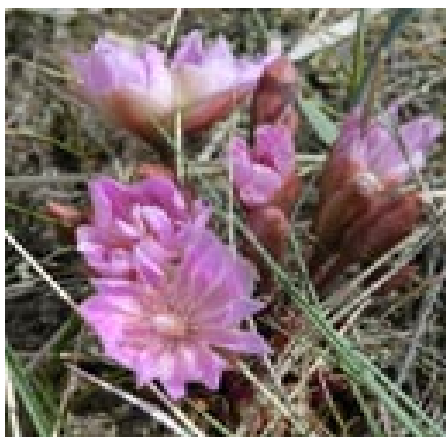


Notes:

Grant-Kohrs Ranch National Historic Site



A Field Guide to the Common Plants by Life Form and Habitat



Bitterroot
Montana's State Flower

Introduction - Cattle and Grasses

Cattle ranching began in the Deer Lodge Valley in the late 1850s. Johnny Grant settled here in the valley and in less than a decade built a herd of 4,000 cattle. He was bought out by Conrad Kohrs in 1866. With his half-brother and partner John Bielenberg, he built and operated Kohrs & Bielenberg Land and Livestock Company. They grazed cattle far beyond the Deer Lodge Valley and at one point grazed more than ten million acres of land in four states and Canada.

Cattle ranching has to have one vital component to make it happen - range grass. This valley, at the headwaters of the Clark Fork drainage was ideally suited for range grasses. Average precipitation is eleven and one half inches a year, with 70 percent of that coming in the growing season of May and June. Typically, the valley is cool, not cold, warm, but not hot. Temperatures in the 100s rarely occur. These biotic factors combine to make the short and long grass prairies of the valley ideally suited for cool and warm season grasses. When Conrad Kohrs purchased the ranch, dominant grasses were Bluebunch Wheat, Prairie June Grass, Giant Wildrye and in the higher elevations Rough Fescue. These grasses, called decreaseers, (plants that are eaten by cattle first) were what made the open range cattle industry possible. The foothills, and the non-irrigated pastures on the ranch still look much like they did in the late 1800s. The exceptions are the irrigated hay meadows that exist today.

What do these grasses and the other plants of Grant-Kohrs Ranch look like, and how do you identify them? That is the purpose of this booklet. There are nearly 2,000 plant species in Montana and 341 of them exist on Grant-Kohrs Ranch. This booklet identifies and illustrates the more common, and agriculturally important plants. The Ranch has a plant list available upon request, and an herbarium collection containing most plant species.

Plants are habitat specific and the center pages, 13 and 14, map the habitats of the Ranch. For convenience plants have been divided into four life forms; **(Green Group Plants) - Horsetails, Sedges, Rushes, and Grasses**, **(Blue Group Plants) - Trees and Shrubs**, **(Red Group Plants) - Noxious Weeds**, and **(Purple Group Plants) - Flowering Plants**. You find each life form by turning to the pages with the corresponding color.

A companion booklet, *Field Guide to the Common Birds by Habitat and Basic Color* has also been produced by Grant-Kohrs for your enjoyment.

-1-

Acknowledgments:

I would like to thank Ben Bobowski of the Grant-Kohrs Ranch Historic Site for encouraging me to develop this guide. This project was made possible through coordination and consultation with Utah State University, through the Rocky Mountain Cooperative Ecosystem Studies Unit, National Park Service.

I also want to thank my wife, Laura Lee, for her editing and suggestions. Additional editing was done by Ben Baldwin, Utah State University, and Ben Bobowski, Julie Croglio, and David Wyrick of Grant-Kohrs National Historic Site.

Gary Swant - Deer Lodge, MT

Photo Credits -

Many of the pictures were taken by Gary Swant. Additional pictures were used from the following web sites that provided non-copyright photos.

Natural Resource Conservation Service - <http://plants.usda.gov>

Range Plants of Utah, Utah State University -
<http://extension.usu.edu/rangeplants>

Montana Department of Agriculture, Montana Noxious Weed List -
<http://www.agr.state.mt.us/weedpest/noxiousweedslist.asp>

Non-copyrighted Google Images

Kansas Department of Agriculture - <http://www.ksda.gov/>

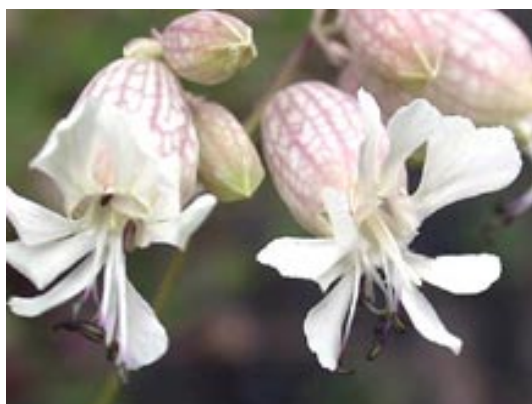


Photo 13



Photo 14



Photo 15

-25-

Dichotomous Keys:

Plants are identified by their vegetative, flower, and fruit characteristics. Often the terms to describe these characteristics are technical in nature. When technical terms are used, they are defined in brackets.

The most common tool used by those who want to identify a plant is the dichotomous key. These keys can be very complicated, technical, and ask questions about plants that are often hard to determine. They have to be very specific in order to divide the 2,000 plants in Montana into family, genus, and species. Fortunately, we will be dealing with just a few plants in each life form, making these dichotomous keys easy to use.

The general rule for the use of a dichotomous key is that each step has two parts. Each part either gives you a direction to another step or identifies the plant.

The following dichotomous key will lead you to the four plant life forms in this booklet.

- Begin Here -

1A. Plants that have woody bases and upright woody stems - **Trees and Shrubs** Go to page 6

1B. Plants may have woody bases, but no upright woody stems - Go to 2A

2A. Stems are herbaceous (soft tissue), and have showy flowers - **Flowering plants*** - Go to page 12

2B. Plants which have herbaceous stems and leaves, but do not have showy flowers - **Horsetails, Sedges, Rushes and Grasses** Go to page 3

* **Noxious Weeds** are included within flowering plants as they have showy flowers. They are keyed on page 9.

Horsetails, Sedges, Rushes and Grasses

Photos on page 18 & 19

The following list contains many of the grasses, sedges, horsetails and rushes that are found on the Grant-Kohrs Ranch. The more common of these plants are identified in this dichotomous key. Please note - this key is a nontechnical key and intended for general interest only. Those plants that are underlined are considered unlikely for a casual visitor to see. Plants in *italics* are found on the trail from the Visitor Center to the Ranch House.

Green Group plants have no woody base, or stems and grow from the base of the plant, rather than from the tips of stems.

Bluebunch Wheatgrass, Western Wheatgrass, Crested Wheatgrass, Needle-and-Thread Grass, Kentucky Bluegrass, Prairie Junegrass, Canada Bluegrass, Sandberg's Bluegrass, Blue Gramma, Smooth Brome, Redtop, Tufted Hairgrass, Timothy, Basin Wildrye, Indian Ricegrass, Sheep Fescue, Smooth Brome, Woolly Sedge, Beaked Sedge, Water Sedge, Needleleaf Sedge, Baltic Rush, Spike Rush, Smallfruited Bulrush, Scouring Rush, Water Horsetail and Bulrush.

These plants are most identifiable when the seed heads are mature which is from late June through August. Plant characteristics can be difficult to describe, you may want to refer to the photos.

- 1A.** Plants are obviously grasslike, stems are round, not dark green, and seed heads are at or near the end of the stems. **Go to 7A**
- 1B.** Plants not grasslike, usually dark green in color, often found in wet areas-**Go to 2A**
- 2A.** Stems round - **Go to 3A**
- 2B.** Stems triangular - **Go to 6A**
- 3A.** Stems with obvious joints and divided into sections - **Go to 4A**
- 3B.** Stems without joints and sections - **Go to 5A**

-3-

Herbaceous flowering Plants



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12

Herbaceous flowering Plants



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

-23-

Horsetails, Sedges, Rushes and Grasses

Photos on page 18 & 19

- 4A. Leafy structures encircle each joint - **Scouring Rush**
(*Equisetum arvense*) [Photo 1](#)
- 4B. Leafy structures not present, joints visible - **Water Horsetail**
(*Equisetum fluviatile*) [Photo 2](#)
- 5A. Plant tall, 20 to 60 inches; leaves yellow-green, sharp edged with distinct central vein; flowers on long stems and overall look is a fuzzy pom-pom; found in wet ground - **Small-fruited Bulrush**
(*Scripus microcarpus*) [Photo 3](#)
- 5B. Plant smaller, less than 36 inches; leaves wirelike and pithy inside - **Baltic Rush** (*Juncus balticus*) [Photo 4](#)
- 6A. Leafy stems, fruit smooth, always in water or wet places - **Water Sedge** (*Carex aquatilis*) [Photo 5](#)
- 6B. Leaves flat, narrow; fruit velvety or woolly; often on stream banks and meadows - **Woolly Sedge** (*Carex lanuginosa*) [Photo 6](#)
- 7A. Grasses growing in clumps or bunches - **Go to 12A**
- 7B. Grasses single stemmed or rhizomes (vertical underground stem) - **Go to 8A**
- 8A. Annual, single stemmed grass; drooping seed heads that are open and branched - **Cheat Grass** (*Bromus tectorum*) [Photo 7](#)
- 8B. Perennial grasses (show last year's leaves), rhizomes - **Go to 9A**
- 9A. Seedhead dense, narrow, and no branching; leaves bluish-green - **Western Wheat Grass** (*Agropyron smithii*) [Photo 8](#)
- 9B. Seedhead branching, rather than dense - **Go To 10A**
- 10A. Seedhead branches whorled around stem - **Go To 11A**
- 10B. Seedhead branches not whorled; leaves stiff, flat, pointed, with distinct veins - **Red Top** (*Agrostis stolonifera*) [Photo 9](#)

Horsetails, Sedges, Rushes and Grasses

Photos on page 18 & 19

- 11A. Leaf blades 1 to 7 inches in length, V-shaped - **Kentucky Bluegrass** (*Poa pratensis*) Photo 10
- 11B. Leaf blade 8 to 15 inches long, flat, with raised and keeled midrib below - **Smooth Brome** (*Bromus inermis*) Photo 11
- 12A. Seedheads show the presences of *awns* (appendage on seed) - **Go to 13A**
- 12B. Seedheads show no awns - **Go To 15A**
- 13A. Awns long, 4 to 5 inches and wavy - **Needle-and-Thread** (*Stipa comata*) Photo 12
- 13B. Awns not long or wavy - **Go To 14A**
- 14A. Awns less than one inch, often bend 90 degrees at maturity - **Bluebunch Wheatgrass** (*Agropyron spicatum*) Photo 13
- 14B. Awns 1/8 to 1/4 inch, never bent; leaves stiff, sharp and bluish-grey - **Sheep Fescue** (*Festuca ovina*) Photo 14
- 15A. Seedheads unbranched - **Go To 16A**
- 15B. Seedheads branched - **Go To 21A**
- 16A. Seedhead squirrel-tail like - **Go to 20A**
- 16B. Seedhead not squirrel-tail like - **Go to 17A**
- 17A. Seedhead distinctly divided in to one or two halves - **Go to 18A**
- 17B. Seedhead not divided, dense, compact, long, up to 10 inches, not - **Go to 19A**
- 18A. Plant small, 6 - 20 inches; seedhead one sided and eyelash-like - **Blue Grama** (*Bouteloua gracilis*) Photo 15
- 18B. Plants robust, 18 to 30 inches; seedhead flattened, and two-parted - **Crested Wheatgrass** (*Agropyron spicatum*) Photo 16
- 19A. Very large, robust, 36 to 70 inches tall; 12 to 36 inch in diameter - **Great Basin Wildrye** (*Leymus cinereus*) Photo 17

-5-

Noxious Weed Photos



Photo 5



Photo 6



Photo 7

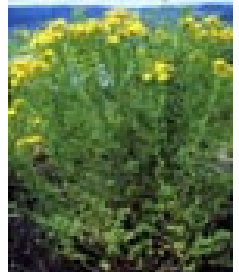


Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15

-22-

Trees and Shrub Photos



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15

Noxious Weed Photos



Photo 1



Photo 2



Photo 3



Photo 4

-21-

Horsetails, Sedges, Rushes and Grasses Photos on page 18 & 19

- 20A. Seedhead very dense, cylindrical, and 2 to 5 inches long, 1/4 inch diameter; leaves distinctly veined, midrib prominent on upper surface - **Timothy** (*Phleum pratense*) Photo 18
- 20B. Seedhead dense to slightly open; leaves basal, veins distinct, curly when dry; seed stalks leafless - **Prairie June Grass** (*Koeleria cristata*) Photo 19
- 21A. Narrow seedhead, up to four inches long, seedhead branches in whorls of 2 to 3 around the main stem. **Sandberg Blue** (*Poa secunda*) Photo 20

Trees and Shrubs Photos on Page 20 & 21

The following list contains many of the trees and shrubs found on the Grant-Kohrs Ranch. The more common of these plants are identified in this dichotomous key. Please note - this key is a nontechnical key and intended for general interest only. Those plants that are underlined are considered unlikely for a casual visitor to see. Plants in **italics** are found on the trail from the Visitor Center to the Ranch House.

Blue Group plants have a woody base and stem. They grow from the tips of the stems.

Rubber Rabbitbrush, Fringed Sage, Green Rabbitbrush, Black Cottonwood, Pacific Willow, Bebb Willow, Booth Willow, Geyer Willow, Sandbar Willow, Redosier Dogwood, Chokecherry, Common Juniper, Quaking Aspen, Woods Rose, Winterfat, Broom Snakeweed, Spineless Horsebrush, Water Birch, Canadian Gooseberry.

Trees and Shrubs

Photos on Page 20 & 21

- 1A.** Woody plants with a main trunk (tree)- **Go To 2A**
1B. Woody plants with several to many upright stems (shrub) - **Go To 3A**
- 2A.** Bark of trunk thin, smooth, and white; margins (edge) of leaves toothed, prominent white mid-vein - **Quaking Aspen**
(*Populus tremuloides*) [Photo 1](#)
- 2B.** Bark of trunk soft, whitish, aging to grey, deeply furrowed; leaves ovate, dark green above, lighter below - **Black Cottonwood**
(*Populus trichocarpa*) [Photo 2](#)
- 3A.** Upright Stems higher than 48 inches (Tall Shrub)- **Go To 4A**
3B. Upright stems less than 48 inches (Short Shrub) - **Go To 10A**
- 4A.** Awl-shaped evergreen needles with white band on upper side -
Common Juniper (*Juniperus communis*) [Photo 3](#)
- 4B.** Leaves deciduous, not evergreen - **Go To 5A**
- 5A.** Bark of the stems shows the presences of lenticels (scars) - **Go to 6A**
5B. Bark of the stems does not show lenticels - **Go To 7A**
- 6A.** Flowers small, catkins (cone-like seed structures); leaves 1 1/2 inch long with fine teeth inside the larger teeth on the edge of blade (leaf) -
Water Birch - (*Betula occidentalis*) [Photo 4](#)
- 6B.** Flowers normal, white and in dense clusters, leaves 1 to 3 1/2 inches with single toothed edge, fruit is dark purple to black -
Chokecherry (*Prunus virginiana*) [Photo 5](#)
- 7A.** Young stems and most old stems are smooth and bright red;
Flowers white in dense flat-topped clusters - **Redosier Dogwood**
(*Cornus sericea*) [Photo 6](#)

-7-

Trees and Shrub Photos



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8

Horsetail, Sedge, Rushes and Grass Photos



Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20

-19-

Trees and Shrubs Photos on Page 20 & 21

7B. Stems show no red - **Go To 8A**

8A. Leaf broadest near the center, pointed at both ends, dull green above, gray-white below; twigs reddish-purple - **Bebb Willow** (*Salix bebbiana*) Photo 7

8b. Leaf lance-shaped, not broadest near the middle - **Go To 9A**

9A. Leaf base wedged-shaped, shiny above, waxy below; twigs yellow to brown - **Geyer's Willow** (*Salix geyeriana*) Photo 8

9B. Leaf base round, lance-shaped, very long-pointed to tip, shiny green above, white below; twigs shiny red to brown or yellow - **Pacific Willow** (*Salix lucida*) Photo 9

10A. Plant cushion or mat forming, less than a foot tall, strong sage odor in leaves when crushed - **Fringed Sage** (*Artemisia frigida*) Photo 10

10B. Plant taller, no sage odor - **Go to 11A**

11A. Plants with prickles or spines - **Go To 12A**

11B. Plants without prickles or spines - **Go To 13A**

12A. Flowers creamy-white; spines less than 1/2 inch; leaves finely hairy; fruit red to black - **Canadian Gooseberry** (*Ribes setosum*) Photo 11

12B. Flowers dark rose, occasionally white; spines recurved or straight, stem red brown; fruit a red rose hip which persist on the plant through winter - **Wild Rose** (*Rosa woodsii*) Photo 12

13A. Flowering heads are arranged in flat-topped clusters, small yellow flowers; leaves threadlike, smooth edged, slightly sticky - **Broom Snakeweed** (*Gutierrezia sarothrae*) Photo 13

-8-

Trees and Shrubs

Photos on Page 20 & 21

13B. Flowering heads not flat-topped, leaves broader **Go To 14A**

14A. Flowering heads yellow, clustered with 4 - 8 flowers at branch tips; leaves curled or twisted through one complete turn - **Green Rabbitbrush** (*Chrysothamnus viscidiflorus*) Photo 14

14B. Flowering heads yellowish green, umbrella shaped, small, less than 1/2 inch, leaves spatula shaped with smooth edges, 1 to 3 veined - **Rubber Rabbitbrush** (*Chrysothamnus nauseosa*) Photo 15

Noxious Weeds

Photos page 21 & 22

Noxious weeds are flowering plants that have been classified by man as undesirable when found in large numbers. They are typically non-native (often from Eurasia) and have few to no natural controls. They often out-compete native plants and produce a monoculture of weeds. Native range grasses are reduced in number and vigor in mixed stands with noxious weeds. Economic losses can be significant if noxious weeds are not controlled. Integrated Pest Management (IPM) controls can be cultural (i.e. mowing), biological (i.e. insects, sheep) and chemical (i.e. Tordon).

Please note - this key is a nontechnical key and intended for general interest only. Those plants that are underlined are considered unlikely for a casual visitor to see. Plants in **italics** are found on the trail from the Visitor Center to the Ranch House.

Red Group plants are all angiosperms (flowering plants) that out compete and threaten native plant communities.

Whitetop, Oxeye Daisy, Field Bindweed, Perennial Pepperweed, Yellow Toadflax, Dalmation Toadflax, St. Johnswort, Tall Buttercup, Sulfur Cinquefoil, Common Tansy, Spotted Knapweed, Russian Knapweed, Canada Thistle, Houndstongue, and Leafy Spurge

-9-

Horsetail, Sedge, Rushes and Grass Photos



Photo 1



Photo 2



Photo 3

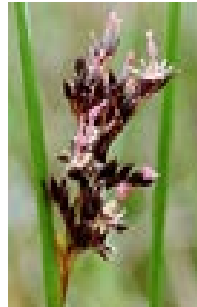


Photo 4

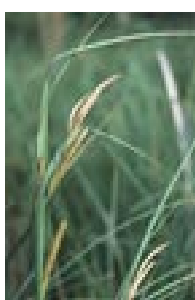


Photo 5



Photo 6



Photo 7



Photo 8



Plant 11



Plant 12



Plant 13



Plant 14

-18-

Herbaceous Flowering Plants

Photos Page 23 & 24

- 11A.** Leaves long and narrow, 12 by 1/8 inch, leaf base clasps the stem; leaves and stem emit milky sap; flowers single at end of stems, flower 3/4 to 1 1/2 inches wide; fruit forms “puffball” seedhead - **Western Salsify** (*Tragopogon dubius*) [Photo 10](#)
- 11B.** Leaves lance shaped, 1 to 6 inches long, 1 inch wide, simple, alternate with 3 conspicuously veins, fine hair on underside; flowering portion inverted cone-shaped, numerous flowering heads, flowers 1/4 inch across - **Canada Goldenrod** (*Solidago canadensis*) - [Photo 11](#)
- 12A.** Flower daisy-like, white ray flowers (petal like outer flowers) with yellow center; leaves basal and mat-like, twice dissected leaflets; flowering stems 2 to 10 inches with solitary flower heads - **Cutleaf Fleabane** (*Erigeron compositus*) [Photo 12](#)
- 12B.** Flowers not daisy-like - **Go To 13A.**
- 13A.** Flower petals, deeply notched, sepals form a bladderlike case with distinct veins; leaves basal - **Bladder Champion** (*Silene vulgaris*) [Photo 13](#)
- 13B.** Flower petals not deeply notched - **Go To 14A**
- 14A.** Plant low cushion or mat, flower solitary at the tips of the stems; flowers sometimes with pink tint - **Hood’s Phlox** (*Phlox hoodii*) [Photo 14](#)
- 14B.** Plant erect, up to 15 inches from woody base; stems weak, with several flowers at tip of stems; leaves narrow and linear in shape, widely spaced on stems - **Long-leaf Phlox** (*Phlox longifolia*) [Photo 15](#)

-17-

Noxious Weeds

Photos page 21 & 22

- 1A.** Flowers are red to purple in color - **Go To 3A**
- 1B.** Flowers are not red to purple in color - **Go To 2A**
- 2A.** Flowers are yellow in color - **Go To 6A**
- 2B.** Flowers are white or predominately white - **Go To 12A**
- 3A.** Basal leaves velvety, rough to the touch; stem leaves alternate and smaller higher on the stem; flowers have 5 petals - **Houndstongue** (*Cynoglossum officinale*) [Photo 1](#)
- 3B.** Basal leaves if present, not velvety - **Go to 4A**
- 4A.** Basal leaves, spine-tipped and wavy, stem leaves alternate, lance shaped, spine tipped, and lack stalks, upper leaves smaller than lower leaves - **Canada Thistle** (*Cirsium arvense*) [Photo 2](#)
- 4B.** Leaves do not show spines - **Go to 5A**
- 5A.** Basal leaves toothed and covered with fine hairs, giving a grayish-green color; leaves on lower stem deeply lobed; purple solitary flower at the tip of each leafy branch - **Russian Knapweed** (*Centaurea repens*) [Photo 3](#)
- 5B.** Basal leaves deeply lobed, and radiate from a central point, no hairs; stem leaves finely divided in to long narrow segments; bracts (leafy structure under the flowers) have dark fringed tips or spots; flower pinkish-purple - **Spotted Knapweed** (*Centaurea maculosa*) [Photo 4](#)
- 6A.** Leaves are divided into leaflets (small leaves) or palmate (deeply lobed from a center point) - **Go to 7A**
- 6B.** Leaves not divided into leaflets, or palmate, rather single and smooth edged - **Go To 9A.**

-10-

Noxious Weeds

Photos page 21 & 22

- 7A. Leaves divided into many small leaflets with toothed edges, leaves all the same size; stems purplish-red; yellow-orange flowers are button-like and in flat-topped clusters - **Common Tansy** (*Tanacetum vulgare*) [Photo 5](#)
- 7B. Leaves with fewer leaflets - **Go To 8A**
- 8A. Leaves divided into 5 to 7 leaflets; conspicuous pointed hairs protrude at right angles from the stem and leaf stalks; flower petals deeply notched; yellow center - **Sulfur Cinquefoil** (*Potentilla recta*) [Photo 6](#)
- 8B. Leaves divided into 3 to 5 leaflets, decreasing in size upward on stem; flower petals smooth edged and glossy-yellow - **Tall Buttercup** (*Ranunculus acris*) [Photo 7](#)
- 9A. Leaves opposite, oval, sessile (without stems), edges in-rolled, with transparent dots on the surface; stems reddish with black glands; flowers 5 petaled - **St. Johnswort** (*Hypericum perforatum*) [Photo 8](#)
- 9B. Leaves alternate, various other characteristics - **Go To 10A**
- 10A. Leaves clasp (encircling) around the stem, smooth edged, and waxy - **Dalmatian Toadflax** (*Linaria dalmatica*) - [Photo 9](#)
- 10B. Leaves do not clasp around the stem. - **Go To 11A**
- 11A. Leaves pale to gray-green, long and narrow, pointed at both ends, with smooth edges; snapdragon like flowers with orange throats - **Yellow Toadflax** (*Linaria vulgaris*) [Photo 10](#)
- 11B. Leaves narrow, simple (one blade), 1 to 4 inches long; both stems and leaves contain a white, milky sap, flowers yellow-greenish, inconspicuous; heart shaped bracts (showy leafy structure below flower) hide true flowers - **Leafy Spurge** (*Euphorbia esula*) [Photo 11](#)

-11-

Herbaceous Flowering Plants

Photos Page 23- 25

- 6A. Flowers have 3 sepals (outer set) and 3 Petals (inner set); sepals pale blue, backward curved and purple lined; petals light blue, leaves basal, sword shaped - **Rocky Mountain Iris** (*Iris missouriensis*) [Photo 5](#)
- 6B. Sepals and petals more than three- **Go To 7A**
- 7A. Flowers- irregular (petal not all the same shape and size) - **Go to 8A**
- 7B. Flower regular (petals alike), nodding, and forming a tube; stem leaves alternate, tapering at the base and lance shaped, lower leaves stalked, upper not - **Mountain Bluebell** (*Mertinsia ciliata*) [Photo 6](#)
- 8A. Flowers strongly irregular with one protruding sterile male stamen that bears a tuft of yellow hair, other stamen hairless; leaves lance-shaped and waxy; flowers deep blue - **Beardtongue** (*Penstemon nitidus*) [Photo 7](#)
- 8B. Flowers pea-shaped and numerous on stems - **Go To 9A**
- 9A. Leaves basal, 7 to 21 leaflets (small leaves on midrib, making a large leaf) leaflets silvery from soft hairs; 5 to 30 reddish-purple flowers aging to blue - **Bessey's Locoweed** (*Oxytropis besseyi*) - [Photo 8](#)
- 9B. Leaves 9 - 25 leaflets, alternate, lower stalked, upper stalkless, leaflets grayish with sharp, stiff hairs; 15 to 50 flowers, dull blue - **Standing Milkvetch** (*Astragalus adsurgens*) [Photo 9](#)
- 10A. Flowers Yellow - **Go to 11A**
- 10B. Flowers White - **Go to 12A**

-16-

Overview of the Grant-Kohrs Ranch and Habitat Types

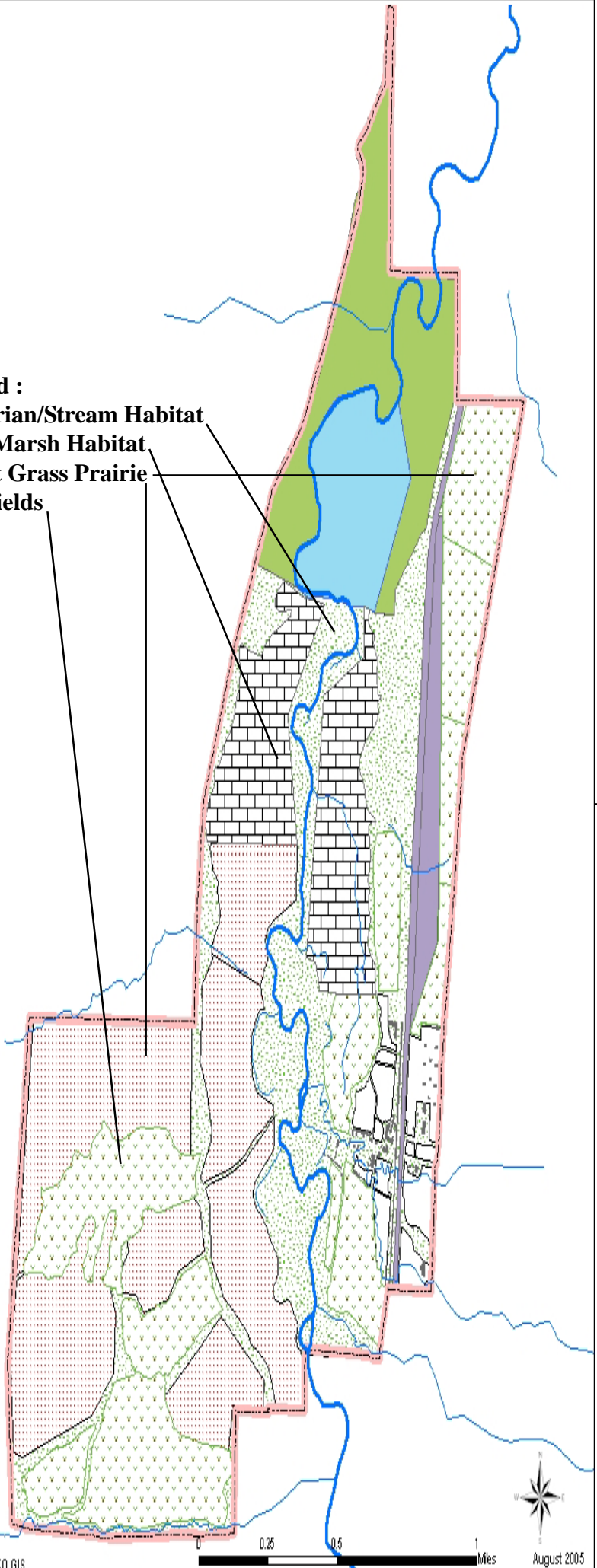
Grant-Kohrs Ranch National Historic Site
Montana

National Park Service
U.S. Department of the Interior



Legend :

- Riparian/Stream Habitat
- Wet Marsh Habitat
- Short Grass Prairie
- Hayfields



Produced by GRKO GIS

August 2005

Herbaceous Flowering Plants

Photos Page 23 - 25

The following list contains many of the flowering plants that are found on the Grant-Kohrs Ranch. The more common of these plants are identified in this dichotomous key. Please note - this key is a nontechnical key and intended for general interest only. Flowering plants in this group are non-woody or herbaceous. **Noxious weeds flowering plants on page 9.**

Plants on the list in **italics** are found on the trail from the Visitor Center to the Ranch House.

Wild Iris, *Bitterroot*, *Scarlet Globemallow*, *Western Salsify*, *Canada Goldenrod*, *Bladder Champion*, *Hood's Phlox*, *Longleaf Phlox*, *Moss Champion*, *Standing Milkvech*, *Bessey's Locoweed*, *Cutleaf Daisy*, *Curleycup Gumweed*, *Bluebell*, *Prairie Smoke*, *Waxleaf Penstomen*, and *Western Yarrow*

1A. Plants with flowers that are red, rose, orange, or pink - **Go to 2A**

1B. Plants with flowers that are other colors - **Go to 5A**

2A. Domed shaped cushion of leaves, flowers pink to purple, 5 petals -
Mountain Pink (*Douglasia montana*) Photo 1

2B. Plant not a cushion of leaves - **Go to 3A**

3A. Leaves alternate and short-stalked, 1 to 2.5 inches long, wider than long, palmately divide (like your hand), edges smooth; starlike hairs on leaves and stems; flowers red to orange. - *Scarlet Globeflower* (*Sphaeralcea coccinea*) Photo 2

3B. Leaves basal - **Go to 4A**

4A. Basal leaves numerous, entire, wither by flowering time; flower stems numerous; petals 12 - 18 - *Bitterroot* (*Lewisia rediviva*) Photo 3

4B. Basal leaves dissected into leaflets, hairy; flowering stems have reduced leaves, flowers on drooping stalks, petals maroon-red - *Prairie Smoke* (*Geum triflorum*) - Photo 4

5A. Plants with flowers that are blue to purple to maroon - **Go to 6A**

5B. Plants with flowers that are white or yellow - **Go to 10A**

-15

Noxious Weeds

Photos page 21 & 22

12A. Leaves alternate, at least on stems - **Go To 13A**

12B. Leaves various, but never alternate - **Go To 14A**

13A. Basal leaves waxy, 13 inches long and 4 inches wide; long stalks, broad at the base, stem leaves and stalks smaller, all leaves have prominent whitish midrib; flowers have 4 petals - **Perennial Pepperweed** (*Lepidium latifolium*) Photo 12

13B. Leaves arrowhead shaped with pointed lobes; stems creeping; flowers bell-shaped and white to pinkish in color - **Field Bindweed** (*Convolvulus arvensis*) Photo 13

14A. Leaves on long narrow stalks and widest at tip, upper leaves smaller, stalkless and toothed; flower heads 1 to 2 inches with white ray flowers (look like petals around edge) and yellow centers - **Oxeye Daisy** (*Chrysanthemum leucanthemum*) Photo 14

14B. Leaves blue-green to gray-green and arrowhead-shaped, all leaves covered with soft white hairs, lower leaves stalked, upper clasping; dense clusters of small flowers on 1/2 inch stalks; flat topped appearance to flower groups - **Whitetop** (*Cardaria draba*) Photo -15

Herbaceous Flowering Plants

Photos page 23 - 25

Showy flowers are a sure sign of spring in Western Montana. Here on the Grant-Kohrs Ranch, spring can often be cold and dry resulting in few herbaceous flowers. Often you have to be at higher elevations where there is more available moisture to have profusions of flowers. The Ranch is not without spring flowers, there are just not as many as one might expect. **PurpleGroup** plants in this key are the more showy flowers of the Ranch. Many are found along the river or the short grass prairie, and will require effort on your part to find. Those plants that are underlined are considered unlikely for a casual visitor to see, but are plentiful in the foothills to the west of the Ranch House.