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10/24/16 km

MCO23, MCO18, MCO20
Examined 9-22-16

BOTANICAL FIELD RECONNAISSANCE REPORT
Helena-Lewis and Clark National Forest

Project: Moose Creek
District: White Sulphur (District 7) L&C NF
Survey Area ID: 011507030402 MC 18, 20, 23
Survey Name: MC8236, MC8237, MC8239
Surveyors: Smits, S & Hair, D
Survey Date(s): 8/23/16

USGS Quad:	Location:	GPS unit/device	Other:
UTM: NAD 83 Zone E	T R S N	Trimble Avenza Smits	
Location/Directions to Survey Area:			Road 6404

Survey type: Field Check; Cursor; General; Intuitive Controlled; Complete

Describe survey route/effort taken:

Walked through the units

Target Species:

Goodyera repens (8239)

Describe general habitat(s): Type, common species, plant associations, unique features, etc.:

8236: Open, dry meadow dominated by Phlox & Poa pratensis, dried up stream running through part (low potential habitat),
8237: Dry meadow dominated by Phlox, stream adjacent
8239: Dead overstory PICO, PIEN & PICO live in mid-story, dry, sparse understory

Management History/Current Uses:

Grazing

Serial Stage: early mid late

Slope/s: 0%

Elevation: 6100

Soil/Bedrock:

SPECIAL STATUS PLANTS (federally listed, FS sensitive)
 Any known/historical populations in the project area? (Include species and EO#)

No

Any new populations found in the project area? (Include species and EO#)

No

Presence of Suitable Habitat for Listed Species (Provide brief explanation of why habitat is unsuitable or where suitable habitat occurs)

SPECIES	STATUS	PRESENT IN PROJECT AREA	HABITAT PRESENT IN PROJECT AREA	HABITAT
<i>Amerorchis rotundifolia</i> Round-leaved Orchis	R1 Sensitive; S	N	Mossy seeps, sphagnum bogs, ponds, or along streams in wet to moist spruce forests with limestone-derived soils. 3350-5920ft elevation	
<i>Aquilegia brevistylis</i> Short-styled Columbine	R1 Sensitive; S		Semi-open, moist drainage bottoms or toe slopes on alluvial or colluvial limestone substrates, at mid-elevation in the montane zone. Can be found along streambanks. Partial understory conifer shade is a common component. 5000-6200ft elevation	
<i>Astragalus lacschewitzii</i> Lacschewitz' Milkveitch	R1 Sensitive; S		Generally restricted to open, gravelly and rocky slopes and ridgetops with calcareous soil and talus in alpine or subalpine zones. 7000-8120 ft elevation	
<i>Botrychium ascendens</i> Upward-lobed Moonwort	R1 Sensitive; K		Stream floodplains of glaciated bottoms dominated by deciduous shrubs with lush cover by forbs, grasses, and mosses in NW Montana. Often associated with wetlands dominated by spruce and alder. Mostly found in subirrigated habitats 2700-6000 (9500) ft elevation	Y
<i>Botrychium crenulatum</i> Wavy Moonwort	R1 Sensitive; K		Stream bottoms, around seeps, on the edges of marshes, and in wet roadside swales, often in soils influenced by precipitated calcium. Vegetation dominated by spruce, alders, and dogwood with high cover and diversity of forbs and graminoids. Reported from western red cedar habitat and also found in rough fescue/ID fescue grasslands in heavy litter, 2400-7,700 ft elevation	X
<i>Botrychium paradoxum</i> Peculiar Moonwort	R1 Sensitive; K		Mesic meadows and bunchgrass communities associated with spruce and lodgepole pine forests in the montane and subalpine zones. Grows on glaciated slopes and ridgetops, glaciated lake basins, and stream bottoms and draws. 2,400-9,500 feet elevation	Y

SPECIES	STATUS	PRESENT IN PROJECT AREA	HABITAT PRESENT IN PROJECT AREA	HABITAT
<p><i>Cyrtopodium parviflorum</i> Slipper Small Yellow Lady's Sparrow's Egg Lady's Slipper</p>	<p>R1 Sensitive; S</p>	<p>2</p>		<p>Along ecotonal margins of spruce habitat types (damp, mossy woods) with wetland features such as fens, seeps, springs, streambeds, and moist forest meadow ecotones in the valley to lower montane zones. Generally associated with high water table features that provide stable, cool groundwater discharge and cool, moist, calcareous soils 2500-6200 feet elevation</p>
<p><i>Cyrtopodium passerinum</i> Sparrow's Egg Lady's Slipper</p>	<p>R1 Sensitive; S</p>			<p>Moist, mossy, seepy areas, riparian zones, ecotonal margins of sphagnum bogs, often in full or partial shade of conifers. Preferred habitat is associated with spruce, but will associate with lodgepole. On the Lewis and Clark, found on calcareous substrates derived from the Madison Limestone Formation. Also associated with semi-permanent water seepage near the surface. 3000-5700 feet elevation</p>
<p><i>Drosera anglica</i> English Sundew</p>	<p>R1 Sensitive; K</p>			<p>Sphagnum moss in wet, organic soils of fens and meadows in the montane zone. Commonly associated with open water, wetlands, or riparian systems.</p>
<p><i>Drosera linearis</i> Slenderleaf Sundew</p>	<p>R1 Sensitive; K</p>			<p>Wet, organic soil of nutrient-poor fens in the montane zone. Commonly associated with open water, wetlands, or riparian systems</p>
<p><i>Elymus inornatus</i> Northern wildrye</p>	<p>R1 Sensitive; K</p>	<p>1</p>		<p>Primarily sandy meadows, along stream banks, on rock hillside with partial shade, and in open stands of lodgepole or spruce. Primarily in the upper montane zone on slopes adjoining the major valley bottoms. Also in well-drained alluvial benches in flood plains 4600 - 5200 ft elevation</p>
<p><i>Eriophorum giganteum</i> Giant Helleborine</p>	<p>R1 Sensitive; K</p>			<p>Widely varied. One consistent requirement is a permanent source of thermally-influenced water at the root level. Stream banks, lake margins, fens with seeps and springs, shrub dominated wetland, and riparian areas 2500 - 6000 feet elevation</p>
<p><i>Eriogonum lasiocarpum</i> Lackschewitz's fleabane</p>	<p>R1 Sensitive; K</p>			<p>Grows exclusively in exposed alpine settings (gravely talus) with water-retaining calcareous soil derived from a dolomite substrate, rock-covered surfaces impeding water loss from shallow soil beneath, exposed, windy sites (saddles, protruding outcrops, crests of updraft chutes), and areas with first snowmelt and late soil recharge above 6000 ft.</p>
<p><i>Gentianopsis macounii</i> Macoun's gentian</p>	<p>R1 Sensitive; K</p>	<p>↑</p>		<p>Wet, organic soil of calcareous fens or wet meadows with standing water in the valley and foothill zones 3500-5500 ft elevation.</p>

SPECIES	STATUS	PRESENT IN PROJECT AREA	PRESENT IN PROJECT AREA	HABITAT
<i>Goodyera repens</i> Northern Rattlesnake-plantain	R1 Sensitive; S	2		Cool, moist, north-facing sites consisting of spruce/ twinflower and subalpine fir/ twinflower habitat types with well-developed organic duff, moss layers at mid-elevations, and shade from late successional forests 5000-6800 feet elevation
<i>Grindelia howellii</i> Howell's Gumweed	R1 Sensitive; S			Vernally moist, highly disturbed soil adjacent to ponds and marshes, as well as similar human-created habitats, such as roadsides and grazed pastures 3000-5500 feet elevation
<i>Juncus hallii</i> Hall's Rush	R1 Sensitive; K			Moist grassland and sedge meadows from the montane to alpine zones. Flats or benches on the gentle to mid-upper slopes (3500) 6000-8800 feet elevation
<i>Micranthes tempestiva</i> Storm Saxifrage	R1 Sensitive; S			Vernally moist, open soil in meadows and on rock ledges in the subalpine and alpine zones 7500-9500 feet elevation
<i>Oxytropis podocarpa</i> Stalked-pod Locoweed	R1 Sensitive; S			Gravelly ridges and slopes, often on limestone, and in the alpine zone. Populations are situated in basins or on steep slopes and ridges with limestone-derived soils, in the alpine zone 6500-8500 feet elevation
<i>Phlox kelleyi</i> var <i>missouliensis</i> Missoula Phlox	R1 Sensitive; K			Open, exposed, limestone-derived slopes in the foothills to exposed, windswept ridges in the subalpine zone 5800-8500 feet elevation
<i>Pinus albicaulis</i> White-bark Pine	Candidate; K			Tolerates poor soils, steep slopes, windy exposures, and tree-line environments. Often found on warm, dry exposures in subalpine and alpine habitats.
<i>Polygonum austrinae</i> Austin's Knotweed	R1 Sensitive; K			Open, gravelly, sparsely-vegetated (mostly barren or easily eroded) slopes with shale-derived soils. Associated with ponderosa and bluebunch wheatgrass habitat types with little vegetation cover 4000-9000 feet elevation
<i>Potamogeton obtusifolius</i> Blunt-leaved pondweed	R1 Sensitive; K			Shallow water of lakes, ponds, and sloughs and lotic streams in the valley, foothill, and montane zones
<i>Potentilla nivea</i> var. <i>pentaphylla</i> Five-leaved cinquefoil	R1 Sensitive; K			Dry, shallow, gravelly soil or talus and scree of exposed ridges, slopes, and summits in the montane to alpine zones 4600-10000 ft elevation
<i>Salix barrattiana</i> Barratt's willow	R1 Sensitive; S	↑		Alpine habitat, sessile catkins, and sticky twigs will distinguish this willow from other species. Leaves and mature female catkins are necessary for positive identification 6500 - 9500 ft elevation

SPECIES	STATUS	PRESENT IN PROJECT AREA	HABITAT PRESENT IN PROJECT AREA	HABITAT
<i>Schoenoplectus subternatis</i> Water Bulrush	R1 Sensitive; K	N	Shallow (0.1 - 3.0 m / < 10 ft depth) open water and boggy margins of ponds, lakes, and sloughs at 0.1-3.0 m depth, in the valley, foothill, and montane zone. Stems float on the water's surface.	
<i>Spiranthes diluvialis</i> Ute Ladies Tresses	Threatened; S*		Alkaline wetlands, swales and old, meandering channels often on the edge of wetlands or areas that are dry by mid-summer 2700-4700 feet elevation	
<i>Thalictrum alpinum</i> Alpine Meadowrue	R1 Sensitive; S		Typically moist meadows or stony slopes in montane and lower subalpine areas. Can occur on drier, upper portions of hummocks. Sometimes occurs along stream channels 4500-8500 feet elevation	
<i>Trichophorum cespitosum</i> Tufted club-rush	R1 Sensitive; K		Sphagnum-dominated fens and wet meadows in the montane to alpine zones. Rare in Montana—known from populations in the mountains portions of western Montana 2500-9000 ft elevation	
<i>Veratrum californicum</i> California False-hellebore	R1 Sensitive; S		Wet meadows and streambanks in the montane and subalpine zones 5500-8000 feet elevation	Y

SPECIAL HABITATS (fens, sphagnum-peat community, meadows, old growth, whitebark pine, etc)

meadows - disturbed, not high quality potential habitat found.

DISTURBANCE/RISK OF INVASION (circle all that apply)*:

- timber harvest,
- fuels reduction,
- recent fire,
- reforestation,
- vegetation mgt
- lack of vegetation,
- rangeland use,
- adjacent to urban
- mining,
- recreation use,
- roads,
- trails,
- erosion,
- invasive species,
- wasteland/fill site,
- hydroelectric,
- other disturbance:
- beetle kill

Explain in greater detail any disturbance noted above:

Any new infestations found in the project area? (Include species; describe and provide GIS/GPS data for infestation)

Documented previously

***Attach a complete species list and a map with route surveyed.

SPECIES LIST AND LOCATION MAP(S)

Species List

- Carex utriculata
Carex spp.
Potentilla gracilis
Phleum pratensis
Achillea millefolium
Perideridia
Antennaria spp.
Geranium spp.
Trifolium spp.
Angelica arguta
Gentian calycosa
Senecio triangularis
Populus tremuloides
Pedicularis groenlandica
Mimulus spp.
Galium boreale
Arnica spp.
Pinus contorta
Picea engelmannii
Abies
Elymus glaucus
Fragaria virginiana
Agropyron spp.
Agrostis scabra
Rosa woodsii
Lupinus spp.
Prunella vulgaris
Calamagrostis rubescens