see the major Cascades peaks from Mt. Rainier in Washington to Mt. Thielsen in southern Oregon. To the west you can see the Pacific Ocean and maybe even waves crashing on the beaches.

# Acknowledgements

The plant list was compiled from lists of Teresa Magee, Billy Snow, Dave Danley, Alcetta Campbell and Wilbur Bluhm. Bob Frenkel, Phil Hays and Esther McEvoy have been annotating the plant list for many years. Rhoda Love helped review the plant list for name changes. Thea Cook of the Oregon Flora Project at Oregon State University provided us with herbarium records from the top of Marys Peak and we made extensive use of the Oregon Flora Project. We would like to thank Cindy McCain with the Siuslaw National Forest for her support and help with our work on this project and Mary Gallagher with the Benton County Historical Society and Museum, Philomath, Oregon for her historical information about Marys Peak. George Taylor provided us with weather information and Dr. E. M. Bishop and Dr. W. A. Niem reviewed our geology section. Drs. Ken Chambers and Harold Zald also reviewed the manuscript.

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(L to R) Bob Frenkel, Esther McEvoy and Phillip Hays at the rock garden at the top of Marys Peak. Photographer unknown.

Phillip R. Hays has a BS in Bacteriology from the University of Arkansas in 1968 and a PhD in Microbiology from Oregon State University in 1978. He became interested in the botany of the Corvallis area in the 1980s and since then has been photographing and drawing the plants of Benton County, Oregon. He has been a member of NPSO since the late 1980s. He wrote "A Guide to Trails in the Corvallis Area" and often leads hikes for the Corvallis Chapter. Phil is Chair of the Benton County Natural Areas and Parks Advisory Board and is a member of the Corvallis Parks, Natural Areas and Recreation Advisory Board. He was a founding member of the Greenbelt Land Trust in Corvallis and currently serves on the Lands Committee.

Robert E. Frenkel has a BA in chemistry from Kenyon College, Ohio 1950; MS in metallurgy in 1954 and PhD in geography 1967 from UC Berkeley, and taught geography at OSU since 1965. He retired as Emeritus Professor in 1997. Bob joined NPSO in the early seventies, working with Jean Sidall and Ken Chambers. He was appointed by Governor McCall as Chair of the Natural Preserves Advisory Committee whose mission was to recommend potential natural areas to the State Land Board. He became fascinated in the flora and vegetation of Marys Peak after first climbing the old ungraded north trail in 1965.

Esther Gruber McEvoy joined NPSO while working for the Bureau of Land Management as a botanist on rare plants in Burns Oregon in 1979. She has a BA in Art from Lewis and Clark College and a BA in Science from Portland State University. In 1980 she helped start the Corvallis Chapter and remains active in the chapter. She worked for the Willamette National Forest in 1981 documenting old growth forests in the coast range. In 1983 and 1984 she worked with Bob Frenkel at Finley National Wildlife Refuge monitoring vegetation changes of a Willamette prairie after burning. In 1994 and 1995 she worked on the dynamics of a *Sidalcea hirtipes* population on the Oregon coast. In 2000 she started Willamette Gardens, a native plant nursery in Corvallis, Oregon which specializes in container grown native plants.

#### MARYS PEAK SCENIC BOTANICAL AREA PLANT SPECIES LIST

FAMILY: GENUS AND SPECIES FAMILY: COMMON NAME HABITAT NOTES

FERNS AND FERN RELATIVES

BLECHNACEAE DEER FERN FAMILY

Blechnum spicant Deer fern Forest

DENNSTAEDTIACEAE BRACKEN FAMILY

Pteridium aquilinum Bracken fern Forest, Moist Meadows

DRYOPTERIDACEAE WOOD FERN FAMILY

Polystichum munitum Swordfern Forest

LYCOPODIACEAE CLUB-MOSS FAMILY

Lycopodium clavatum var. integrifolium Common clubmoss Forest

OPHIOLGLOSSACEAE ADDER'S TONGUE FAMILY

Botrychium multifidum Leathery grapefern Riparian

PTERIDACEAE MAIDENHAIR FERN

Adiantum aleuticum Western maidenhair fern Riparian Adiantum pedatum
Cryptogramma acrostichoides Rock brake Rock cliffs Cryptogramma crispa

WOODSIACEAE CLIFF FERN FAMILY

Athyrium filix-femina Lady fern Forest

**CONIFERS** 

CUPRESSACEAE CYPRESS FAMILY

Thuja plicata Western red cedar Forest

PINACEAE PINE FAMILY

Abies grandisGrand firForestAbies proceraNoble firForestPseudotsuga menziesii var. menziesiiDouglas firForestTsuga heterophyllaWestern hemlockForest

TAXACEAE YEW FAMILY

Taxus brevifolia Western yew Forest

FLOWERING PLANTS:DICOTS

ADOXACEAE MUSKROOT FAMILY

Sambucus mexicanaBlue elderberryForestSambucus racemosa var. arborescensRed elderberryRiparian

APIACEAE CARROT FAMILY

Ligusticum apiifoliumClery-leaved lovageMeadowLomatium martindaleiCascade desert parsleyRock GardenLomatium utriculatumSpring goldMeadowOsmorhiza purpureaPurple sweet cicelyOpen ForestSanicula crassicaulisSnakerootOpen Forest

APOCYNACEAE DOGBANE FAMILY

Apocynum androsaemifolium var. pumilum Dwarf dogbane Rock Garden, Meadow

ARALIACEAE GINSENG FAMLY

Oplopanax horridus Devils club Forest

ARISTOLOCHIACEAE DUTCHMAN'S PIPE FAMILY

Asarum caudatum Wild ginger Forest, Riparian

ASTERACEAE SUNFLOWER FAMILY

Achillea millefoliumYarrowMeadowAdenocaulon bicolorPathfinderForest

Agoseris grandiflora Agroseris Open Forest, Meadow

Anaphalis margaritacea Pearly everlasting Meadow

Anisocarpus madioides Woodland tarweed Forest Madia madioides

Arnica amplexicaulis Clasping arnica Riparian

**FAMILY: GENUS AND SPECIES** FAMILY: COMMON NAME HABITAT **NOTES** Bellis perennis English lawndaisy Meadow Cirsium edule var. edule Indian thistle Meadow Cirsium hallii Cirsium vulgare Bull thistle Meadow Smooth hawksbeard Crepis capillaris Meadow Eriophyllum lanatum var. leucophyllum Western woolly sunflower Meadow, Rocky Euribia radulina Rough leaved aster Dry Forest Aster radulinus Hieracium albiflorum White flowered hawkweed Open Forest \* Hypochaeris radicata Meadow Hairy catsear Lactuca biennis Tall blue lettuce Moist Areas Lapsana communis Nipplewort Forest Leucanthemum vulgare Oxeye daisy Meadow Chrysanthemum leucanthemum \* Matricaria discoidea Pineapple weed Roadside Matricaria matricarioides Petasites frigidus var. palmatus Western coltsfoot Moist Woods Senecio integerrimus var. exaltatus Tall western groundsel Meadow, Rock Garden Senecio jacobea Tansy ragwort Meadow Senecio sylvaticus Wood groundsel Roadside Senecio triangularis var. triangularis Arrowleaf groundsel Forest, Meadow Tanacetum vulgare Meadow Common tansy Taraxacum officinale Common dandelion Meadow **BERBERIDACEAE** BARBERRY FAMILY Vanilla leaf Forest Achlys triphylla Berberis aquifolium Forest Mahonia aquifolium Tall Oregon grape Berberis nervosa Cascade Oregon grape Forest Mahonia nervosa Vancouveria hexandra White inside out flower Forest **BETULACEAE BIRCH FAMILY** Alnus rubra Oregon alder, red Alder Riparian Corylus cornuta var. californica California hazelnut Forest **BORAGINACEAE** BORAGE FAMILY Hydrophyllum occidentale Western waterleaf Forest, Riparian Hydrophyllum tenuipes Pacific waterleaf Forest, Riparian Nemophila parviflora var. parviflora Wood nemophila Forest Phacelia heterophylla ssp. virgata Varileaf phacelia Roadside, Rocky Phaceilia nemoralis Woodland phacelia Moist Forest Romanzoffia sitchensis Sitka mistmaiden Rocky **BRASSICEAE MUSTARD FAMILY** Cardamine nuttallii Spring beauty Forest Cardamine pulcherrima Cardamine oligosperma Little western bittercress Moist Meadows Draba verna Spring whitlow grass Meadow Erysimum capitatum var. capitatum Rough wallflower Rock Garden Turritis glabra Tower mustard Roadside Arabis glabra **CAMPANULACEAE** HAREBELL FAMILY Scouler's harebell Campanula scouleri Forest, Riparian **CAPRIFOLIACEAE** HONEYSUCKLE FAMILY Lonicera ciliosa Orange honeysuckle Open Forest Symphoricarpus albus var. laevigatus Forest Common snowberry Symphoricarpos mollis Creeping snowberry Open Forest **CARYOPHYLLACEAE** PINK FAMILY Cerastium arvense ssp. strictum Field chickweed Meadow

Big chickweed

Deptford pink

Douglas silene

Bigleaf sandwort

Meadow

Roadside

Rock Garden, Meadow

Forest

Moehringia macrophylla

Cerastium fontatum spp. vulgare

Dianthus armeria ssp. armeria

Silene douglasii var. douglasii

Cerastium vulgatum, misapplied

Arenaria macrophylla

FAMILY: GENUS AND SPECIES FAMILY: COMMON NAME HABITAT **NOTES** Roadside \* Spergularia rubra Red sandspurry Stellaria crispa Crisped starwort Moist Forest **HEATH FAMLY ERICACEAE** Arctostaphylos uva-ursi Kinnikinnick Forest Chimaphila umbellata var. occidentalis Prince's pine Forest Gaultheria shallon Salal Forest Monotropa hypopitys Pinesap Forest Hypopitys monotropa Monotropa uniflora Indian pipe Forest Moist Forest Pyrola asarifolia Alpine pyrola Pyrola picta White-vein pyrola Forest Pyrola aphylla Forest Vaccinium membranaceum Big huckleberry Vaccinium parvifolium Red huckleberry Forest Vaccinium scoparium Grouse whortleberry Open Forest **PEA FAMILY FABACEAE** \* Cytisus scoparius Scots broom Meadow Lathyrus nevadensis var. nevadensis Sierra peavine Open Forest Lathyrus polyphyllus Leafy peavine Roadside, Open Forest Forest, Roadside Lotus crassifolius var. crassifolius Big deervetch Roadside Lotus micranthus Small flowered lotus Lupinus albicaulis var. albicaulis Sickle keeled lupine Forest Lupinus latifolius var. latifolius Broad leaved lupine Open Forest Lupin us lepidus var. lobbii Rock Garden Prostrate lupine Lupinus rivularis Riverbank lupine Riparian, Roadside Melilotus officinalis Common yellow sweetclover Roadside Rupertia physodes California tea Roadside Least hopclover Roadside, Meadow Trifolium dubium Red clover Meadow Trifolium pratense Trifolium repens White clover Meadow Trifolium subterraneum Subterraneum clover Meadow, Open Forest Vicia americana var. americana American vetch Roadside, Open Forest **FAGACEAE OAK FAMILY** Chrysolepis chrysophylla var. chrysophylla Golden chinquapin Open Forest Castanopsis chrysophylla **GOOSEBERRY FAMILY GROSSULARICEAE** Ribes sangineum var. sangineum Red flowering currant Open Forest **IRIDACEAE IRIS FAMILY** Iris tenax var. tenax Meadow Oregon iris LAMIACEAE MINT FAMILY Prunella vulgaris var. lanceolata Native heal all Meadow Satureja douglasii Yerba buena Forest Moist Forest Stachys mexicana Mexican betony Moist to drier sites Stachys rigida Rigid betony LINNAEAEAE LINNAEA FAMILY Linnaea borealis var. longiflora Western twinflower Forest **MONTIACEAE PURSLANE FAMILY** Candy flower Forest, Riparian Claytonia sibirica Montia sibirica Claytonia perfoliata ssp. perfoliata Miner's lettuce Forest, Riparian Montia perfoliata **ONAGRACEAE EVENING PRIMROSE FAMILY** Chamaenerion angustifolium var. canescens Fireweed Meadow, Roadside Epilobium angustifolium Epilobium ciliatum var. ciliatum Purple leaved willowherb Epilobium watsonii Riparian, Open Forest **OROBANCHACEAE BROOMRAPE FAMILY** Castilleja hispida var. hispida Harsh Indian paintbrush Rock Garden, Roadside

**OXALIS FAMILY** 

**OXALIDACEAE** 

**FAMILY: GENUS AND SPECIES** FAMILY: COMMON NAME HABITAT **NOTES** 

Oxalis oregana Oregon wood sorrel Forest Trillium leaved oxalis Riparian

Oxalis trilliifolia **PAPAVERACEAE** POPPY FAMILY

Dicentra formosa ssp. formosa Bleedingheart Forest, Riparian

**PHRYMACEAE** LOPSEED FAMILY

Mimulus alsinoides Chickweed monkeyflower Rocky

Mimulus dentatus Tooth leaved monkeyflower Meadow, Riparian **PLANTAGINACEAE** PLAINTAIN FAMILY

Collinsia grandiflora Large flowered blue-eyed Mary Meadow

Collinsia parviflora Small flowered blue-eyed Mary Roadside, Meadow Digitalis purpurea Roadside, Meadow Foxglove Nothochelone nemorosa Woodland beardtongue Forest

Penstemon cardwellii Rock Garden, Roadside Cardwell's penstemon

Penstemon rattanii var. rattanii Rattan's penstemon Roadside

Plantago lanceolata English plantain Meadow, Roadside Plantago major Common plantain Meadow, Roadside

Synthyris reniformis Snowqueen Forest Veronica americana Common speedwell Riparian Veronica arvensis Small speedwell Meadow Veronica serpyllifolia var. humifusa Thyme-leaved speedwell Meadow

**POLEMONIACEAE** PHLOX FAMILY

Varied leaf collomia Riparian, Open Forest Collomia heterophylla

Gilia capitata ssp.capitata Bluefield gilia Rock Garden

Riparian, Rocky Microsteris gracilis Slender phlox Phlox gracilis

Phlox diffusa Spreading phlox Rock Garden, Meadow

**POLYGONACEAE BUCKWHEAT FAMILY** 

Eriogonum nudum var. nudum Barestem buckwheat Roadside Haussknecht's buckwheat Rocky Eriogonum umbellatum var. haussknechtii Polygonum aviculare Knotweed Roadside

Broad leaved knotweed Moist Areas Polygonum minimum \* Rumex acetosella Sour dock Meadow

**PRIMULACEAE** PRIMROSE FAMILY

Trientalis latifolia Western starflower Forest

RANUNCULACEAE **BUTTERCUP FAMILY** 

Actea rubra Western red baneberry Forest Anemone deltoidea Threeleaf anemone Forest Anemone lyallii Lyall's anemone Meadow Blue windflower Anemone oregana var. oregana Forest Aquilegia formosa Red columbine Moist Forest

Delphinium menziesii Meadow, Rock Garden Menzies' larkspur

Oregon goldthread

Forest

Ranunculus occidentalis Western buttercup Meadow Ranunculus uncinatus Little buttercup Forest Thalictrum occidentale Western meadowrue Forest Trautvetteria carolinensis False bugbane Riparian

RHAMNACEAE **BUCKTHORN FAMILY** 

Rhamnus purshiana Cascara Forest

**ROSACEAE ROSE FAMILY** 

Amelanchier alnifolia var. semiintegrifolia Pacific serviceberry Open Forest Meadow Fragaria vesca ssp. bracteata Woodland strawberry Fragaria virginiana var. platypetala Wild strawberry Meadow Holodiscus discolor var. discolor Forest Oceanspray

Coptis laciniata

FAMILY: GENUS AND SPECIES FAMILY: COMMON NAME HABITAT NOTES

Prunus emarginata var. emarginata Shrubby bittercherry Riparian, Forest

Little wild rose Forest Rosa gymnocarpa var. gymnocarpa Rosa pisocarpa Clustered wild rose Forest Rubus laciniatus Evergreen blackberry Meadow Rubus parviflorus Thimbleberry Meadow Rubus pedatus Five leafed dwarf bramble Moist Forest Rubus spectabilis Salmonberry Riparian, Forest

Rubus ursinus Pacifc blackberry Forest

RUBIACEAE MADDER FAMILY

Galium aparineCleaversForestGalium oreganumOregon bedstrawShady ForestGalium triflorumFragrant bedstrawForest

SALICACEAE WILLOW FAMILY

Salix species Willows Riparian

SAPINDACEAE SOAPBERRY FAMILY

Acer circinatumVine mapleForestAcer glabrum var. douglasiiDouglas mapleForest

SAXIFRAGACEAE SAXIFRAGE FAMILY

Chrysosplenium glechomifolium Western golden carpet Riparian

Heuchera micrantha Alumroot Moist Rocky Outcrops

Lithophragma parviflorum var. parviflorum Small flowered fringecup Meadow, Rocky

Micranthes ferruginea Rusty saxifrage Riparian Saxifrage ferruginea

Mitella caulescensStar-shaped mitrewortRiparianTellima grandifloraLarge fringecupForestTiarella trifoliata var. trifolilataTrefoil foamflowerForest

Tolmiea menziesii Piggyback plant Riparian, Forest

SCROPHULARIACEAE SNAPDRAGON FAMILY

Scrophularia californica ssp. californica California figwort Meadow

SELAGINELLACAE SPIKEMOSS FAMILY

Selaginella scopulorum Rocky Mountain spikemoss Rocky Selaginella densa var. scopulorum

VIOLACEAE VIOLET FAMILY

Viola aduncaWestern longspur violetMeadowViola glabellaStream violetRiparianViola sempervirensEvergreen violetForest

FLOWERING PLANTS: MONOCOTS

AMARYLLIDACEAE AMARYLLIS FAMILY

Allium crenulatum Scalloped onion Rock Garden

ASPARAGACEAE ASPARAGUS FAMILY

Maianthemum dilatatum False-lily-of-the-valley Forest, Riparian

Maianthemum racemosum ssp. amplexicaule Large false Solomon's seal Forest, Riparian Smilacina racemosa

Maianthemum stellatum Small false Solomon's seal Moist Forest, Meadow Smilacina stellata

CYPERACEAE SEDGE FAMILY

Carex aquatilis var. dives Sitka sedge Wet Meadow Carex sitchensis

Carex californicaCalifornia sedgeWet PrairieCarex fractaFragile sheathed sedgeWet to Dry SoilCarex hoodiiHood's sedgeMoist MeadowsCarex mertensiiMertens sedgeWet AreasCarex rossiiRoss sedgeMeadow

JUNCACEAE RUSH FAMILY

Luzula comosa var. laxa Pacific woodrush Moist Forest, Rocky Luzula campestris

Luzula parviflora Small flowered woodrush Moist to Dry Forest

### FAMILY: GENUS AND SPECIES FAMILY: COMMON NAME HABITAT NOTES

LILIACEAE LILY FAMILY

Calochortus tolmieiOregon mariposa lilyMeadowClintonia unifloraQueencup beadlilyForestErythronium grandiflorum var. grandiflorumYellow fawnlily, glacier lilyMeadow

Erythronium oregonumGiant fawnlilyMeadow, ForestErythronium oreganum var. oreganumFritillaria affinisChecker lilyMeadowFritillaria lanceolata

Lilium columbianum Columbia or tiger lily Meadow

Prosartes hookeriHooker's fairybellsForestDisporum hookeriProsartes smithiiFairy lanternsForestDisporum smithii

Streptopus amplexifolius Twisted stalk Riparian

**MELANTHIACEAE** 

Anticlea occidentalis Western stenanthium Forest Stenathium occidentale

Trillium ovatum ssp. ovatumWestern trilliumForestXerophyllum tenaxBeargrassMeadow

ORCHIDACEAE ORCHID FAMILY

Cephalanthera austiniaePhantom orchidForestCorallorhiza maculataSpotted coralrootForestGoodyera oblongifoliaWestern rattlesnake plantainForest

Platanthera stricta Slender bog orchid Riparian Habenaria saccata

Listera caurinaNorthwestern twaybladeForestListera cordataHeartleaf twaybladeForest

POACEAE GRASS FAMILY

Agrostis hallii Hall's bentgrass Forest

Agrostis pallens Dune bentgrass Forest Agrostis diegoensis

\* Aira caryophyllea Hairgrass Gravelly Soil Aira praecox Early hairgrass Gravelly Soil

Bromus carinatusCalifornia bromeMoist Forest, MeadowBromus hordeaceusSoft bromeMoist MeadowBromus sitchensisAlaska bromeMeadow

Bromus vulgaris Open Forest, Moist Banks, Rocky Slopes

\* Cynosurus echinatus Hedgehog dogtailgrass Open Ground \* Dactylis glomerata Orchardgrass Meadow

Danthonia californica California oatgrass Meadow, Open Forest

\* Elymus elymoides Bottlebrush squirreltail Open Forest, Rocky Slopes Sitanion hystrix

Elymus glaucus ssp. glaucus

Blue wildrye
Open Forest
Western fescue
Moist to Dry Forest

Festuca roemeri var. roemeri Oregon Fescue Meadow
Festuca rubra ssp. commutata Chewings red fescue Meadow

Festuca subulata Bearded fescue Moist, Dry Forest

Koeleria macrantha Prairie junegrass Meadow Koeleria cristata

\* Lolium perenne English ryegrass Meadow
Melica bulbosa Oniongrass Meadow
Melica spectabilis Purple oniongrass Meadow

Melica subulata Alaska oniongrass Dry, Moist Forest

Phleum alpinumAlpine timothyMeadowPoa annuaAnnual bluegrassMeadow

Poa laxifloraLoose flowered bluegrassMoist Forest, MeadowPoa pratensisKentucky bluegrassMoist Forest, Meadow

<sup>\*</sup> Indicates a non-native, introduced species