

**Plant Inventory  
at  
Fort Union Trading Post  
National Historic Site  
2003-2004**

**Final Report**

**By:**

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## Introduction and Methods

Fort Union Trading Post National Historic Site lies along the Missouri River on the border of North Dakota and Montana in the north central Great Plains. The park includes 333 acres of fee title land. The majority of the park, 288 acres, lies north of the Missouri River in the extreme southwest corner of Williams County, North Dakota and extends into Roosevelt County, Montana. A narrow slice of land, encompassing 45 acres, borders the south side of the Missouri River in Richland County, Montana and McKenzie County, North Dakota. The park includes native and restored grasslands, floodplain forests and an additional 120 to 130 acres of wet floodplain within high water demarcation that is state property.

The purpose of this study was to provide a baseline floristic inventory for the park. During 2003 and 2004 the park was visited nine times with visits dispersed throughout the growing season. The intention was to visit every habitat often enough during the season so that every species present in the park could be collected during its flowering or fruiting period. Days on which the park was visited were: May 20, 2003; June 22, 2003; June 23, 2003; July 20, 2003; July 21, 2003; August 29, 2003; August 30, 2003; July 15, 2004 and July 16, 2004. Reference was made to previous floristic studies made in western North Dakota to assist in the determination of rarity. Hegsted (1973) made an extensive survey of the flora of northwestern North Dakota that included Williams County. Zaczkowski (1972) surveyed the flora of southwestern North Dakota. Additional information on distribution was obtained from the *Atlas of the Flora of the Great Plains* (1977) and from the herbarium at North Dakota State University, Fargo.

## Vegetation

Since a floristic survey is not a quantitative study it does not produce the ecological data necessary for the classification of vegetation into types or communities. However, obvious differences exist between the high, dry prairie of the Bodmer Overlook, the wet, shrubby floodplain on the north side of the Missouri River, the high, park-like, sandy terrace on the south side of the river and the former cultivated area that is being replanted with prairie species. Each of these habitats supports a collection of typical species as well as some unique to that habitat alone.

Within the park the area the thirty acre tract known as the Bodmer Overlook is of particular interest floristically. This site is separated from the main part of the park near the river and occupies a high elevation overlooking the Missouri River valley. The hillcrests have sparse vegetation with many openings between plants exposing sandy soils with a substantial component of clay and rocks. Vegetation is typical of dry prairie. The most abundant species are sedges and grasses, predominantly *Andropogon scoparius*, *Carex filifolia*, *Bouteloua gracilis*, *Muhlenbergia cuspidata*, and *Stipa comata*. *Calamovilfa longifolia* forms large distinctive patches. Typical forbs include *Phlox hoodii*, *Eriogonum pauciflorum*, *Ceratoides lanata*, *Sphaeralcea coccinea*, *Opuntia fragilis*, *Artemisia filifolia*, *Dalea purpurea*, *Gutierrezia sarothrae*, *Solidago missouriensis*, *Machaeranthera grindeloides* and *Grindellia squarrosa*.

The hillsides and lower slopes of the Bodmer Overlook are more densely covered with vegetation. Again, grasses are the most abundant species with *Agropyron smithii*, *Agropyron dasystachyum*, *Poa sandbergii*, *Koeleria pyramidata*, *Andropogon scoparius*, *Bouteloua curtipendula* and *Stipa viridula* being common. Many of the hilltop forbs also occur on the slopes. In addition, one commonly finds *Anemone patens*, *Rosa arkansana*, *Echinacea angustifolia*, *Ratibida columnifera*, *Chrysopsis villosa*, *Artemisia ludoviciana*, *Solidago mollis*, *Yucca glauca* and *Juniperus horizontalis*. The hollows between slopes have been severely impacted by winter feeding of cattle by the former lessee which introduced weeds and non-native grasses. Annual forbs including *Lappula echinata*, *Rumex crispus*, *Chenopodium album* and *Kochia scoparia* will undoubtedly disappear with time as perennial prairie species displace them but *Agropyron cristatum* will probably remain permanently. Prescribed burns would accelerate of disappearance of the introduced weeds, however, carrying a burn over the crests of the hills might be detrimental to some of the rare plants found on those sites. Occasional, intensive grazing would diminish the buildup of litter on the lower slopes, but, under no circumstance should cattle be wintered or fed there.

Despite its small area, six rare species were found on the Bodmer Overlook. *Phlox alyssifolia*, *Erigeron compositus*, and *Townsendia excapa* all flower early in the season and all are close to their eastern limits in the northern Great Plains. All three species are rare in western North Dakota. Other species are reaching their northern limits of distribution, Neither *Mirabilis linearis* nor *Aristata purpurea* is rare in southwestern North Dakota but were considered rare by Hegsted. The same is true for *Hymenoxys richardsonii* and *Hymenoxys acaulis* even though

both are relatively common and conspicuous on the upper slopes of the Bodmer Overlook.

The high terrace upon which the fort itself is situated is largely a disturbed site due to farming and other human activities. Reseeding has been done to replace prairie species and to restore a more historically accurate aspect to the area surrounding the fort. Five rare species were found in the recently seeded areas west of the fort and another elsewhere on the terrace. Two species, *Poa annua* and *Digitaria ischaemum*, were considered rare to western North Dakota by both Hegsted and Zaczkowski, but, of course, are not rare in lawns in the central and eastern parts of the state and probably were introduced as contaminants in the seed used to revegetate the site. *Chorispora tenella* may also have been introduced as a contaminant in the seed, however, its presence had been documented three times by Hegsted and Zaczkowski on sandy floodplains and in a sandy field. *Ranunculus testiculatus* appears to be relatively new to the state. There are no collections on file at North Dakota State University. It was observed previously in this part of the state (personal communication, Dr. William Barker, NDSU) and in Billings County, North Dakota by the author so perhaps it may become more common in the area with time. However, *Ranunculus testiculatus* appears on the list of infrequent Great Plains taxa in the *Atlas of the Flora of the Great Plains*. *Allysum desertorum* is a native species uncommonly found on sandy floodplains in southwestern North Dakota but had not been reported in northwestern North Dakota previous to this study. One additional native species, *Picradeniopsis oppositifolia*, was found in loose, sandy soil on the edge of the terrace just east of the saw-pit. It had not previously been reported in northwestern North Dakota and appears to be at its northern limits of distribution.

Just to the south of the fort the high terrace drops off to the present floodplain. This slope and the higher levels on the outside of the floodplain are occupied by trees and shrubs including; *Acer negundo*, *Fraxinus pensylvanica*, *Salix amegdaloides* and *Cornus stolonifera*. The upper edges of the slope are skirted in places by *Artemisia cana* or by *Prunus virginiana* or *Sherperdia argentea*. *Bromus inermis* and *Poa palustris* are abundant in the understory. Common forbs include *Cirsium canadense*, *Apocynum cannabinum*, *Asclepias speciosa*, *Glycyrriza lepidota*, and *Aster simplex*. Three species found in this location are rare in this part of the state. Neither Hegsted nor Zaczkowski reported *Carex bicknellii* which is more common eastward and is probably reaching the limit of its western distribution. *Bromus squarrosa* occurs sporadically in the Great Plains but neither Hegsted nor Zaczkowski found it. Finally, *Lactuca canadense* had not been previously reported in northwestern North Dakota although it is common in the central and eastern Great Plains.

The river inundates much of the floodplain each spring and shallow water remains over much of the area even after the flood recedes. As a result, wet areas of the floodplain are occupied by large patches of *Phragmites australis*, *Carex laeviconica*, *Carex aquatilis*, *Carex americana*, *Phalaris arundinacea*, *Scirpus acutus*, *Typha latifolia* or *Typha angustifolia x latifolia*. Few forbs are abundant in these wet areas with the exception of *Potentilla anserina*. Long, low ridges extend along the floodplain where former floods left sandy deposits. These minimal elevations provide habitat for *Salix exigua* ssp. *interior* which colonizes newly established sandbars and eventually for *Salix lutea* and *Salix eriocephala*. These sites provide habitat for *Lycopus asper*, *Lycopus americana*, *Mentha arvensis*, *Aster simplex*, *Equisetum arvense*, *Equisetum laevigatum* and *Polygonum lapathifolium* among others.

By late summer many species are flowering on the exposed river shoreline and sandbars

including *Juncus nodosus*, *Juncus torreyi*, *Eleocharis acicularis*, *Eleocharis erythropoda*, *Scirpus maritimus*, *Amaranthus albus*, *Aster brachyactis*, *Bidens vulgata* and *Ranunculus cymbalaria*. Seven of the species collected in those locations were rare in northwestern North Dakota. *Teucrium canadense* is not uncommon in central North Dakota and eastward but reaching its westward limit. *Polypogon monspeliensis* has only sporadic occurrences in the northern Great Plains and has been rarely found in North Dakota. Five other species are widely separated from the nearest documented collections in central and southeastern North Dakota. These species include: *Eragrostis hypnoides*, *Leersia oryzoides*, *Veronica anagalis-aquatica*, *Plantago rugelii*, *Typha angustifolia* and *Polygonum pensylvanica*

The south side of the river is a high, sandy terrace that does not flood in the spring. There is no shoreline vegetation since that river is eroding toward that side and the bank drops abruptly into the water. The aspect is dominated by large trees with a grassy understory. The typical woody species include: *Populus deltoides*, scattered throughout the area, and *Fraxinus pennsylvanica*, *Acer negundo*, *Ulmus americana*, *Juniperus scopulorum*, *Prunus virginiana*, *Sherpherdia argentea*, *Cornus canadensis* and *Symphoricarpos occidentalis* concentrated along the outer margins and on the slope to the upper terrace. Typical species under the cottonwood trees include *Bromus inermis*, *Poa pratensis*, *Stipa comata*, *Sporobolus cryptandrus*, *Euphorbia esula*, *Cirsium arvense*, *Artemisia filifolia*, *Opuntia fragilis*, *Chrysopsis villosa*, *Achillea millefolium* and *Aster ericoides*. In addition, large patches of *Psoralea lanceolata* were found on the west end of the property, the only place that species was found in the park. One rare species, *Carex rossii*, was found on the sandy floodplain south of the river. That species is infrequent throughout the Great Plains.

## Annotated List

The following list of the vascular flora of Fort Union Trading Post NHS is based on collections and observations made at the site during 2003 and 2004. Nomenclature follows the *Flora of the Great Plains* (Great Plains Flora Association, 1991). Species are listed phylogenetically according to the *Flora of the Great Plains*. Common names provided are those used in the *Flora of the Great Plains* or in the *Handbook of North Dakota Plants* (Stevens, 1963).

Each species was assigned to an abundance category based on subjective evaluation. Abundant species are those that have a large number of individuals, a wide ecological amplitude or are those that occur in habitats covering a large portion of the park. Common species have a large numbers of individuals occurring in commonly encountered habitats, which, however, may not cover a large portion of the park. Uncommon species have few to moderate numbers of individuals that occur either sporadically or in uncommon habitats. Rare species have few individuals and are usually restricted to specific habitats. Furthermore, the use of the designation rare was reserved for those species rarely found in this part of the state based on previous floristic studies conducted in western North Dakota (Hegstad, 1973; Zaczkowski, 1972) and for species widely separated from other documented collections based on information derived from *Atlas of the Flora of the Great Plains* and collection records at North Dakota State Herbarium, Fargo. Rare species may be more abundant in the park than uncommon species.

### **Selaginellaceae** (Spikemoss Family)

*Selaginella densa* Rydb. (small clubmoss)

Uncommon, on high ,dry, sandy prairie.

### **Equisetaceae** (Horsetail Family)

*Equisetum arvense* L. (field horsetail)

Common, on moist soils of the riverbank and in shrubby areas on the floodplain.

*Equisetum hyemale* L. (common scouring rush)

Uncommon, in shrubby areas of the floodplain.

*Equisetum laevigatum* A.Br. (smooth scouring rush)

Common, on moist soils of the riverbank.

### **Cupressaceae** (Cypress Family)

*Juniperus horizontalis* Moench. (creeping juniper)

Uncommon, on prairie slopes of the Bodmer Overlook and along the edge of the upper river terrace.

*Juniperus scopulorum* Sarg. (Rocky Mountain juniper)  
Uncommon, on the high floodplain.

**Ranunculaceae** (Buttercup Family)

*Anemone canadensis* L. (meadow anemone)  
Uncommon, in shrubby area of upper terrace. June-July.

*Anemone cylindrica* A. Gray (cottonweed)  
Uncommon, in grassy draw, Bodmer overlook. July.

*Anemone patens* L. (pasque flower)  
Common, on grassy slopes of Bodmer overlook. May.

*Clematis ligusticifolia* Nutt. (western clematis)  
Uncommon, in shrubby areas along high terrace. July.

*Ranunculus cymbalaria* Pursh (seaside buttercup)  
Uncommon, on muddy edge of sandbar. July-August.

*Ranunculus testiculatus* Crantz.  
Rare, one of the first collections in North Dakota. West of fort in grass planting. May.

*Thalictrum dasycarpum* Fisch. & Ave-Lall. (purple meadow rue)  
Uncommon, along edge of floodplain terrace. June-July.

*Thalictrum venulosum* Trel. (early meadow rue)  
Common, on woody or brushy river terrace. June-July.

**Ulmaceae** (Elm Family)

*Ulmus americana* L. (American elm)  
Uncommon, on upper floodplain. May.

**Urticaceae** (Nettle Family)

*Urtica dioica* L. (stinging nettle)  
Common, in moist areas of wooded floodplain terrace. June-August.

**Nyctaginaceae** (Four-O'Clock Family)

*Mirabilis nyctaginea* (Michx.) MacM. (wild four-o'clock)  
Common, in wooded draws and along wooded edges of the floodplain. June-August.

*Mirabilis linearis* (Pursh) Heimerl. (narrowleaf four-o'clock)  
Rare, on upper slopes of Bodmer Overlook. July.

### **Cactaceae** (Cactus Family)

*Corphantha vivipara* (Nutt.) Britt. & Rose (pincushion cactus)  
Uncommon, on high prairie of Bodmer Overlook. June-July.

*Opuntia fragilis* (Nutt.) Haw. (little prickly pear)  
Uncommon, on high prairie of Bodmer Overlook. June-July.

*Opuntia polycantha* Haw. (plains prickly pear)  
Uncommon, on high prairie of Bodmer Overlook. June.

### **Chenopodiaceae** (Goosefoot Family)

*Atriplex subspicata* (Nutt.) Rydb. (spearscale)  
Uncommon, in grass restoration west of the fort. June.

*Atriplex nuttallii* S. Wats. (moundscale)  
Uncommon, on clay hilltop of Bodmer Overlook. June-August.

*Ceratoides lanata* (Pursh) Howell (winterfat)  
Uncommon, on grassy hilltop of Bodmer Overlook, sandy-clay soil. June-August.

*Chenopodium album* L. (lamb's quarters)  
Common, in disturbed areas on prairie and along roadsides. June-August.

*Chenopodium berlandieri* Moq. (pitted goosefoot)  
Uncommon, in disturbed areas. July-August.

*Chenopodium fremontii* S. Wats. (Fremont goosefoot)  
Uncommon, on wooded upper floodplain terrace. July-August.

*Chenopodium glaucum* L. (oak-leaved goosefoot)  
Uncommon, along sandy shoreline and moist road ditches. July-September.

*Chenopodium pratericola* Rydb.  
Uncommon, high, sandy terrace south of the river. July-September.

*Chenopodium rubrum* L. (alkali blite)  
Uncommon, in road ditches. July-September.

*Chenopodium subglabrum* A.Nels.

Uncommon, on high sandy terrace south of the river. July-September.

*Kochia scoparia* (L.) Schrad. (kochia, burning bush)

Common, along roadsides and on disturbed sites. July-August.

*Salsola kali* L. (Russian thistle)

Common, on disturbed areas. July-August.

### **Amaranthaceae** (Pigweed Family)

*Amaranthus albus* L. (tumbling pigweed)

Uncommon, on sandbars and along roadsides. July-September.

*Amaranthus graecizans* L. (prostrate pigweed)

Uncommon, along roadsides and in disturbed areas. July-September.

*Amaranthus retroflexus* L. (rough pigweed)

Uncommon, along roadsides and in disturbed areas. July-September.

### **Portulacaceae** (Purslane Family)

*Portulaca oleracea* L. (common purslane)

Uncommon, in reseeded areas. July-August.

### **Caryophyllaceae** (Pink Family)

*Carastium arvense* L. (prairie chickweed)

Uncommon, on prairie. June.

### **Polygonaceae** (Buckwheat Family)

*Eriogonum flavum* Nutt. (yellow wild buckwheat)

Uncommon, on rocky hilltop of Bodmer Overlook, sandy-clay soil. June-July

*Eriogonum pauciflorum* Pursh (wild buckwheat)

Common, on hilltops of Bodmer Overlook, clay soil. June-August.

*Polygonum achoreum* Blake (knotweed)

Common, along roadsides. July-September.

- Polygonum amphibium* L. (water smartweed)  
Common, in wet areas of floodplain. July-September.
- Polygonum aviculare* L. (knotweed)  
Common, along roadsides. July-September.
- Polygonum convolvulus* L. (climbing or wild buckwheat)  
Common, along roadsides and disturbed areas. June-September.
- Polygonum lapathifolium* L. (pale smartweed)  
Uncommon, along sandy riverbank. July-September.
- Polygonum pensylvanicum* L. (Pennsylvania smartweed)  
Rare, on sandbar. July-September.
- Polygonum ramosissimum* Michx. (knotweed)  
Uncommon, in disturbed areas. July-August.
- Rumex crispus* L. (curly dock)  
Uncommon, in disturbed areas. July-August.
- Rumex stenophyllus* Ledeb. (dock)  
Uncommon, on riverbank and in disturbed areas. July-August.
- Rumex maritimus* L. (golden dock)  
Uncommon, on sandy river bank. July-August.
- Rumex mexicanus* Meissn. (willow-leaved dock)  
Uncommon, on moist, open river bottom. July-August.

#### **Malvaceae** (Mallow Family)

- Sphaeralcea coccinea* (Pursh ) Rydb. (red false mallow)  
Common, prairie hillsides. June-July.

#### **Violaceae** (Violet Family)

- Viola nuttallii* Pursh (yellow prairie violet)  
Common, on top and slopes of Bodmer Overlook. May-June.

#### **Loasaceae** (Stickleaf Family)

*Mentzelia decapetala* (Pursh) Urban & Gilg. (ten-petal mentzelia)  
Common, on gravelly slope bordering entrance road. July-August.

### **Salicaceae** (Willow Family)

*Populus deltoides* Marsh. (cottonwood)  
Abundant, on floodplain. April-May.

*Salix amygdaloides* Anderss. (peachleaf willow)  
Abundant, on floodplain. May-June

*Salix eriocephala* Michx. (diamond willow, Missouri willow)  
Abundant, on floodplain. May-June.

*Salix exigua* Nutt. (sandbar willow, coyote willow)  
Abundant, on floodplain. May-June.

*Salix lutea* Nutt. (yellow willow)  
Abundant, on floodplain. May-June.

### **Capparaceae** (Caper Family)

*Cleome serrulata* Pursh (Rocky Mountain bee plant)  
Uncommon, on lower prairie slope of Bodmer Overlook. August.

### **Brassicaceae** (Mustard Family)

*Allysum desertorum* Staph. (alyssum)  
Rare, in grass planting west of fort. May-June.

*Arabis divaricarpa* A. Nels. (rock cress)  
Uncommon, on prairie, June-July.

*Arabis hirsuta* (L.) Scop. var. *pyncocarpa* (Hopkins) Rollins (rock cress)  
Uncommon, on upper edge of river terrace. May-June.

*Arabis holboellii* Hornem. (rock cress)  
Uncommon, on rocky hilltop of Bodmer Overlook. June-July.

*Brassica kaber* (DC.) Wheeler (yellow mustard)  
Uncommon, along roadsides and in restoration areas. June-July.

- Camelina microcarpa* Andr. (small-seeded false flax)  
Uncommon, upper edge of terrace and road ditches. June-July.
- Capsella bursa-pastoris* (L.) Medic. (shepard's purse)  
Common, in disturbed areas. May-August.
- Chorispora tenella* (Pall.) DC. (blue mustard)  
Rare, in grass restoration area west of fort. May-June.
- Conringa orientalis* (L.) Dum. (hare's-ear mustard)  
Uncommon, on edge of upper terrace, sandy soil.
- Descurainia sophia* (L.) Webb. (flixweed)  
Common, in disturbed areas. June-July.
- Draba nemorosa* L. (yellow whitlowwort)  
Uncommon, in disturbed prairie draw. May-June.
- Erysimum asperum* (Nutt.) DC. (western wallflower)  
Common, on prairie. June.
- Erysimum chieranthoides* L. (wormseed wallflower)  
Uncommon, on wooded upper floodplain terrace. June-July.
- Lepidium densiflorum* Schrad. (peppergrass)  
Common, along roadsides. June-July.
- Lesquerella ludoviciana* (Nutt.) Wats. (bladderpod)  
Common, on hillsides and slopes of Bodmer Overlook. May-June.
- Sisymbrium altissimum* L. (tumbling mustard)  
Common, on disturbed areas. June-July.
- Sisymbrium loeselii* L. (tall hedge mustard)  
Uncommon, Open woods of floodplain and disturbed prairie. June-July.
- Thlaspi arvense* L. (field pennycress)  
Common, in disturbed areas. May-July.

#### **Primulaceae** (Primrose Family)

- Androsace occidentalis* Pursh (western rock jasmine)  
Uncommon, west of fort in grass restoration. May-June.

*Lysimachia ciliata* L. (fringed loosestrife)  
Uncommon, on moist wooded floodplain. June-August.

### **Grossulariaceae** (Currant Family)

*Ribes hirtellum* Michx  
Uncommon, on wooded floodplain. May-June.

*Ribes odoratum* Wendl. (buffalo current, golden current)  
Common, edge of wooded terrace. May.

*Ribes setosum* Lindl. (bristly gooseberry)  
Uncommon, on upper floodplain. May-June.

### **Saxifragaceae** (Saxifrage Family)

*Heuchera richardsonii* R. Br. (alum root)  
Uncommon, on prairie slopes. June-July

### **Rosaceae** (Rose Family)

*Amelanchier alnifolia* Nutt. (Juneberry)  
Uncommon, along edge of wooded terrace. May.

*Crataegus rotundifolia* Moench. (northern hawthorn)  
Uncommon, in wooded draw. June.

*Geum triflorum* Pursh. (torch flower)  
Uncommon, on prairie hillside. May-June.

*Potentilla concinna* Richards.  
Uncommon, on high prairie slopes. May.

*Potentilla anserina* L. (silverweed)  
Abundant, on wet floodplain. June-July.

*Potentilla hippiana* Lehm. (woolly cinquefoil)  
Uncommon, on prairie hillside. June-July

*Potentilla norvegica* L. (rough cinquefoil, strawberryweed)  
Uncommon, along trail on riverbottom. July.

- Potentilla paradoxa* Nutt. (bushy cinquefoil)  
Uncommon, along path on moist, sandy river terrace.
- Potentilla pensylvanica* L. (prairie cinquefoil)  
Uncommon, on grassy slopes of Bodmer Overlook. June-July.
- Prunus americana* Marsh. (wild plum)  
Uncommon, woody draw. May.
- Prunus virginiana* L (chokecherry)  
Common, edge of wooded river terrace. May.
- Rosa arkansana* Porter (prairie wildrose)  
Common, on slopes and hilltop of Bodmer Overlook. June.
- Rosa acicularis*. Lindl. (prickly wildrose)  
Uncommon, on edge of wooded river terrace. June.
- Rosa woodsii* Lindl. (western wildrose)  
Common, edge of wooded draw and wooded river terrace. June.

#### **Fabaceae** (Bean Family)

- Astragalus adsurgens* Pall. var. *robustior* Hook. (standing milk-vetch)  
Uncommon, on prairie slope of Bodmer Overlook. June-July.
- Astragalus bisulcatus* (Hook.) Gray (two-grooved milk-vetch)  
Uncommon, on rocky slope of Bodmer Overlook. June-July.
- Astragalus crassicaarpus* Nutt. (ground plum)  
Uncommon, on prairie of Bodmer Overlook. June-July.
- Astragalus flexuosus* (Hook.) D. Don. (Slender milk-vetch, pliant milk-vetch)  
Common, on grassy slopes of Bodmer Overlook. June-July.
- Astragalus gilviflorus* Sheld. (plains orophaca)  
Common, on hilltop with heavy clay soil, Bodmer Overlook. May.
- Astragalus missouriensis* Nutt. (*Missouri milk-vetch*)  
Common, on hilltop and upper slopes of Bodmer Overlook. May-June.
- Astragalus pectinatus* Dougl. (narrow-leaved poisonvetch)  
Uncommon, on south slope and hilltop of Bodmer Overlook. May-June.

- Dalea candida* Michx. (white prairie clover)  
Uncommon, prairie slopes. July-August.
- Dalea purpurea* Vent. (purple prairie clover)  
Common, on prairie slopes. July-August.
- Glycyrriza lepidota* Pursh (wild licorice)  
Common, on shrubby slope river terrace and road ditches. June-August.
- Hedysarum boreale* Nutt. (sweet vetch)  
Uncommon, shrubby river terrace. June-July.
- Lupinus pusillus* Pursh. (small or rusty lupine)  
Uncommon, on upper edge of sandy terrace. June.
- Medicago sativa* L. (alfalfa)  
Common, in road ditches. July-August.
- Melilotus alba* Medic. (white sweet clover)  
Uncommon, in gravel pit and road ditches. July-August.
- Melilotus officinalis* (L.) Pall. (yellow sweet clover)  
Common, in road ditches. July-August.
- Oxytropis campestris* (L.) DC. var. *gracilis* (A. Nels.) Barneby (slender locoweed)  
Uncommon, on prairie hilltops of Bodmer Overlook. May-June.
- Oxytropis lambertii* Pursh (purple loco)  
Common, on prairie hillside. May-June.
- Psoralea argophylla* Pursh (silver-leaf scurf pea)  
Common, on prairie. July-August.
- Psoralea esculenta* Pursh. (breadroot scurf pea, prairie turnip)  
Common, on prairie. June-July.
- Psoralea lanceolata* Pursh (lemon scurf pea)  
Common, on high sandy terrace south of river. July.
- Vicia americana* Muhl. var. *americana* (American vetch)  
Common, on prairie and along edges of wooded areas. May-July.
- Vicia americana* Muhl. var. *minor* Hook. (American vetch)  
Common, on prairie and along roadsides. May-July.

**Elaeagnaceae** (Oleaster Family)

*Elaeagnus angustifolia* L. (Russian olive)

Common, along river terrace and in old gravel pit. June.

*Sherperdia argentea* (Pursh) Nutt. (buffaloberry)

Common, along upper edge of river terrace. May.

**Onagraceae** (Evening Primrose Family)

*Calylophus serrulatus* (Nutt.) Raven (plains yellow primrose)

Uncommon, on prairie hillsides. June-July.

*Gaura coccinea* Pursh (scarlet gaura)

Common, on prairie and along roadsides. June-July.

*Oenothera caespitosa* Nutt. (gumbo evening primrose, gumbo lily)

Common, on clay hillside of Bodmer Overlook. May-June.

*Oenothera nuttallii* Sweet. (white-stemmed evening primrose)

Uncommon, on rocky slope of Bodmer Overlook. July.

**Cornaceae** (Dogwood Family)

*Cornus stolonifera* Michx. (red osier dogwood)

Common, on river floodplain. May.

**Santalaceae** (Sandalwood Family)

*Comandra umbellata* (L.) Nutt. subsp. *pallida* (A. DC.) Piehl.

Uncommon, on prairie. June-July.

**Celastraceae** (Staff Tree Family)

*Celastrus scandens* L. (American bittersweet)

Uncommon, on upper wooded river terrace. June.

**Euphorbiaceae** (Spurge Family)

*Euphorbia esula* L. (leafy spurge)

Abundant, on river bottom, gravel pits and along roadsides. May-September.

*Euphorbia glyptosperma* Engelm. (ridge-seeded spurge)  
Common, on disturbed areas and along roadsides. June-September.

*Euphorbia serpyllifolia* Pers. (thyme-leaved spurge)  
Common, on disturbed areas and along roadsides. June-September.

### **Vitaceae** (Grape Family)

*Vitis riparia* Michx. (river bank grape)  
Uncommon, or wooded river terrace. June.

### **Linaceae** (Flax Family)

*Linum perenne* L. var. *lewisii* (Pursh) Eat. & Wright (blue flax)  
Common, on prairie and planted areas. June-July.

*Linum rigidum* Pursh. (stiffstem flax)  
Common, in prairie. June-July.

### **Polygalaceae** (Milkwort Family)

*Polygala alba* Nutt. (white milkwort)  
Common, on prairie. May-June.

### **Aceraceae** (Maple Family)

*Acer negundo* L. (boxelder)  
Common, on edge of river terrace. April-May.

### **Anacardiaceae** (Cashew Family)

*Rhus aromatica* Ait. var. *trilobata* (Nutt.) Gray (fragrant sumac)  
Common, on south slope of Bodmer Overlook. April-May.

*Toxicodendron rydbergii* (Small ex Rydb.) Greene (poison ivy)  
Common, in wooded and shrubby areas. June-September.

**Apiaceae** (Parsley Family)

*Cicuta maculata* L. (common water hemlock)

Uncommon, on sandy soil near river. July-September.

*Lomatium foeniculaceum* (Nutt.) Coult. & Rose (wild parsley)

Uncommon, on prairie hillside. April-June.

*Musineon divaricatum* (Pursh) Nutt.

Uncommon, on clay hilltop of Bodmer Overlook. May-June.

**Apocynaceae** (Dogbane Family)

*Apocynum cannabinum* L. (Indian hemp dogbane, prairie dogbane)

Common, on river floodplain terraces. June-August.

**Asclepiadaceae** (Milkweed Family)

*Asclepias ovalifolia* Dcne. (ovalleaf milkweed)

Uncommon, southeast slope of high gravelly slope, Bodmer Overlook. June-July.

*Asclepias speciosa* Torr. (showy milkweed)

Common, in shrubby areas of river floodplain and in road ditches. June-August.

*Asclepias pumila* (A. Gray) Vail. (whorled milkweed)

Rare, on bare knoll in southeast corner of Bodmer Overlook. June-July.

**Solanaceae** (Potato or Nightshade Family)

*Solanum triflorum* Nutt. (cut-leaved nightshade)

Uncommon, on disturbed prairie. May-August.

*Solanum rostratum* Dun. (buffalo bur)

Uncommon, along roadsides. June-September.

**Convolvulaceae** (Morning Glory Family)

*Convolvulus arvensis* L. (field bindweed)

Common, along roadsides. June-August.

**Polemoniaceae** (Polemonium Family)

*Phlox alyssifolia* Greene. (blue phlox)

Rare, on rocky hilltop of Bodmer Overlook. May-June.

*Phlox hoodii* Rich. (Hood's phlox)

Common, on prairie and rocky hilltops. May-June.

**Hydrophyllaceae** (Waterleaf Family)

*Ellisia nyctelea* L. (waterpod)

Uncommon, in grass planting west of fort. May-June.

**Boraginaceae** (Borage Family)

*Cryptantha celosioides* (Eastw.) Pays. (butte candle)

Uncommon, on prairie hilltop of Bodmer Overlook. May-June.

*Hackelia deflexa* (Wahl.) Opiz. (stickseed)

Uncommon, in wooded areas. June-July.

*Lapula echinata* Gilib. (blue stickseed)

Common, in disturbed prairie areas and along roadsides. June-August.

*Lapula redowskii* (Hornem.) Greene

Uncommon, in disturbed areas. June-August.

*Lithospermum incisum* Lehm. (narrow-leaved puccoon)

Uncommon, on hilltops of Bodmer Overlook. May-June.

*Mertensia lanceolata* (Pursh) A. DC. (bluebells, lungwort)

Uncommon, on grassy slopes and hollows. May-June.

**Verbenaceae** (Vervain Family)

*Verbena bracteata* Lag. & Rodr. (prostrate vervain)

Uncommon, along roadsides and in gravel pit. July-September.

### **Lamiaceae** (Mint Family)

*Hedeoma hispidum* Pursh (rough false pennyroyal)

Uncommon, on hilltop with sparse vegetation, Bodmer Overlook. June-July.

*Lycopus americanus* Muhl. ex Bart (American bugleweed)

Common, on riverbank. July-August.

*Lycopus asper* Greene (rough bugleweed)

Common, in moist areas of floodplain. July-August.

*Mentha arvensis* L. (field mint)

Common, shrubby riverbank. July-August.

*Monarda fistulosa* L. var. *menthaefolia* (Graham) Fern. (wild bergamot)

Uncommon, along the edges of shrubby areas. July-August.

*Salvia reflexa* Hornem. (lance-leaved sage)

Uncommon, in old gravel pit. July-September.

*Scutellaria galericulata* L. (marsh skullcap)

Uncommon, along riverbank. July-August.

*Stachys palustris* L. subsp. *pilosa* (Nutt.) Epling. (hedge nettle, marsh betony)

Uncommon, on sandy riverbank. June-August.

*Teucrium canadense* L var. *occidentale* (Gray) McCl. & Epl. (American germander, woodsage)

Rare, on edge of floodplain near the river. July-August.

### **Plantaginaceae** (Plantain Family)

*Plantago major* L. (common plantain)

Common, along river bank and roadsides. July-August.

*Plantago patagonica* Jacq. Var. *patagonica*. (prairie plantain, Patagonian plantain)

Common, on prairie hilltops and hillsides. June-August.

*Plantago rugelii* Dcne. (Rugel's plantain)

Rare, along riverbank. August.

### **Oleaceae** (Olive Family)

*Fraxinus pennsylvanica* Marsh. (green ash)

Common, on upper floodplain and in woody draws. April-May.

**Scrophulariaceae** (Figwort Family)

*Castilleja sessiliflora* Pursh (downy paintbrush)  
Uncommon, on upper slopes of Bodmer Overlook. May-June.

*Orthocarpus luteus* Nutt. (owl clover)  
Uncommon, on prairie slopes. July-August.

*Penstemon albidus* Nutt. (white beardtongue)  
Common, on prairie slopes. June.

*Penstemon gracilis* Nutt. (slender beardtongue)  
Uncommon, on prairie slopes. June.

*Veronica anagallis-aquatica* L. (water speedwell)  
Rare, on sandbar. August.

**Orobanchaceae** Broomrape Family)

*Orobanche fasciculata* Nutt. (broomrape)  
Uncommon, on prairie hillside. June-July.

**Campanulaceae** (Bellflower Family)

*Campanula rotundifolia* L. (harebell)  
Uncommon, on prairie. June-July.

**Rubiaceae** (Madder Family)

*Galium boreale* L. (northern bedstraw)  
Common, on wooded areas of upper terrace. June-July.

*Galium aparine* L. (cleavers, catchweed bedstraw)  
Common, on wooded river terrace. June-July.

**Caprifoliaceae** Honeysuckle Family)

*Symphoricarpos occidentalis* Hook. (buckbrush, western snowberry)  
Abundant, along wooded draws and upper slopes of river terraces. June-July.

## Asteraceae (Sunflower Family)

- Achillea millefolium* L. ssp. *lanulosa* (Nutt.) Piper (yarrow)  
Common, on prairie hillsides. June-July.
- Ambrosia artemisiifolia* L. (common ragweed, short ragweed)  
Common, in road ditches and in disturbed areas. August.
- Ambrosia psilostachya* DC. (western ragweed)  
Common, in disturbed areas. August.
- Ambrosia trifida* L. (giant ragweed)  
Uncommon, in gravel pit. August.
- Antennaria microphylla* Rydb. (pink pussytoes)  
Uncommon, on hilltop of Bodmer Overlook. May-June.
- Antennaria neglecta* Greene (field pussytoes)  
Uncommon, on north slope of Bodmer Overlook. May-June.
- Antennaria parvifolia* Nutt. (pussytoes)  
Uncommon, on hillslopes. May-June.
- Arctium minus* Bernh. (common burdock)  
Uncommon, on wooded terrace south of the river. July-August.
- Arnica fulgens* Pursh. (arnica)  
Uncommon, on prairie hollow, Bodmer Overlook. June.
- Artemisia absinthium* L (wormwood)  
Common, in gravel pit and disturbed areas. July-August.
- Artemisia biennis* Willd. (biennial wormwood)  
Common, in gravel pit and other disturbed areas. July-August.
- Artemisia cana* Pursh. (dwarf sagebrush)  
Common, along upper edge of river terrace. August.
- Artemisia dracuncululus* L. (silky wormwood)  
Common, in gravel pit and other disturbed areas. August.
- Artemisia frigida* Willd. (fringed sage)  
Common, on prairie. August.

- Artemisia longifolia* Nutt. (long-leaved sage)  
Uncommon, on southeast side of upper slope, Bodmer Overlook. August.
- Artemisia ludoviciana* Nutt. (white sage, pasture sage)  
Common, on prairie hilltops and slopes. August.
- Aster brachyactis* Blake (rayless aster)  
Common, sandy river bank. August-September.
- Aster ericoides* L. (heath aster, white aster)  
Common, on upper river terraces and prairie. August-September.
- Aster laevis* L. (*smooth blue aster*)  
Common, in moist, shrubby areas of floodplain. August-September.
- Aster oblongifolius* Nutt. (aromatic aster)  
Uncommon, on rocky hilltop of Bodmer Overlook. August-September.
- Aster simplex* Willd. var. *ramosissimus* (T. & G.) Cronq. (panicled aster)  
Common, in moist, shrubby areas of flood plain. August-September.
- Bidens cernua* L. (nodding beggar-ticks)  
Uncommon, on sand bar. August-September.
- Bidens vulgata* Greene. (beggar-ticks)  
Uncommon, on river bank. August-September.
- Crepis runcinata* (James) T. & G. (hawk's-beard)  
Uncommon, on wet floodplain. July.
- Chrysopsis villosa* (Pursh) Nutt. (golden aster)  
Common, on prairie, along roadsides and on upper terrace. August-September.
- Chrysothamnus nauseosus* (Pall.) Britt. (rabbitbrush)  
Common, on upper slopes of Bodmer Overlook. August-September.
- Cirsium arvense* (L.) Scop. (Canada thistle, field thistle)  
Common, along roadsides, on upper terrace and in disturbed areas. July-September.
- Cirsium flodmanii* (Rydb.) Arthur (Flodman's thistle)  
Common, on prairie and disturbed areas. July-August.
- Cirsium undulatum* (Nutt.) Spreng. (wavy-leaf thistle)  
Common, on prairie and disturbed areas. July-September.

- Conyza canadensis* (L.) Cronq. (horseweed)  
Common, along roadsides and in disturbed areas. July-August.
- Echinacea angustifolia* DC. (pink coneflower)  
Common, on prairie. July-August.
- Erigeron compositus* Pursh (fernleaf fleabane)  
Rare, on hillcrest of Bodmer Overlook. May-June.
- Erigeron glabellus* Nutt. subsp. *pubescens* (Hook.) Cronq. (fleabane)  
Uncommon, on prairie. July.
- Erigeron pumilus* Nutt. (fleabane)  
Uncommon, on prairie hilltops of Bodmer Overlook. June-July.
- Gaillardia aristata* Pursh. (blanket flower)  
Common, on prairie. June-July.
- Grindellia squarrosa* (Pursh) Dun. (curly-top gumweed)  
Common, on prairie and along roadsides. August-September.
- Gutierrezia sarothrae* (Pursh) Britt. & Rusby (snakeweed)  
Common, on stony hilltop of Bodmer Overlook. August-September.
- Haplopappus spinulosus* (Pursh) DC. (cutleaf ironplant)  
Common, on stony hilltops of Bodmer Overlook. August-September.
- Helianthus annuus* L (common sunflower)  
Common, along roadsides and in disturbed areas. July-August.
- Helianthus maximilianii* Schrad. (Maximilian sunflower)  
Uncommon, along roadsides and on the edge of the floodplain. August.
- Helianthus nuttallii* T. & G. ssp. *rydbergii* (Britt.) Long. (Nuttall's sunflower)  
Uncommon, on open floodplain terrace. August.
- Helianthus petiolaris* Nutt. (plains sunflower)  
Uncommon, along roadsides and in disturbed areas. July-August.
- Helianthus rigidus* (Cass.) Desf. (stiff sunflower)  
Uncommon, on prairie. July-August.
- Hymenopappus filifolius* Hook. var. *polycephalus* (Osterh.) B.L. Turner  
Uncommon, on hilltop of Bodmer Overlook. June-July.

- Hymenoxys acaulis* Pursh) Parker (stemless hymenoxys)  
Uncommon/rare, on stony, clay hilltop of Bodmer Overlook. May-June.
- Hymenoxys richardsonii* (Hook.) Cockll. (Colorado rubber plant)  
Uncommon/rare, on stony, clay hilltop of Bodmer Overlook. May-June.
- Iva xanthifolia* Nutt. (marsh elder)  
Uncommon, on disturbed area below maintenance shop. July.
- Kuhnia eupatorioides* var. *corymbulosa* T. & G. (false boneset)  
Uncommon, in prairie hollow of Bodmer Overlook. July-August.
- Lactuca canadensis* L. (wild lettuce)  
Rare, on wooded terrace. July.
- Lactuca oblongifolia* Nutt. (blue lettuce)  
Common, along roadsides and in disturbed areas. July.
- Lactuca serriola* L. (prickly lettuce)  
Common, along roadsides and in disturbed areas. July.
- Lygodesmia juncea* (Pursh) Hook. (skeleton weed)  
Common, on prairie. July-August.
- Liatris punctata* Hook. (blazing star)  
Common, on prairie. July-August.
- Machaeranthera grindelioides* (Nutt.) Shinnars (goldenweed)  
Uncommon, on rocky hilltop of Bodmer Overlook. June-July.
- Picradeniopsis oppositifolia* (Nutt.) Rydb.  
Rare, along gravelly edge of terrace east of saw pit. June-July.
- Ratibida columnifera* (Nutt.) Woot. & Standl. (yellow coneflowere, prairie coneflower)  
Common, on prairie. July-August.
- Senecio canus* Hook. (gray ragwort)  
Uncommon, on upper prairie slopes. June-July
- Senecio plattensis* Nutt. (prairie ragwort)  
Uncommon, on prairie slopes. June-July.
- Solidago canadensis* L (Canada goldenrod)  
Common, along terrace edge. August.

*Solidago gigantea* Ait. var. *serotina* (Kuntz.) Cronq. (late goldenrod)  
Uncommon, along terrace edge and in disturbed areas. August.

*Solidago missouriensis* Nutt. (prairie goldenrod)  
Common, on prairie. July-August.

*Solidago mollis* Bartl. (soft goldenrod)  
Common, on prairie. August.

*Solidago rigida* L. (rigid goldenrod)  
Common, on prairie. August.

*Sonchus arvensis* L. (field sow thistle)  
Common, on river bottom on edge of shrubby area. July-August.

*Sonchus asper* (L.) Hill (prickly sow thistle)  
Uncommon, along upper edge of terrace. July-August.

*Taraxacum officinale* Weber. (dandelion)  
Common, along roadsides and in reseeded areas. May-September.

*Townsendia excapa* (Rich.) Porter (easter daisy)  
Rare, on stony hilltop near east boundary of Bodmer Overlook. May.

*Tragopogon dubius* Scop. (goat's beard, western salsify)  
Common, on prairie and along roadsides. June-August.

*Xanthium strumarium* L. (cocklebur)  
Common, on riverbank and terrace. August.

#### **Alismataceae** (Water Plantain Family)

*Alisma subcordatum* Raf. (water plantain)  
Uncommon, along shoreline of backwater. July-August.

*Alisma triviale* Pursh. (water plantain)  
Uncommon, along shoreline of backwater. August.

*Sagittaria cuneata* Sheld. (arrowhead)  
Uncommon, along muddy edge of backwater. August-September.

### **Commelinaceae** (Spiderwort Family)

*Tradescantia occidentalis* (Britt.) Smyth. (spiderwort)  
Uncommon, on sandy river terrace. June-July.

### **Juncaceae** (Rush Family)

*Juncus balticus* Willd. (Baltic rush)  
Common, in wet places along shore and floodplain. July-August.

*Juncus bufonius* L (toad rush)  
Uncommon, along trail across moist floodplain. July-August.

*Juncus interior* Wieg. (inland rush)  
Uncommon, on floodplain and riverbank. July-August.

*Juncus nodosus* L. (knotted rush)  
Common, on sandbars and sandy river bank. August-September.

*Juncus torreyi* Cov. (Torrey's rush)  
Common, on sandbars and sandy river bank. August-September.

### **Cyperaceae** (Sedge Family)

*Carex aquatilis* Wahl. var. *altior* (Rydb.) Fern.  
Common, in moist areas of shrubby floodplain. June-July.

*Carex atherodes* Spreng. (slough sedge)  
Uncommon, in wet areas of floodplain. June-July.

*Carex brevior* (Dew.) Mack. (Fescue sedge)  
Common, on wooded terrace. June-July.

*Carex bicknellii* Britt.  
Rare, in wooded area. July.

*Carex eleocharis* Bailey (needleleaf sedge)  
Common, on high grassy floodplain south of the river. June-July.

*Carex filifolia* Nutt. (threadleaf sedge)  
Abundant, on upper slopes of Bodmer Overlook. May-June.

- Carex gravida* Bailey var. *gravida* (heavy sedge)  
Common, on wooded terrace. July.
- Carex laeviconica* Dew. (smoothcone sedge)  
Abundant, on wet floodplain. June-July.
- Carex lanuginosa* Michx. (wooly sedge)  
Uncommon, in wet, open areas of floodplain. June-July.
- Carex molesta* Mack. ex. Bright  
Uncommon, on wooded terrace. July.
- Carex rossii* F. Booth.  
Rare, on open, sandy floodplain south of the river. July.
- Carex sprengei* Dewey.  
Uncommon, wooded ravines. June-July.
- Carex vulpinoidea* Michx. (fox sedge)  
Common, on moist floodplain. July-August.
- Eleocharis acicularis* (L.) R. & S. (needle spikesedge)  
Uncommon, on mud flat. July-August.
- Eleocharis erythropoda* Steud. (spikerush)  
Common, on river shoreline and sandbars. July-August.
- Eleocharis macrostachya* Britt. (spikerush)  
Uncommon, on riverbank. July-August.
- Scirpus acutus* Muhl. (hardstem bullrush)  
Abundant, in wet, backwater areas of floodplain. July-August.
- Scirpus americanus* Pers. (chair-maker's rush)  
Common, in wet, backwater areas of floodplain. July-August.
- Scirpus fluviatilis* (Torr.) A. Gray. (river bulrush)  
Uncommon, on wet floodplain. July-August.
- Scirpus maritimus* var. *paludosus* (A.Nels.) Kukenth. (prairie bullrush)  
Common, on river bank. July-August.
- Scirpus validus* Vahl. (soft-stem bullrush)  
Common, in wet, backwater areas of floodplain. July-August.

## Poaceae (Grass Family)

*Agropyron caninum* (L.) Beauv. subsp. *majus* (Vasey) C. L. Hitch. (slender wheatgrass)  
Abundant, on prairie and revegetated areas. June-August.

*Agropyron cristatum* (L.) Gaertn. (crested wheatgrass)  
Abundant, along roadsides, in revegetated areas and on prairie. June-August.

*Agropyron dasystachyum* (Hook.) Scribn.  
Abundant, on prairie. June-August.

*Agropyron repens* (L.) Beauv. (quackgrass)  
Common, along roadsides and in disturbed areas. June-August.

*Agropyron smithii* Rydb. (western wheatgrass)  
Abundant, on prairie and along roadsides.

*Agrostis scabra* Willd. (ticklegrass)  
Common, along roadsides. June-August.

*Agrostis stolonifera* L. (redtop)  
Uncommon, on moist edges of floodplain. July-August.

*Alopecurus aequalis* Sobol. (short-awn foxtail)  
Common, on sand bar and river bank. August.

*Andropogon gerardii* Vitman (big bluestem)  
Uncommon, in prairie draw. August-September.

*Andropogon scoparius* (Michx.) (little bluestem)  
Common, on prairie hillsides. July-September.

*Aristata purpurea* Nutt. var. *robusta* (Merrill) A. Holmgren & N. Holmgren (red three-awn)  
Rare, on upper slopes and crest of Bodmer Overlook. July-August.

*Avena fatua* L. var. *sativa* (L.) Hausskn. (oats)  
Uncommon, in prairie hollow disturbed by wintering cattle. June-July.

*Bouteloua curtipendula* (Michx.) Torr. (sideoats grama)  
Common, on prairie. July-August.

*Bouteloua gracilis* (H. B. K.) Lag. ex Griffiths (blue grama)  
Abundant, on prairie. July-August.

- Bromus japonicus* Thunb. ex Murr. (Japanese brome)  
Uncommon, in prairie hollow disturbed by wintering cattle. June-July.
- Bromus tectorum* L. (downy brome)  
Common, in grass planting west of fort. May-June.
- Bromus inermis* Leyss. subsp. *inermis* (smooth brome)  
Abundant, along roadsides and upper terraces. June-August.
- Bromus squarrosus* L.  
Rare, on disturbed areas and high terrace. June.
- Buchloe dactyloides* (Nutt.) Engelm. (buffalo grass)  
Uncommon, planted near maintenance shop. August.
- Calamagrostis montanensis* (Scribn.) Scribn. (plains reedgrass)  
Uncommon, on prairie. July.
- Calamovilfa longifolia* (Hook.) Scribn. (prairie sandreed)  
Common, on upper slopes and hilltops of Bodmer Overlook. July-August.
- Digitaria ischaemum* (Schreb.) Muhl. (smooth crabgrass)  
Rare, along the edge of parking lot.
- Distichlis spicata* (L.) Greene var. *stricta* (Torr.) Beetle (inland salt grass)  
Common, on prairie sites with clay soils and poor drainage. June-July.
- Echinochloa crusgalli* (L.) Beauv. (barnyard grass)  
Common, on disturbed areas. July-August.
- Elymus canadensis* L. (Canada wild rye)  
Common, along edge of wooded areas and terraces. July-August.
- Elymus junceus* Fisch. (Russian wild rye)  
Common, in seeded area west of fort. June-July.
- Elymus virginicus* L. var. *submuticus* Hook. (Virginia wild rye)  
Uncommon, on river bottom along edge of willow thickets. August.
- Elymus virginicus* L. var. *virginicus* (Virginia wild rye)  
Common, on wooded terrace. July-August.
- Eragrostis cilianensis* (All.) E. Mosher (stinkgrass)  
Uncommon, on disturbed areas and open floodplain. July.

- Eragrostis hypnoides* (Lam.) B. S. P. (teal lovegrass)  
Rare, on river sandbar and bank. August-September.
- Festuca octoflora* Walt. (six weeks fescue)  
Uncommon, on open, sandy edge of upper terrace. June.
- Hordeum jubatum* L. (foxtail barley)  
Common, along roadsides and disturbed areas. June-July.
- Koeleria pyramidata* (Lam.) Beauv. (Junegrass)  
Abundant, on prairie slopes. June-July.
- Leersia oryzoides* (L.) Sw. (rice cutgrass)  
Rare, on sandbars and along river bank. August-September.
- Muhlenbergia asperifolia* (Nees & Mey.) Parodi (scratchgrass)  
Uncommon, on sandbars and riverbank. August-September.
- Muhlenbergia cuspidata* (Torr.) Rydb. (plains muhly)  
Common, on upper slopes and hilltops of Bodmer Overlook. August.
- Muhlenbergia racemosa* (Michx.) B.S.P. (marsh muhly)  
Uncommon, on upper wooded terraces. July-August.
- Panicum capillare* L. (witchgrass)  
Common, along roadsides and disturbed areas. July-August.
- Panicum virgatum* L. (switchgrass)  
Uncommon, along roadsides and on open floodplain. August.
- Phalaris arundinacea* L. (reed canarygrass)  
Abundant, on wet floodplain. July-August.
- Phragmites australis* (Cav.) Trin. (common reed)  
Abundant, on wet floodplain. August.
- Poa annua* L. (annual bluegrass)  
Rare, in seeded area west of fort. June-September.
- Poa arida* Vasey. (plains bluegrass)  
Uncommon, on open, sandy floodplain. June-July.
- Poa compressa* L. (Canada bluegrass)  
Uncommon, on open, sandy floodplain. June-July.

- Poa interior* Rydb. (inland bluegrass)  
Uncommon, on wooded terrace. July
- Poa palustris* L. (fowl bluegrass)  
Common, on wooded terraces. July.
- Poa pratensis* L. (Kentucky bluegrass)  
Abundant, on prairie, roadsides and disturbed areas. June-July.
- Poa sandbergii* Vasey (Sandberg's bluegrass)  
Abundant, on prairie. June.
- Polypogon monspeliensis* (L.) Desf. (rabbitfoot grass)  
Rare, on muddy bank of backwater. July-August.
- Schedonnardus paniculatus* (Nutt.) Trel. (tumblegrass)  
Uncommon, in disturbed areas. July-August.
- Setaria viridis* (L.) Beauv. (green pigeongrass, green foxtail)  
Common, along roadsides and in disturbed areas. July.
- Spartina pectinata* Link. (prairie cordgrass)  
Common, in wet, open areas. July.
- Sporobolus cryptandrus* (Torr.) Gray (sand dropseed)  
Common, on open, sandy terrace south of the river. July-August.
- Stipa comata* Trin. & Rupr. (needle-and-thread)  
Abundant, on prairie hilltops and slopes. June-July.
- Stipa spartea* Trin. (porcupine-grass)  
Common, prairie hillsides. June-July.
- Stipa viridula* Trin. (green needlegrass)  
Abundant, on prairie hillsides. June-July.

### **Typhaceae** (Cat-tail Family)

- Typha angustifolia* L. (narrow-leaved cat-tail)  
Common, on wet floodplain and in shallow backwater areas. July-August.
- Typha angustifolia x latifolia* (*Typha glauca* Godr.) (hybrid cat-tail)  
Abundant, on wet, river floodplain. August.

*Typha latifolia* L. (broad-leaved cat-tail)  
Common, on wet floodplain. August.

**Liliaceae** (Lily Family)

*Allium textile* A. Nels. & Macbr. (onion)  
Common, on hilltops and slopes of Bodmer Overlook. May.

*Asparagus officinalis* L. (asparagus)  
Uncommon, on upper terraces. June.

*Smilacina stellata* (L.) Desf. (false solomon seal)  
Common, on wooded river terraces. May-June.

*Yucca glauca* Nutt. (yucca, soapweed)  
Common, on upper south facing slopes of Bodmer Overlook. June-July.

**Iridaceae** (Iris Family)

*Sisyrinchium montanum* Greene. (blue-eyed grass)  
Uncommon, in grassy hollow. May.

## **Summary**

The vascular flora of Fort Union Trading Post National Historic Site, as documented by collections made for this study, consisted of 345 species and subspecies or varieties representing 61 families. The five families with the largest number of species were Asteraceae (69 species), Poaceae (56 species), Fabaceae (22 species), Cyperaceae (21 species) and Brassicaceae (18 species). Twenty-two species were designated as rare based on information from previous floristic studies done in the area and regional information.

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