

Vegetation and Butterfly Inventory and Appraisal for the Moon Mountain Park Trail Corridor

Eugene, Oregon

Executive Summary

This project was for the purpose of surveying vegetation and butterfly occurrence within the general area of a proposed pedestrian trail corridor in Moon Mountain Park, and was undertaken for the Laurel Hill Valley Citizens neighborhood group. The proposed trail area is the generally south sloping meadows in the western portion of the park, immediately east of the power line corridor.

No rare vascular plant species, butterflies or essential butterfly habitat were located within 10 feet to either side of the trail centerline as staked and flagged. The project surveys conducted previous to the trail centerline staking in July covered a much larger portion of the park so as to entail the eventual placement of the trail. No listed species were discovered in those surveys, but four rare plant species are known in the area as described herein. No rare butterfly species were observed, and no records of any rare species were contained in an area report from the Oregon Natural Heritage Information Center reviewed for this project.

One small section of trail in oak woodland, just above a turn below the last grade to the top, could be moved a few feet uphill to avoid impacting the end of a large rotten log that serves as unique wildlife, bryophyte and lichen habitat.

Overall, this historic prairie/savanna habitat, and the plants and wildlife that inhabit it, is threatened by encroaching native woody trees and shrubs, and invasion by exotic woody and herbaceous plant species.

Site Information

Date	March – July 2008	Personnel	B. Newhouse. Salix Associates	
Location	County: LANE	TRS	T18S, R05W Sec. 03 (SE ¼ of SW ¼)	
Approx. size	40 acres	TRS centroid	18S, 03E, Sec. 3, SE ¼ of SW 1/4	
UTM centroid	NAD 83 CONUS	Zone 10	496811mE	4874905mN
Elevation	800-900 feet		Search radius: approximately 500 feet	
Access	South on Laurel Hill Rd. to Bracken Fern to Pinerock. Park at end of Pinerock Drive, walk easterly up hill, follow new City trail ending under power lines at western edge of site.			
Notes	Entails area larger than trail corridor. Additional future surveys will yield more species.			
Condition	<i>One of the highest quality upland prairie sites present in the metro area.</i> Excellent probability for rare plant presence, good possibility for rare butterfly and (nesting) bird species. (See more below.)			
Rare Species	<i>Lithophragma glabrum</i> , <i>Lomatium macrocarpum</i> , <i>Montia howellii</i> , <i>Viola praemorsa</i> ssp. <i>praemorsa</i> .			
Invasive Species	One patch of <i>Geranium lucidum</i> was noted and identified for treatment by City staff present on a field survey.			

Summary of Vegetation Structure and Composition

The following table shows vegetation species composition (richness) by structure (layer), and native and exotic species are further separated out for comparison. (The table does not illustrate actual cover within a structural layer.) Overall, 175 vascular plant species were identified in this survey, and about 65% of the species identified are native. Of the total of 175 species, 113 are native, and of those, 4 are rare (but none are officially listed). About 62 exotic species were observed, and just over half (32) are considered to be invasive (currently or potentially causing moderate to high impact on native habitats).

The tree layer is comprised of about 75% native species, while the shrub layer is less native: 58%. The forb layer is about 68% native, and native species comprise less than half of the grass layer (47%). The fern layer is entirely native.

GROUP	TOTAL	Native All	Native Rare	Exotic All	Exotic Invasive	% Native
Trees	12	9	0	3	2	75
Shrubs	19	11	0	8	6	58
Forbs	110	75	4	35	14	68
Graminoids	30	14	0	16	10	47
Ferns & Allies	4	4	0	0	0	100
Total	175	113	4	62	32	65

The overall site native vegetation quality is very high in comparison to other metro area prairie/savanna sites, although many areas of the park are dominated by exotic species. The bordering woodland to the northeast (within the park) is comprised of native white oak communities, e.g.: *Quercus garryana* / *Toxicodendron diversilobum* - *Symphoricarpos albus* / *Lonicera hispidula* - *Festuca californica* - *Polypodium glycyrrhiza*. The bordering conifer and mixed conifer forest to the north has become invaded by invasive, exotic blackberries (*Rubus armeniacus* and *R. vestitus*), and treatment of them is needed in order to protect and restore native understory diversity.

Encroachment by native trees and shrubs, and invasion by exotic trees and shrubs is occurring in this historically native prairie/savanna habitat. Because prairie/savanna habitat has become extremely rare, partly because of such encroachment and invasion, protection from further degradation is warranted. The City of Eugene has previously done some control of encroaching conifers and invasive Scot's broom, and collected native seed on this site for restoration on other sites. Cutting, girdling or topping of all exotic trees and some native trees should be completed while minimizing soil disturbance so as to reduce invasion by exotic species, and protect native habitats. Shrubs (or sprouting trees) should be removed or killed using other techniques.

Removal of most cut and downed woody material from the site should be accomplished if possible. Management of threats should begin as soon as a comprehensive restoration and management plan can be completed. High impact invasive species could be controlled in the interim.

Reintroduction of periodic prescribed fire as a management tool to decrease thatch and encroachment by woody vegetation would be desirable, but construction of new residential development adjacent to the site will make use of prescribed burning extremely difficult in the future. Other methods likely will need to be explored.

Butterfly Occurrence and Habitat

Eleven species of butterflies were observed in the area of the proposed trail corridor. In particular, surveys targeted potential occurrence of Taylor's checkerspots and Fender's blues – but neither was noted.

Occurrence of the exotic plant *Plantago lanceolata* (larval host), and native bunchgrasses (primarily *Festuca roemerii* and *Danthonia californica*) and native nectar plants (such as *Sidalcea malviflora* ssp. *virgata*, *Camassia leichtlinii* var. *suksdorfii*, and *Lomatium* spp.), and the overall short stature vegetation in those areas, are essential elements for Taylor's Checkerspot habitat. Surveys for that species this spring, however, were negative. Prolonged periods of unusually cold and damp weather predominated, making it an atypical year for Taylor's Checkerspot occurrence, so follow-up surveys next year would be prudent.

Potential occurrence of Fender's Blue Butterflies would be linked to occurrence of Kincaid's Lupine (*Lupinus sulphureus* ssp. *kincaidii*) or Spurred Lupine (*L. arbustus*). Neither of those species was noted near the proposed trail corridor, but could occur nearby, or possibly reintroduced as part of a comprehensive restoration plan.

Occurrence of a population of a host plant for fritillaries, Upland Yellow Violet (*Viola praemorsa* ssp. *praemorsa*) is significant, although no fritillaries were seen during surveys. Again, further surveys in a warmer, drier year should be undertaken.

Rare Elements

No listed Threatened or Endangered species were located in the area of the trail corridor, but some very unique and uncommon plant species were documented. These include: Prairie Star (*Lithophragma glabrum*), Large-fruited Lomatium (*Lomatium macrocarpum*), Howell's Montia (*Montia howellii*), and Upland Yellow Violet (*Viola praemorsa* ssp. *praemorsa*).

A list of rare plant and animal species tracked by the Oregon Natural Heritage Information Center was reviewed as a part of this project. No occurrences of species tracked by that institution previously have been documented in or adjacent to the park.

The four species of *Lomatium* noted during this survey occur mostly in large patches unmatched at any other local site – in both size and proximity to each other. The occurrence of Large-fruited Lomatium (*Lomatium macrocarpum*) is particularly notable because it is quite rare in the Willamette Valley. Occurrence of these species in these significant populations highlights the uniqueness and quality of Moon Mountain habitats. Protection and management of rare habitats is aligned with the Oregon Conservation Strategy, and activities to carry out those goals may qualify for funding under various grant programs associated with that program document.

Vascular Plant List for Moon Mountain Park Trail Corridor Area

Bruce Newhouse, Salix Associates. March – July 2008. Concentrated in western portion of park.

Key: **N/E:** Native/Exotic (From Lane County Checklist of Vascular Plants, Emerald Chapter NPSO). *Exotic species in italics.*

R/I: Rare/Invasive (Rare from Fed/State ESA, ORNHIC, and Emerald Chapter NPSO).

Habitats: PS = Prairie-Savanna: includes shrub patches, scattered trees; Wd = Woodland: QUEGAR dominated; F = Forest; Wt = wetland: small wet seeps generally in south portion of site. **Occurrence:** S = Scarce; O = Occasional, C = Common ; A = Abundant

Latin Name	Common Name	Habitats						Notes
		N/E	R/I	PS	Wd	F	Wt	
TREES								
<i>Abies grandis</i>	Grand Fir	N				S		
<i>Acer macrophyllum</i>	Bigleaf Maple	N		S	S	C		
<i>Arbutus menziesii</i>	Pacific Madrone	N		S	O			
<i>Fraxinus latifolia</i>	Oregon Ash	N			O			Moist draws to north (uphill) of east side of main meadow.
<i>Quercus garryana</i> var. <i>garryana</i>	Oregon White Oak	N		S	A	O		
<i>Quercus kelloggii</i>	California Black Oak	N			S			Very few seen. One present at trail terminus (at top).
<i>Pinus ponderosa</i>	Ponderosa Pine	N		S				One seen just below middle of park.
<i>Prunus cerasifera</i>	<i>Thundercloud Plum</i>	<i>E</i>			S			
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas Fir	N		S	O	A		
<i>Prunus avium</i>	<i>Mazzard, Bird or Sweet Cherry</i>	<i>E</i>	<i>I</i>		O	C		
<i>Pyrus</i> sp.	<i>Domestic Pear</i>	<i>E</i>	<i>I</i>	O	O			
<i>Rhamnus purshiana</i>	Cascara Buckthorn	N		S	S			
SHRUBS, SMALL TREES, MOUNDING VINES								
<i>Berberis aquifolium</i>	Tall Oregongrape	N		O	S			Often at PS – Wd edges, or under QUEGAR
<i>Corylus cornuta</i> var. <i>californica</i>	California Hazel	N						Possibility that this is <i>C. avellana</i> (European).
<i>Crataegus monogyna</i>	<i>English Hawthorn</i>	<i>E</i>	<i>I</i>	O	S			
<i>Crataegus suksdorfii</i>	Suksdorf's Hawthorn	N			O		S	
<i>Cotoneaster franchetii</i>	<i>Franchet's Cotoneaster</i>	<i>E</i>		S				<i>PS – Wd edges</i>
<i>Cytisus scoparius</i>	<i>Scot's Broom</i>	<i>E</i>	<i>I</i>	O				
<i>Holodiscus discolor</i>	Oceanspray	N		S		O		Mostly in and near gaps and edges. Orobanche

Latin Name	Common Name	Habitats						Notes
		N/E	R/I	PS	Wd	F	Wt	
								pinorum is a parasite that may co-occur, but appears late in the growing season. (Present on Skinner Butte.)
<i>Ilex aquifolium</i>	English Holly	E	I		S	S		
<i>Oemleria cerasiformis</i>	Osoberry	N		S	O	O		
<i>Physocarpus capitatus</i>	Ninebark	N			S			
<i>Prunus virginiana</i> var. <i>demissa</i>	Chokecherry	N		O				
<i>Pyracantha</i> sp.	Firethorn	E		S				One large patch noted to SW of PSEMEN in center of main meadow.
<i>Rosa eglanteria</i>	Sweetbriar Rose	E	I	O	O			
<i>Rosa gymnocarpa</i>	Baldhip Rose	N				O		
<i>Rubus armeniacus</i>	Armenian Blackberry	E	I	O	O	S	O	Very similar to <i>R. vestitus</i>
<i>Rubus parviflorus</i>	Thimbleberry	N				C		
<i>Rubus vestitus</i>	European Blackberry	E	I	O	O	S	O	Very similar to <i>R. armeniacus</i>
<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	Snowberry	N			O			
<i>Toxicodendron diversilobum</i>	Poison-Oak	N		O	A			
FORBS								
<i>Achillea millefolium</i>	Yarrow	N		O				
<i>Adenocaulon bicolor</i>	Pathfinder	N				O		
<i>Agoseris grandiflora</i>	Large-flowered Agoseris	N		S				Fide J. Getty (7/08)
<i>Aphanes arvensis</i>	Field Lady's Mantle	N		S				Rocky areas with Racometrium; open mud or soil. OR & WA Flora Checklists synonymize <i>A. occidentalis</i> in our area.
<i>Aquilegia formosa</i>	Red & Yellow Columbine	N			S			
<i>Bellis perennis</i>	English Lawn Daisy	E	I				O	
<i>Brodiaea elegans</i> ssp. <i>hooveri</i>	Harvest Lily	N		O				
<i>Calochortus tolmiei</i>	Cat's Ear Lily	N		S				Nectar plant. Some excellent quality patches.
<i>Cardamine hirsuta</i>	Hairy Bittercress	E		O				
<i>Camassia leichtlinii</i> var. <i>suksdorfii</i>	Tall Camas	N		C	O			Numerous, large patches in meadows, under QUEGAR. Nectar plant.
<i>Camassia quamash</i> var. <i>maxima</i>	Common Camas	N		O	S			Nectar plant for Lepidoptera, Hemiptera
<i>Cardamine hirsuta</i>	Hairy Wintercress	N			S	S		
<i>Cardamine nuttallii</i> var. <i>nuttallii</i>	Spring Beauty	N			C			
<i>Centaurea cyanus</i>	Batchelor's Button	E	I	S				
<i>Centaureum erythraea</i>	Common Centaury	E		O				

Latin Name	Common Name	N/E	R/I	Habitats				Notes
				PS	Wd	F	Wt	
<i>Centaurium muehlenbergii</i>	Muehlenberg's Centaury	N		O				Most numerous in power line roads/trails
<i>Cerastium glomeratum</i>	Sticky Chickweed	E			S			Somewhat invasive.
<i>Cerastium fontanum ssp. vulgare</i>	Common Chickweed	E		O			O	
<i>Circaea alpina</i>	Enchanter's Nightshade	N				S		
<i>Cirsium arvense</i>	Canada Thistle	E	I			S		Moist openings, edges.
<i>Cirsium vulgare</i>	Bull Thistle	E		S	S			Somewhat invasive in disturbed areas.
<i>Clarkia sp.</i>	Clarkia	N		S				NW corner, just above power line in prairie. Did not see in flower.
<i>Claytonia sibirica</i>	Candyflower	N				C		
<i>Collinsia parviflora</i>	Sm.-Flwd. Blue-Eyed Mary	N			S			
<i>Comandra umbellata ssp. californica</i>	Bastard Toadflax	N		S				Nectar plant.
<i>Cynoglossum grande</i>	Hound's Tongue	N			O			Hummingbird plant. Early blooming.
<i>Daucus carota</i>	Wild Carrot	E	I	C				
<i>Delphinium menziesii</i>	Menzie's Larkspur	N		S		S		
<i>Dichelostemma congestum</i>	Ookow	N		S				
<i>Dipsacus fullonum</i>	Teasel	E	I	S				Two areas in south portion
<i>Dodecatheon cf. hendersonii</i>	Henderson's Shooting Star	N		S				Just west of, and below, summit
<i>Drymocallis glandulosa var. glandulosa</i>	Sticky Cinquefoil	N			S			= <i>Potentilla glandulosa var. glandulosa</i> . Seen only to WNW of top trail terminus in small gap.
<i>Eriophyllum lanatum</i>	Oregon Sunshine	N		C				
<i>Erodium cicutarium</i>	Crane's Bill	E		C				In areas with short or no other vegetation.
<i>Erythronium oreganum</i>	Fawn Lily	N			C	S		
<i>Fragaria vesca ssp. bracteata</i>	Woods Strawberry	N			O			
<i>Fragaria virginiana var. platypetala</i>	Broadpetal Strawberry	N		O				
<i>Galium aparine</i>	Bedstraw; Cleavers	N		O	O	O		
<i>Geranium columbinum</i>	Longstem Geranium	E	I	C				Very common and widespread in prairies.
<i>Geranium lucidum</i>	Shining Geranium	E	I		S			Extremely invasive in Wd, also in savanna and forest. One patch found east to northeast of LOMMAC population in Wd. (Jason planning to treat it.)
<i>Geranium molle</i>	Soft Geranium	E	I	C				
<i>Geum macrophyllum</i>	Large-leaved Avens	N				S		Moist areas in shade or part sun.
<i>Hydrophyllum tenuipes</i>	Pacific Waterleaf	N				C		
<i>Hypericum perforatum</i>	St. John's Wort	E	I	O				
<i>Iris tenax var. tenax</i>	Pacific Iris	N			S			

Latin Name	Common Name	N/E	R/I	Habitats			Notes
				PS	Wd	F	
<i>Lamium purpureum</i>	Red Dead Nettle	E		O	O		
<i>Lathyrus aphaca</i>	Yellow Vetchling	E			C		
<i>Lathyrus polyphyllus</i>	Pea	N				S	Forest edge at end of summit trail spur.
<i>Lathyrus sphaericus</i>	Grass Pea	E			O		
<i>Leptosiphon bicolor</i>	Two-color Linanthus	N		S			Scattered where veg is short; largest patch in SW area just W of power lines.
<i>Leucanthemum vulgare</i>	Oxeye Daisy	E	I	O	O		May be a complex of species.
<i>Ligusticum apiifolium</i>	Lovage	N				S	On edges or in gaps.
<i>Linum bienne</i>	Flax	E		O			
Lithophragma glabrum	Prairie Star	N	R	S			Confirmed; ephemeral (completely disappeared by 5/11). Photographed. Grows with <i>Racomitrium</i> on vernal moist to wet exposed rock near center of site. Very rare in Lane County.
Lomatium macrocarpum	Large-Fruited Lomatium	N	R	S			Very uncommon. Mostly at far east end.
<i>Lomatium nudicaule</i>	Barestem Lomatium	N		O			
<i>Lomatium triternatum</i>	Nineleaf Lomatium	N		O			Important T. Checkerspot nectar plant.
<i>Lomatium utriculatum</i>	Spring Gold	N		O			Important T. Checkerspot nectar plant.
<i>Lonicera hispidula</i> var. <i>hispidula</i>	Hairy Honeysuckle	N		S	O		Dominant in some QUEGAR woodlands.
<i>Lupinus polycarpus</i>	Miniature Lupine	N		O			
<i>Lupinus rivularis</i>	Riverbank Lupine	N		S			Under power line, west side of site.
<i>Madia elegans</i>	Showy Tarweed	N		O			
<i>Madia gracilis</i>	Slender Tarweed	N		O			
<i>Madia sativa</i>	Coast Tarweed	N		O			
<i>Maianthemum stellatum</i>	Star-flowered Solomon's seal	N				O	
<i>Montia fontana</i>	Water Chickweed	N					O
<i>Montia howellii</i>	Howell's Montia	N	R				S
<i>Myosotis discolor</i>	Yel. & Blue Forget-Me-Not	E					
<i>Nemophila menziesii</i> var. <i>atomaria</i>	Baby-Blue Eyes	N		S			Mostly in NW section
<i>Nemophila parviflora</i>	Sm-Flwd Grove-Lover	N					
<i>Osmorhiza berteroi</i>	Sweet Cicely	N					
<i>Parentucellia viscosa</i>	Parentucellia	E		O			O
<i>Phoradendron villosum</i>	Oak Mistletoe	N		O	O		Parasitic on QUEGAR. Larval host plant for Great Blue Hairstreak, but that spp. is uncommon/rare in Lane Co.,

Latin Name	Common Name	N/E	R/I	Habitats			Notes
				PS	Wd	F	
							more common to south.
<i>Plantago lanceolata</i>	Narrow-Leaved Plantain	E		C			Potential larval host for Taylor's Checkerspot Butterfly. No longer known in Lane Co., but highest potential in native bunchgrass prairie with this as a host plant, and with nectar plants.
<i>Potentilla gracilis</i> var. <i>gracilis</i>	Slender Cinquefoil	N		O			
<i>Prosartes hookeri</i>	Hooker's Fairy Bells	N				O	
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Self-Heal	N		O			
<i>Ranunculus occidentalis</i>	Western Buttercup	N		C			
<i>Ranunculus orthorhynchus</i>	Straight-beaked Buttercup	N					O
<i>Ranunculus uncinatus</i>	Small-flowered Buttercup	N			S	O	
<i>Rubus ursinus</i>	Dewberry	N			O	O	
<i>Sanicula bipinnatifida</i>	Purple Sanicle	N		S			
<i>Sanicula crassicaulis</i> var. <i>crassicaulis</i>	Pacific Sanicle	N		S	C		
<i>Satureja douglasii</i>	Yerba Buena	N			C		
<i>Saxifraga integrifolia</i>	Common W. Saxifrage	N		O			Usually in rocky, vernal moist areas.
<i>Senecio jacobaea</i>	Tansy Ragwort	E			S		Biocontrol keeps this species in check.
<i>Sherardia arvensis</i>	<i>Sherardia</i>	E	I				Dominant in some meadow areas.
<i>Sidalcea malviflora</i> ssp. <i>virgata</i>	Rosy Checkermallow	N		C			Common on this site.
<i>Sisyrinchium idahoense</i> var. <i>idahoense</i>	Idaho blue-eyed mini-iris	N		S			Normally called "blue eyed-grass," but is an iris, not a grass. Moist areas.
<i>Taraxacum officinale</i>	Common Dandelion	E		S			
<i>Tellima grandiflora</i>	Fringecups	N				C	
<i>Torilis arvensis</i>	<i>Torilis</i>	E	I			S	
<i>Trientalis latifolia</i>	Starflower	N				S	
<i>Trifolium angustifolium</i>	Narrow-leaved Clover	E	I	S			
<i>Trifolium campestre</i>	Hop Clover	E		S			
<i>Trifolium dubium</i>	Least Hop Clover	E		O			Most common in disturbed areas. Widespread dom.
<i>Trifolium subterraneum</i>	Subterranean Clover	E					O
<i>Trillium ovalifolium</i>	Pacific Trillium	N				S	
<i>Triphysaria pusilla</i>	Dwarf Owlclover	N		S			In trails and dry areas with short vegetation.
<i>Triteleia hyacinthina</i>	Hyacinth Lily	N		S			S
<i>Valeriana locusta</i>	European Corn Salad	N	I	A			Dominant in the "understory" of much of the prairie areas.

Latin Name	Common Name	N/E	R/I	Habitats				Notes
				PS	Wd	F	Wt	
<i>Vancouveria hexandra</i>	Inside-out Flower	N				O		
<i>Verbascum blattaria</i>	<i>Moth Mullein</i>	E		S				
<i>Vicia americana</i> var. <i>americana</i>	American Vetch	N		O	O			
<i>Vicia hirsuta</i>	Hairy Vetch	E		O				Moderately invasive.
<i>Vicia sativa</i> var. <i>sativa</i>	Common Vetch	E		O				Moderately invasive.
<i>Vicia villosa</i>	Winter Vetch	E	I	O				Moderately invasive.
<i>Viola glabella</i>	Stream Violet	N				O		
<i>Viola praemorsa</i> ssp. <i>praemorsa</i>	Upland Yellow Violet	N	R	S				
<i>Wyethia angustifolia</i>	Mule's Ears	N		S				
GRASSES, RUSHES & SEDGES								
<i>Achnatherum lemmonii</i>	Lemmon's Needlegrass	N		S				
<i>Aira caryophylla</i> var. <i>caryophylla</i>	<i>European silver hairgrass</i>	E		A				
<i>Arrhenatherum elatius</i>	<i>Tall Oatgrass</i>	E	I	C				<i>Highly invasive in uplands. Control ASAP recommended.</i>
<i>Avena fatua</i>	<i>Wild Oats</i>	E	I					
<i>Bromus carinatus</i>	California Brome	N		O	O			Most often at edges and gaps.
<i>Bromus hordeaceus</i>	<i>Soft Brome</i>	E	I	C				
<i>Bromus secalinus</i>	<i>Chess Brome</i>	E	I	C				
<i>Bromus sterilis</i>	<i>Poverty Brome</i>	E	I	C				
<i>Bromus vulgaris</i>	Soft Brome	N				O		
<i>Carex leptopoda</i>	Slender-foot Sedge	N				O		
<i>Carex tumulicola</i>	Foothill Sedge	N		S				
<i>Cynosurus cristatus</i>	<i>Crested Dogtail</i>	E		S				
<i>Cynosurus echinatus</i>	<i>Hedgehog Dogtail</i>	E	I	A				
<i>Dactylis glomerata</i>	<i>Orchardgrass</i>	E	I	C	C	S		
<i>Danthonia californica</i>	California Oatgrass	N		C				
<i>Elymus glaucus</i>	Blue Wildrye	N		O	O			Short, glaucous form scattered throughout western portions of prairies.
<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	Bearded Wheatgrass	N						
<i>Festuca californica</i>	California Fescue	N			O			In oak woodland to northeast of prairie.
<i>Festuca roemerii</i>	Roemer's Fescue	N		O				Fairly regular occurrence on this site. Need to check against <i>F. rubra</i> .
<i>Hordeum murinum</i>	Mouse Barley	E		O				

Latin Name	Common Name	N/E	R/I	Habitats				Notes
				PS	Wd	F	Wt	
<i>Juncus patens</i>	Spreading Rush	N				S	O	
<i>Juncus tenuis</i> (cf)	Slender Rush	N					O	Check against <i>J. occidentalis</i> in fruit
<i>Lolium perenne</i>	<i>Perennial Ryegrass</i>	E		S				<i>Moderately invasive.</i>
<i>Luzula comosa</i>	Pacific Woodrush	N		O				
<i>Melica subulata</i>	Alaska Oniongrass	N			S	S		
<i>Phleum pratense</i>	<i>Timothy</i>	E		O				
<i>Poa pratensis</i>	<i>Kentucky Bluegrass</i>	E	I	O	O		O	<i>Moderately invasive. Common in lower areas.</i>
<i>Schedonorus arundinaceus</i>	<i>Tall Fescue</i>	E	I	C	S	S	O	<i>Widespread. Dominant in "finger" meadow.</i>
<i>Taeniatherum caput-medusa</i>	<i>Medusahead</i>	E	I	O				
<i>Ventenata dubia</i>	<i>Ventenata</i>	E		S				
FERNS & ALLIES								
<i>Dryopteris arguta</i>	Coastal Shield Fern	N			O	S		
<i>Polypodium glycyrrhiza</i>	Licorice Fern	N			C	O		
<i>Polystichum munitum</i>	Sword Fern	N			O	C		
<i>Pteridium aquilinum</i>	Bracken	N			S	S		

Preliminary Wildlife List for Moon Mountain Park

B. Newhouse; incidental sightings March – July 2008.

Common Name	N/E	R/I	Habitats				Notes
			PS	Wd	Fo	FI	
Amphibians & Reptiles							
Garter Snake, unid. (<i>Thamnophis</i> sp.)	N						
Birds							
American Crow	N					O	Year-round resident.
American Goldfinch	N		O	O			Year-round resident.
American Robin	N		O				Summer resident. Some also winter residents and/or spring or fall migrants.
Band-tailed Pigeon	N				S		Spring migrant. Summer resident/breeder?
Bewick's Wren	N		O	O			Year-round resident.
Black-capped Chickadee	N						Year-round resident.
Black-headed Grosbeak	N		S	S	S		Spring migrant, and summer resident.
Black-throated Gray Warbler	N			O	O		Spring migrant, and summer resident.
Common Yellowthroat	N		S				Rarely overwinters. Regular spring migrant and summer breeder in mesic to moist shrubby areas.
Dark-eyed Junco	N			O	O		Year-round resident.
Evening Grosbeak	N				O		Spring migrant.
Hutton's Vireo	N				O		Year-round resident.
Lesser Goldfinch	N			O			Year-round resident. Possible summer breeder?
Orange-crowned Warbler	N			O	O		Summer resident.
Red-breasted Sapsucker	N		S				Year-round resident.
Red-tailed Hawk	N					O	Summer resident. Some also migrants, winter residents. May have bred on N side.
Ruby-crowned Kinglet	N			O	O		Year-round resident.
Song Sparrow	N			O			Year-round resident. Especially like shrubby, moist areas.
Spotted Towhee	N		S	O			Year-round resident. Especially like shrubby areas.
Steller's Jay	N				O		Year-round resident.
Turkey Vulture	N					O	Summer resident. Migrant. A few are now winter residents. Soaring overhead.
Vaux's Swift	N						Foraging overhead.
Western Scrub-jay	N		S	O			Year-round resident. May be linked with QUEGAR reproduction.
Wild Turkey	E		O	O			<i>Exotic; year-round resident. May compete with native birds and mammals for acorns. Young likely eat butterfly and moth caterpillars.</i>

Common Name	N/E	R/I	Habitats				Notes
			PS	Wd	Fo	FI	
Willow Flycatcher	N	R	S				Spring migrant, possibly summer resident/breeder. See rare species table.
Wilson's Warbler	N			O	O		Summer breeder.
Wrentit	N		S				Year-round resident. Prefers dense shrub habitats.
Butterflies							
Common Checkered Skipper	N						Seen first on 6/19
Common Ringlet	N		C				Seen first on 5/19/08. Uses many species of grasses as larval host plants.
Common Wood-Nymph	N		C				Seen first on 7/20/08. Uses many grasses. Often rests at forest/prairie edge.
Eastern Tailed-blue	N		S				Seen first on 5/11/08. One female. Likely using vetches (<i>Vicia</i> spp.), clovers (<i>Trifolium</i> spp.) or possibly miniature lupine (<i>Lupinus polycarpus</i>). Found near riverbank lupines (growing in one area only).
Gray Hairstreak	N		S				Seen first on 5/4/08. One, nectaring on bastard toadflax (<i>Comandra umbellata</i>). Wide variety of host plants.
Mylitta Crescent	N		O				One, 5/4/08. Use <i>Cirsium</i> as host plants.
Orange Sulphur	N		O				Seen first on 5/19/08. Strong flyers, so may be reproducing at another site. If using host plants on MM site, likely using vetches (<i>Vicia</i> spp.), clovers (<i>Trifolium</i> spp.) or possibly miniature lupine (<i>Lupinus polycarpus</i>). Riverbank lupine (<i>L. rivularis</i>) present in one location under lower power line also is a possibility.
Propertius Duskywing	N			O			Seen first on 5/19/08. Uses Oregon white oak (<i>Quercus garryana</i>) as host plant.
Silvery Blue	N		C				Seen first on 5/4/08. Uses lupines (<i>Lupinus</i> spp.) and other Fabaceae as host plants. On this site, because they are numerous, widespread and not likely to disperse long distances, they likely are using a local, well-distributed host plant. Most likely possibility is one or more vetches (<i>Vicia</i> spp.), clovers (<i>Trifolium</i> spp.) or possibly miniature lupine (<i>Lupinus polycarpus</i>).
Western Tiger Swallowtail	N		S				Strong flyer, usually near forest or woodland edge.
Other Insects							
<i>Bombus</i> cf. <i>vosnesenskii</i>	N		O				The most common "black and yellow" bumblebee in our area.
<i>Bombylius</i> sp.	?		O				Bee imitator. Entirely brown.
<i>Apis mellifera</i> (European Honey Bee)	E		O				May compete with native insects for nectar and pollen. May compete with native bats and birds for nesting cavities.
Mammals							
Black-Tailed Deer	N			O			
Coyote	N		S	S	S	S	Scat
Pocket Gopher, unid.	N		S				Mounds in small gap above main meadow.
Townsend's Chipmunk	N			S	S		

Potentially-occurring rare plant and animal species for the Moon Mountain Park site.

List adapted from South Ridgeline Habitat Study (Salix Associates).

The following list contains species that occur within the South Ridgeline Habitat Study area boundary or within 0.5 miles, or that are suspected of occurring in the vicinity. Other uncommon and rare species not listed here may possibly occur. Fish and invertebrates (other than butterflies) are not included here.

KEY:

V is the assigned value for the SRHS, as defined in the Uncommon and Rare Species Status/Value Tables. **H** = high, **M** = medium, **L** = low.

O = Moon Mountain Park area occurrence: **C** = **confirmed** (before SRHS, in or near SRHS area as per ORNHIC), **L** = likely, **U** = unlikely but possible, **V** = very unlikely, **A** = accidental, **?** = unknown.

Fed is the status under the federal Endangered Species Act.

FW is the listing status of the Oregon Department of Fish and Wildlife (animals) and Oregon Dep't. of Agriculture (plants)

NH is the listing status of the Oregon Natural Heritage Information Center (ORNHIC), with 1 being the rarest.

CS is the Oregon Conservation Strategy (Y = yes)

NP is the Native Plant Society of Oregon, Emerald Chapter R & E List; only List B species (rare in Lane Co.) included here; other NP listings are shown only if a species is listed for another reason.

Habitat notes: Synthesis of habitat information from listed sources below, supplemented with field observations.

V	O	Scientific Name	Common Name	Fed	FW	NH	CS	Habitat Notes
AMPHIBIANS AND REPTILES								
H	U	Bufo boreas	Western toad	---	SV	4	---	Adults are partly fossorial, using mostly woods and shrubby areas. Breed in shallow water. Becoming very rare in WV.
H	C	Rana aurora aurora	Northern red-legged frog	SOC	SV	4	Y	Need ponds and wetlands for breeding, with adjacent moist forests with dense understory for dispersal.
H	C	Crotalus viridis	Western rattlesnake	---	SV	4	Y	Utilize sunny, rocky areas on ridge tops or south slopes, and nearby low, sparse vegetated areas.
BIRDS								
H	U	Contopus cooperi	Olive-sided flycatcher	SOC	SV	4	---	Need older stands, especially with large, older trees near openings. Migration, yes. Nesting, unlikely.
M	C	Dryocopus pileatus	Pileated woodpecker	---	SV	---	---	Late successional, mixed forest with large diameter trees and snags. Also forages in other forest types.
H	C	Empidonax traillii brewsteri	Little willow flycatcher	---	SV	4	Y	Prefers willow and other shrub thickets, especially near water.

V	O	Scientific Name	Common Name	Fed	FW	NH	CS	Habitat Notes
M	C	<i>Oreortyx pictus</i>	Mountain quail	SOC	---	4	---	Need shrubby habitats and open places nearby to forage.
M	L	<i>Patagioenas fasciata</i>	Band-tailed pigeon	SOC	---	4	---	Need mineral sites, and large conifer forest landscape, with mixed age and structure within.
H	U	<i>Poocetes gramineus affinis</i>	Oregon vesper sparrow	SOC	SC	2	Y	Need grasslands with patches of bare ground for foraging and nesting; scattered shrubs/trees for perching.
H	L	<i>Sialia mexicana</i>	Western bluebird		SV	4	Y	Primary habitat is oak savanna; nest in cavities.
H	L	<i>Sitta carolinensis aculeata</i>	White-breasted nuthatch	---	---	4	Y	Aka white-breasted nuthatch. Prefers mature oak savanna and woodland habitats, with oaks >22"dbh.
H	I	<i>Spizella passerine</i>	Chipping sparrow	---	---	---	Y	Oak woodlands & savanna; likely oak-pine (& Doug-fir?) savanna.
H	V	<i>Sturnella neglecta</i>	Western meadowlark	---	SC	4	Y	Needs 40 ac or more of prairie or other open habitat for nesting.
INVERTEBRATES								
H	V	<i>Euphydryas editha taylori</i>	Taylor's checkerspot	C	---	1	Y	Need prairie & savanna habitat. Currently use <i>Plantago lanceolata</i> (narrow-leaf plantain) as larval host; historically, likely used <i>Castilleja</i> . Historic in Lane Co. (Coburg Hills).
H	U	<i>Icaricia icarioides fenderi</i>	Fender's blue butterfly	LE	---	1	Y	Use prairie and savanna habitat. Almost exclusively use <i>Lupinus sulphureus</i> ssp. <i>kincaidii</i> (Kincaid's lupine) as larval host. Rarely, <i>Lupinus albicaulis</i> and <i>L. arbustus</i> .
MAMMALS								
M	U	<i>Arborimus longicaudus longicaudus</i>	Red tree vole	SOC	---	4	---	Prefers young to mature conifer stands.
M	U	<i>Myotis californicus</i>	California myotis	---	---	4	Y	Use a wide range of habitats, roost in crevices, possibly caves. Snags likely important.
M	L	<i>Myotis evotis</i>	Long-eared myotis	SOC	SU	4	---	Associated with conifer forests. Uses snags, buildings, bridges and other structures.
H	C	<i>Sciurus griseus</i>	Western gray squirrel	---	SU	4	Y	Oak savanna and woodland is best habitat, and mixed pine or other conifer element is good. Prefer large OR white oak cavities for birthing/rearing.
M	U	<i>Thomomys bulbivorus</i>	Camas pocket gopher	SOC	---	4	---	Prairies and openings with good drainage. Generally at lower elevations than the S. Eugene Ridgeline area.
PLANTS								
H	U	<i>Cicendia quadrangularis</i>	Timwort	---	---	2	---	A Vernal pools, pond edges; sparsely-vegetated parts of wet prairie when drying out in spring.

V	O	Scientific Name	Common Name	Fed	FW	NH	CS	Habitat Notes	
H	C	<i>Cimicifuga elata</i>	Tall bugbane	---	C	1	---	A	Slightly moist north slopes in conifer forest, usually with bigleaf maple in the understory. Rare on E and W slopes. Often in small gaps.
M	U	<i>Dodecatheon pulchellum</i> var. <i>macrocarpum</i>	Beautiful shooting star	---	---	---	---	B	Wet to moist prairies.
H	U	<i>Erigeron decumbens</i> var. <i>decumbens</i>	Willamette Valley daisy	LE	LE	1	Y	A	Moist to upland prairie, possibly savanna.
H	C	<i>Eucephalus (Aster) vialis</i>	Wayside aster	SOC	LT	1	Y	A	Oak savanna, mixed forest gaps and edges.
H	V	<i>Horkelia congesta</i> ssp. <i>congesta</i>	Shaggy horkelia	SOC	C	1	---	A	Moist to upland prairie and savanna.
H	C	<i>Lathyrus holochlorus</i>	Thin-leaved peavine	SOC	---	1	---	A	Often associated with moist OR white oak / OR ash forest, on edges. Usually on floodplains, can be on hillsides or hilltops.
M	U	<i>Lathyrus vestitus</i> var. <i>ochropetalus</i>	Pacific pea	---	---	---	---	B	Forest openings and edges.
H	U	<i>Lomatium bradshawii</i>	Bradshaw's lomatium	LE	LE	1	Y	A	Wet prairie; occasionally gaps in wet, Oregon ash forest.
M	U	<i>Lomatium macrocarpum</i>	Large-fruited lomatium	---	---	---	---	B	Dry prairies and savannas.
M	C	<i>Lupinus affinis</i>	Fleshy lupine	---	---	---	---	B	Meadows, prairies.
H	U	<i>Lupinus sulphureus</i> ssp. <i>kincaidii</i>	Kincaid's lupine	LT	LT	1	Y	A	Upland to slightly moist prairie.
M	U	<i>Montia dichotoma</i>	Dwarf montia	---	---	---	---	B	Vernally moist areas.
H	C	<i>Montia howellii</i>	Howell's montia	---	C	4	---	A	Vernally moist areas with sparse vegetation. Wet prairies (occ. on ant mounds); seepy, gravelly areas. Can grow in gravel in parking areas, road shoulders.
M	C	<i>Olsynium douglasii</i>	Grass widows	---	---	---	---	B	Grassy balds, rocky areas.
M	L	<i>Orobanche pinorum</i>	Oceanspray broomrape	---	---	---	---	B	Parasitic on <i>Holodiscus discolor</i> .
H	U	<i>Romanzoffia thompsonii</i>	Thompson mistmaiden	---	---	1	---	A	Seepy areas on south slopes. Does not compete well with taller vegetation. Historic sighting in SRHS area.
H	V	<i>Rotala ramosior</i>	Toothcup	---	---	2	---	C	Shorelines.
M	C	<i>Senecio macounii</i>	Puget groundsel	---	---	---	---	B	Savannas, open woodlands.
H	C	<i>Sericocarpus rigidus</i> (<i>Aster curtus</i>)	White-topped aster	SOC	LT	1	Y	A	Prairies and savannas, upland to moist. Sometimes with some disturbance.
H	L	<i>Sidalcea campestris</i>	Meadow checkermallow	---	C	4	---	A	Dry to moist prairies and savannas; also edges and gaps
M	U	<i>Sidalcea cusickii</i>	Cusick's checkermallow	---	---	4	---	---	Damp to wet prairie, forest edges and gaps.
M	V	<i>Silene hookeri</i> ssp. <i>hookeri</i>	Hooker's pink	---	---	---	---	B	Dry prairies and savannas.
H	C	<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed	SOC	---	1	---	A	Wet to moist prairie.

V	O	Scientific Name	Common Name	Fed	FW	NH	CS	Habitat Notes	
			grass						
M	U	<i>Triteleia grandiflora</i> ssp. <i>howellii</i>	Howell's brodiaea	---	---	---	---	B	Dry to moist prairies.
M	U	<i>Verbena hastata</i>	Blue verbena	---	---	4	---	B	Moist areas.
M	U	<i>Viola hallii</i>	Hall's violet	---	---	---	---	B	Upland prairie.
M	C	<i>Viola praemorsa</i> ssp. <i>prae.</i>	Upland yellow violet	---	---	---	---	B	Dry prairies and savannas.