

# THE KERNEN PRAIRIE - A RELICT FESCUE GRASSLAND NEAR SASKATOON, SASKATCHEWAN

BOHDAN PYLYPEC, Department of Crop Science and Plant Ecology, University of Saskatchewan, Saskatoon, Saskatchewan. S7N 0W0

## Introduction

On the northeast outskirts of Saskatoon 8 km from the city centre lies the Kernen Prairie, a 130 ha tract of virgin Plains Rough Fescue (*Festuca altaica*) grassland completely surrounded by tilled fields. It has been spared from cultivation and heavy grazing by domestic animals due to the foresight of Fred Kernen who protected this valuable land and donated it to the University of Saskatchewan in 1977 with the condition that it remain in its native state. The ecological significance of this prairie is tremendous, considering its location in an area of intensive agricultural development and its proximity to a large urban centre.

In 1985 and 1986 a detailed survey of the vegetation of the prairie was conducted. This report summarizes some of the results, with emphasis on a checklist of the flora.

## Study Area

The Kernen Prairie (E1/2 8-37-4-W3rd, elevation 510 m) lies on glaciolacustrine deposits laid down by glacial Lake Saskatchewan some 12,000 years ago.<sup>4</sup> A broad north-south ridge of sandy Bradwell loam soil gently slopes (1-1.5°) to each side where fine textured clayey Sutherland soils are present.<sup>11</sup>

Though the prairie is relatively flat,



Fescue - Speargrass with Pasture Sage; snowberry in background.

several features provide variety in the micro-relief, microclimate and vegetation. Along the ridge numerous pits 0.5-1.0 m deep occur, each floored with a flat dolomitic boulder. The origins of these pits are unclear. They have been termed "bovarcinations" by some, in the belief that they represent bison wallows; but more likely, they have been formed when wind erosion removed soil around the shallow-rooted vegetation above the boulders. Scattered throughout the prairie are somewhat elevated "mima mounds," named after the Mima Prairie in Washington State where this phenomenon was first noted.<sup>6</sup> Disturbance by ground squirrels and pocket gophers at these sites facilitates invasion by weedy species and also attracts predatory animals such as Red Foxes, Northern Harriers and Short-eared Owls, and until recently, Burrowing Owls. The sites are fertile and highly productive, and often the older ones are covered by dense stands of Western Snowberry (*Symphoricarpos occidentalis*). In low areas on the prairie, the Sutherland soils

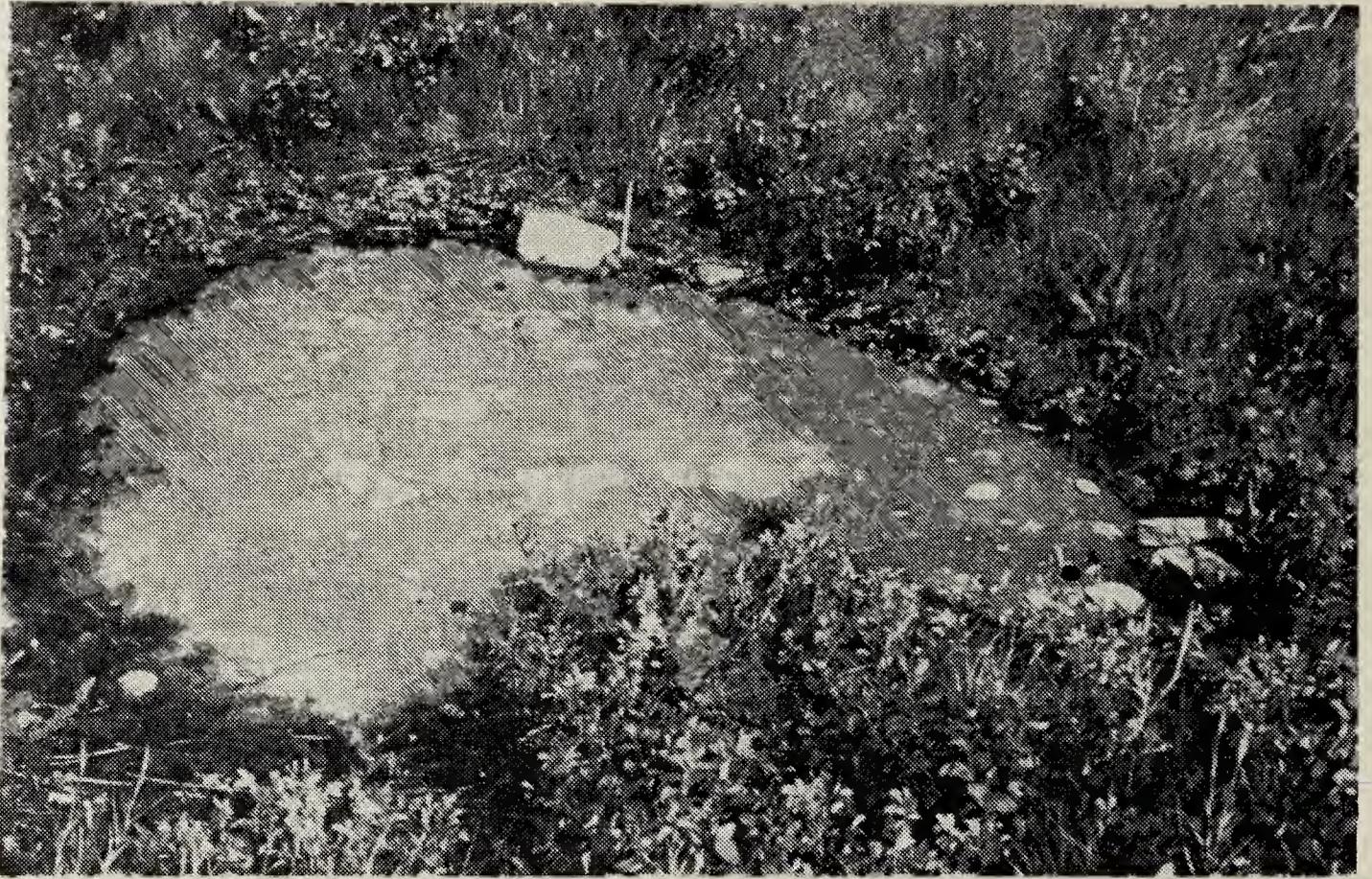
are cracked into polygon shapes about a metre across. These soils contain a high proportion of montmorillonitic clay which expands greatly upon wetting and contracts upon drying - the result is a pattern of polygons outlined by trenches and with central "puffs". These changes in micro-relief are accompanied by changes in soil and vegetation characteristics.<sup>2</sup> The Kernan Prairie also contains a number of temporary potholes with open water until about mid-July.

### Vegetation

The prairie lies in the transition area between fescue prairie and aspen parkland, and also contains important species from the mixed grassland.<sup>5 10</sup> Plains Rough Fescue is the dominant species with Western Porcupine Grass (*Stipa curtiseta*) and Northern Wheatgrass (*Agropyron dasystachyum*) also being important, especially on the upper slopes.<sup>3</sup> Trembling Aspen (*Populus tremuloides*) is present in four low-lying areas, but the most important woody species are shrubs including Western Snowberry, Silver-



Mainly fescue and snowberry; Silverberry and Poplar in background.



*"Bovarcination" with exposed dolomitic rock. Note pencil in background.*



*Snowberry on old "mima mound" surrounded by more snowberry and Fescue; Poplar in background.*



*Soil polygons with Fescue dominant*



*Low-lying area surrounded by meadowsweet and snowberry; silverberry, dock, Manitoba Maple and Poplar in background.*

berry (*Elaeagnus commutata*), Narrow-leaved Meadowsweet (*Spiraea alba*) and roses (*Rosa arkansana* and *Rosa woodsii*) that are present in all but the driest sites. The shrubby vegetation continues to provide excellent habitat for Savannah Sparrows and other passerines as was the case 15 years ago.<sup>7 8</sup>

Surveys in 1985 using systematically placed 0.25 m<sup>2</sup> quadrats revealed that shrubs and trees occupy 15.3% cover, grasses and graminoids 79.7% and forbs 14.3% (Table 1). (The values total more than 100% because the vegetation stratifies more than one layer on occasion).

In addition to the 70 vascular plant species recorded in cover surveys, other species were collected outside the quadrats on the prairie and deposited as

voucher specimens in the W.P. Fraser Herbarium at the University of Saskatchewan. A total of 165 species in 34 families have been collected (Appendix) indicating that this homogeneous-appearing area is, upon closer inspection, quite diverse.

The checklist includes 24 grasses, 10 sedges, 14 woody species (trees and shrubs) and 117 forbs. In addition, five other species indicated with an asterisk (\*) in the Appendix were recorded by Baines in 1963 although no voucher specimens are available.<sup>2 3</sup>

Baines attributed the species diversity to a soil moisture gradient occurring at the prairie.<sup>2 3</sup> For example, among the graminoids, Western Porcupine Grass, Northern Wheatgrass and Blue Grama (*Bouteloua gracilis*) occur on xeric sites,

Table 1. PERCENT COVER OF PLANT SPECIES RECORDED IN SYSTEMATIC COVER SURVEYS OF 1985.

<i>Shrubs and trees cover</i>		%
Western Snowberry ( <i>Symphoricarpos occidentalis</i> )		11.3
Roses ( <i>Rosa arkansana</i> and <i>Rosa woodsii</i> )		1.9
Narrow-leaved Meadowsweet ( <i>Spiraea alba</i> )		1.0
Silverberry ( <i>Elaeagnus commutata</i> )		0.7
Trembling Aspen ( <i>Populus tremuloides</i> )		0.4
Total		15.3
<i>Grasses and graminoids</i>		
Plains Rough Fescue ( <i>Festuca altaica</i> )		39.1
Western Porcupine Grass ( <i>Stipa curtisetata</i> )		15.9
Sedges ( <i>Carex</i> spp.)		14.1
Northern Wheatgrass ( <i>Agropyron dasystachyum</i> )		7.2
Smooth Brome ( <i>Bromus inermis</i> )		1.1
Western Wheatgrass ( <i>Agropyron smithii</i> )		1.0
10 other species		1.3
Total		79.7
<i>Forbs</i>		
Northern Bedstraw ( <i>Galium boreale</i> )		3.6
Pasture Sage ( <i>Artemisia frigida</i> )		1.7
Crocus Anemone ( <i>Anemone patens</i> )		1.3
Many-flowered Aster ( <i>Aster ericoides</i> )		1.3
American Vetch ( <i>Vicia americana</i> )		1.0
44 other species		5.4
Total		14.3

Plains Rough Fescue and Slender Wheatgrass (*Agropyron trachycaulum*) on more mesic sites, while in the wettest areas, one can find Slough Grass (*Beckmannia syzigachne*), Tall Manna Grass (*Glyceria grandis*) and Awned Sedge (*Carex atherodes*). Since the prairie is in a transition area between aspen parkland and fescue grassland, species typical of both regions are represented. In addition, important species from the mixed prairie are present, particularly on more xeric sites. A number of weedy species occur, too, which is to be expected considering the area is surrounded by cultivated fields.

Baines indicated that the Kern Prairie was acquired by the Kern family in 1917.<sup>2</sup> The area was grazed by cattle and horses until the 1930s. Since then, disturbance has been minimal. In 1948, one summer of light grazing occurred, and approximately 25 ha were mowed in 1959. Aerial photographs from 1950 also reveal an airstrip approximately 1300 m long and 10 m wide, extending north-south in the eastern half of the prairie.

This area was tilled in 1963 and now is covered with Smooth Brome, Alfalfa (*Medicago sativa*) and native grasses including Western Wheatgrass and Northern Wheatgrass. Since 1963 the area has not been disturbed. Aerial photographs since 1944 have revealed that the shrubbery is now more prominent. Litter has built up, and the site appears to be more mesic than before. For example, Blue Grama, a xeric species, is found only in traces, whereas 23 years ago Baines noted the species had a frequency of 21% and was noted in stands on the driest upper and mid-slopes.<sup>2 3</sup> In similar locations, he also noted another xeric species, Needle-and-thread (*Stipa comata*) with a frequency of 7.5%, whereas this study did not record this species at the prairie. Thus, without the influence of grazing, mowing and fire, the vegetation has changed and probably simplified. In the past, it is likely that fire was a major force in grasslands such as the Kern Prairie.<sup>1 9</sup> Consequently, current plans for managing this prairie include studies of prescribed burning.



Speargrass - fescue with Winterfat and Pasture Sage; Silverberry, snowberry and Poplar in background.

## Acknowledgements

The assistance of V.L. Harms, J.H. Hudson and J.Y. Marchand in the annotation of plant specimens is gratefully appreciated. I would also like to thank R.E. Redmann for advice in conducting this study, J.S. Rowe for reviewing the article, and B.A. Atimoyoo for typing the manuscript.

<sup>1</sup>ARCHIBOLD, O.W. and M.R. WILSON 1980. The natural vegetation of Saskatchewan prior to agricultural settlement. *Can. J. Bot.* 58:2031-2042.

<sup>2</sup>BAINES, G.B.K. 1964. Plant distributions on a Saskatchewan prairie in relation to edaphic and physiographic factors. M.Sc. thesis, University of Saskatchewan, Saskatoon. 57 pp.

<sup>3</sup>BAINES, G.B.K. 1973. Plant distributions on a Saskatchewan prairie. *Vegetatio* 28:99-123.

<sup>4</sup>CHRISTIANSEN, E.A. 1979. The Wisconsinan deglaciation of southern Saskatchewan and adjacent areas. *Can. J. Earth Sci.* 16:913-938.

<sup>5</sup>COUPLAND, R.T. 1961. A reconsideration of

grassland classification in the Northern Great Plains of North America. *J. Ecol.* 49:135-167.

<sup>6</sup>DEL MORAL, R. and D.C. DEARDOFF 1976. Vegetation of the Mima Mounds, Washington State. *Ecology* 57:520-530.

<sup>7</sup>KARASIUK, D.J. 1973. The feeding ecology of the Savannah Sparrow, *Passerculus sandwichensis* (Gmelin) at Saskatoon, Saskatchewan. M.Sc. thesis, University of Saskatchewan, Saskatoon. 131 pp.

<sup>8</sup>LEIN, M.R. 1968. The breeding biology of the Savannah Sparrow, *Passerculus sandwichensis* (Gmelin) at Saskatoon, Saskatchewan. M.Sc. thesis, University of Saskatchewan, Saskatoon. 171 pp.

<sup>9</sup>ROWE, J.S. 1969. Lightning fires in Saskatchewan grassland. *Can. Field/Nat.* 83:312-324.

<sup>10</sup>ROWE, J.S. and R.T. COUPLAND 1984. Vegetation of the Canadian Plains. *Prairie Forum* 9:231-248.

<sup>11</sup>SOUSTER, W.E. 1979. Soils of the Kernen Crop Research Farm. Sask. Inst. Pedology Publ. M51. University of Saskatchewan, Saskatoon. 30 pp.



*Beautiful Sunflower, Helianthus subrhoideus*

**Appendix. CHECKLIST OF FLORA OF THE KERNEN PRAIRIE**

**PTERIDOPHYTA** - Ferns and fern allies  
SELAGINELLACEAE - Spike-moss family  
*Selaginella densa* Rydb. - Prairie Selaginella

**SPERMATOPHYTA** - Seed-bearing plants

**ANGIOSPERMAE**

**MONOCOTYLEDONAE**

GRAMINEAE - Grass family

*Agrohordeum macounii* (Vasey) Lepage -  
Macoun's Wild Rye

*Agropyron albicans* var. *albicans* Scribn. &  
Smith ) Awned Northern Wheatgrass

*Agropyron albicans* var. *griffithsii* (Scribn. &  
Smith) Beetle - Awned Northern  
Wheatgrass

*Agropyron dasystachyum* (Hook.) Scribn. -  
Northern Wheatgrass

*Agropyron pectiniforme* R. & S. - Crested  
Wheatgrass

*Agropyron repens* (L.) Beauv. - Quack Grass

*Agropyron smithii* Rydb. - Western Wheatgrass

*Agropyron subsecundum* (Link) Hitchc. - Awn-  
ed Slender Wheatgrass

*Agropyron trachycaulum* var. *trachycaulum*  
(Link) Malte - Slender Wheatgrass

*Agrostis scabra* Willd. - Rough Hair Grass

*Beckmannia syzigachne* (Steud.) Fern. - Slough  
Grass

*Bouteloua gracilis* (HBK.) Lag. - Blue Grama

*Bromus inermis* Leyss. - Smooth Brome

*Calamagrostis inexpansa* A. Gray - Northern  
Reed Grass

*Danthonia intermedia* Vasey - Timber Oat  
Grass

*Festuca altaica* Trin. ssp. *hallii* (Vasey) Harms  
- Plains Rough Fescue

*Glyceria grandis* S. Wats. - Tall Manna Grass

*Helictotrichon hookeri* (Scribn.) Henr. -  
Hooker's Oat Grass

*Hordeum jubatum* L. - Wild Barley

*Koeleria cristata* (L.) Pers. - June Grass

*Muhlenbergia richardsonis* (Trin.) Rydb. - Mat  
Muhly

*Poa cusickii* Vasey - Early Bluegrass

*Poa interior* Rydb. - Wood Bluegrass

*Poa pratensis* L. - Kentucky Bluegrass

\**Stipa comata* Trin. & Rupr. -  
Needle-and-thread

*Stipa curtisetata* (A.S. Hitchc.) Barkworth -  
Western Porcupine Grass

*Stipa viridula* Trin. - Green Needle Grass

CYPERACEAE - Sedge family

*Carex aenea* Fern. - Silvery-flowered Sedge

*Carex atherodes* Spreng. - Awned Sedge

*Carex eleocharis* Bailey - Low Sedge

*Carex filifolia* Nutt. - Thread-leaved Sedge

*Carex lanuginosa* Michx. - Woolly Sedge

*Carex obtusata* Lilj. - Blunt Sedge

*Carex pensylvanica* Lam. - Sun-loving Sedge

*Carex praegracilis* W. Boott - Graceful Sedge

\**Carex siccata* Dewey - Hay Sedge

*Carex xerantica* Bailey - White-scaled Sedge

*Eleocharis palustris* (L.) R. & S. - Creeping  
Spike-rush

JUNCACEAE - Rush family

*Juncus balticus* Willd. - Baltic Rush

*Juncus dudleyi* Wieg. - Dudley's Rush

LILIACEAE - Lily family

*Smilacina stellata* (L.) Desf. - Star-flowered  
Solomon's-seal

IRIDACEAE - Iris family

*Sisyrinchium montanum* Greene - Common  
Blue-eyed Grass

**DICOTYLEDONAE**

SALICACEAE - Willow family

*Populus tremuloides* Michx. - Trembling Aspen

*Salix bebbiana* Sarg. - Beaked Willow

*Salix petiolaris* Sm. - Basket Willow

URTICACEAE - Nettle family

*Urtica dioica* L. var. *procera* (Muhl.) Wedd.  
- Stinging Nettle

SANTALACEAE - Sandalwood family

*Comandra umbellata* (L.) Nutt. var. *umbellata*  
- Bastard Toadflax

POLYGONACEAE - Buckwheat family

*Polygonum coccineum* Muhl. forma *terrestre*  
(Willd.) Stanford - Water Smartweed

*Polygonum convolvulus* L. - Wild Buckwheat

*Rumex acetosa* L. - Sour Dock

*Rumex pseudonatronatus* Borbas - Field Dock

CHENOPODIACEAE - Goosefoot family

*Atriplex nuttallii* S. Wats. - Nuttall's Atriplex

*Chenopodium album* L. - Lamb's-quarters

*Eurotia lanata* (Pursh) Moq. - Winterfat

\* Species recorded by Baines; no voucher specimen available.

*Kochia scoparia* (L.) Schrad. - Kochia  
*Monolepis nuttalliana* (R. & S.) Greene - Spear-  
leaved Goosefoot  
*Salsola kali* L. var. *tenuifolia* Tausch. -  
Russian-thistle

CARYOPHYLLACEAE - Pink family  
*Cerastium arvense* L. - Field Chickweed  
*Saponaria vaccaria* L. - Cow Cockle  
*Stellaria longipes* Goldie - Long-stalked  
Stitchwort

RANUNCULACEAE - Crowfoot family  
*Anemone canadensis* L. - Canada Anemone  
*Anemone patens* L. var. *wolfgangiana* (Bess.)  
Koch. ) Crocus Anemone  
*Thalictrum venulosum* Trel. - Veiny  
Meadow-rue

CRUCIFERAE - Mustard family  
*Arabis divaricarpa* A. Nels. - Purple Rock Cress  
*Arabis hirsuta* (L.) Scop. - Hirsute Rock Cress  
*Arabis hoebellii* Hornem. - Reflexed Rock  
Cress  
*Brassica kaber* (DC.) L.C. Wheeler - Wild  
Mustard  
*Descurainia richardsonii* (Sweet) O.E. Schulz  
var. *richardsonii* - Gray Tansy Mustard  
*Descurainia sophia* (L.) Webb. - Flixweed  
*Erysimum cheiranthoides* L. - Wormseed  
Mustard  
*Erysimum inconspicuum* (S.Wats.) MacM. -  
Small-flowered Prairie Rocket  
*Lepidium densiflorum* Schrad. - Common  
Pepper-grass  
*Lesquerella arenosa* (Richards.) Rydb. - Sand  
Bladderpod  
*Sisymbrium altissimum* L. - Tumbling Mustard  
*Thlaspi arvense* L. - Stinkweed

SAXIFRAGACEAE - Saxifrage family  
*Heuchera richardsonii* R. Br. - Alumroot  
*Ribes oxycanthoides* L. var. *oxycanthoides*  
- Northern Gooseberry

ROSACEAE - Rose family  
*Amelanchier alnifolia* Nutt. - Saskatoon  
*Crataegus chryscarpa* Ashe - Round-leaved  
Hawthorn  
*Fragaria virginiana* Dcne. - Smooth Wild  
Strawberry  
*Geum triflorum* Pursh - Three-flowered Avens  
*Potentilla arguta* Pursh - White Cinquefoil  
*Potentilla concinna* Richardson - Early  
Cinquefoil  
*Potentilla gracilis* Dougl. var. *glabrata* (Lehm.)  
Hitc. - Graceful Cinquefoil

*Potentilla gracilis* Dougl. var. *gracilis* - Graceful  
Cinquefoil  
*Potentilla pensylvanica* L. var. *atrovirens*  
(Rydb.) T. Wolf - Prairie Cinquefoil  
*Prunus virginiana* L. - Chokecherry  
*Rosa acicularis* Lindl. - Prickly Rose  
*Rosa arkansana* Porter var. *arkansana* - Low  
Prairie Rose  
*Rosa woodsii* Lindl. - Wood's Rose  
*Spiraea alba* Du Roi - Narrow-leaved  
Meadowsweet

LEGUMINOSAE - Pea family  
*Astragalus adsurgens* Hook. - Ascending Pur-  
ple Milk-vetch  
*Astragalus agrestis* Dougl. - Purple Milk-vetch  
*Astragalus flexuosus* Dougl. - Slender  
Milk-vetch  
*Astragalus pectinatus* Dougl. - Narrow-leaved  
Milk-vetch  
*Medicago falcata* L. - Yellow Lucerne  
*Medicago sativa* L. - Alfalfa  
*Melilotus alba* Medic. - White Sweet-clover  
*Melilotus officinalis* (L.) Pall. - Yellow  
Sweet-clover  
*Oxytropis campestris* (L.) DC. var. *gracilis* (A.  
Nels.) Barneby - Late Yellow Locoweed  
*Oxytropis sericea* Nutt. var. *spicata* (Hook.)  
Barneby - Early Yellow Locoweed  
*Psoralea argophylla* Pursh - Silverleaf Psoralea  
*Psoralea esculenta* Pursh - Indian Breadroot  
*Thermopsis rhombifolia* (Nutt.) Richardson -  
Golden-bean  
*Vicia americana* Muhl. var. *angustifolia* Nees  
- American Vetch

LINACEAE -Flax family  
*Linum lewisii* Pursh - Lewis' Wild Flax

ACERACEAE - Maple family  
*Acer negundo* L. var. *interius* (Britt.) Sarg. -  
Manitoba Maple

MALVACEAE - Mallow family *Sphaeralcea coc-*  
*cinea* (Nutt.) Rydb. - Scarlet Mallow

VIOLACEAE - Violet family  
*Viola adunca* J.E. Smith - Early Blue Violet  
*Viola nuttallii* Pursh - Nuttall's Yellow Violet  
*Viola pedatifida* G. Don - Crowfoot Violet

ELAEAGNACEAE - Oleaster family  
*Elaeagnus commutata* Bernh. - Silverberry  
*Shepherdia argentea* Nutt. - Buffaloberry

ONAGRACEAE - Evening-primrose family  
*Epilobium ciliatum* Raf. var. *ciliatum* - Northern Willowherb

UMBELLIFERAE - Parsley family  
*Lomatium macrocarpum* (Hook. & Arn.)  
Coul. & Rose ) Long-fruited Parsley  
*Zizia aptera* (Gray) Fern. - Heart-leaved  
Alexanders

PRIMULACEAE - Primrose family  
*Androsace septentrionalis* L. - Pygmyflower  
*Lysimachia ciliata* L. - Fringed Loosestrife

POLEMONIACEAE - Phlox family  
*Collomia linearis* Nutt. - Narrow-leaved  
Collomia  
*Phlox hoodii* Richardson - Moss Phlox

BORAGINACEAE - Borage family  
*Hackelia deflexa* Wahl. (Opiz.) var. *americana*  
(Gray) Fern. & Johnston - Nodding  
Stickseed  
*Lappula echinata* Gilib. - Bluebur

LABIATAE - Mint family  
*Mentha arvensis* L. var. *villosa* (Benth.) S.R.  
Stewart - Field Mint  
*Stachys palustris* L. var. *pilosa* (Nutt.) Fern. -  
Marsh Hedge-nettle

SOLANACEAE - Potato family  
*Solanum triflorum* Nutt. - Wild Tomato

SCROPHULARIACEAE - Figwort family  
*Orthocarpus luteus* Nutt. - Owls's-clover  
*Penstemon gracilis* Nutt. - Lilac-flowered  
Beardtongue  
*Penstemon procerus* Dougl. - Slender  
Beardtongue

RUBIACEAE - Madder family  
*Galium boreale* L. - Northern Bedstraw

CAPRIFOLIACEAE - Honeysuckle family  
*Symphoricarpos occidentalis* Hook. - Western  
Snowberry

CAMPANULACEAE - Bluebell family  
*Campanula rotundifolia* L. - Harebell

COMPOSITAE - Composite family  
*Achillea millefolium* L. - Yarrow  
*Agoseris glauca* (Pursh) Raf. - False Dandelion  
*Antennaria parvifolia* Nutt. - Small-leaved  
Everlasting

*Arnica chamissonis* Less. - Leafy Arnica  
*Arnica fulgens* Pursh - Shining Arnica  
*Artemisia biennis* Willd. - Biennial Wormwood  
*Artemisia cana* Pursh - Hoary Sagebrush  
*Artemisia frigida* Willd. - Pasture Sage  
*Artemisia ludoviciana* Nutt. var. *gnaphalodes*  
(Nutt.) T. & G. - Prairie Sage  
*Aster ericoides* L. ssp. *pansus* (Blake) A.G.  
Jones ) Many-flowered Aster  
*Aster hesperius* A. Gray - Willow Aster  
*Aster laevis* L. - Smooth Aster  
*Carduus nutans* L. - Nodding Thistle  
*Cirsium arvense* (L.) Scop. - Canada Thistle  
*Cirsium flodmanii* (Rydb.) Arthur - Flodman's  
Thistle  
*Crepis tectorum* L. - Narrow-leaved  
Hawk's-beard  
*Erigeron asper* Nutt. - Rough Fleabane  
*Erigeron caespitosus* Nutt. - Tufted Fleabane  
*Erigeron canadensis* L. - Canada Fleabane  
*Erigeron glabellus* Nutt. - Smooth Fleabane  
*Gaillardia aristata* Pursh - Great-flowered  
Gaillardia  
*Grindelia squarrosa* (Pursh) Dunal - Gumweed  
*Gutierrezia sarothrae* (Pursh) Britt. & Rusby -  
Common Broomweed  
*Helenium autumnale* L. var. *montanum* (Nutt.)  
Fern. - Mountain Sneezeweed  
*Helianthus subrhomboides* Rydb. - Beautiful  
Sunflower  
*Heterotheca villosa* (Pursh) Shinnars var.  
*villosa*) Hairy Golden-aster  
*Hieracium umbellatum* L. - Canada  
Hawkweed  
*Lactuca pulchella* (Pursh) DC. - Blue Lettuce  
*Liatris punctata* Hook. - Dotted Blazingstar  
*Lygodesmia juncea* (Pursh) D. Don -  
Skeletonweed  
*Prenanthes racemosa* Michx. - Glaucous  
White Lettuce  
*Ratibida columnifera* (Nutt.) Woot. & Standl.  
- Long-headed Coneflower  
*Senecio canus* Hook. - Silvery Groundsel  
*Solidago canadensis* L. var. *gilvocanescens*  
Rydb. - Canada Goldenrod  
*Solidago missouriensis* Nutt. - Low Goldenrod  
*Solidago rigida* L. var. *humilis* - Stiff Goldenrod  
*Solidago spathulata* DC. var. *spathulata* -  
Mountain Goldenrod  
*Sonchus arvensis* L. - Perennial Sow-thistle  
*Taraxacum officinale* Weber - Dandelion  
*Tragopogon dubius* Scop. - Yellow  
Goat's-beard