

Rare Plant Inventory and
Community Vegetation Survey
Squilchuck State Park



Cypripedium montanum, mountain
lady's-slipper, on the state Watch list,
present at Squilchuck State Park

Conducted for
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In the summer of 2004, at the request of and under contract to the Washington State Parks Commission, a rare plant inventory and community vegetation survey was conducted at Squilchuck State Park by Dana Visalli and assisting botanists and GIS technicians. Squilchuck State Park is a 263 acre park on the east slope of the Cascade Mountains in Central Washington, located largely in the transition zone between shrub-steppe and montane forest.

Plant community polygons were delineated prior to the initiation of field surveys using orthophotos and satellite imagery. These polygons were then ground checked during the vegetation surveys, which were conducted simultaneously with the rare plant inventories. All plant associations were determined using the *Field Guide for Forested Plant Associations of the Wenatchee National Forest* (Lilybridge et al, 1995)



The Douglas-fir dominated forest above the lodge, on the eastern slopes of the park. The forest on this east slope is in places heavily overstocked and the trees suppressed.

Vegetation surveys and plant inventories were conducted by two field personnel (one botanist, one GIS technician) on June 11th, and again by 4 field workers on August 13 (two botanists and two GIS technicians). All vascular plant species encountered were identified to species; a total of 219 species were found in the park. No plants listed by the Washington Natural Heritage Program as Threatened, Endangered or Sensitive (TES) were encountered during the inventory. Two small populations of mountain lady's-slipper (*Cypripedium montanum*) were found; this strikingly beautiful orchid was until recently a listed species in the state. It is now on the WNHP 'Watch' list, which is a category below the TES listings which the WNHP maintains to gather additional information on some formerly listed species that have proven to be more abundant in the state that was first thought to be the case.

The central area of the park served as a local ski area for the community of Wenatchee for a number of years before it was displaced by a larger resort higher in the nearby mountains. A small lodge is still maintained on the property, and adjacent to this there is large parking area, mowed fields, and the former ski hill, now largely returning to native vegetation. Near the entrance to the park there is are several small fields that were farmed for some years, and are now a mix of native and non-native plant species. A small creek wells up out of the ground below the



The old ski lodge, with mowed area adjacent. Young Douglas-fir have crowded into what must have been an open area behind the lodge when the ski area was active.



Near the homesite at the north end of the park, an open area that was formerly field or pasture.

lodge, and runs through the park for several hundred yards before its confluence with Squilchuck Creek just outside the park boundaries. There is a small vernal pond in the park along the eastern boundary.

Most of the remainder of the park is covered by coniferous forest. A considerable portion of the park is on slopes with a northerly aspect; these areas are dominated by Douglas-fir. On several flat benches the forest quickly transitions to a more open ponderosa pine-dominated community, while on the true-north slopes and in the forested portion of the creek bottom grand fir appears, often in the shade of the Douglas-fir.

All of the forested areas appear to be second growth, with the majority of the trees being 60-100 years old. Some more mature Douglas-fir and ponderosa pine emerge from the forest canopy of younger trees in the southeast quadrant of the park. The north-facing slopes tend to be overstocked with crowded, suppressed Douglas-fir 6-12 inches in diameter that would doubtless



The site of the small vernal pond in the northeast quadrant of the park, dry in August when this picture was taken.

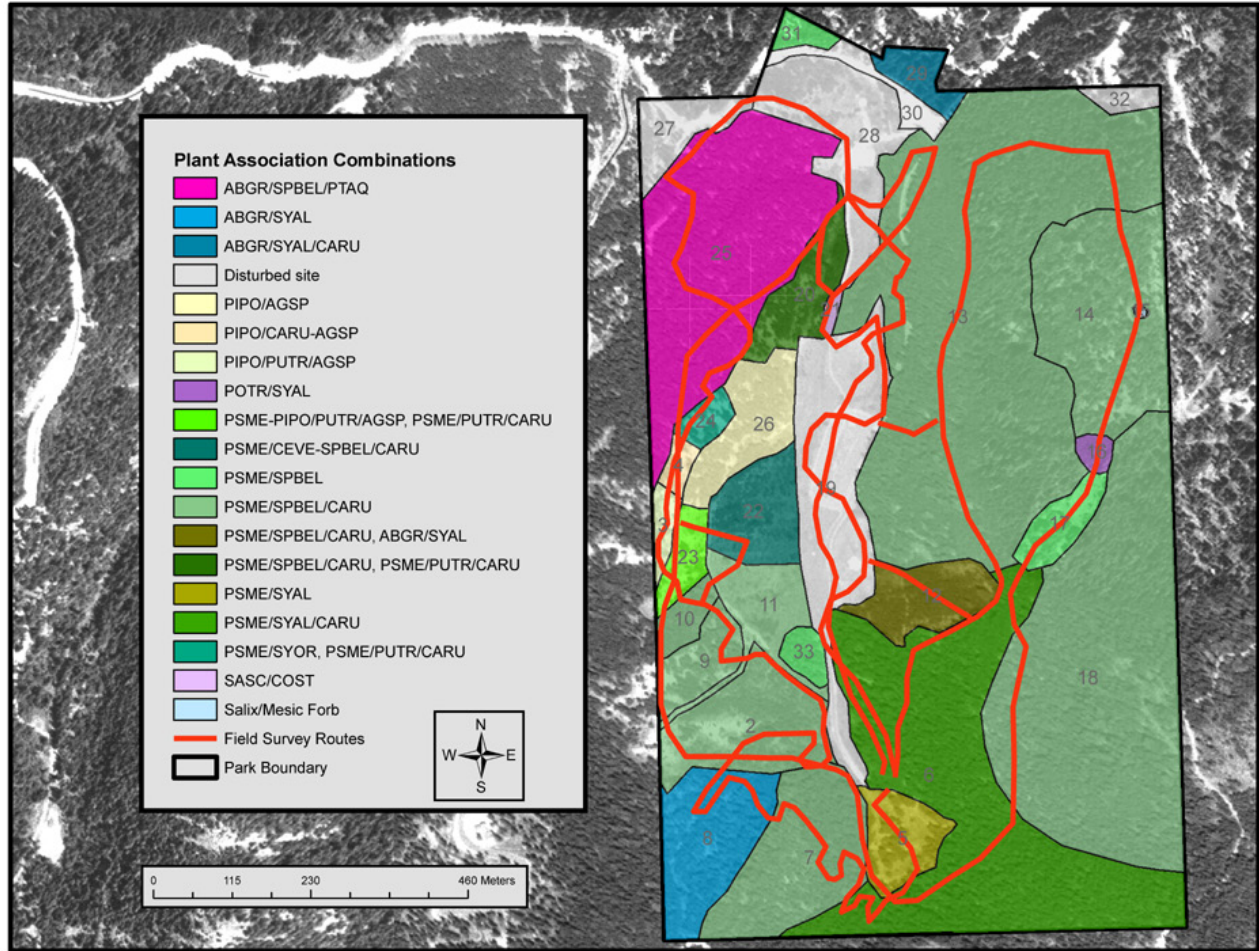


The only aspen grove in the park, also in the northeast quadrant

benefit from a prescribed burn. Nearby private dwellings may preclude this kind of treatment. Near the entrance to the park, in the cool and damp of the creek bottom, there are a small number of maturing grand fir.

Weeds are abundant in the former parking area of the ski hill and in the adjacent mowed fields. Several of the weed species in the park are on the county noxious weed list--notably diffuse knapweed (*Centaurea diffusa*) and butter-and-eggs (*Linaria vulgaris*); the local ranger is well aware of these species and it is our impression that he is already working to eradicate them. Because there is so much heavily disturbed ground in the vicinity of the former ski area, weeds will be an issue in this portion of the park for some years to come.

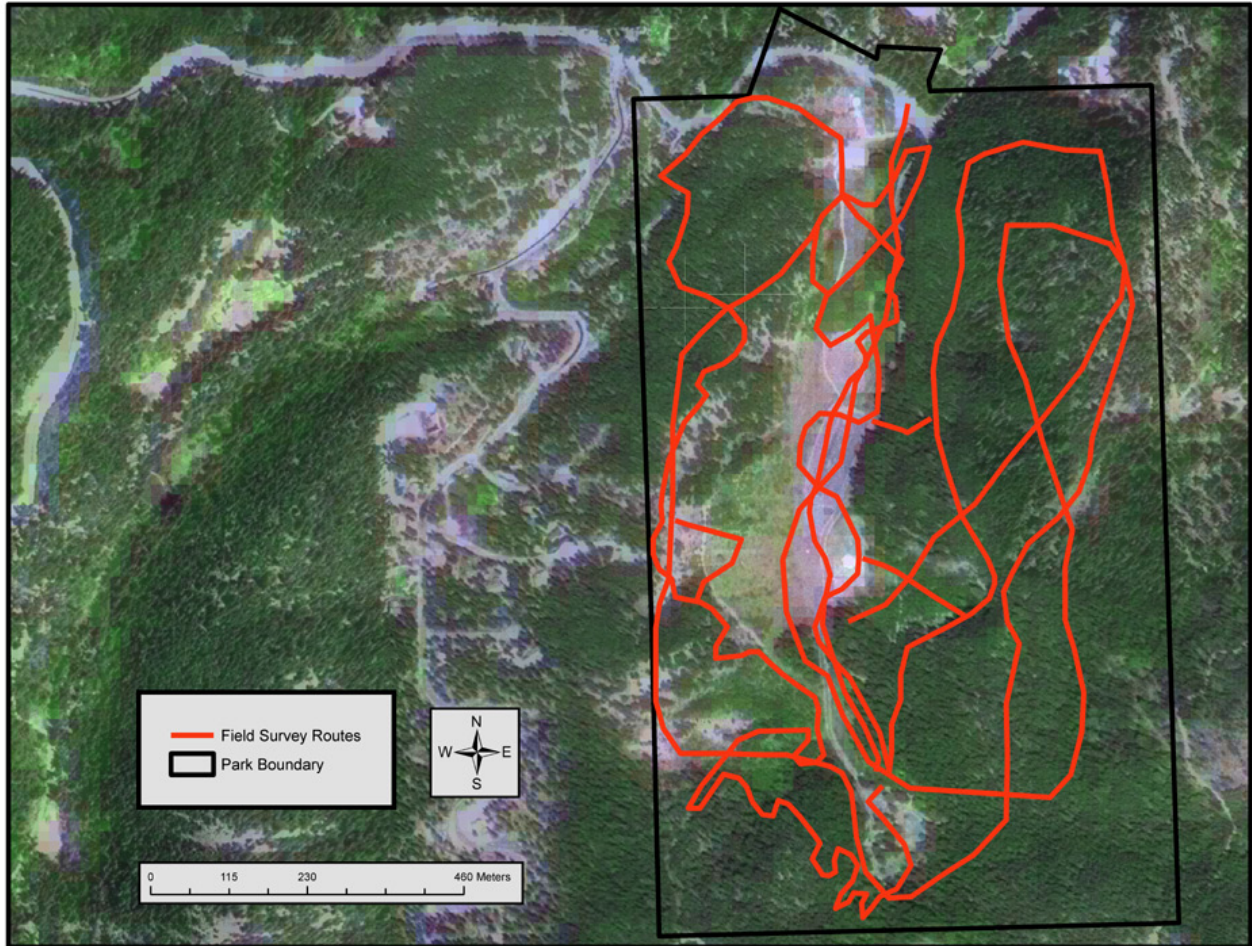
Squilchuck Vegetation Community Map



Key to Plant Associations

ABGR/SPBE/PTAQ	<i>Abies grandis</i> / <i>Spiraea betulifolia</i> / <i>Pteridium aquilinum</i>	Grand fir/Birchleaf spiraea/Bracken fern
ABGR/SYAL	<i>Abies grandis</i> / <i>Symphoricarpus albus</i>	Grand fir/Common snowberry
ABGR/SYAL/CARU	<i>Abies grandis</i> / <i>Symphoricarpus albus</i> / <i>Calamagrostis rubescens</i>	Grand fir/Common snowberry/Pinegrass
DISTURBED SITE	Disturbed site	Roads, parking lots, buildings, former farm fields
PIPO/AGSP	<i>Pinus ponderosa</i> / <i>Agropyron spicatum</i>	Ponderosa pine/Bluebunch wheatgrass
PIPO/CARU-AGSP	<i>Pinus ponderosa</i> / <i>Calamagrostis rubescens</i> / <i>Agropyron spicatum</i>	Ponderosa pine/Pinegrass/Bluebunch wheatgrass
PIPO/PUTR/AGSP	<i>Pinus ponderosa</i> / <i>Purshia tridentate</i> / <i>Agropyron spicatum</i>	Ponderosa pine/Butterbrush/Bluebunch wheatgrass
POTR/SYAL	<i>Populus tremuloides</i> / <i>Symphoricarpus albus</i>	Quaking aspen/Common snowberry
PSME/CEVE-SPBEL/CARU	<i>Pseudotsuga menziesii</i> / <i>Ceanothus velutinus</i> - <i>S. betulifolia</i> / <i>C. rubescens</i>	Douglas fir/Snowbrush-Birchleaf spiraea/Pinegrass
PSME-PIPO/PUTR/AGSP	<i>Pseudotsuga menziesii</i> - <i>P. ponderosa</i> / <i>P. tridentata</i> / <i>A. spicatum</i>	Douglas fir-Ponderosa pine/Bitterbrush/Bluebunch wheatgrass
PSME/PUTR/CARU	<i>Pseudotsuga menziesii</i> / <i>Purshia tridentate</i> / <i>Agropyron spicatum</i>	Douglas fir/Bitterbrush/Bluebunch wheatgrass
PSME/SPBEL	<i>Pseudotsuga menziesii</i> / <i>Spiraea betulifolia</i>	Douglas fir/Birchleaf spiraea
PSME/SPBEL/CARU	<i>Pseudotsuga menziesii</i> / <i>Calamagrostis rubescens</i>	Douglas fir/Pinegrass
PSME/SYAL	<i>Pseudotsuga menziesii</i> / <i>Symphoricarpus albus</i>	Douglas fir/Common snowberry
PSME/SYAL/CARU	<i>Pseudotsuga menziesii</i> / <i>Symphoricarpus albus</i> / <i>C. rubescens</i>	Douglas fir/Common snowberry/Pinegrass
PSME/SYOR	<i>Pseudotsuga menziesii</i> / <i>Symphoricarpus oreophilus</i>	Douglas fir/Mountain snowberry
SASC/COST	<i>Salix scouleriana</i> / <i>Cornus stolonifera</i>	Scoulers willow/Red-oiser dogwood
SALIX/MESIC FORB	<i>Salix</i> /Mesic forb	Willow/Mesic forb

Squilchuck Survey Routes



Survey Dates:

June 11: two field workers

August 13: four field workers

A selection of Squilchuck State Park wildflowers:



Red columbine, *Aquilegia formosa*



Monkshood, *Aconitum columbianum*



Showy aster, *Aster conspicuus*



Tiger lily, *Lilium columbianum*



Butter-and-eggs, *Linaria vulgaris*



Baneberry, *Actaea rubra*

	Code	Scientific Name	Common Name	Family- Scientific	Family- Common	Type	Alien?
117	HYFE	Hydrophyllum fendleri	white waterleaf	Hydrophyllaceae	Waterleaf	p	
118	JUBA	Juncus balticus	Baltic rush	Juncaceae	Rush	g	
119	JUTE	Juncus tenuis	slender rush	Juncaceae	Rush	g	
120	KOCR	Koeleria cristata	Junegrass	Gramineae	Grass	g	
121	LAMU	Lactuca muralis	wall lettuce	Compositae	Composite	a	a
122	LASE	Lactuca serriola	wild lettuce	Compositae	Composite	a	a
123	LAOC	Larix occidentalis	Western larch	Pinaceae	Pine	c	
124	LAPA5	Lathyrus pauciflorus	few-flowered peavine	Leguminosae	Pea	p	
125	LIGR	Ligusticum grayi	Gray's lovage	Umbelliferaeae	Parsley	p	
126	LICO	Lilium columbianum	tiger lily	Liliaceae	Lily	p	
127	LIVU2	Linaria vulgaris	butter-and-eggs	Scrophulariaceae	Figwort	p	
128	LIBU	Lithophragma bulbifera	bulbiferous fringe cup	Saxifragaceae	Saxifrage	a	
129	LIGL2	Lithophragma glabrum	smooth fringe cup	Saxifragaceae	Saxifrage	a	
130	LIAR4	Lithospermum arvense	corn grower	Boraginaceae	Borage	a	
131	LONU	Lomatium nudicaule	barestem lomatium	Umbelliferaeae	Parsley	p	
132	LOTR2	Lomatium triternatum	narrow-leaved desert parsley	Umbelliferaeae	Parsley	p	
133	LUNA5	Luina nardosmia	silverbrown luina	Compositae	Composite	p	
134	LUSE4	Lupinus sericeus	silky lupine	Leguminosae	Pea	p	
135	LUWY	Lupinus wyethii	Wyeth lupine	Leguminosae	Pea	p	
136	MAGR3	Madia gracilis	slender tarweed	Compositae	Composite	a	
137	MANE	Malva neglecta	dwarf mallow	Malvaceae	Mallow	a	
138	MAMA11	Matricaria matricarioides	pineapple weed	Compositae	Composite	a	
139	MELU	Medicago lupulina	black medic	Leguminosae	Pea	p	a
140	MESA	Medicago sativa	alfalfa	Leguminosae	Pea	p	a
141	MEAL2	Melilotus alba	white clover	Leguminosae	Pea	b	a
142	MEL04	Mertensia longiflora	small bluebells	Boraginaceae	Borage	p	
143	MIGU	Mimulus guttatus	yellow monkeyflower	Scrophulariaceae	Figwort	p	
144	MITR4	Mitella trifida	three-tooth mitella	Saxifragaceae	Saxifrage	p	
145	MOPA5	Montia parvifolia	littleleaf montia	Caryophyllaceae	Pink	a	
146	MYDI	Myosotis discolor	yellow and blue forgetmenot	Boraginaceae	Borage	a	
147	NEBR	Nemophila breviflora	Great Basin nemophila	Hydrophyllaceae	Waterleaf	a	
148	NECA2	Nepeta cataria	catnip	Labiatae	Mint	p	a
149	OSCH	Osmorhiza chilensis	mountain sweet-cicely	Labiatae	Parsley	p	
150	OSOC	Osmorhiza occidentalis	western sweet-cicely	Umbelliferaeae	Parsley	p	
151	PAMY	Pachistima myrsinites	pachistima	Celastraceae	Stafftree	s	
152	PEBR	Pedicularis bracteosa	bracted lousewort	Scrophulariaceae	Figwort	p	
153	PECO6	Penstemon confertus	yellow penstemon	Scrophulariaceae	Figwort	s	
154	PEFR3	Penstemon fruticosus	shrubby penstemon	Scrophulariaceae	Figwort	s	
155	PEGA	Penstemon gairdneri	Gairdner's penstemon	Scrophulariaceae	Figwort	s	
156	PEGA3	Perideridia gairdneri	Gairdner's yampha	Umbelliferaeae	Parsley	p	
157	PHHA	Phacelia hastata	silverleaf phacelia	Hydrophyllaceae	Waterleaf	p	
158	PHLE4	Philadelphus lewisii	Lewis' mockorange	Hydrangeaceae	Hydranga	s	
159	PHPR3	Phleum pratense	timothy	Gramineae	Grass	g	
160	PIPO	Pinus ponderosa	ponderosa pine	Pinaceae	Pine	t	
161	PLLA	Plantago lanceolata	narrow leaf plantain	Plantaginaceae	Plantain	p	a
162	PLMA2	Plantago major	common plantain	Plantaginaceae	Plantain	p	a
163	POBU	Poa bulbosa	bulbous bluegrass	Gramineae	Grass	a	a
164	POCO	Poa compressa	Canada bluegrass	Gramineae	Grass	g	
165	POPR	Poa pratensis	Kentucky bluegrass	Gramineae	Grass	g	a
166	POSE	Poa secunda	Sandberg bluegrass	Gramineae	Grass	g	
167	POAV	Polygonum aviculare	prostrate knotweed	Polygonaceae	Buckwheat	a	
168	POPE3	Polygonum persecaria	spotted ladysthumb	Polygonaceae	Buckwheat	a	
169	POMU	Polystichum munitum	sword-fern	Polypodiaceae	Common Fern	f	
170	POTR5	Populus tremuloides	quaking aspen	Salicaceae	Willow	t	
171	POTR15	Populus trichocarpa	black cottonwood	Salicaceae	Willow	t	
172	POAR7	Potentilla arguta	sticky cinquefoil	Rosaceae	Rose	p	
173	POGL9	Potentilla glandulosa	sticky cinquefoil	Rosaceae	Rose	p	
174	POGR9	Potentilla gracilis	slender cinquefoil	Rosaceae	Rose	p	

