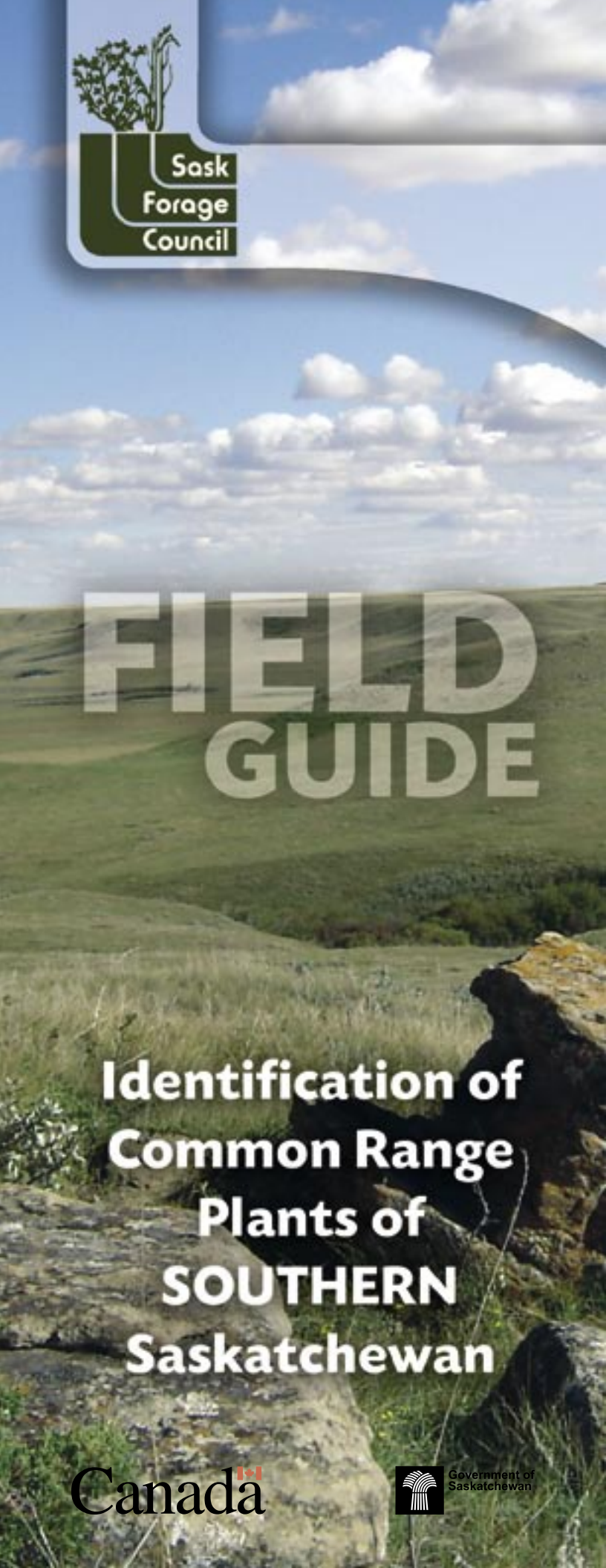
Sask
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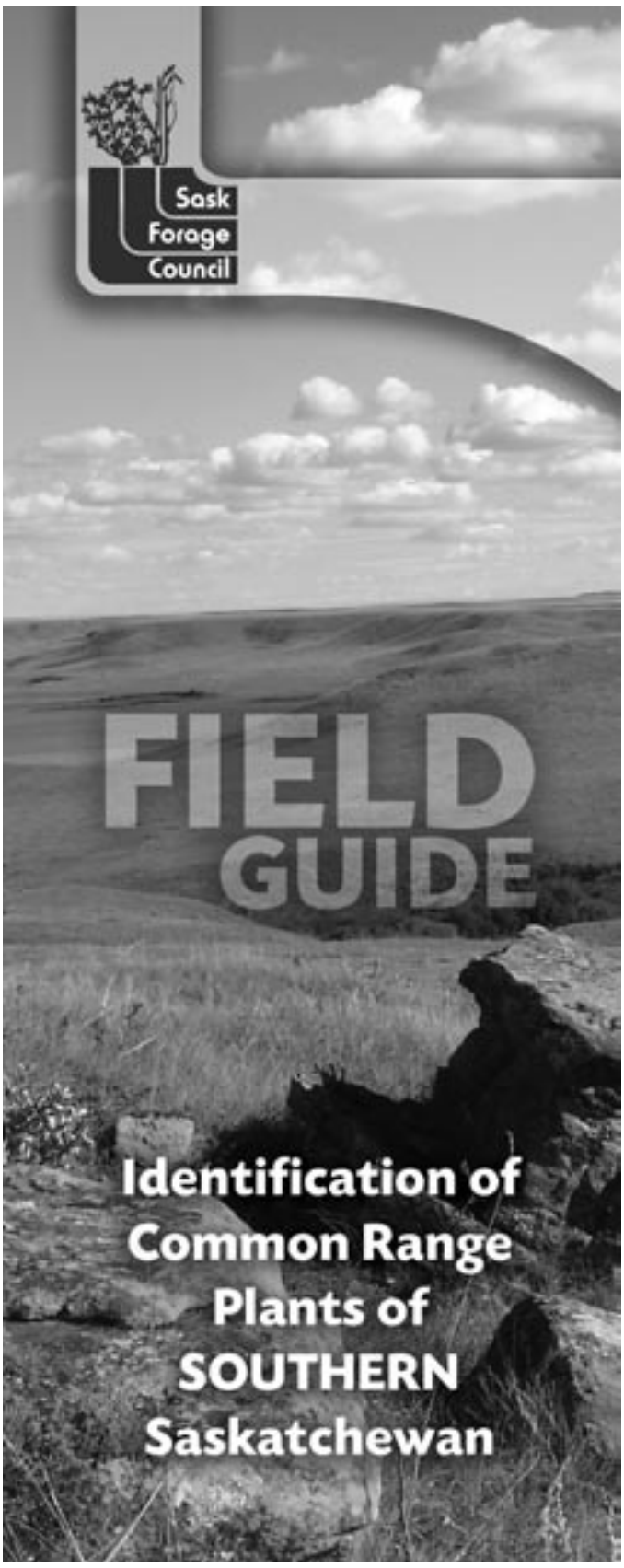
Saskatchewan

Cover photo: The confluence of Bone Creek and Swift Current Creek northwest of Shaunavon on the Amon Ranch.
Photo credit: Alicia N. Hargrave


Sask
Forage
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FIELD
GUIDE
Identification of
Common Range
Plants of
SOUTHERN
Saskatchewan

Introduction

This field guide is intended for basic plant identification and reviews the common range plant species found throughout southern Saskatchewan. It is primarily designed for producers, land managers, and extension personnel. For a more complete listing of plants or more detailed identification, please refer to *Budd's Flora of the Canadian Prairie Provinces* (see references).

There are four sections in this guide, corresponding to the main range plant groups:

- **Grasses**
- **Grass-like Plants**
- **Forbs**
- **Shrubs**

Vegetative and flower characteristics are used to describe plants in this guide, in conjunction with plant illustrations. The species habitat, distribution, and height are included. Growth form is listed if not erect (ie. spreading). The perennial growth habit applies to all species unless otherwise noted (ie. annual, biennial). The season of flowering for the forbs and shrubs is also included. Grasses can have one of two designations: cool season or warm season. These designations refer to differences in how plants perform photosynthesis. Warm season species have photosynthetic processes that are more efficient in warmer, drier environments. Therefore, growth of warm season species is later in the growing season while cool season species grow in the spring and early summer. The cool season designation applies to all grass species in southern Saskatchewan unless otherwise noted.

Some of the plant species in this field guide have a "Similar Species" box next to the illustration. These plants are closely related to the illustrated plant, but have distinguishing features. To differentiate between species, only these distinguishing features are listed.

With ongoing research in taxonomy, the grouping of plants is continually changing where individual species are placed in relation to others. With this reorganization, comes a change in the scientific name. New Latin names are listed in the index in brackets behind the commonly used Latin names.

To help in identifying common range plants in your area, first start in an ungrazed or lightly grazed location. Flowering heads and seeds will assist in the identification process. Then use the following steps to identify the species:

1. Determine the range plant group for the specimen using the key on page one (ie. Grasses, Grass-like Plants, Forbs, Shrubs).

2. Review the basic plant characteristics for each plant group on the introductory page of each section (ie. Grass Plant Parts, Sedge Plant Parts, Leaf Morphology for Forbs and Shrubs).

3. Identify the species by using the illustrations and identifying characteristics.

Three other guides exist in this series to identify plants in other areas or habitats of Saskatchewan. Please contact the Saskatchewan Forage Council (SFC), as well as local Saskatchewan Agriculture and Food (SAF) or Agriculture and Agri-Food Canada - Prairie Farm Rehabilitation Administration (AAFC-PFRA) district offices, for copies of this publication and the field guides listed below.

- *Field Guide: Identification of Common Range Plants of Northern Saskatchewan*

- *Field Guide: Identification of Common Riparian Plants of Saskatchewan*

- *Field Guide: Identification of Common Seeded Plants for Forage and Reclamation in Saskatchewan.*

Acknowledgements

This field guide was compiled by Alicia N. Hargrave of Walsh, Alberta. *Field Guide: Identification of Common Range Plants of Southern Saskatchewan* was funded by Agriculture and Agri-Food Canada's Greencover Canada Program and administered through the Saskatchewan Forage Council (SFC). Acknowledgement is due to the authors and contributors of previous editions that this field guide was adapted from.

Illustrations in this field guide were copied and used with permission from a number of sources. Elaine L. Muth of Saskatoon, Saskatchewan produced five of the illustrations, as noted on page 59.

A big thank you to Janice Bruynooghe, Saskatchewan Forage Council (SFC); Peggy Antonichuk, SFC; Barry Marquette, SFC; Elaine Moats, Saskatchewan Agriculture and Food (SAF); Michel Tremblay, SAF; Trevor Lennox, SAF; Todd Jorgenson, SAF; Al Foster, SAF; Chris Nykoluk, Agriculture and Agri-Food Canada – Prairie Farm Rehabilitation Administration; Jeff Thorpe, Saskatchewan Research Council; Jim Romo, University of Saskatchewan (U of S); Jody Oliver, Saskatchewan Watershed Authority (SWA); Krista Connick, SWA; Alan Iwaasa, Agriculture and Agri-Food Canada – Semiarid Prairie Agricultural Research Centre; Chris Brooks, U of S; Kirsten Remarchuk, W.P. Fraser Herbarium; BJ Haubrich, Hazenmore, Saskatchewan; James Hargrave, Walsh, Alberta; and Rod Chometa, Pamela Nimegeers, Clayton Binning, Ryan Chaika at Orylix Media.

Table of Contents

Shrubs

Common Range Plants

Herbaceous Plants

Woody Plants
(see **Shrubs** pg. 39-45)

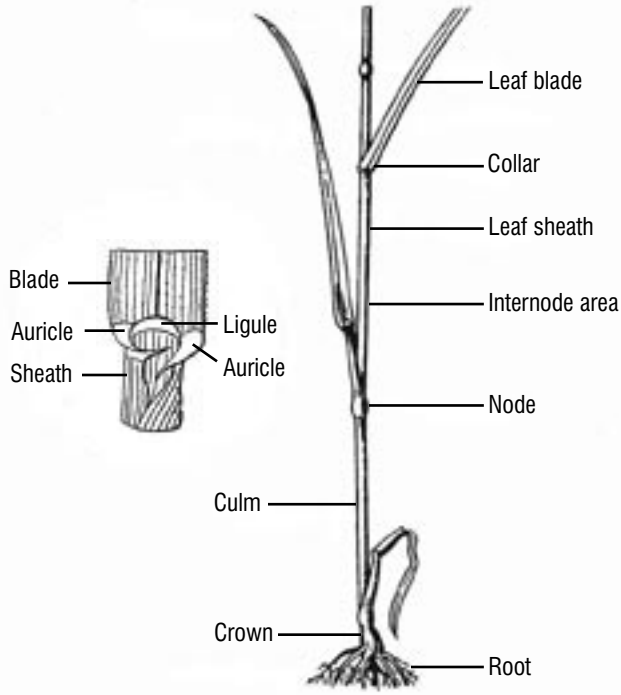
Leaves linear with
parallel veins

Leaves broad
with net-like veins
(see **Forbs** pg. 22-38)

Stems hollow, jointed,
and circular to flat
(see **Grasses** pg. 2-18)

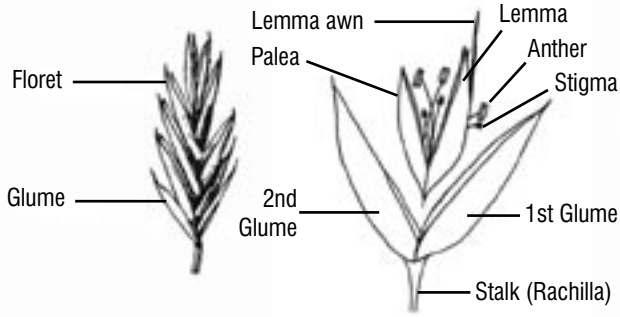
Stems solid, not jointed,
and often triangular
(see **Grass-like Plants** pg. 19-21)

The Grass Plant Parts



Spikelet

Floret



Fibrous Roots

Rhizomatous Roots

Grass Flowering Heads

A. Spike

Unbranched, terminal flowering head with spikelets attached directly to the central axis (Example: wheatgrass).

B. Comb-like Spike

Unbranched flowering head with spikelets attached directly to the central axis and arranged on one side like a comb; spikes may not be terminal (Example: blue grama).

C. Raceme

Unbranched flowering head with spikelets borne on stalks attached to the central axis (Example: bluestems).

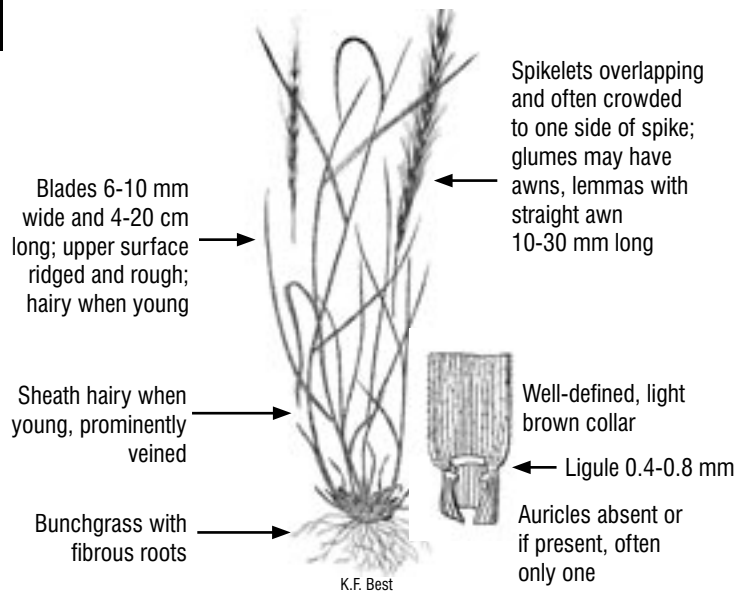
D. Panicle

Branched flowering head with spikelets borne on stalks and lower branches longest and flowering first (Examples: june grass, bluegrasses, needle grasses).

Awned / Bearded Wheatgrass

Agropyron subsecundum

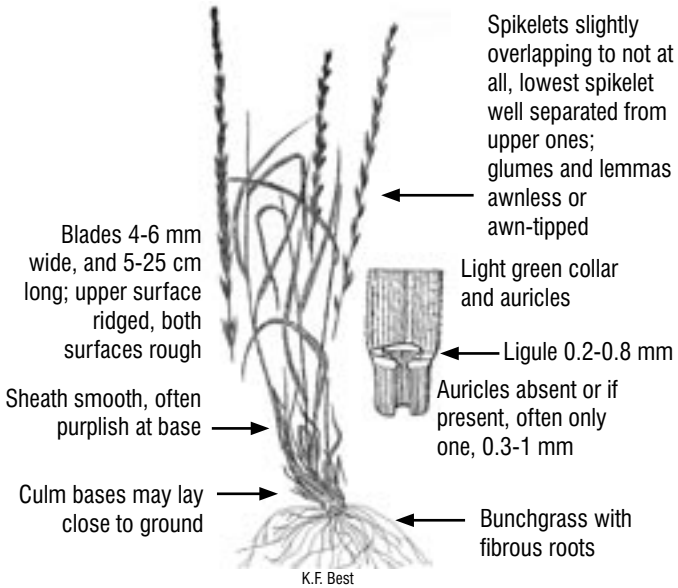
- **Culm 50-100 cm, spike 5-20 cm, erect or slightly nodding**
- **Moist, well-drained, fertile soils**



Slender Wheatgrass

Agropyron trachycaulum

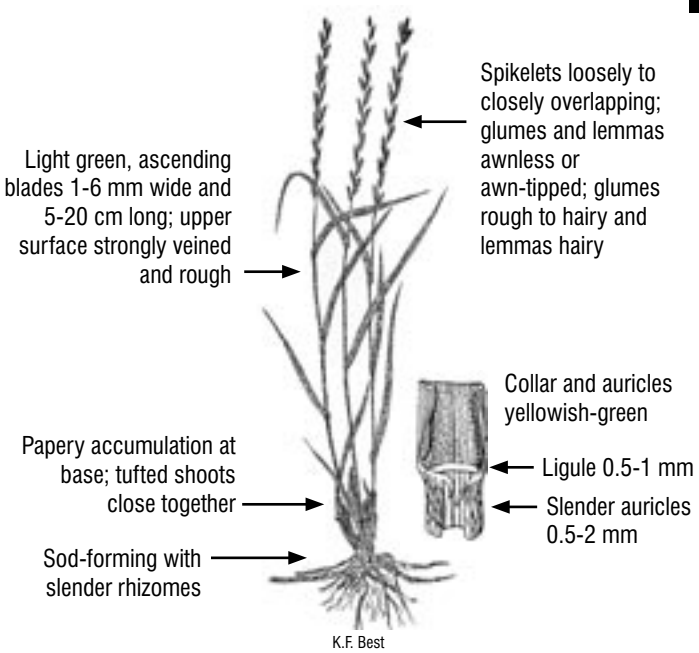
- **Culm 50-100 cm, spike 10-25 cm, erect or slightly nodding**
- **Moist soils, tolerates salinity**



Northern Wheatgrass

Agropyron dasystachyum

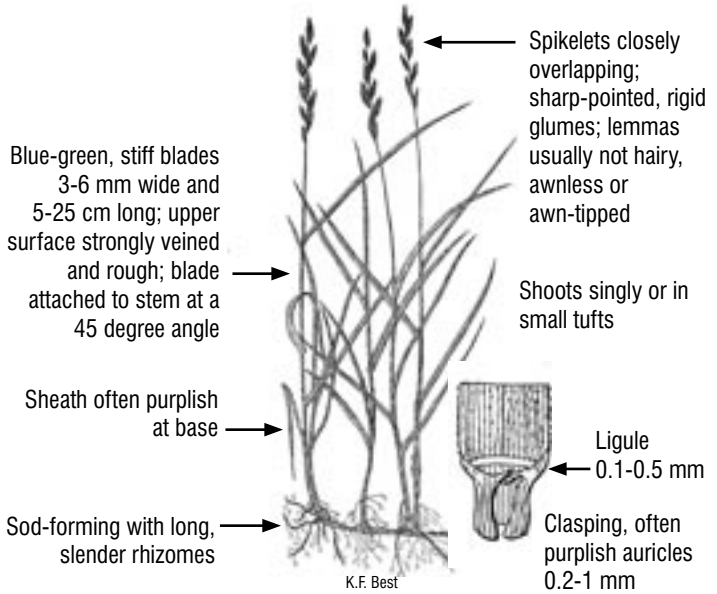
- **Culm 40-70 cm, spike 6-15 cm**
- **Most common wheatgrass on the prairies**



Western Wheatgrass / Bluejoint

Agropyron smithii

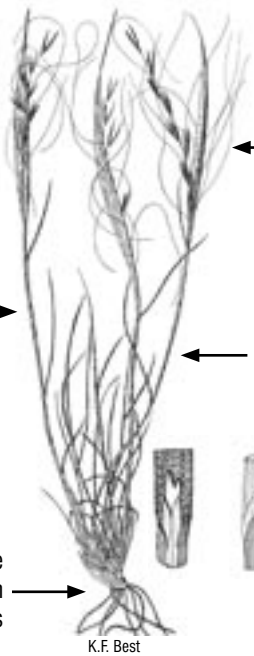
- **Culm 30-60 cm, spike 7-15 cm**
- **Most common in moist, saline, and heavy soils**



Needle and Thread

Stipa comata

- **Culm 30-60 cm, panicle 10-20 cm**
- **Most common species on dry prairie**
- **Saskatchewan provincial grass**



Open panicle; papery glumes with awns 3-7 mm long; hairy, leathery lemmas, shiny-brown at maturity with awns 10-15 cm long, curly at the tip and twisted below when mature

Light green, leathery blades 1-3 mm wide and 5-30 cm long; ridged and rough on upper surface, veins distinct below

Sheath prominently veined; often partially encloses panicle

Ligule 1.5-6 mm; distinct and often split

Auricles absent

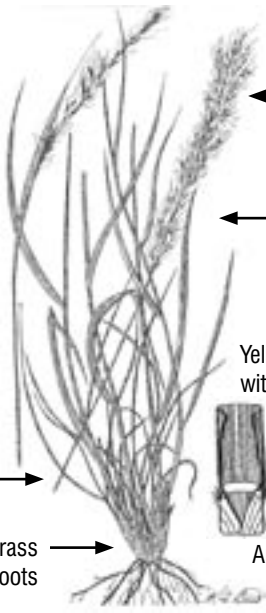
Dense bunchgrass with fibrous roots

K.F. Best

Green Needle Grass

Stipa viridula

- **Culm 50-100 cm, panicle 10-20 cm**
- **Moist to dry prairie; fertile soils**



Dark green, mostly basal blades 2-5 mm wide and 10-25 cm long; prominently veined and rough on upper surface, prominent midrib below

Greenish, narrow, and compact panicle

Hairy lemmas dark brown when mature; lemma with delicate, twice bent awn 2-3 mm long

Yellowish-green collar with hairy margins

Smooth sheath with distinct veins; hairy near collar and along margins

Ligule 0.5-2 mm

Auricles absent

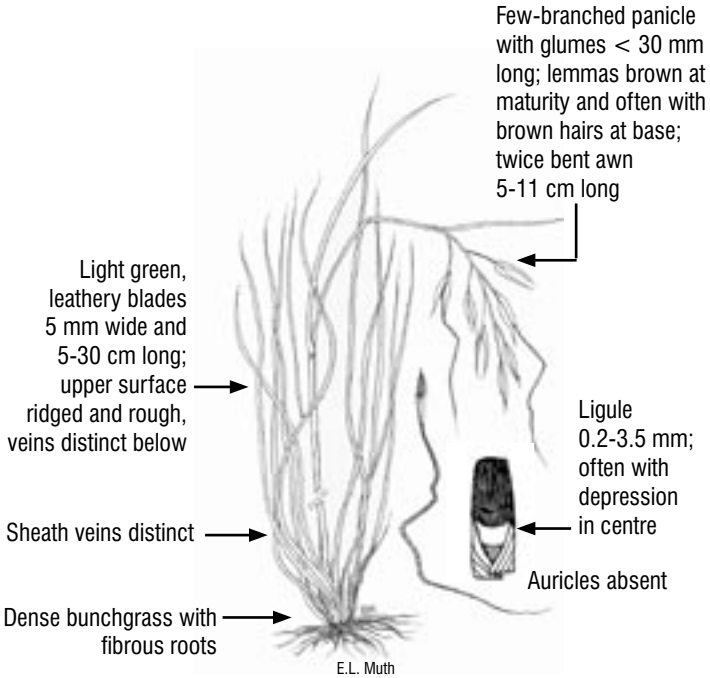
Dense bunchgrass with fibrous roots

K.F. Best

Western Porcupine Grass

Stipa curtiseta

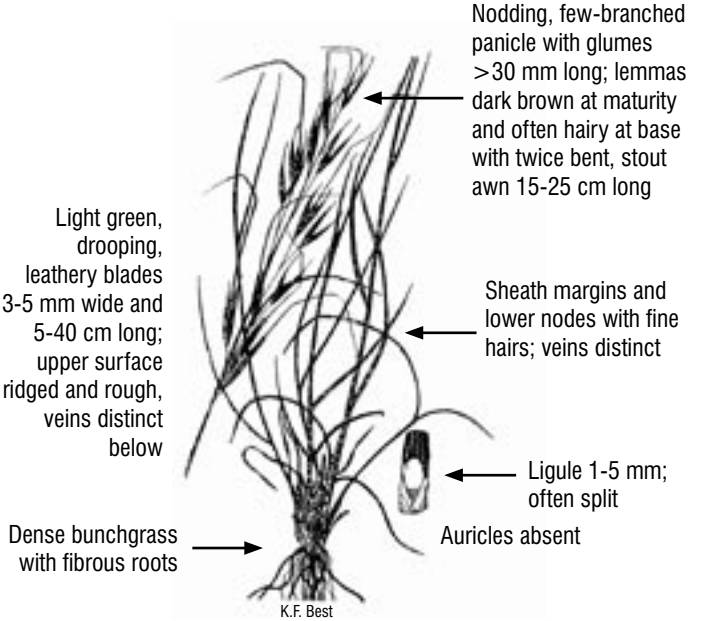
- **Culm 40-60 cm, panicle 10-20 cm**
- **Throughout moist prairie**



Porcupine Grass

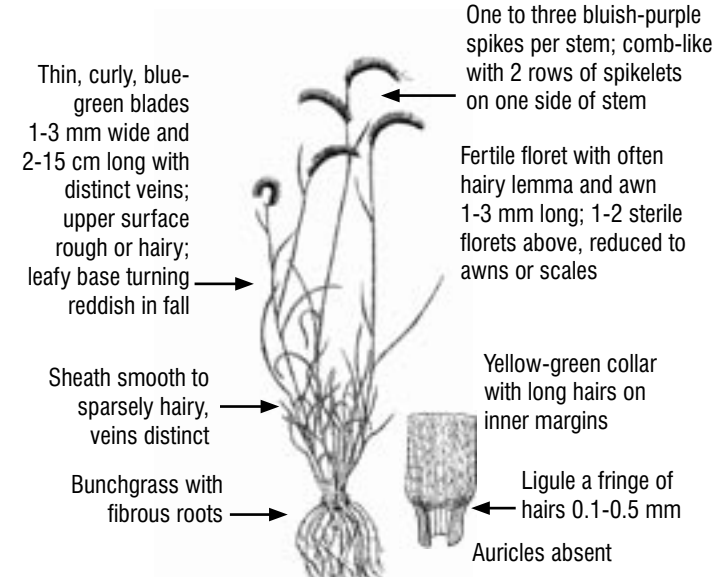
Stipa spartea

- **Culm 50-100 cm, panicle 15-20 cm**
- **Moist soil in southeastern Saskatchewan**



Blue Grama
Bouteloua gracilis

- **Culm 10-50 cm, spike 2.5-5 cm**
- **Warm-season species**
- **Dry prairie**



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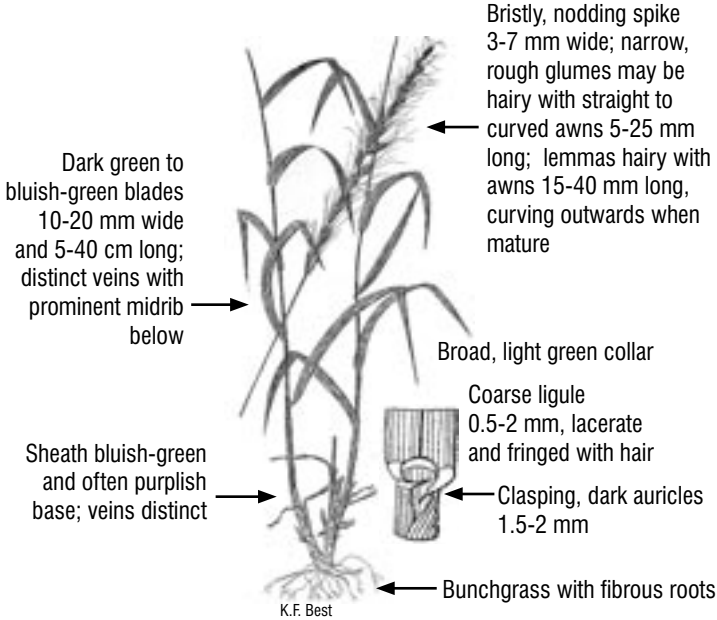
Canada Wildrye
Elymus canadensis

- **Culm 100-150 cm, spike 10-25 cm**
- **Sandy areas, streambanks, and wooded areas**



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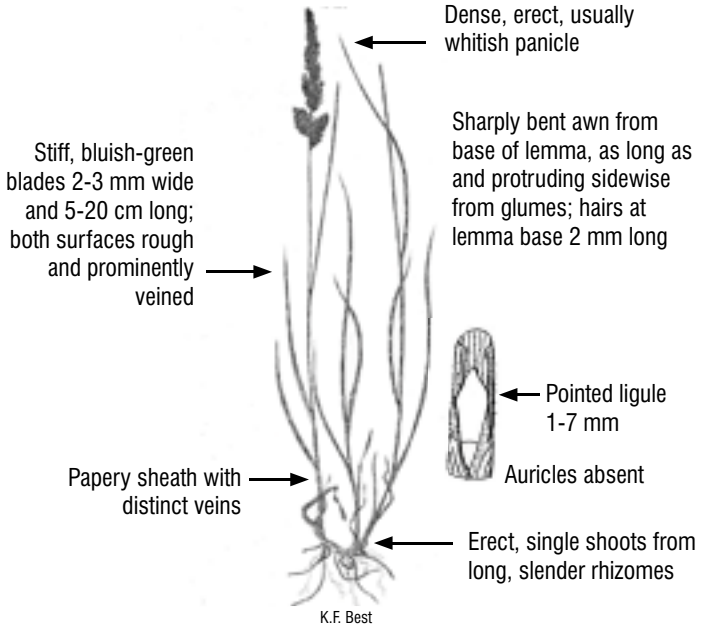
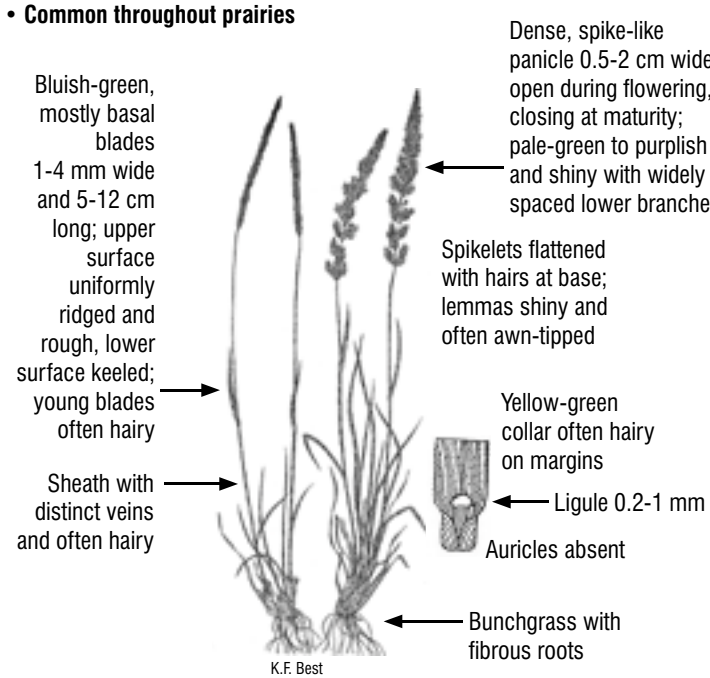
Plains Reed Grass
Calamagrostis montanensis

- **Culm 20-40 cm, panicle 5-10 cm**
- **Moist to moderately dry prairie**



June Grass
Koeleria macrantha

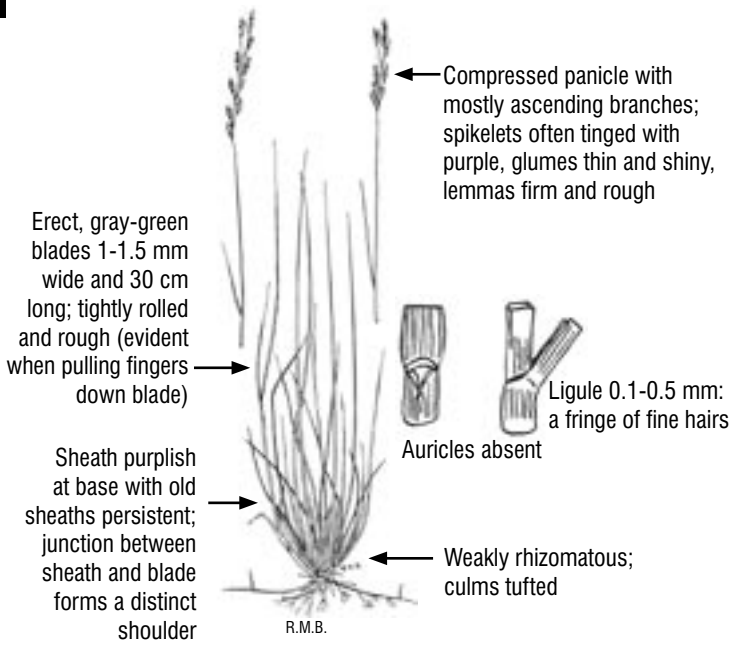
- **Culm 10-50 cm, panicle 3-10 cm**
- **Common throughout prairies**



Plains Rough Fescue

Festuca hallii

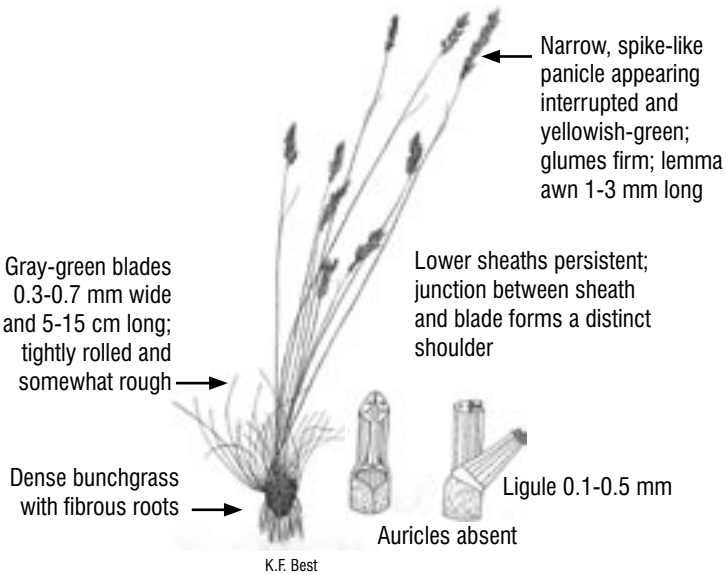
- **Culm 20-60 cm, panicle 6-15 cm**
- **Fertile Dark Brown and Black soils, occasional on north-facing slopes in Brown soils**
- **Often confused with kentucky bluegrass (page 13)**



Sheep Fescue

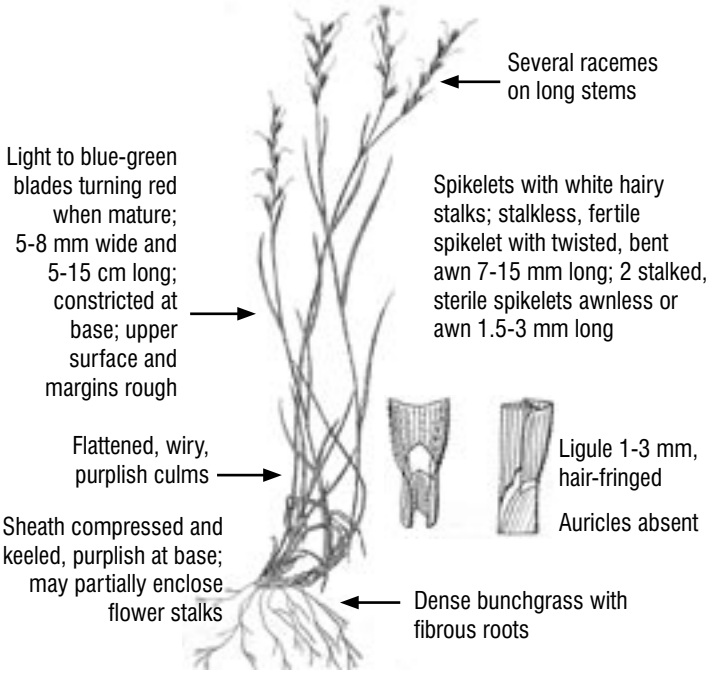
Festuca saximontana

- **Culm 10-50 cm, panicle 2-10 cm**
- **Grasslands and open woods often on sandy, eroded soils**



Little Bluestem
Andropogon scoparius

- **Culm 30-70 cm, racemes 3-6 cm**
- **Warm-season species**
- **Dry, well-drained, often exposed sites and coarse, low fertility soils**



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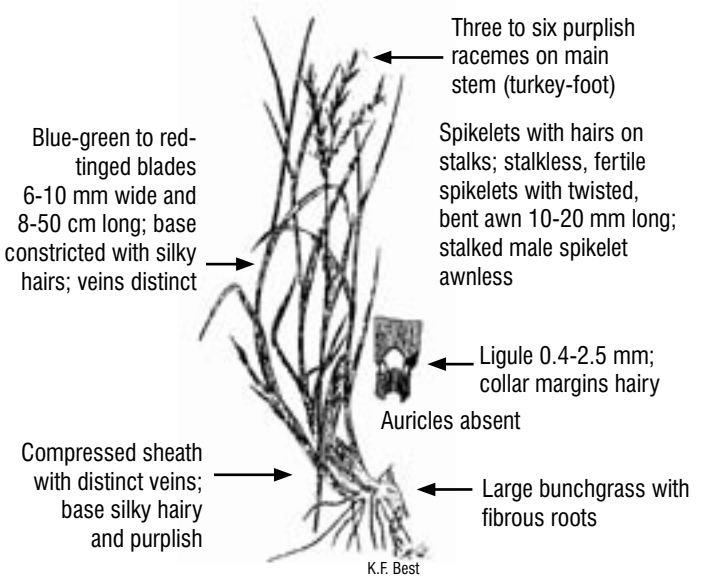
Big Bluestem
Andropogon gerardii

- **Culm 100-150 cm, raceme 5-10 cm**
- **Warm-season species**
- **Southeastern Saskatchewan, generally on slopes or along drainages**



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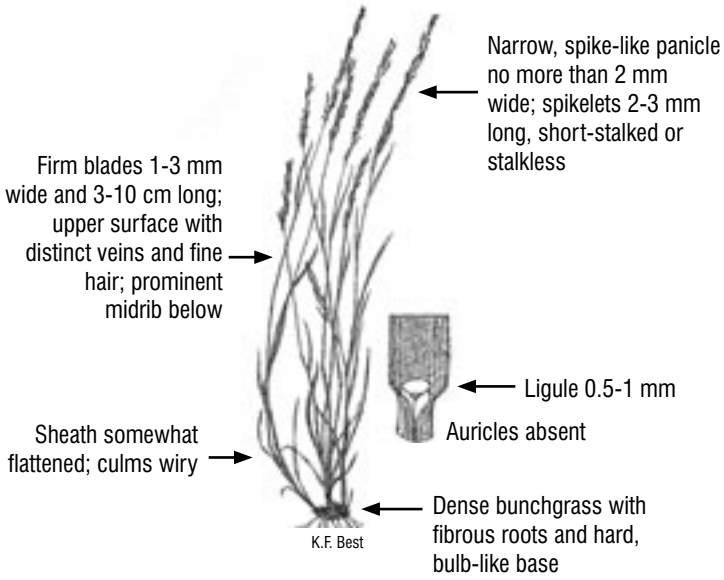
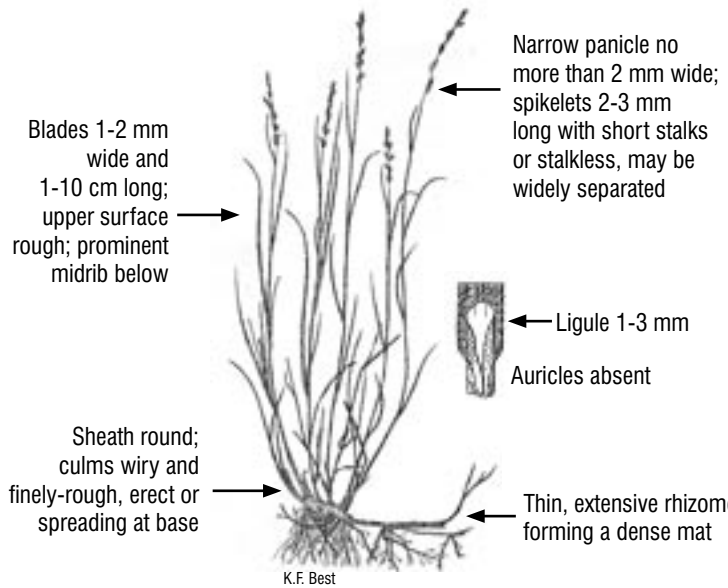
Prairie Muhly
Muhlenbergia cuspidata

- **Culm 10-30 cm, panicle 5-10 cm**
- **Warm-season species**
- **Dry prairie and eroded slopes**
- **Seed often parasitized by insects causing a hard, yellow, round gall 1 mm wide**



Mat Muhly
Muhlenbergia richardsonis

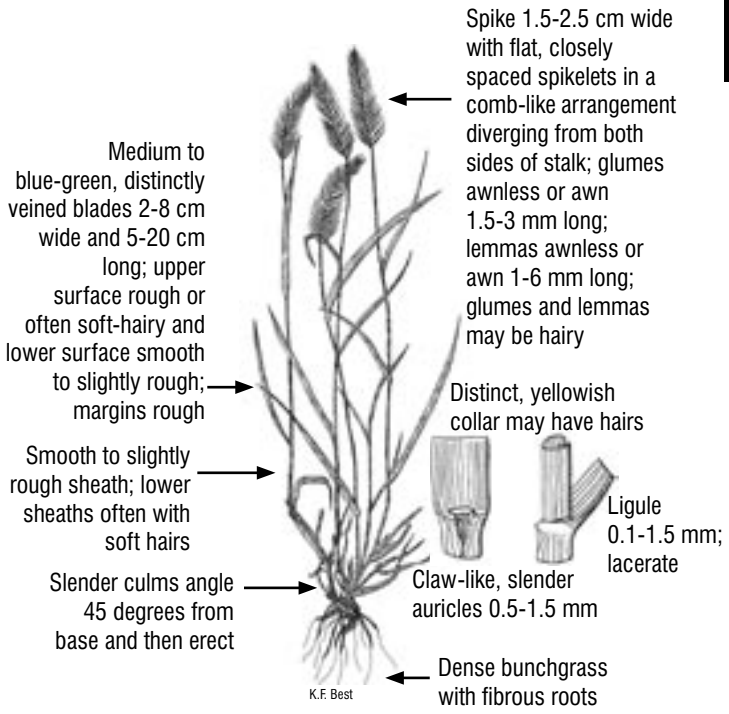
- **Culm 5-40 cm, panicle 3-10 cm**
- **Warm-season species**
- **Moist prairie, often in saline soil**



Crested Wheatgrass

Agropyron cristatum

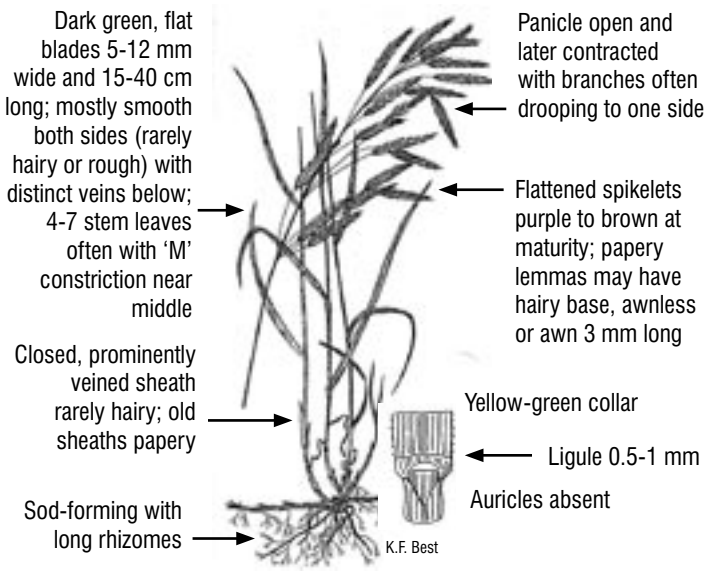
- **Culm 30-100 cm, spike 2-7 cm**
- **Widely adapted grass prefers well-drained soils**
- **Introduced, invasive in natural areas**



Smooth Brome

Bromus inermis

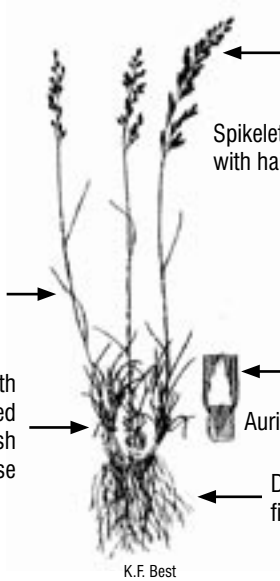
- **Culm 50-100 cm, panicle 6-20 cm**
- **Introduced, invasive in natural areas**
- **Throughout area in moist prairie, open woods, and roadsides**



Sandberg's Bluegrass

Poa sandbergii

- **Culm 10-30 cm, panicle 2-10 cm**
- **Dry grasslands**
- **Seed matures before July**



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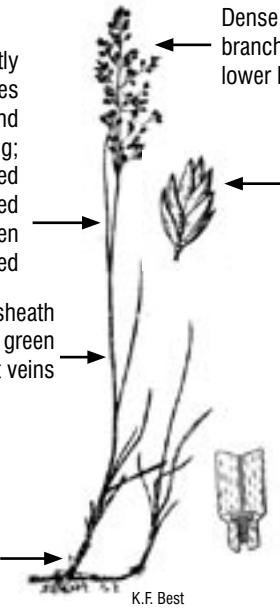
Kentucky Bluegrass

Poa pratensis

- **Culm 30-100 cm, panicle 5-15 cm**
- **Moist, fertile soils**
- **Common on moist, overgrazed sites**
- **Possibly introduced, invasive in natural areas**
- **Often confused with plains rough fescue (page 10)**



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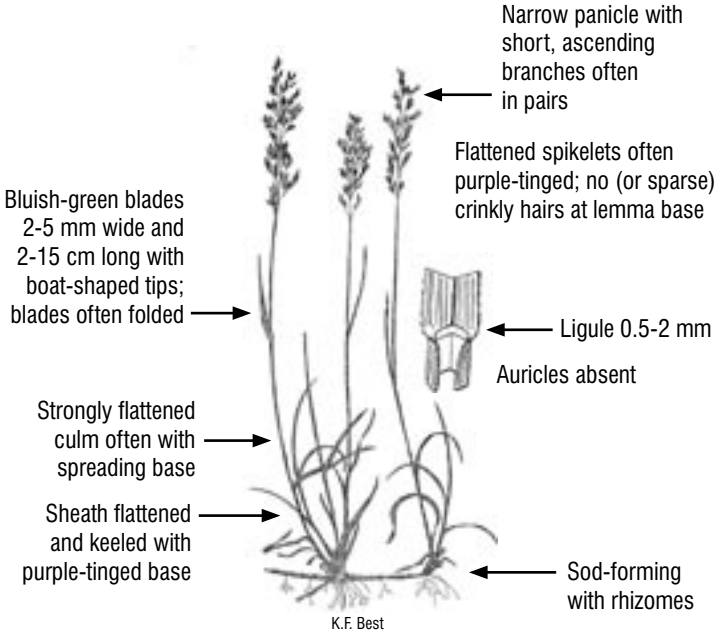
Canada Bluegrass

Poa compressa

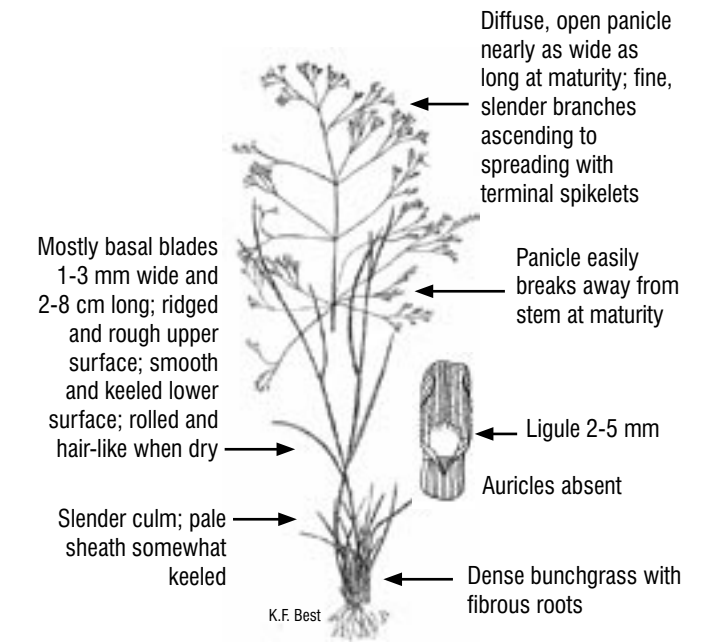
- **Culm 15-50 cm, panicle 3-10 cm**
- **Introduced, invasive in natural areas**
- **Moist, well-drained, often poor soils**



Rough Hair Grass

Agrostis scabra

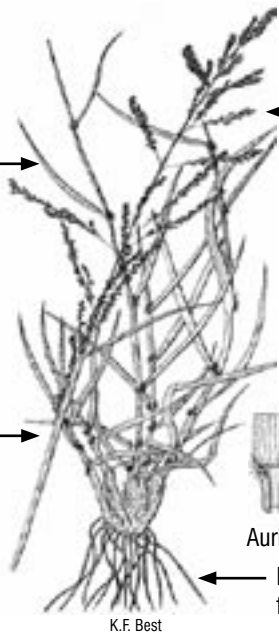
- **Culm 30-70 cm, panicle 15-25 cm**
- **Meadows, moist prairie, open woods, and waste places**



Sand Dropseed

Sporobolus cryptandrus

- **Culm 30-100 cm, panicle 10-25 cm**
- **Warm-season species**
- **Dry prairie on sandy soils**



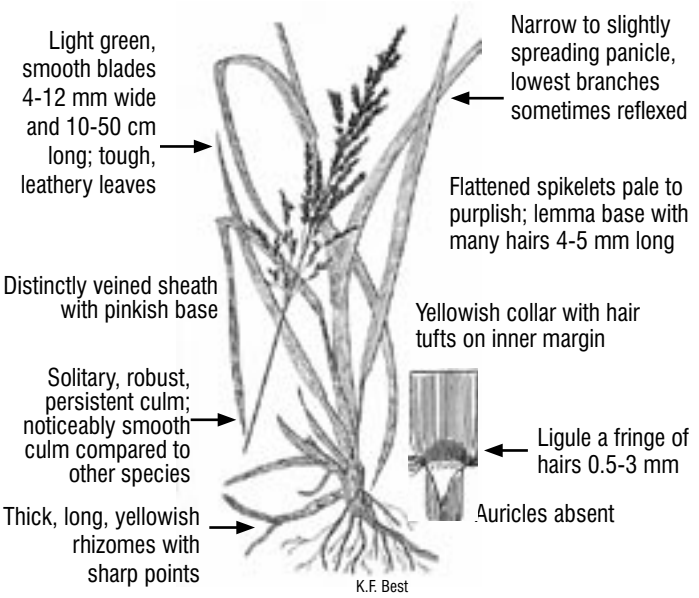
Prairie Dropseed

Sporobolus heterolepis

- **Culm 30-70 cm, panicle 5-20 cm**
- **Warm-season species**
- **Moist soils in southeastern prairies**

Sand Reed Grass
Calamovilfa longifolia

- **Culm 50-150 cm, panicle 15-35 cm**
- **Warm-season species**
- **Sandy soils**



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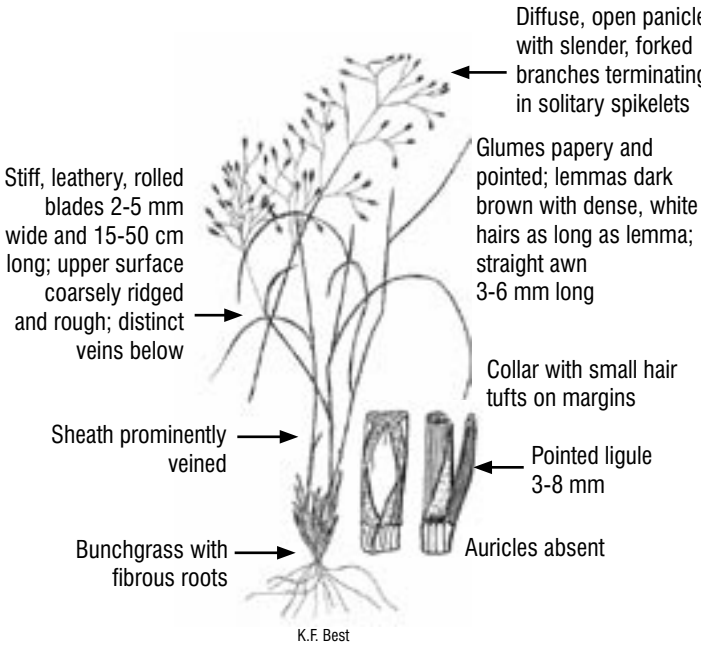
Indian Rice Grass
Oryzopsis hymenoides

- **Culm 30-60 cm, panicle 10-20 cm**
- **Sandy soils and rocky slopes**



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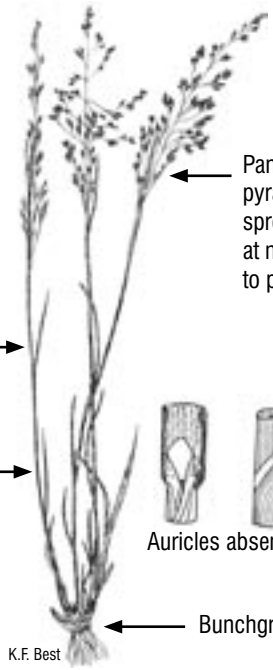
Nuttall's Alkali Grass

Puccinellia nuttalliana

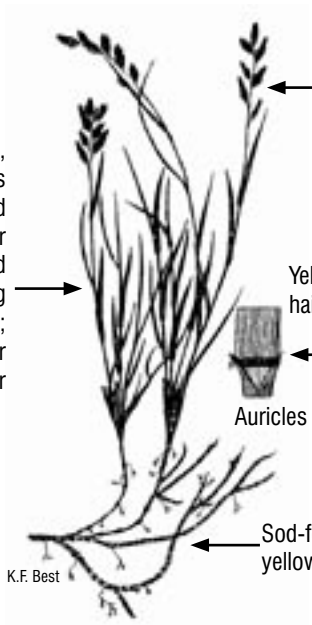
- **Culm 30-60 cm, panicle 10-20 cm**
- **Moist to dry saline soils**
- **Often in association with salt grass**



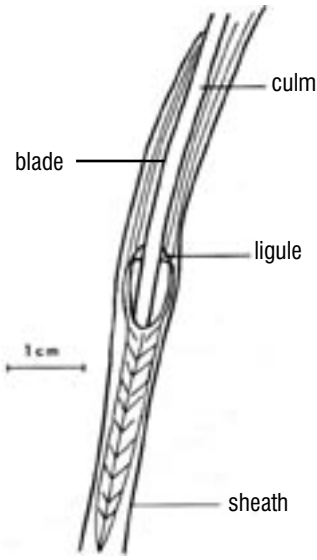
Salt Grass

Distichlis stricta

- **Culm 10-40 cm, panicle 2-6 cm**
- **Warm-season species**
- **Dry to moist saline soils**

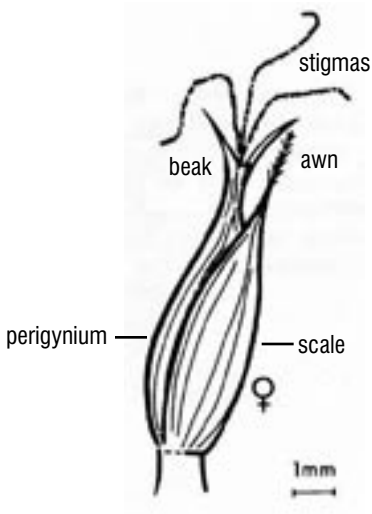


The Sedge Plant Parts

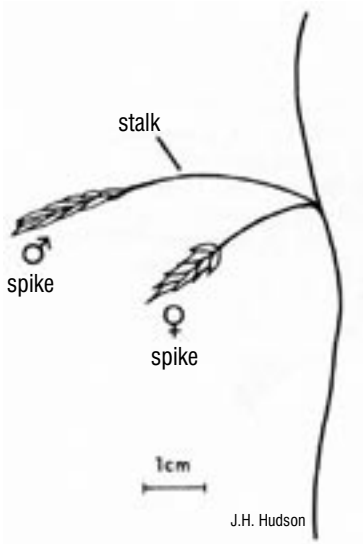


Leaf-sheath and blade.

A solitary spike arrangement with male florets above female. Other possibilities include female above male or a mixture of both sexes.



A female floret.



Separate male and female spikes.

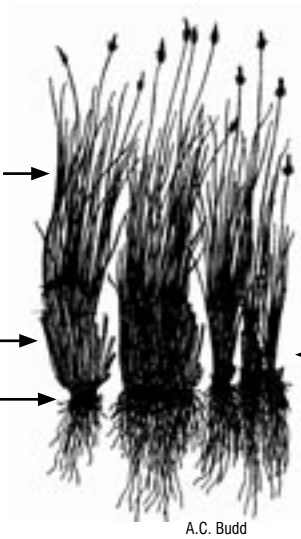
Distinguishing Characteristics of Sedges

- Stems solid, often triangular, and not jointed (no nodes)
- Leaves arise from 3 sides of stem
- Sheath usually closed
- Indistinct collar
- Auricles absent
- Flower whorls reduced to bristles and bracts; each true flower subtended by single bract (scale)

Thread-leaved Sedge

Carex filifolia

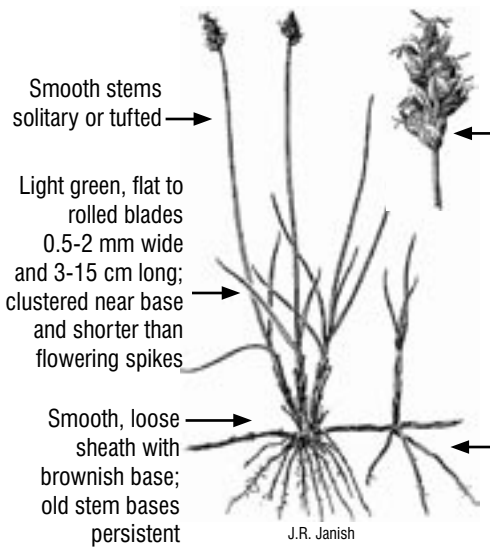
- **Culm 5-30 cm, spike 1.5-3 cm**
- **Dry grassland and eroded slopes**



Low Sedge

Carex stenophylla ssp. eleocharis

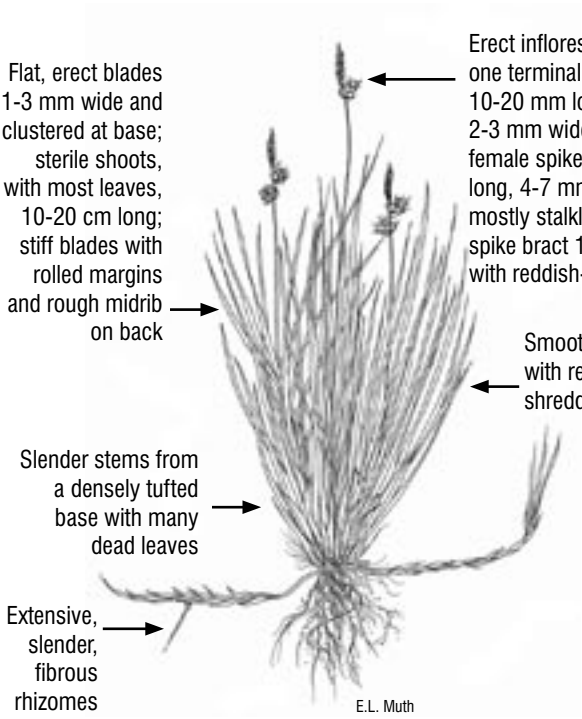
- **Culm 3-25 cm, spike 1-1.5 cm**
- **Dry grassland and open slopes**



Sun-loving Sedge

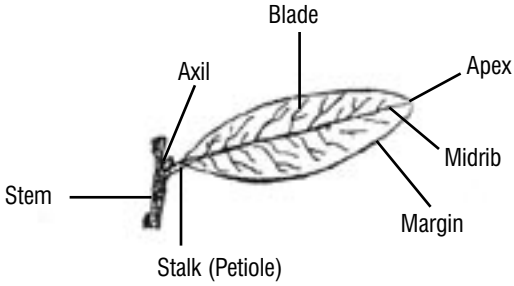
Carex pensylvanica

- **Culm 10-30 cm, spike 1.5-5 cm**
- **Sandy prairie, moist grassland, and open woods**



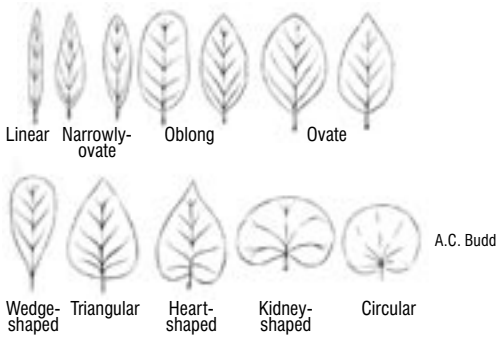
Leaf Morphology of Forbs and Shrubs

Leaf Parts

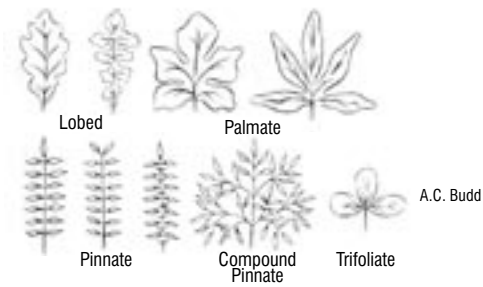


Leaf Arrangements

Examples of Simple Leaves



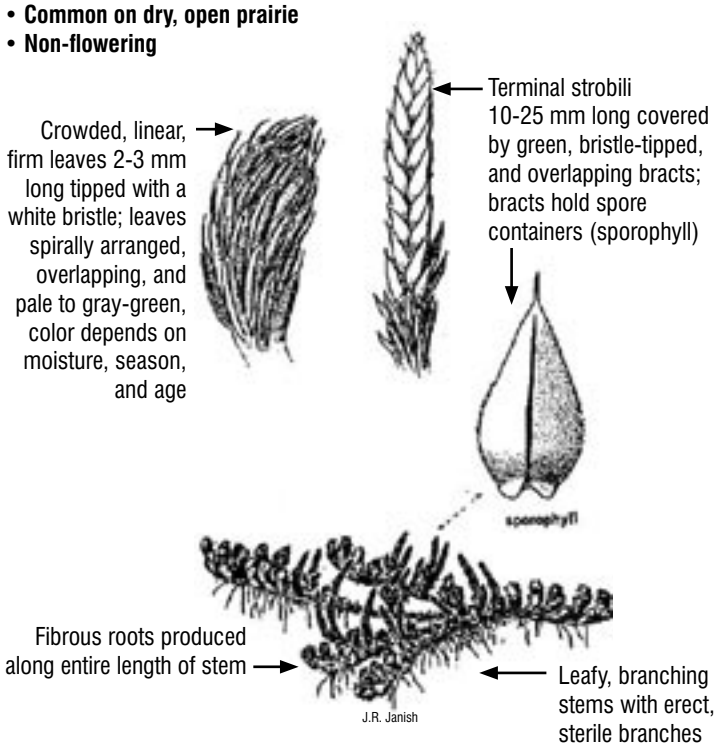
Examples of Divided Leaves



Little Clubmoss

Selaginella densa

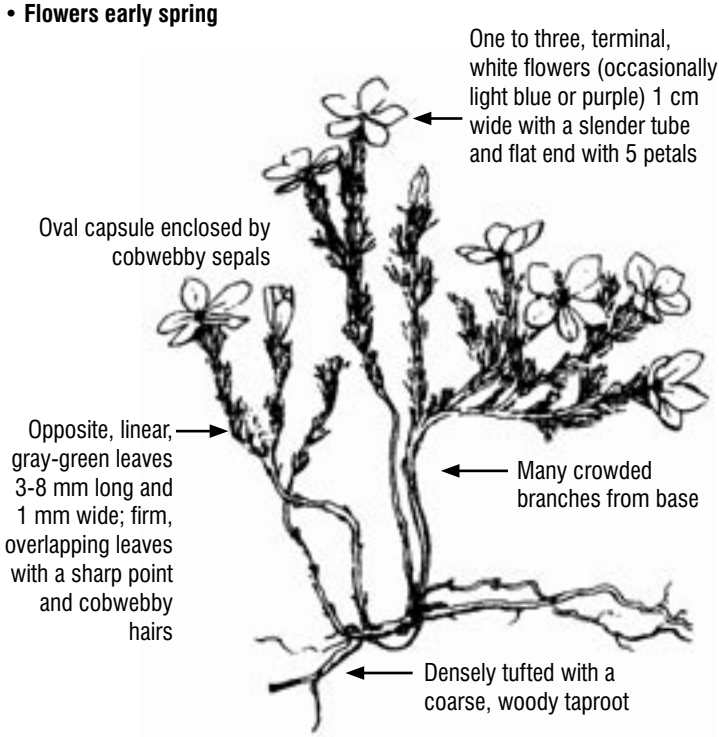
- **Low growing: dense mats at soil level**
- **Common on dry, open prairie**
- **Non-flowering**



Moss Phlox

Phlox hoodii

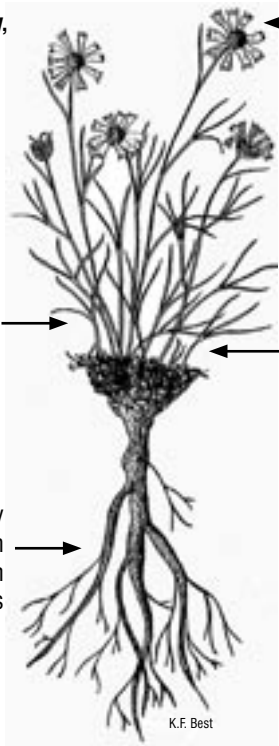
- **2-8 cm tall, mat-forming**
- **Dry prairie and exposed hillsides**
- **Flowers early spring**



Colorado Rubberweed

Hymenoxys richardsonii

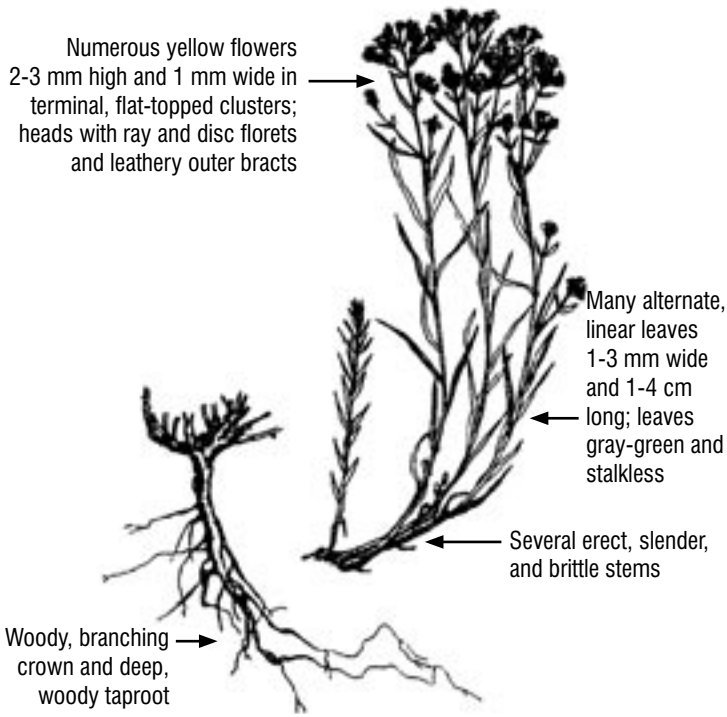
- **10-20 cm tall**
- **Open prairie and dry, rocky hillsides**
- **Flowers late spring, early summer**



Broomweed

Gutierrezia sarothrae

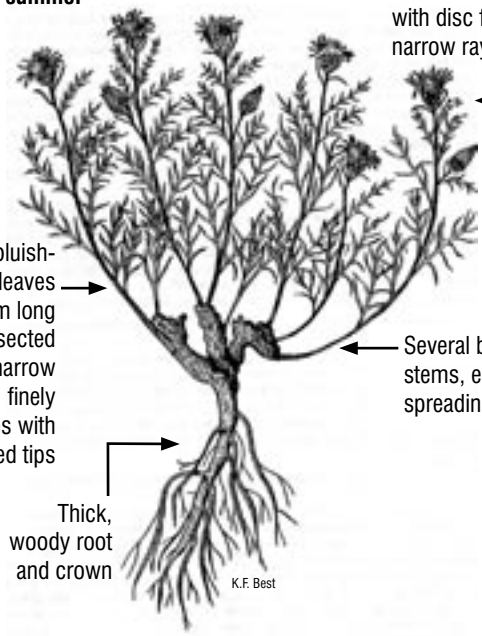
- **10-30 cm tall**
- **Dry prairie and exposed slopes**
- **Flowers in summer**



Spiny Ironplant

Haplopappus spinulosus

- **15-40 cm tall**
- **Dry prairie and hillsides**
- **Flowers in summer**

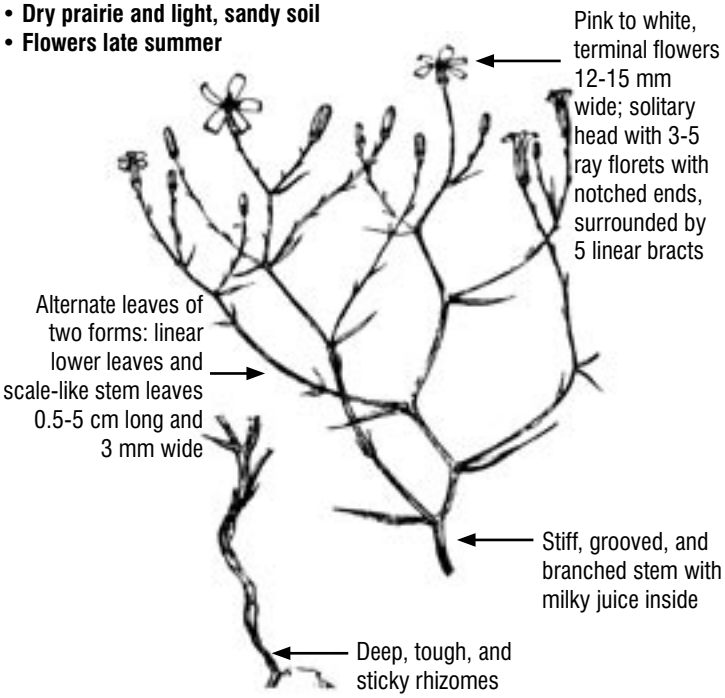


Similar species: Toothed Ironplant (*H. nuttallii*)
- 10-30 cm tall, erect stems
- simple, gray-green leaves 1-3 cm long with short, spiny teeth
- flowers 12 mm wide with disc florets only

Skeletonweed

Lygodesmia juncea

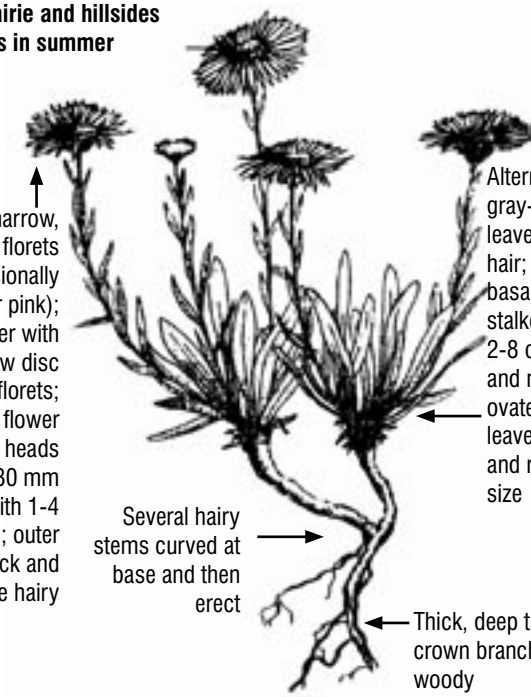
- **10-40 cm tall**
- **Dry prairie and light, sandy soil**
- **Flowers late summer**



Tufted Fleabane

Erigeron caespitosus

- **10-20 cm tall**
- **Dry prairie and hillsides**
- **Flowers in summer**

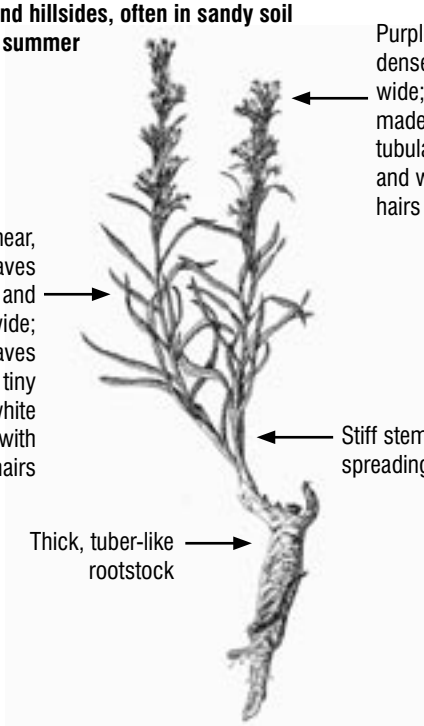


Similar species: Compound Fleabane (*E. compositus*)
- 2-15 cm tall; dry, eroded hillsides
- leaves mostly basal with 3 divisions
- flower heads 10-15 mm wide with one per stem

Dotted Blazingstar

Liatris punctata

- **10-30 cm tall**
- **Dry prairie and hillsides, often in sandy soil**
- **Flowers late summer**

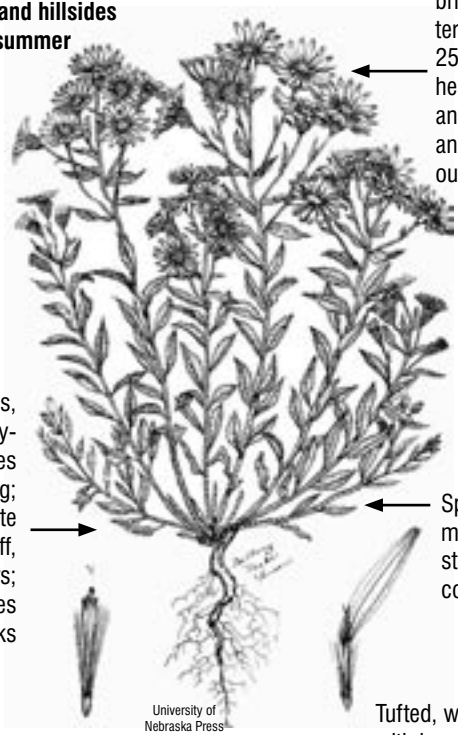


K.F. Best

Hairy Golden Aster

Chrysopsis villosa

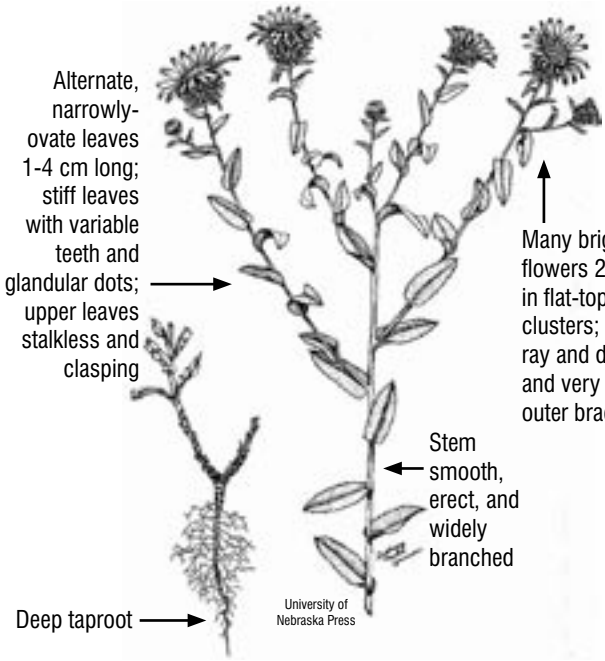
- **15-60 cm tall**
- **Dry prairie and hillsides**
- **Flowers in summer**



Gumweed

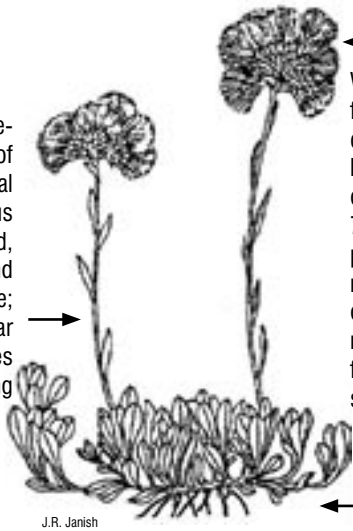
Grindellia squarrosa

- **20-60 cm tall**
- **Dry prairie, saline flats, roadsides, and slough margins**
- **Flowers in summer**
- **Biennial or short-lived perennial**



Low Everlasting
Antennaria aprica

- **5-15 cm tall**
- **Dry, open prairie**
- **Flowers in summer**



White or faint pink flowers in terminal, compact clusters; heads with many disc florets 7-12 mm tall and papery outer bracts; mature flowers with dense white hairs; male and female flowers often on separate plants

Gray-green, white-woolly leaves of 2 types: basal leaves numerous and wedge-shaped, 1-3 cm long and 5-8 mm wide; 5-7 alternate, linear stem leaves 1 cm long

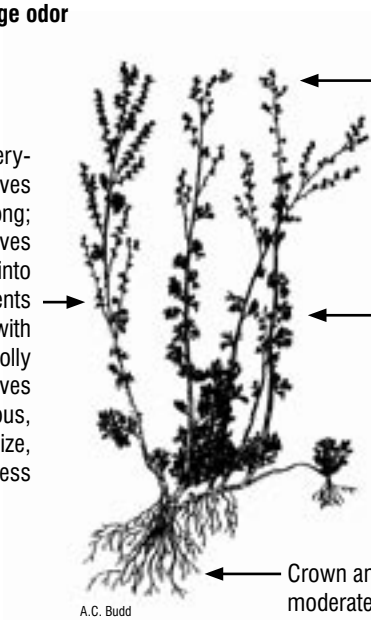
Mat-forming with leafy stolons

J.R. Janish

FORBS

Pasture Sage
Artemisia frigida

- **15-50 cm tall, mat-forming**
- **Open grasslands and overgrazed pastures**
- **Flowers in summer**
- **Aromatic sage odor**



Many yellow flowers 3.5 mm tall in leafy, terminal clusters; heads with disc florets and woolly bracts

Alternate, silvery-gray leaves 1-3 cm long; feathery leaves dissected into linear segments and covered with dense woolly hair; upper leaves less numerous, reduced in size, and stalkless

Silvery-gray stem with dense woolly hair; perennial stems branching from base with erect annual flowering stems

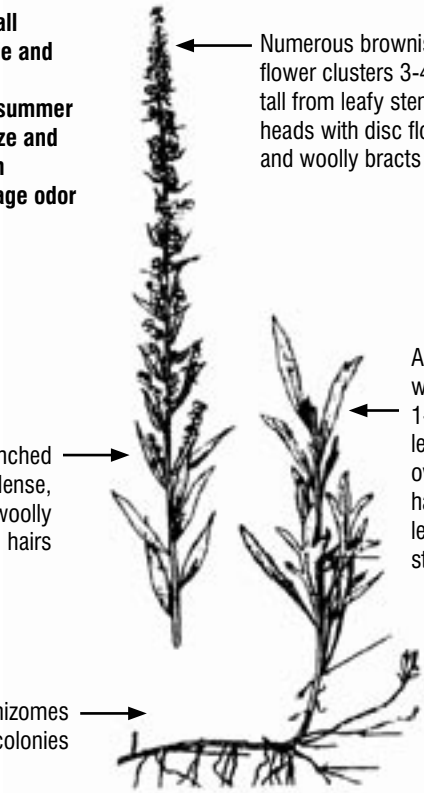
Crown and roots moderately woody, forming mats

A.C. Budd

Prairie Sage

Artemisia ludoviciana

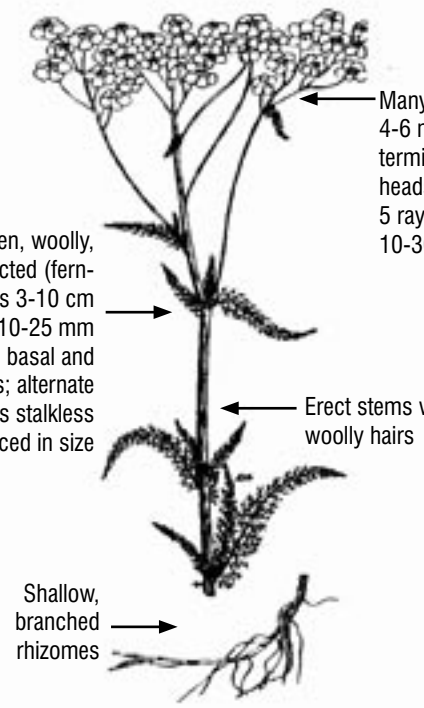
- **15-60 cm tall**
- **Moist prairie and parkland**
- **Flowers in summer**
- **Varies in size and growth form**
- **Aromatic sage odor**



Yarrow

Achillea millefolium

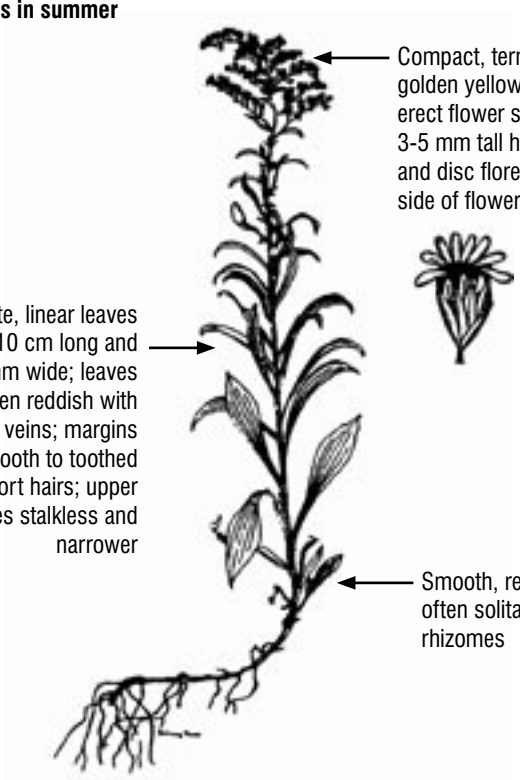
- **20-100 cm tall**
- **Open grassland, forest clearings, and waste areas**
- **Flowers in summer**
- **Aromatic**



Low Goldenrod

Solidago missouriensis

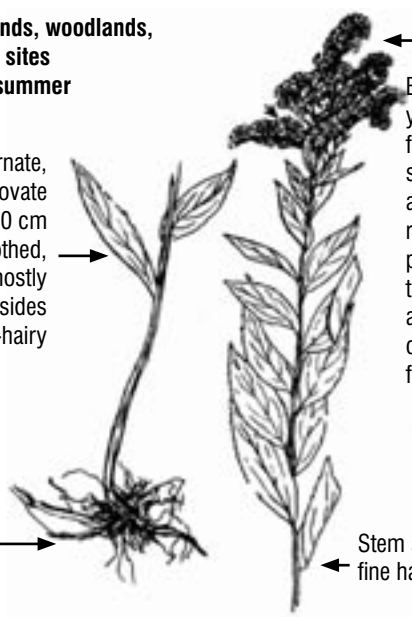
- **15-50 cm tall**
- **Dry prairie, roadsides, and open woods**
- **Flowers in summer**



Canada Goldenrod

Solidago canadensis

- **30-80 cm tall**
- **Moist grasslands, woodlands, and disturbed sites**
- **Flowers late summer**

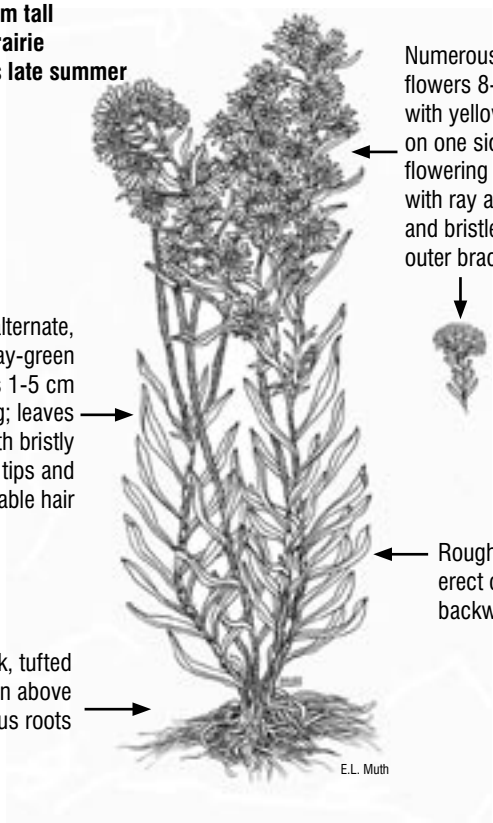


Similar species: Velvety Goldenrod (*S. mollis*)
- stiff, 20-50 cm tall
- fine, velvety hairs on entire plant
- rigid, ovate leaves 2-7 cm long; upper leaves reduced in size and stalkless

Many-flowered Aster

Aster ericoides

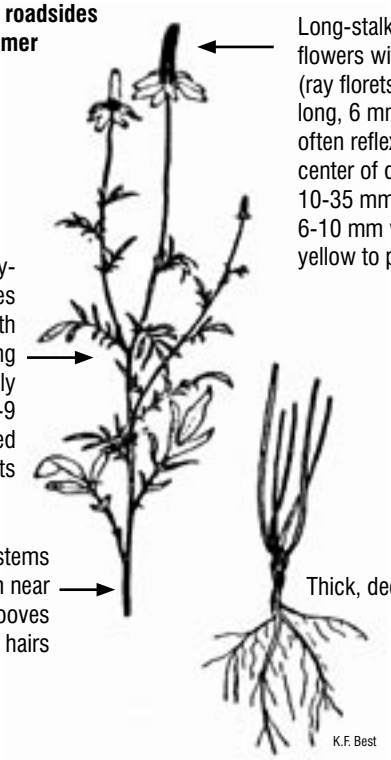
- **20-60 cm tall**
- **Open prairie**
- **Flowers late summer**



Prairie Coneflower

Ratibida columnifera

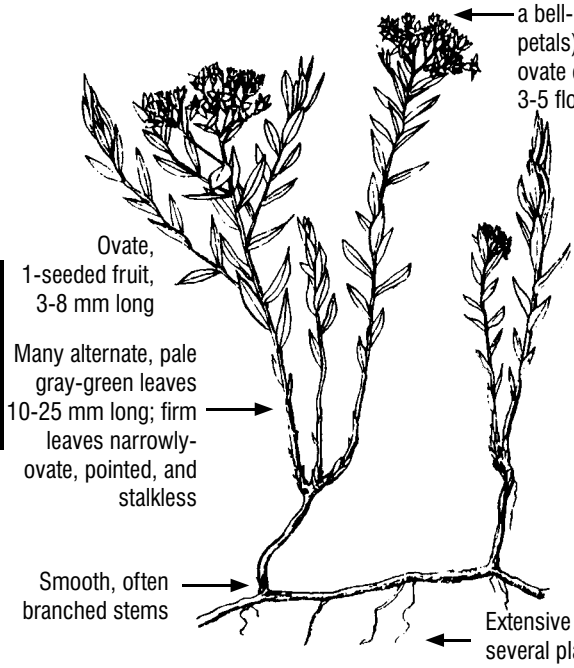
- **30-70 cm tall**
- **Dry prairie and roadsides**
- **Flowers in summer**



Pale Comandra / Bastard Toadflax

Comandra umbellata

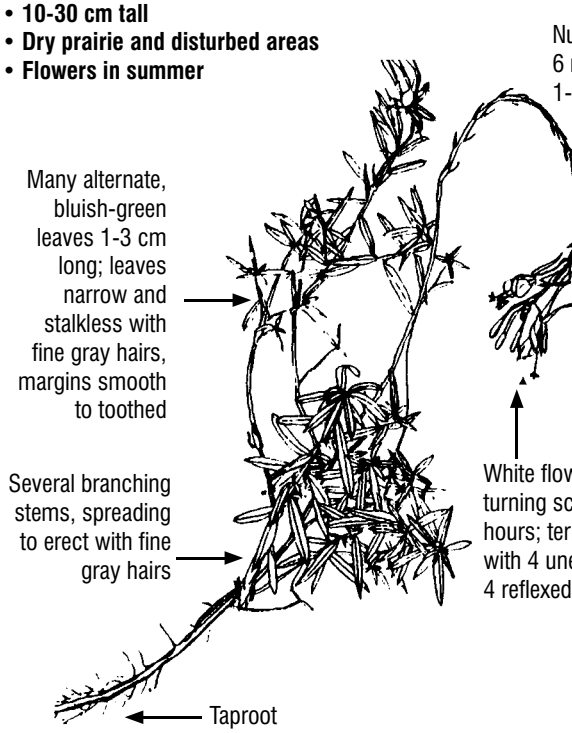
- **6-30 cm tall**
- **Dry grasslands and well-drained soils**
- **Flowers late spring**



Scarlet Gaura

Gaura coccinea

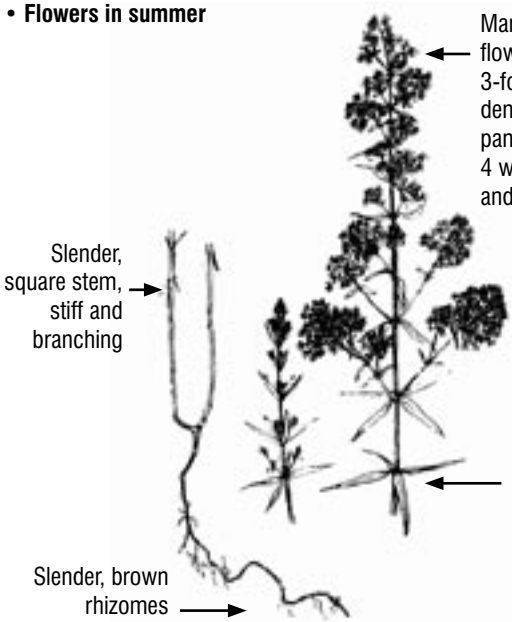
- **10-30 cm tall**
- **Dry prairie and disturbed areas**
- **Flowers in summer**



Northern Bedstraw

Galium boreale

- **20-50 cm tall**
- **Moist prairie, roadsides, and open woods**
- **Flowers in summer**

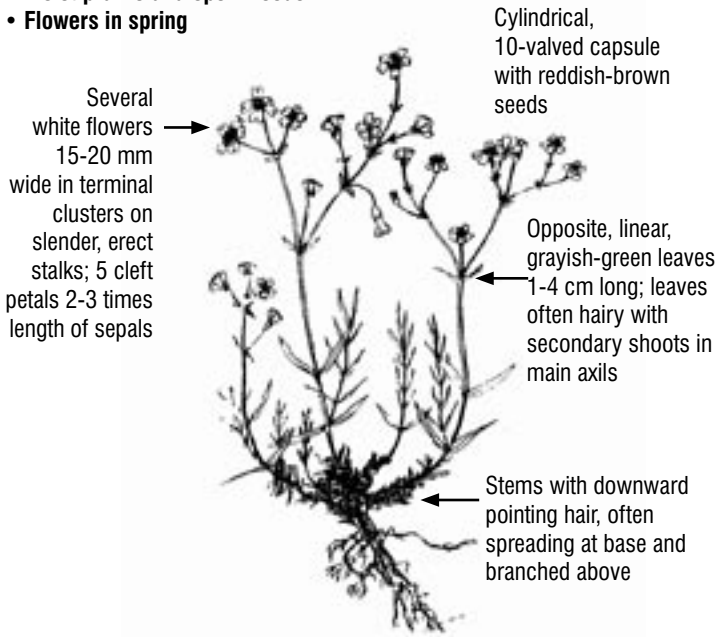


Similar species: Sweet-scented Bedstraw (*G. triflorum*)
- trailing, slender stem, 30-100 cm long
- whorl of 6 leaves, bristly tip, 1-veined
- long-stalked flowers from leaf axils
- fruit pairs with hooked bristles

Field Chickweed

Cerastium arvense

- **10-30 cm tall**
- **Moist prairie and open woods**
- **Flowers in spring**

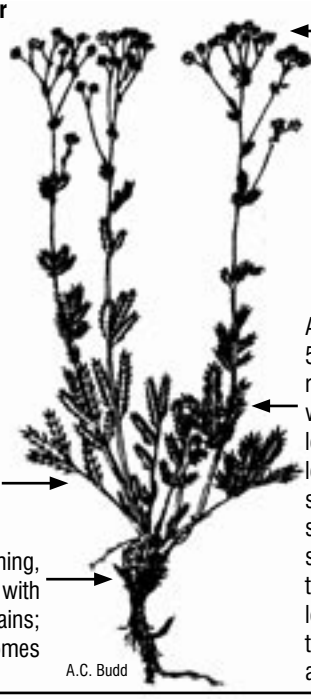


Similar species: Mouse-eared Chickweed (*C. vulgatum*)
- 10-40 cm tall, stems often appear as separate plants; introduced
- petals and sepals equal length
- ovate leaves 10-25 mm long with stiff, coarse hair

Prairie Cinquefoil

Potentilla pensylvanica

- **10-40 cm tall**
- **Dry to moist grasslands and open slopes**
- **Flowers in summer**



Terminal clusters with many congested, yellow flowers 1 cm wide; petals longer than sepals with 5 parts each and many stamens

Many seeds 1 mm long

Alternate leaves 5-15 cm long with rolled margins and woolly hair; basal leaves with 5-15 leaflets and long stalks; stem leaves short-stalked and reduced in size upwards; leaflets toothed to shallowly lobed, divided halfway to midrib, green above and gray-green below

Hairy stems

Stout, branching, scaly crown with leafy remains; stout rhizomes

A.C. Budd

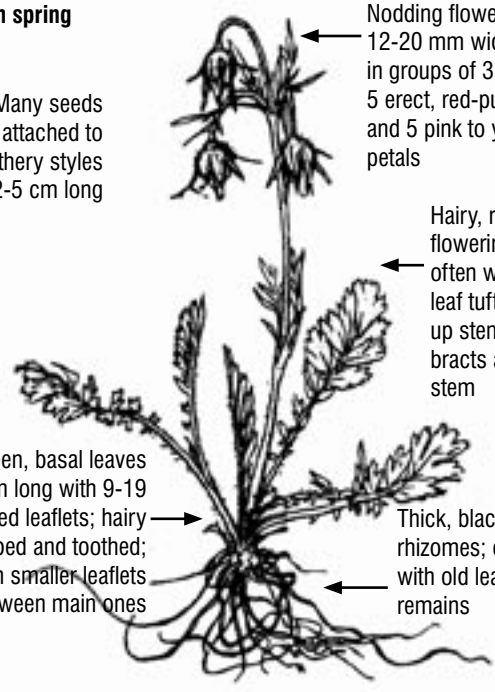
FORBS

Similar species: Woolly Cinquefoil (*P. hippiana*)
- 10-25 cm tall, entire plant white-woolly
- basal leaves with 7-11 leaflets

Three-flowered Avens

Geum triflorum

- **15-40 cm tall**
- **Moist, open prairie**
- **Flowers in spring**



Nodding flowers 12-20 mm wide, usually in groups of 3; 5 erect, red-purple sepals and 5 pink to yellow petals

Many seeds attached to feathery styles 2-5 cm long

Hairy, reddish flowering stems often with paired leaf tufts half way up stem and leafy bracts at top of stem

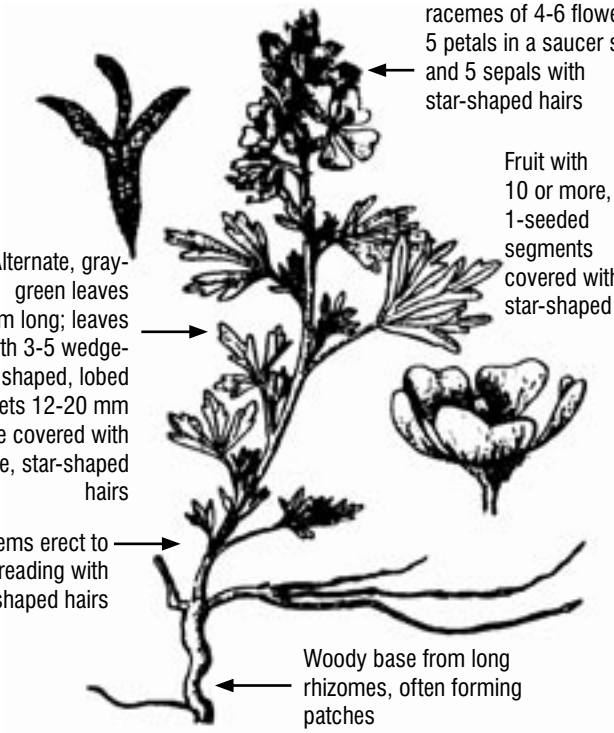
Bright green, basal leaves 15-20 cm long with 9-19 wedge-shaped leaflets; hairy leaflets lobed and toothed; often smaller leaflets between main ones

Thick, black rhizomes; crown with old leaf remains

Scarlet Mallow

Malvastrum coccineum

- **5-20 cm tall**
- **Dry, open prairie and disturbed sites**
- **Flowers in spring and early summer**



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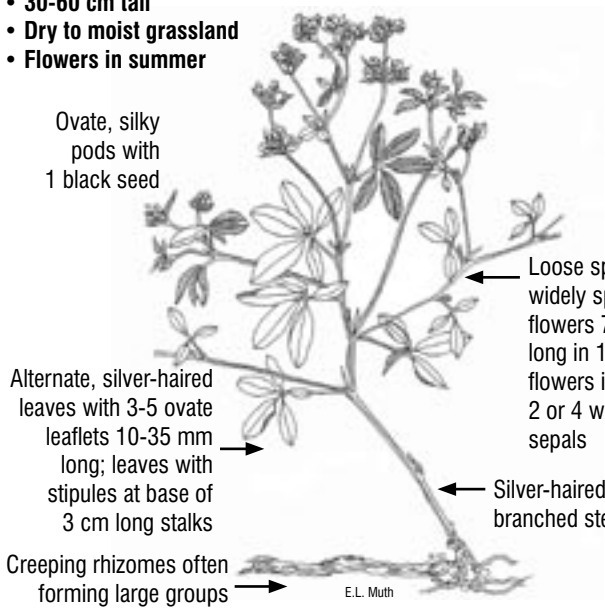
Silverleaf Psoralea

Psoralea argophylla

- **30-60 cm tall**
- **Dry to moist grassland**
- **Flowers in summer**



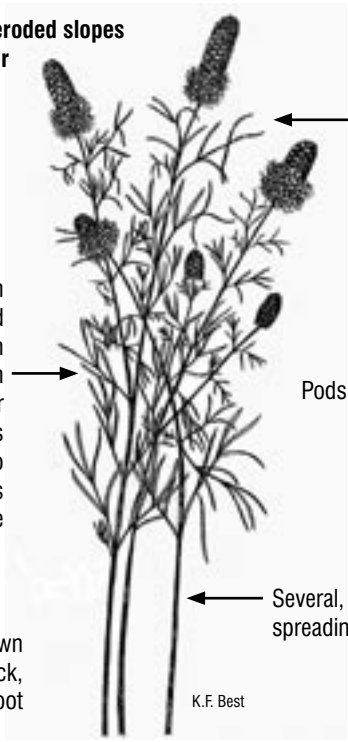
Similar species: Indian Breadroot (*P. esculenta*)
- 10-50 cm tall; stout with loose, dense white hairs and tuberous taproot
- flowers 12-15 mm long, dense spikes

Similar species: Scurf Pea (*P. lanceolata*)
- 20-50 cm tall in sandy sites; semi-spreading with sparse hair and linear leaflets
- flowers 5-6 mm long, dense spikes

Purple Prairie Clover

Petalostemon purpureum

- **20-50 cm tall**
- **Open prairie and eroded slopes**
- **Flowers in summer**

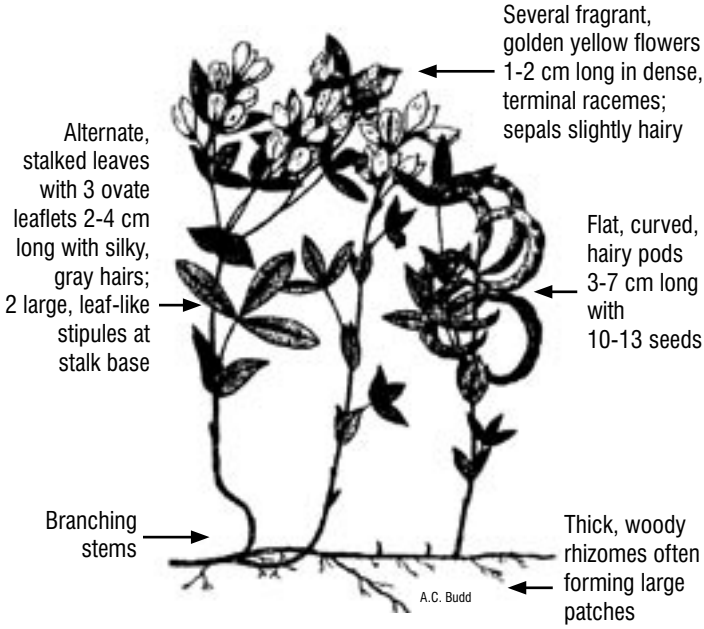


Similar species: White Prairie Clover (*P. candidum*)
- white flowers in a dense spike 2-8 cm long, sepals with slight hair
- 5-9 linear leaflets 5-30 mm long and 2-3 mm wide, hairless

Goldenbean

Thermopsis rhombifolia

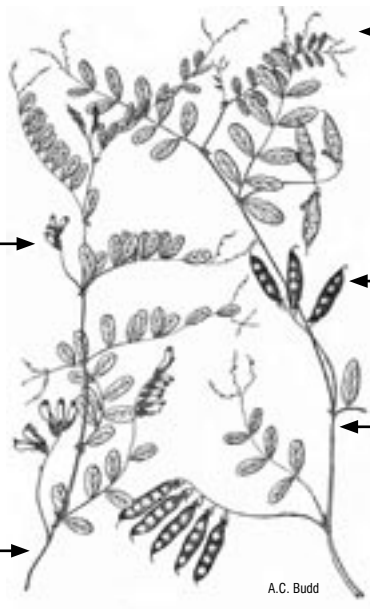
- **15-50 cm tall**
- **Open prairie, roadsides, and sandy sites**
- **Flowers in spring**



American Vetch

Vicia americana

- **40-80 cm long**
- **Moist prairie, open woods, and coulees**
- **Flowers in summer**

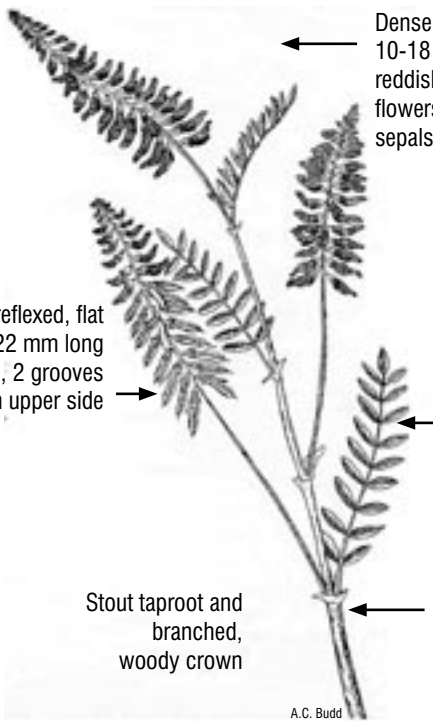


Plants in open grassland often have narrower leaflets and may be a separate species: *Vicia sparsifolia*

Two-grooved Milkvetch

Astragalus bisulcatus

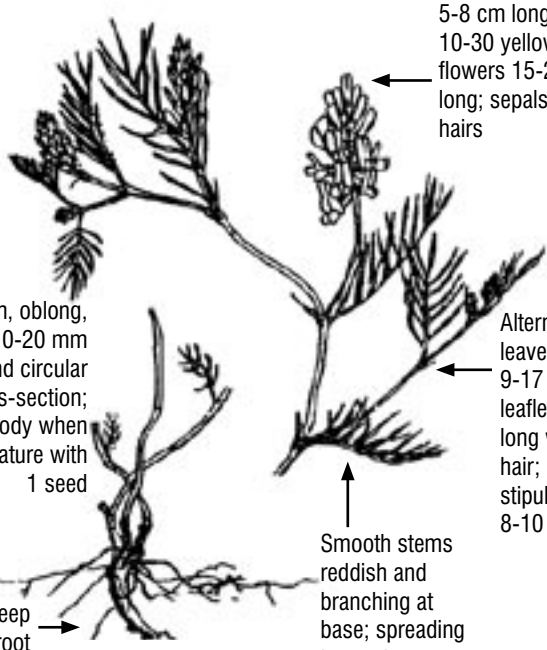
- **30-80 cm tall**
- **Open prairie, slopes, and alluvial flats**
- **Flowers late spring to early summer**
- **Strong, unpleasant odor**



Narrow-leaved Milkvetch

Astragalus pectinatus

- **20-50 cm tall**
- **Open prairie, eroded slopes, and alkaline flats**
- **Flowers in spring**



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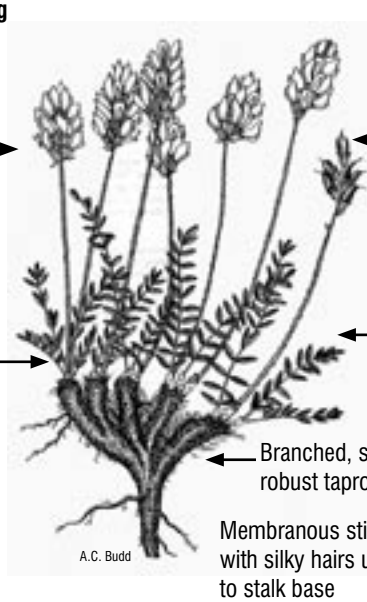
Early Yellow Locoweed

Oxytropis sericea

- **10-20 cm tall**
- **Dry, open grasslands**
- **Flowers in spring**



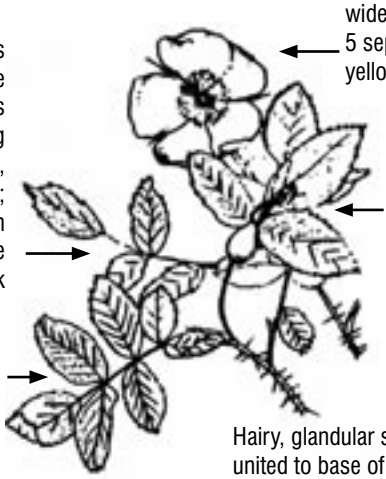
Similar species: Late Yellow Locoweed (*O. campestris*)
- 15-40 cm tall; flowers early summer
- 17-33 leaflets, less obvious stipules
- creamy-yellow to purple flowers 12-15 mm long; pods membranous

SHRUBS

Prickly Rose

Rosa acicularis

- **30-120 cm tall**
- **Thickets, woods, roadsides, and streambanks**
- **Flowers early summer**

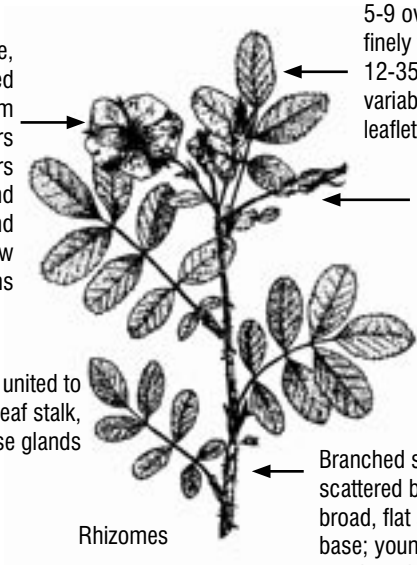


Similar species: Prairie Rose (*R. arkansana*)
- 20-30 cm tall, little-branched stem dying to ground each season
- 9-11 shiny leaflets
- 2-3 pink to white, flat flowers

Wood's Rose

Rosa woodsii

- **50-200 cm tall**
- **Thickets, open woods, sand hills, and prairie coulees**
- **Flowers in summer**

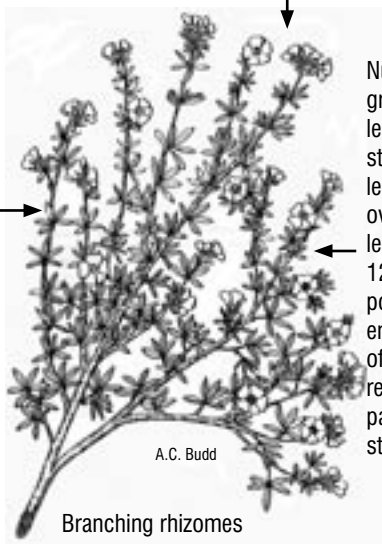


Shrubby Cinquefoil
Potentilla fruticosa

- **15-150 cm tall**
- **Moist Fescue Prairie and open woods**
- **Flowers in summer**

Deep yellow flowers 15-25 mm wide, solitary or 3-7-clustered; 5 petals and 5 hairy sepals with many stamens; seeds with dense, coarse hair

Stems much-branched; older branches red-brown or gray with shredding outer bark; young branches with silky hair



Branching rhizomes

Numerous, gray-green, alternate leaves with short stalks and 5-7 leaflets; narrowly-ovate, silky hairy leaflets 12-25 mm long, pointed at both ends and margins often rolled; reddish-brown, papery stipules at stalk base

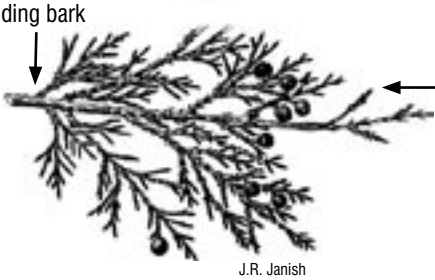
Creeping Juniper
Juniperus horizontalis

- **Low-growing: 3-5 m long**
- **Sandy and rocky hillsides; dry, open woods**
- **Forms large mats**
- **Flowers in spring; berry matures 1st year**

Scale-like, overlapping, opposite leaves 1-7 mm long; leaves bluish-green with sharp tips and a gland on back, forming ascending branches 10-30 cm tall

Creeping, twisted stems rooting along length; red-brown to gray with shredding bark

Taproot



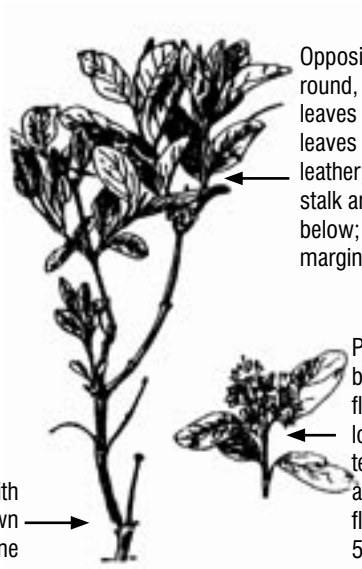
Blue to green, terminal, berry-like seed cones with a powdery covering, 5-8 mm wide; catkin-like pollen cones 3-5 mm long; male and female cones on separate plants

Similar species: Common Juniper (*J. communis*)
- bushy: 0.6-1.5 m tall, 2-4 m wide
- needle-like leaves 5-12 mm long in whorls of 3, upper surface white and grooved
- pale blue, berry-like cones in leaf axils with powdery covering; berry matures in 2nd year

Western Snowberry / Buckbrush

Symphoricarpos occidentalis

- **50-100 cm tall**
- **Prairies, coulees, thickets, and open woods**
- **Extensive rhizomes forming colonies**
- **Flowers in summer**



Opposite, ovate to round, gray-green leaves 2-6 cm long; leaves thick and leathery with a short stalk and soft hairs below; entire to wavy margins

Many round, white, waxy berries; often turning greenish-black

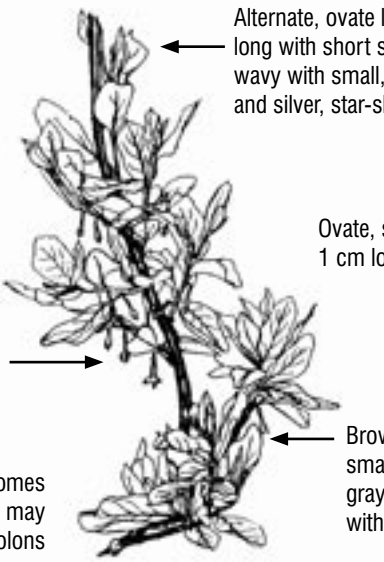
Pink and white bell-shaped flowers 5-9 mm long in dense terminal and axillary spikes; flowers with 5 lobes and protruding reproductive parts

Hollow branches with green to reddish-brown bark, often with fine hairs; older branches gray and shredded

Wolfwillow / Silverberry

Elaeagnus commutata

- **1-5 m tall**
- **Grasslands, ravines, and gravelly or sandy soils**
- **Nitrogen fixer**
- **Flowers late spring and early summer**



Alternate, ovate leaves 2-6 cm long with short stalks; leaves wavy with small, brown scales and silver, star-shaped hairs

Funnel-shaped, hanging flowers 1-1.5 cm long in clusters of 2-3 in leaf axils; flowers silvery outside and yellow inside with 4 sepal lobes and no petals; strong fragrance; male and female flowers may be on separate plants

Ovate, silvery berry 1 cm long

Brown twigs with small scales; gray-brown with age

Extensive rhizomes forming colonies; may produce stolons

Saskatoon

Amelanchier alnifolia

- **0.5-6 m tall**
- **Coulees, thickets, and open woods**
- **Flowers late spring**

White flowers 8-12 mm wide in dense, terminal racemes of 4-20 flowers; 5 distinct petals, 5 sepals, and many stamens

Alternate, ovate to round leaves 1-5 cm long with rounded ends; fine teeth towards the tip

Red to purple, round berries 6-10 mm wide; sweet flavor with a powdery covering

Smooth stems, reddish-brown with fine hair when young, turning gray with age

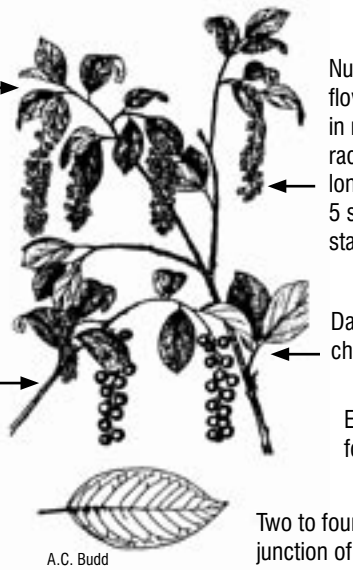
Rhizomes, forming thickets

SHRUBS

Chokecherry

Prunus virginiana

- **1-6 m tall**
- **Coulees, open woods, riverbanks, and sand hills**
- **Flowers late spring**



Alternate, thin, ovate leaves 5-10 cm long with a short, sharp tip; leaves sharply toothed and may have slight hair below

Numerous white flowers 12 mm wide in narrow, terminal racemes 5-15 cm long; 5 petals and 5 sepals with many stamens

Dark red to black cherry 8-10 mm wide

Smooth, reddish-brown to gray stems, turning black with age; stem lenticels noticeable

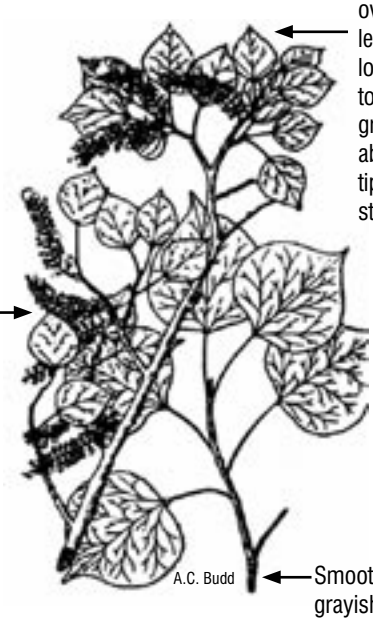
Extensive rhizomes forming thickets

Two to four purple glands at junction of stalk and blade

A.C. Budd

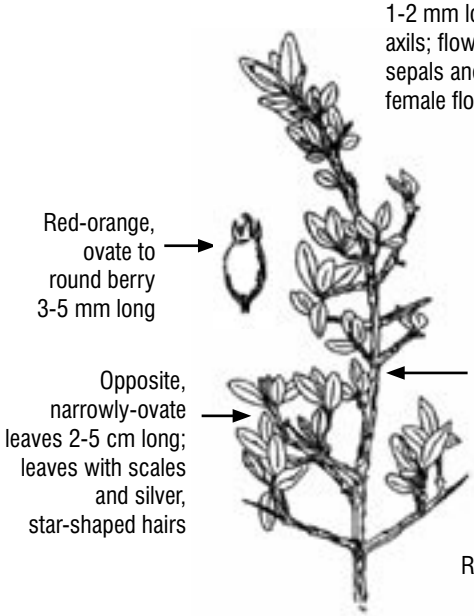
Trembling Aspen
Populus tremuloides

- **3-30 m tall**
- **Moist sites and depressions in prairies; parkland and forest**
- **Flowers in spring; male and female trees**



Thorny Buffaloberry
Shepherdia argentea

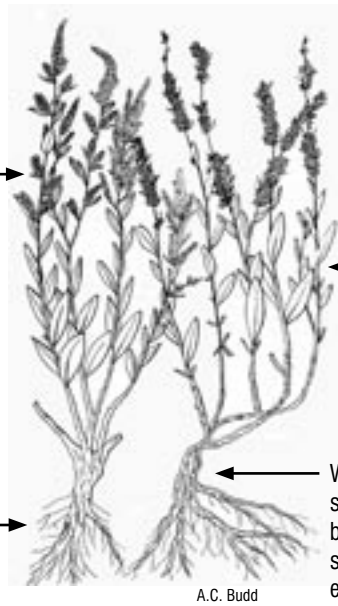
- **1-5 m tall**
- **Sloughs, stream and riverbanks, coulees, and open woods**
- **Nitrogen fixer**
- **Flowers late spring**



Nuttall's Saltbush

Atriplex nuttallii

- **10-75 cm tall**
- **Badlands, eroded soils, and saline alluvial flats**
- **Flowers spring and early summer**



Male and female flowers on separate plants; yellow male flowers in dense, leafy, terminal spikes with 3-5 sepals and no petals; female flowers in axillary or terminal spikes with no sepals or petals but a pair of toothed bracts 4-7 mm long

Seeds round, leathery, and slightly warty

Alternate, gray-green leaves 2-5 cm long; mostly stalkless, narrowly-ovate leaves with fine scales

Woody-based, gray stem with many branches and fine scales; spreading to erect

Deep taproot

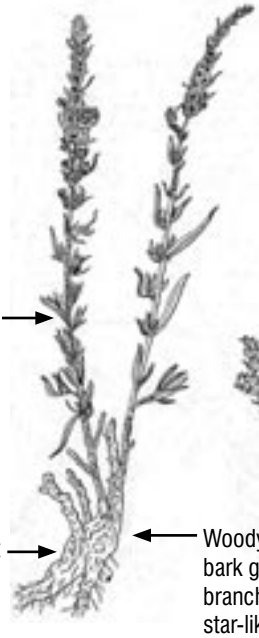
A.C. Budd

SHRUBS

Winterfat

Eurotia lanata

- **15-50 cm tall**
- **Dry prairie, slopes, and clay soils; tolerates salinity**
- **Similar to sage but odor lacking**
- **Flowers late spring and early summer**



Fruit bracts 4-6 mm long with 2 horn-like tips, covered with silky, white hairs

Axillary clusters of 2-4 flowers with male above the female; male flowers with 4 sepals and no petals; female flowers with no sepals or petals but enclosed in a pair of united bracts with 2 horns, covered with silky, white hairs

Alternate, linear leaves 1-5 cm long; mostly stalkless leaves with margins rolled inwards; covered with white or red silky, star-like hairs

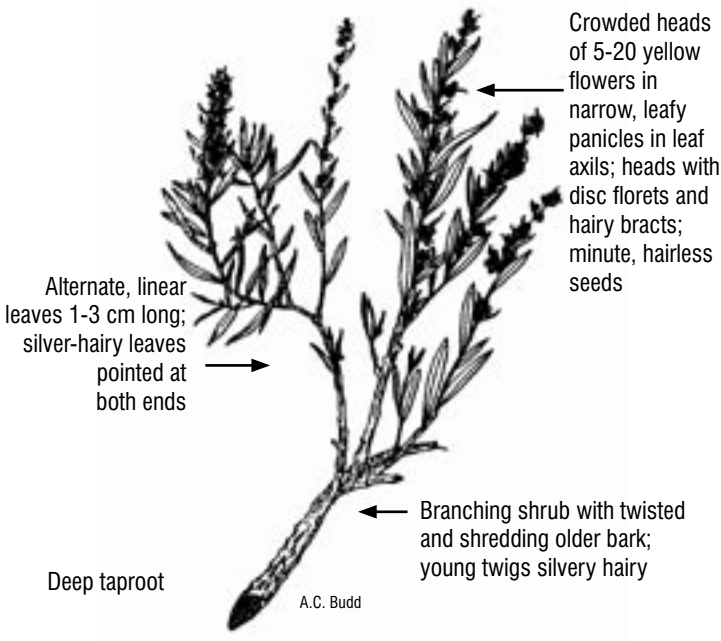
Deep taproot

Woody and branching at base with old bark gray-brown; stiff, erect annual branches covered with woolly, star-like white or red hairs

A.C. Budd

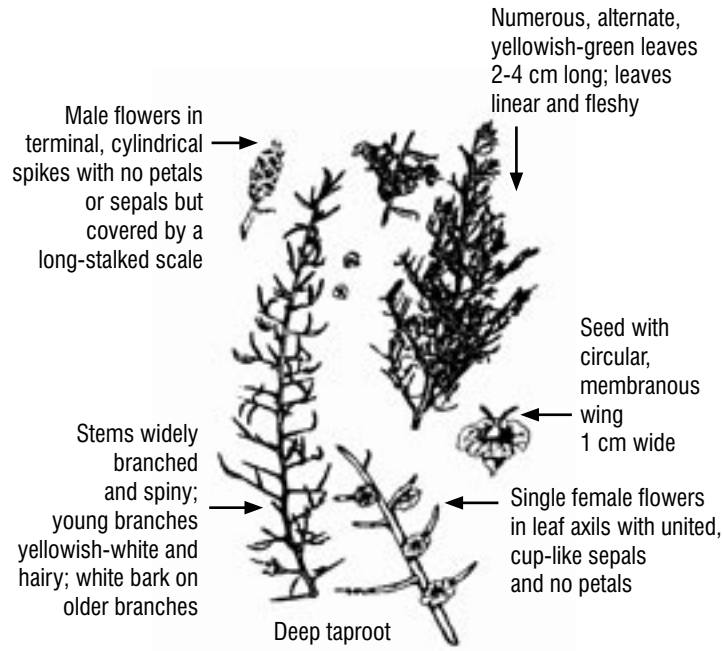
Silver Sage
Artemisia cana

- **30-150 cm tall**
- **Dry prairie, eroded slopes, and floodplains**
- **Aromatic sage odor**
- **Flowers late summer and autumn**



Greasewood
Sarcobatus vermiculatus

- **30-200 cm tall**
- **Saline sloughs and flats, heavy clay soils, and eroded slopes**
- **Flowers early summer**



Grazing Response and Forage Value

Grazing response is how various plant species react to grazing management. Plants are divided into three categories of response to grazing. Plants that decrease in abundance with improper grazing are Decreasers **(D)**. Plants that increase in abundance under similar management are Increasers **(I)**. Plants that invade sites or heavily increase on sites with improper grazing are Invaders **(IV)**. Invaders that are not native to North America are termed Exotic Invaders **(EIV)**. As the condition of the range site decreases, there are continually less Decreaser species and more Increaser and Invader species. Grazing response for a species may vary between soil and climate zone, as well as range site. The response to grazing for each species indicated on the next page is the generally accepted response on an average site. This usually pertains to upland sites with a loamy soil texture. Some species have a different response in a certain soil zone, as seen in brackets.

Forage value of a plant is determined by considering its palatability, nutritive quality, longevity, and area or primary distribution. Forage value varies, depending on the kind of livestock using the plants and the season of use. There are four classifications of this indicator. Plants that are palatable, nutritious, and therefore grazed readily have a Good forage value **(G)**. Plants that have moderate palatability and nutrition have a Fair forage value **(F)**. Plants that are either unpalatable, not nutritious, or low growing with reduced forage have a Poor forage value **(P)**. Poisonous plants is the fourth forage value classification **(POIS)**.

SPECIES	GRAZING RESPONSE	FORAGE VALUE
American Vetch	D	G
Awned Wheatgrass	D	G
Big Bluestem	D	G
Blazingstar	D	F
Blue Grama	I	G
Broomweed	IV	P
Canada Bluegrass	EIV	G
Canada Goldenrod	I	P
Canada Wild Rye	D	G
Chokecherry	D	F – POIS
Clubmoss	I	P
Colorado Rubberweed	I	P
Creeping Juniper	I	P
Early Yellow Locoweed	I	P – POIS
Field Chickweed	I	F
Goldenbean	I	P
Greasewood	I	F – POIS
Green Needle Grass	D	G
Gumweed	I – IV	P
Hairy Golden Aster	I	F
Indian Rice Grass	D	G
June Grass	I	G
Kentucky Bluegrass	EIV	G
Little Bluestem	I	P – F
Low Everlasting	I – IV	P
Low Goldenrod	I	P
Low Sedge	I	F – P
Many-flowered Aster	I	F
Mat Muhly	I	F
Moss Phlox	I	P
Narrow-leaved Milkvetch	I	P – POIS
Needle and Thread	I (D – Brown)	G
Northern Bedstraw	I	P
Northern Wheatgrass	D (I – Black)	G
Nuttall's Alkali Grass	D	G
Nuttall's Saltbush	D	G
Pale Comandra	I	P
Pasture Sage	I	P – F
Plains Reed Grass	I	F
Plains Rough Fescue	D	G
Prairie Cinquefoil	I	P
Prairie Coneflower	I	P
Prairie Dropseed	D	F
Prairie Muhly	I	F
Prairie Sage	I	P – F
Prickly Rose	I	P – F
Purple Prairie Clover	D	F

SPECIES	GRAZING RESPONSE	FORAGE VALUE
Rough Hair Grass	IV	F
Salt Grass	I	P
Sandberg's Bluegrass	I	G
Sand Dropseed	D	F
Sand Reed Gass	I	F
Saskatoon	D	G
Scarlet Gaura	I	P
Scarlet Mallow	I	P
Sheep Fescue	I (D – Black)	G
Shrubby Cinquefoil	I	P
Silver-leaf Psoralea	I	P
Silver Sagebrush	I	F
Skeletonweed	I	P
Slender Wheatgrass	D (I – Black)	G
Spiny Ironplant	I	P
Sun-loving Sedge	I	G
Thorny Buffaloberry	I	P
Thread-leaved Sedge	I (D – Brown)	G
Three-flowered Avens	I	P
Trembling Aspen	I – IV	F
Tufted Fleabane	I	P
Two-grooved Milkvetch	I	P – POIS
Western Porcupine Grass	D (I – Black)	G
Western Snowberry	I	P
Western Wheatgrass	I	G
Winterfat	D	G
Wolfwillow	I	F
Wood's Rose	I	P – F
Yarrow	I	P

Glossary

Alluvial: lowland areas of clay, sand, and silt left by floodwaters.

Annual: a plant that germinates, flowers, and sets seed, in one year.

Anther: the pollen container of a stamen or the male reproductive organ.

Auricles: a pair of ear-shaped appendages or lobes, at the junction of the blade and sheath in many grasses and sedges.

Awn: a slender, often teminal, bristle.

Axillary: a flowering structure located in, or arising from an axil.

Biennial: a plant that completes its lifecycle in two years.

Capsule: a dry fruit with more than one chamber and opening at maturity.

Catkin: a scaly spike of flowers, often of one sex and without petals.

Culm: the stem of a grass or a sedge.

Disc florets: tubular, inner flowers of many Sunflower Family plants.

Floret: a single flower of a dense flowering unit.

Glandular: bearing glands (a spot on an organ surface or hair tip producing a sticky or greasy substance).

Glume: one of the two bracts at the base of the grass spikelet.

Inflorescence: a mode of arrangement of flowers in a flowering unit or structure.

Internode: the portion of a stem between two nodes (*see node*).

Keeled: a sharp or distinct ridge.

Lacerate: ligule margins irregularly cut or torn.

Lemma: the lower of the two bracts enclosing the single flowers (florets) in grass spikelets.

Lenticel: a small, slightly raised area on the bark in many shrubs and trees.

Ligule: the appendage on the inner side of the leaf, at the junction of the blade and sheath in many grasses and sedges; a membrane or fringe of hair.

Node: the place on a stem from which leaves or branches arise.

Palea: the upper of the two bracts enlcosing the single flowers (florets) in grass spikelets.

Palmate: a leaf with the shape of a hand, with three or more leaflets, veins, or lobes from a common point.

Perennial: a plant that persists for more than two years.

Perigynium: a sac-like, papery sheath enclosing the fruit in sedges.

Petals: the second, or inner set of floral leaves, usually coloured or white.

Pinnate: a leaf with leaflets arranged on each side of the common axis.

Pistil: the female reproductive parts of a flower, including the stigma at the summit, the ovary at the base, and the style connecting the two.

Ray florets: strap-like, often outer flowers of many Sunflower Family plants.

Reflexed: bent sharply backward, or downward.

Rhizomes: an underground, creeping, root-like stem, often producing new plants at its nodes or tip.

Samara: a dry, winged fruit often with one seed and not spitting at maturity.

Sepals: the first, or outer set of floral leaves, usually green and leaf-like.

Sheath: the part of a leaf-base which encloses the stem.

Spikelet: a group of singular flowers in grasses and sedges (*see floret*).

Sporophyll: a leaf holding spore-sacs where spores are produced, especially in ferns and club moss (*for plural, see strobili*).

Stamen: the male reproductive parts of a flower, with the pollen-bearing anther at the summit

Stigma: the summit of the female reproductive parts, that receives the pollen.

Strobili: a cone-like grouping of sporophylls.

Stipules: a pair of appendages at the base of a leaf or leaf stalk.

Stolons: a horizontal, creeping stem from the base of a plant, producing new plants at its nodes or tip.

Style: the structure in the female reproductive parts between the stigma and the ovary.

Umbel: a flower cluster where all flower stalks arise from the same point.

Umbellet: a secondary umbel.

Alphabetical Index by Common Name

Grasses

Grass-like Plants

Forbs

Shrubs

Alphabetical Index by Latin Name

Grasses

Grass-like Plants

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Shrubs

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Illustrations

The illustrations of many-flowered aster, silverleaf psoralea, sun-loving sedge, and western porcupine grass were produced by Elaine L. Muth of Saskatoon, Saskatchewan.

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