

MC025, MC027, MC026, MC019, MC021
Scanned 9-22-16

Survey ID _____

BOTANICAL FIELD RECONNAISSANCE REPORT
Helena-Lewis and Clark National Forest

entered NRM
10/25/16
MM ✓

→ 011507 030402 - MC019, 021, 025-027

Project: Moose Creek

District: White Sulphur / Lewis & Clark NF

Survey Area ID: 011507

Survey Name: MC8222, MC8231, MC8232

Survey Date(s): 8/22/16/
8/23/16

Surveyor/s: Smits, S. MC8238, MC82310
Hair, D. Moose Creek 019, 021, 025, 026, 027

USGS Quad:

Location: T R S 1/4 1/16

UTM: NAD 83 Zone E

N

GPS unit/device
Trimble
Avenza Smits
Other: _____

Location/Directions to Survey Area:

Road 6404

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

Describe survey route/effort taken:

Walked through swits with particular emphasis on wet areas & diverse features apparent from aerial photographs

Target Species: *Goodyera repens*, *Thalictrum alpinum*, *Veratrum californicum*, *Aquilegia brevistylis*, *Botrychium* spp., *Cypripedium parviflorum*, *Epipactis gigantea*

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

8222: Spruce dominated riparian area; permanent stream, alder & willow make up midstory riparian zone is considerably wet in some places
8231 & 8232: permanent stream, lots of dead fall, spruce, fir overstory; huckleberry & raspberry understory
8238: stream
82310: stream running along eastern side of polygon, permanent stream

Management History/Current Uses:

8222: Cattle grazing, damage overall is not to significant

Seral Stage: early mid late

Slope/s: 0%

Aspect/s:

Elevation: 6100

Soil/Bedrock: clay loam

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
Amerorchis rotundifolia Round-leaved Orchis	R1 Sensitive; S	N	N	Mossy seeps, sphagnum bogs, ponds, or along streams in wet to moist spruce forests with limestone-derived soils. 3350-5920ft elevation
Aquilegia brevistyla Short-styled Columbine	R1 Sensitive; S		X	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
Astragalus lackschewitzii Lackschewitz' Milkvetch	R1 Sensitive; S		N	Generally restricted to open, gravelly and rocky slopes and ridgetops with calcareous soil and talus in alpine or subalpine zones. 7000-8120 ft elevation
Botrychium ascendens Upward-lobed Moonwort	R1 Sensitive; K		X	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
Botrychium crenulatum Wavy Moonwort	R1 Sensitive; K		X	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, 2,400-7,700 ft elevation
Botrychium paradoxum Peculiar Moonwort	R1 Sensitive; K		X	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

SPECIES	STATUS	PRESENT IN PROJECT AREA	HABITAT PRESENT IN PROJECT AREA	HABITAT
<i>Cypripedium parviflorum</i> Small Yellow Lady's Slipper	R1 Sensitive; S	N	Y	Along ecotonal margins of spruce habitat types (damp, mossy woods) with wetland features such as fens, seeps, springs, streamsides, 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
<i>Cypripedium passerinum</i> Sparrow's Egg Lady's Slipper	R1 Sensitive; S		X	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
<i>Drosera anglica</i> English Sundew	R1 Sensitive; K		N	Sphagnum moss in wet, organic soils of fens and meadows in the montane zone. Commonly associated with open water, wetlands, or riparian systems.
<i>Drosera linearis</i> Slenderleaf Sundew	R1 Sensitive; K		N	Wet, organic soil of nutrient-poor fens in the montane zone. Commonly associated with open water, wetlands, or riparian systems
<i>Elymus innovatus</i> Northern wildrye	R1 Sensitive; K		X	Primarily sandy meadows, along stream banks, on rock hillsides 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
<i>Epipactis gigantea</i> Giant Helleborne	R1 Sensitive; K		N	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
<i>Erigeron lackschewitzii</i> Lackschewitz's fleabane	R1 Sensitive; K		N	Grows exclusively in exposed alpine settings (gravelly 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.
<i>Gentianopsis macounii</i> Macoun's gentian	R1 Sensitive; K	Y	N	Wet, organic soil of calcareous fens or wet meadows with standing water in the valley and foothill zones 3500-5500 ft elevation.

SPECIES	STATUS	PRESENT IN PROJECT AREA	HABITAT PRESENT IN PROJECT AREA	HABITAT
<i>Goodyera repens</i> Nothern Rattlesnake-plantain	R1 Sensitive; S	N	Y	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		N	Vernally moist, lightly 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		X	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		N	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 Lococweed	R1 Sensitive; S		N	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 kelseyi</i> var <i>missoulensis</i> Missoula Phlox	R1 Sensitive; K		X	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		Y	Tolerates poor soils, steep slopes, windy exposures, and tree-line environments. Often found on warm, dry exposures in subalpine and alpine habitats.
<i>Polygonum. austinae</i> Austin's Knotweed	R1 Sensitive; K		Y	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		N	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 subterminalis</i> Water Bulrush	R1 Sensitive; K	N	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*		N	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		N	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		N	Sphagnum-dominated fens and wet meadows in the montane to alpine zones. Rare in Montana— known from populations in the mountainous portions of western Montana 2500-9000 ft elevation
<i>Veratrum californicum</i> California False-hellebore	R1 Sensitive; S		Y	Wet meadows and streambanks in the montane and subalpine zones 5500-8000 feet elevation

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

riparian habitat, generally along proposed unit's edge

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:

Explain in greater detail any disturbance noted above:

Cattle haven't significantly degraded the habitat overall

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

N

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

SPECIES LIST AND LOCATION MAP(S)

Twisted stalk

Species list

Senecio triangularis
Salix spp. X 3
Geranium richardsonii
Picea englemannii
Aster spp.
Bromus spp.
Rosa woodsi
Equisitum spp.
Achillea millefolium
Heracleum maximum
Actea rubra
Phleum pratensis
Carex utriculata
Cirsium arvense
Shepherdia canadensis
Juniperus communis
Pinus contorta
Ribes spp.
Galium borealis
Fragaria virginiana
Thalictrum spp.
Angelica arguta
Pedicularis groenlandica
Alnus incana
Pyrola asarifolia
Trifolium spp.
Linnaea borealis
Cornus canadensis

Potentilla spp.
Plantanthera spp.
Gentian calycosa
Elymus spp.
Spiraea betulifolia
Vaccinium spp.
Ribes hoodsonianum
Streptopus amplexifolius
Arnica cordifolia
Orthilla secunda
Campanula rotundifolia
Stipa richardsonii
Heuchera parvifolia
Berberis repens
Glyceria grandis
Chamophora umbellatum
Actostaphalos uva-ursi
Pseudotsuga mensesii
Parnassia palustris
Phleum pratensis
Lupinus spp.
Astragalus spp.
Stipa nelsonii
Desephora (former Potentilla)
Urtica dica
Veractrum viride

Mimulus guttatus
Prunella spp.
Elymus glaucous
Loniera spp.
Vaccinium scoparium