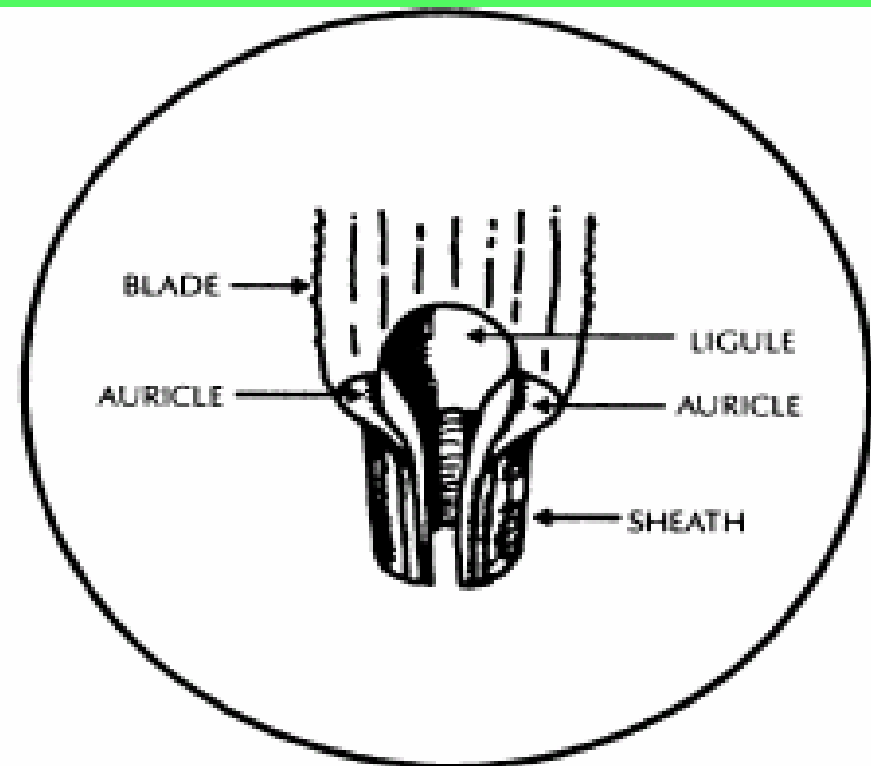


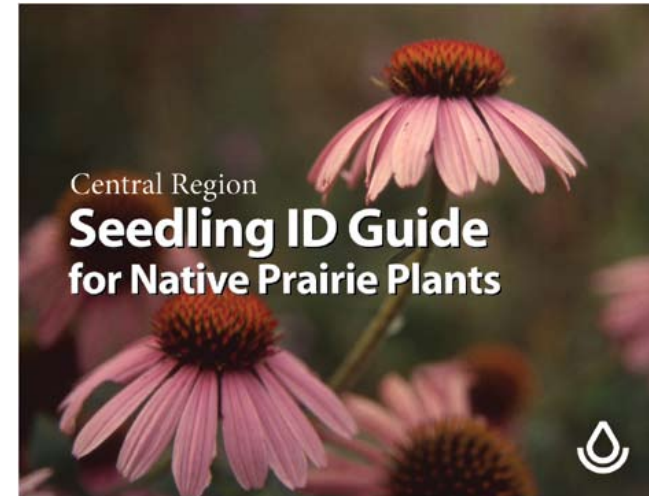
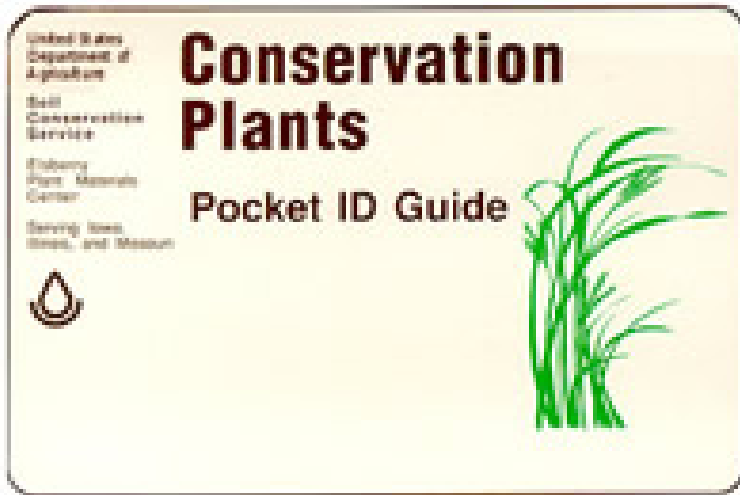
Introduction to plant identification

Paul Salon

Plant Materials Specialist

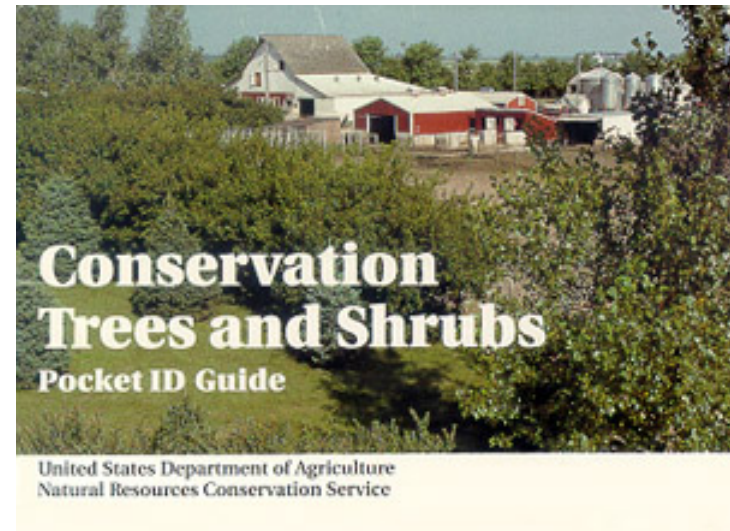


Guide to Identification Tips

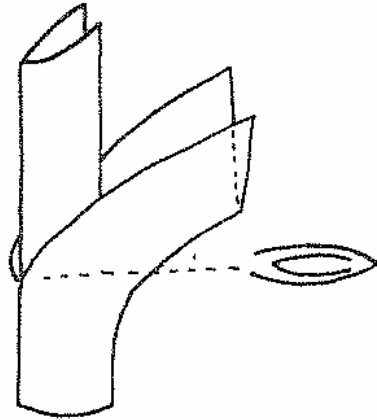


call the National Association of Conservation Districts, 1.800.825.5547, for information on costs and ordering.

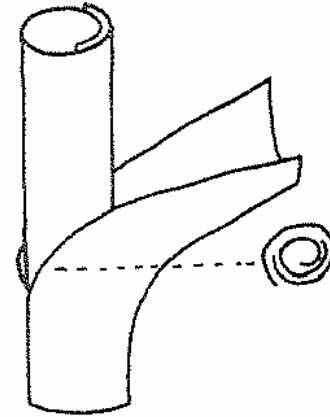
<http://Plant-Materials.nrcs.usda.gov>
for i.d. guides



Stem characteristics



Folded



Rolled

Orchard grass
KY, CA, & Ann. bluegrass
Perennial ryegrass **
Little blue stem
Big bluestem
Broomsedge
Fine fescues

Note: yellow foxtail and barnyard
grass have rolled leaves in
flattened stems

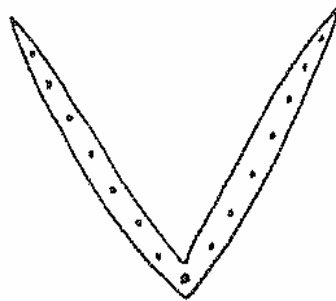
Annual rye grass **
Tall fescue
Most other grasses

Leaf Blade

The non clasping part of the leaf above the collar and ligule



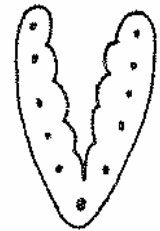
Flat
Keel'd below



V-shaped



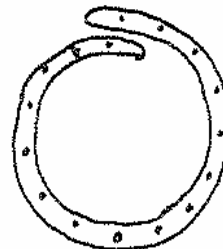
Folded



Bristle-like



Flat
Ridged above



Rolled

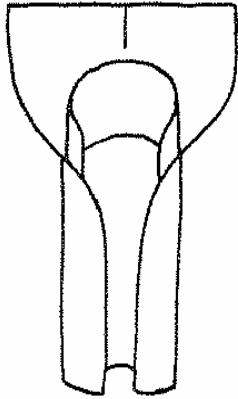


Margins
Rolled in

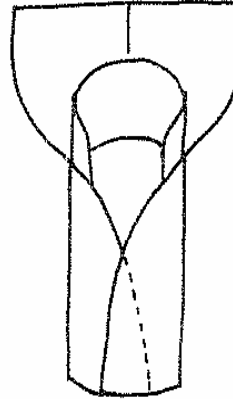
Blade surfaces may be smooth, rough or **hairy (downy brome, witchgrass large crabgrass)**,

Veins may be prominent on surface or beneath forming ridges (**johnson grass**) or keels (**bluegrasses**)

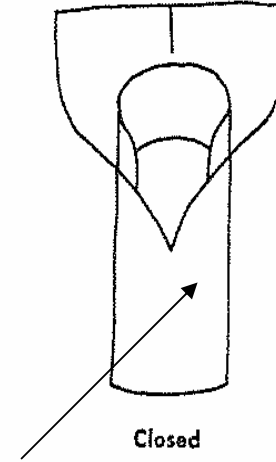
Sheath



Split



Split, margins overlapping

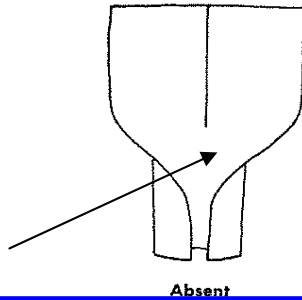


Closed

Bromegrass

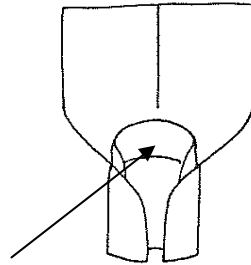
The sheath is the tubular basal portion of the leaf surrounding the stem

Ligule Types

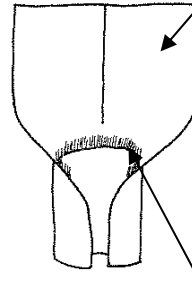


Absent

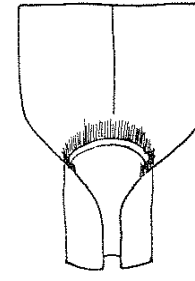
Absent in
Barnyardgrass



Membranous



Fringe of hairs



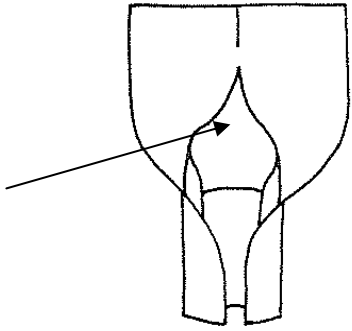
Fringe of hairs
fused at base

Long hairs near base
of blade Yellow
foxtail, switchgrass

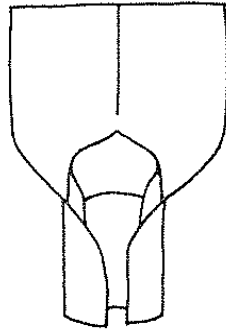
Foxtails, fall panicum,
witchgrass

The ligule is the upward-pointing growth found on the inside of the leaf at the Junction of the blade and sheath

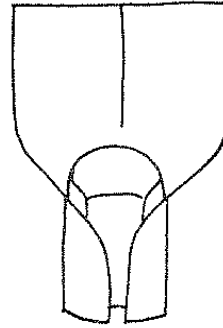
Ligule Shapes



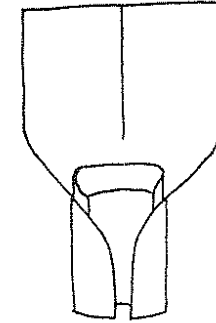
Acuminate



Acute

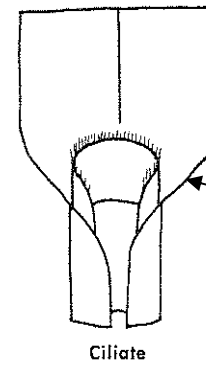
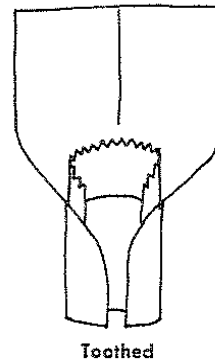
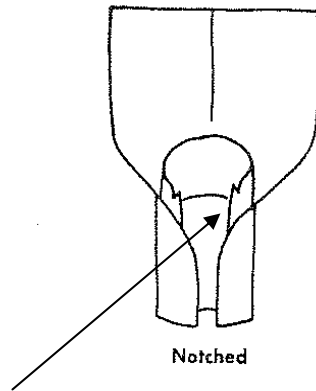
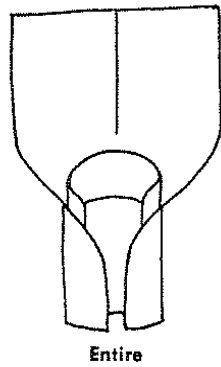


Rounded



Truncate

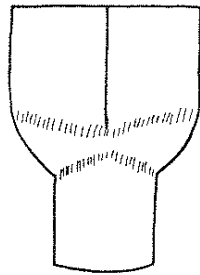
Ligule Margins



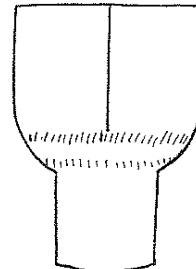
Phragmites

Timothy has notched margin

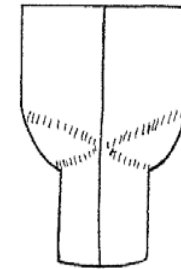
Collar



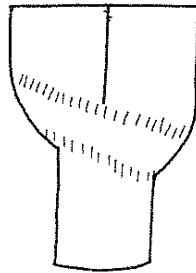
Broad



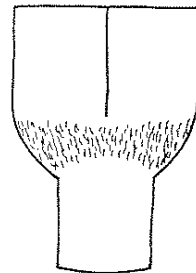
Narrow



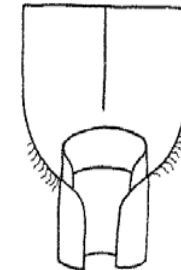
Divided



Oblique



Hairy

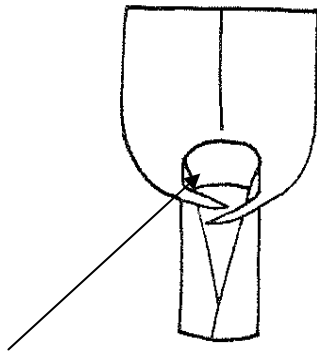


Margins hairy

The collar is a band, generally much lighter in color, marking the Division between the sheath and the blade

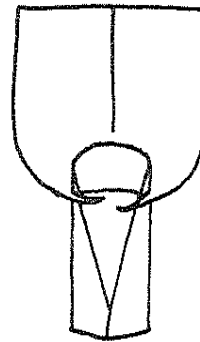
This region is pronounced in **tall fescue** presenting itself as a band of Yellow green this same color is seen to follow up the leaf blade in striations

Auricles



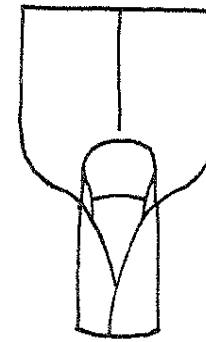
Large

Quackgrass,



Small

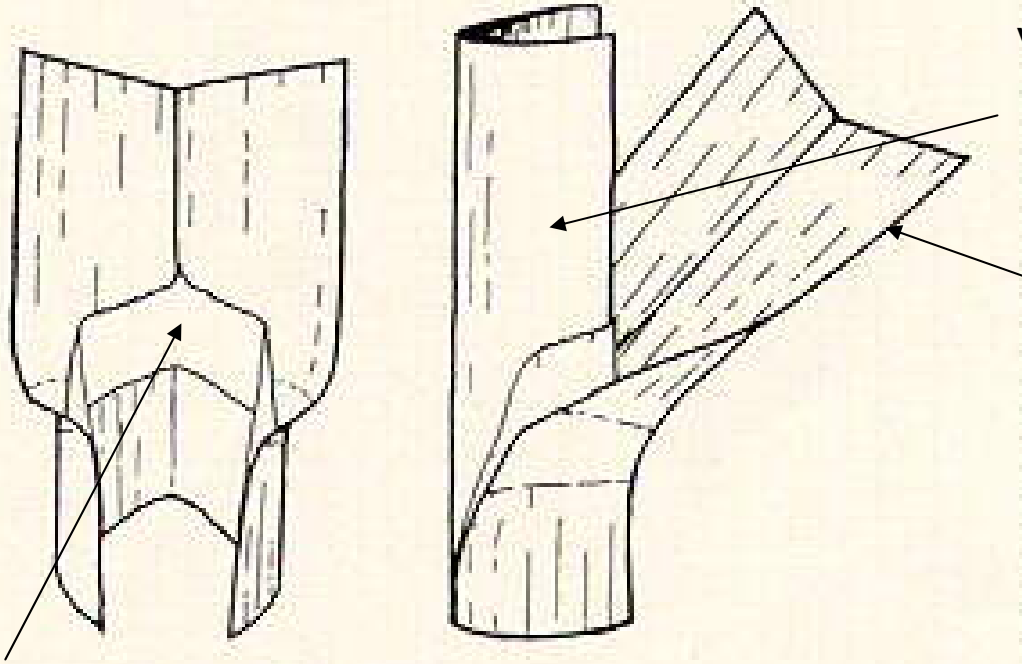
Perennial ryegrass sm
Annual ryegrass variable



Absent

Auricles are claw-like appendages which project from the collar one from each side

Flat stem, folded
vs rounded, rolled

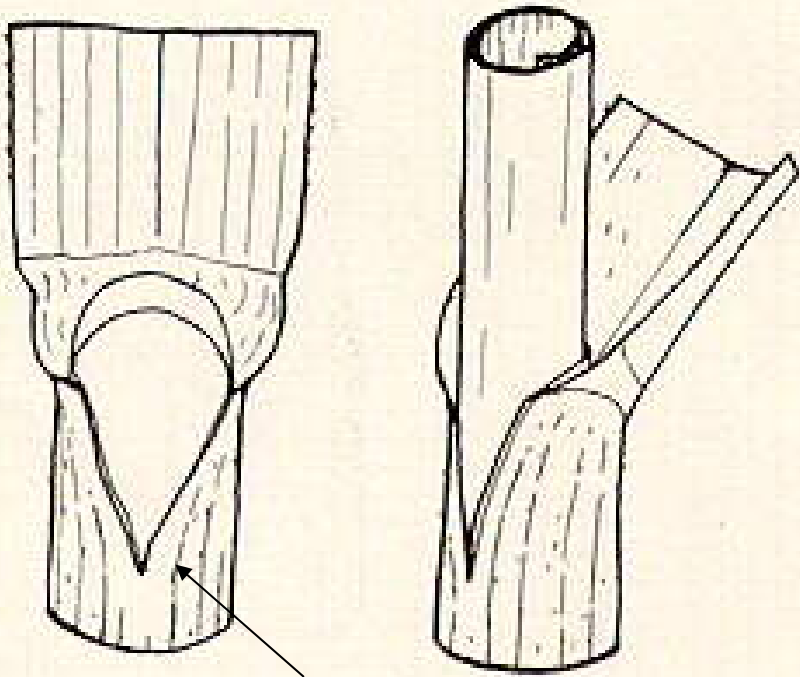


Blue green color

membranous, white
Ligule

Dactylis glomerata L. ORCHARD GRASS



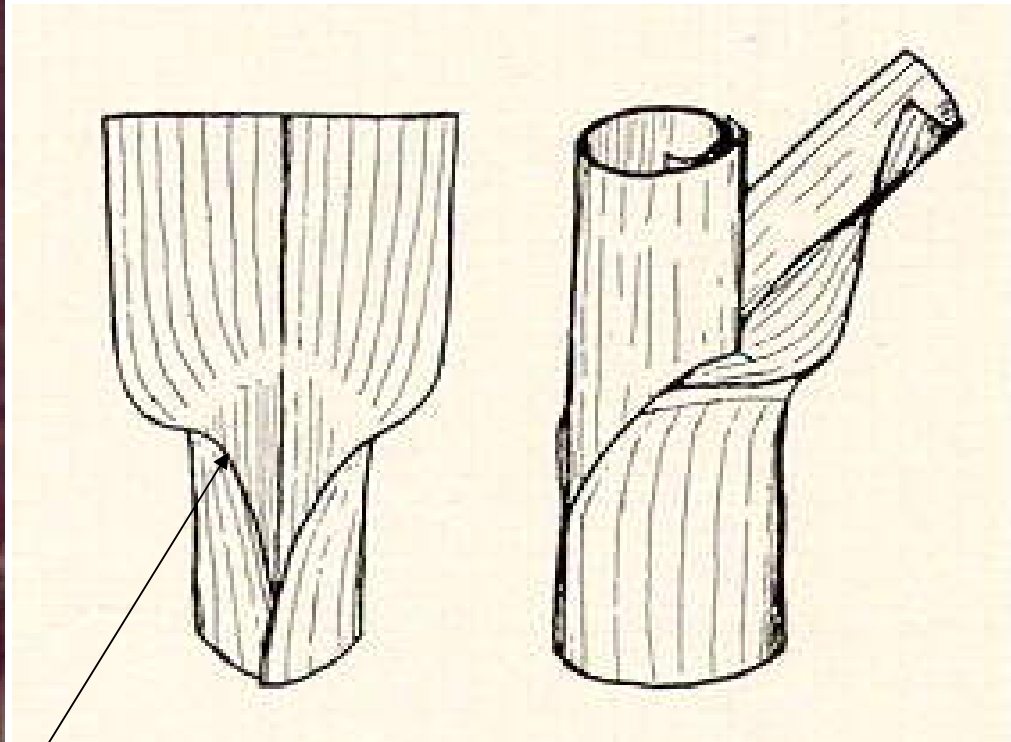


Closed sheath margin

***Bromus inermis* Leyss. SMOOTH BROMEGRASS**

Rhizomatous

Auricles absent



No sheath or auricle

***Echinochloa crusgalli* (L.) Beauv. BARNYARD GRASS**



SWITCHGRASS
(*Panicum virgatum*)

Sod forming, grows 3 to 6 feet tall

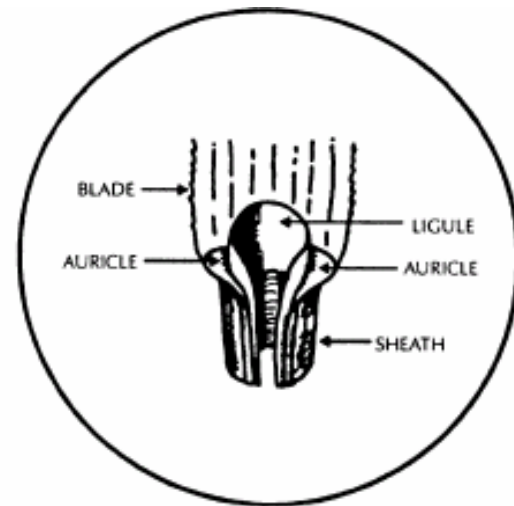
IDENTIFICATION TIPS:

Sheath: Round, open, white to purplish tinged below.

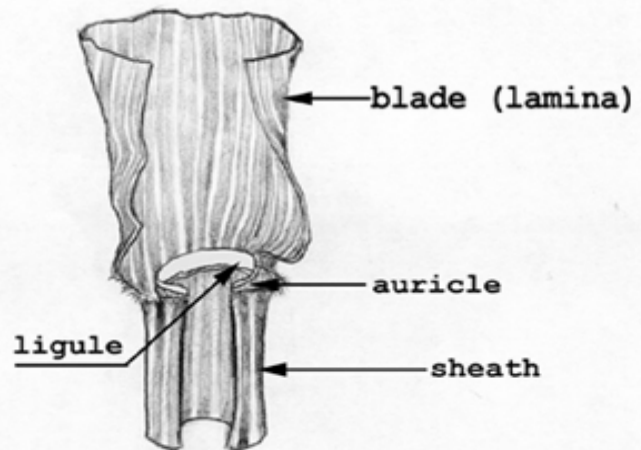
Blade: Rolled in the bud shoot, flat up to 1/2-inch wide.

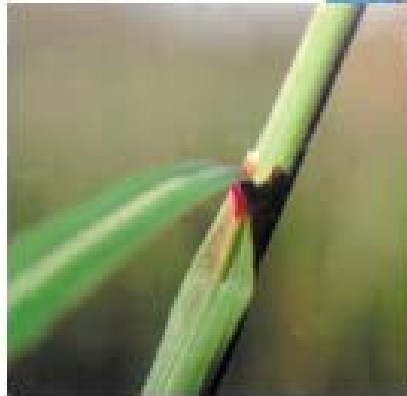
Ligule: Fringe of hairs with a dense mat of hairs extending onto the upper leaf surface.

Inflorance: Open panicle.



Guide to Identification Tips





INDIANGRASS
(*Sorghastrum nutans*)

Spreads by short rhizomes,
somewhat bunchy, grows 3 to 6 feet tall

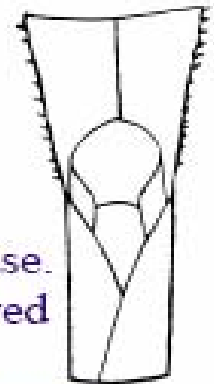
IDENTIFICATION TIPS:

Sheath: Round, open, may be hairy at the base.

Blade: Rolled in the bud shoot, flat, narrowed at base.

Ligule: Prominent, the sides of which seem to be projections of the sheath margins.

Inflorescence: Shiny golden yellow with long grayish hairs with twisted awns.





LITTLE BLUESTEM
(*Schizachyrium scoparium*)

Strong bunch grass, grows 2 to 3 feet tall.

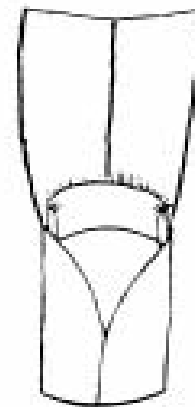
IDENTIFICATION TIPS:

Sheath: Flattened, open, often purplish at the base.

Blade: Folded in the bud shoot, folded along the midrib, narrow.

Ligule: Small membranous.

Inflorescence: Dense hairy seed head.





BIG BLUESTEM
(*Andropogon gerardii*)

Bunch grass with short rhizomes

Grows 6 to 9 feet tall

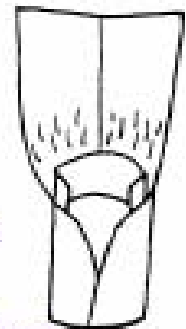
IDENTIFICATION TIPS:

Sheath: Round to somewhat flattened, open purplish at the base, usually hairy.

Blade: Rolled in the basal shoot, silky hairs widely dispersed on the upper leaf surface.

Ligule: Small membranous.

Inflorescence: Turkey foot shaped seed head.



Plant characters to look for

- Life cycle- annual, perennial, biennial
- Growth habit- erect, prostrate, rosette, viney, woody
- Seedlings- Cotyledon, seed itself
- Roots- bunch, fibrous, taproot, rhizomatous, stoloniferous
- Leaf- size, shape, orientation, margins, veins, hairs, glands
Petioles, bracts/acrea (smartweed)
- Flowers- color, morphology, fruit or seedheads

Red Clover



About this plant:

Biennial or short lived perennial legume
Growth is from crowns; tufted appearance
Grows 18 to 30 inches tall

Identification Tips:

Leaf: Three leaflets all equal distance from petiole, light colored V marks present on upper leaf surface, not shiny underneath, oval leaves

Flower: Rose red color

Other: Vegetative parts usually usually covered with many hairs, does not have stolons

White Clover



About this plant:

Perennial legume

Spreads by stolons

Grows 6 to 12 inches tall

Identification Tips:

Leaf: Three leaflets all equal distance from petiole, long petioles
light colored V marks present on upper leaf surface, shiny underneath

Flower: White to pinkish white

Other: No hairs on vegetative plant parts, stoloniferous roots at nodes

Alsike Clover



About this plant:

Perennial short lived legume

Growth from a crown with multiple stems

Grows 12 to 24 inches tall

Identification Tips:

Leaf: Three leaflets all equal distance from petiole, no light marks present on upper leaf surface, not shiny underneath

Flower: White to rose

Other: No hairs on vegetative parts , more upright than white

Sweet clover



About this plant:

Biennial legume (some annual forms also)

Growth occurs from a crown with one main stem

Grows 2 to 5 feet tall

Identification Tips:

Leaf: Usually three leaflets with terminal leaflet on small stem; entire leaflet is toothed

Flower: Yellow/White

Other: White sweet clover is more coarse, taller and flowers 10 to 20 days later than yellow. Sweet clover sweet clovers are taller and coarser than other legumes

Alfalfa



About this plant:

Perennial Legume

Growth occurs from crowns, grows 2 to 3 feet tall

Identification Tips:

Leaf: Usually three leaflets with terminal leaflet on small stem; 1/3 of leaflet is toothed

Flower: Purple

Black Medic



Yellow flower, trifoliate leaves, terminal leaf stalk is present
Lower growing compared to alfalfa

Birdsfoot Trefoil

Birdsfoot trefoil



Lotus corniculatus



About this plant:

Perennial legume

Growth occurs from crowns but roots can also produce new growth

Grows 12 to 18 inches tall

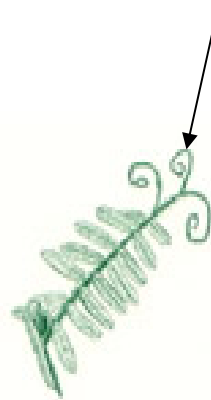
Identification Tips:

Leaf: 5 leaflets, 3 above and 2 below

Flower: Yellow to deep orange, tinged with red

Other: Inch-long seed pods resemble several toes of a bird's foot, thus plant's name

Hairy Vetch



About this plant:

Winter annual legume

Usually planted in late summer for major growth the following year

Grows 3 to 4 feet and attaches to other plants by tendrils

Identification Tips:

Leaf: Multiple leaflets arranged along the sides of a common stem ending in a tendril

Flower: Blue violet – reddish purple

Other: Vegetative parts are covered by small hairs

Crown vetch



About this plant:

Perennial legume

Spreads to underground rootstocks

Creeping stems grow to 3 to 5 feet tall

Identification Tips:

Leaf: 12 to 14 pairs of leaflets arranged along a common stem, no tendrils

Flower: Variegated white to purple in color

Illinois bundleflower



Distinguishing Characteristics

Numerous, tiny paired leaflets appearing fern-like

Height To 4 feet

Blooms June to August

Description

Plants are smooth and bushy finely pinnately compound and produce small, round flower clusters.

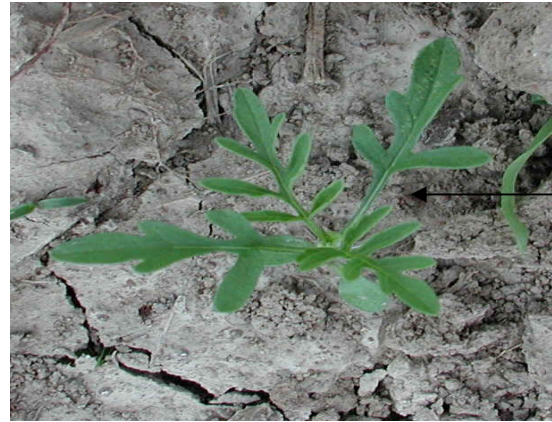
Each flower has fine, long stamens that provide a fuzzy appearance. Leaves and seeds are a source of protein for wildlife and livestock.

Common lambsquarters



Common lambsquarters: Cotyledons/ Seed leaves are narrow, with nearly parallel sides. The seed leaves and early true leaves are dull bluish green above and often purple below. Common lambsquarters may be up to 6 feet (180 cm) tall, depending on moisture and soil fertility. Tiny flowers are packed in dense clusters at the tips of the main stem and branches. Leaves of common lambsquarters are coated with tiny white scales.

Ragweed



Seedling: Opposite first leaves with petioles

Leaves: nearly smooth, deeply cut into many lobes most alternate,

Some opposite below

Plant: upright, coarse stemmed

Primary cause of hay fever.

Smooth or Redroot Pigweed



Smooth: no to few hairs on leaves no white vein midvein ending with bristle tip

Redroot: very hairy on the veins (white) on the underside and reddish root

Both have hairy stems

Broadleaf Plantain



Basal rosette, oval leaves, parallel venation,
buckhorn plantain have narrower leaves

Bull thistle



Biennial rosette, prominent spines, taproot, coarse hairs on upper surface and softer whitish hairs below.

Canada thistle – perennial, rhizomatous occurs in clumps
leaves smooth above,
smooth or hairy below

Chickory



Basal rosette, dandelion like leaves but rougher to the touch
And produces sparsely leaved branching stems later in season, milky sap
Dandelions have yellow flowers during early spring

Common Yarrow



Rhizomatous perennial, The foliage of common yarrow is finely dissected and covered with soft hairs, giving it a fern-like appearance. The foliage has a pungent odor. White flat topped flower.

Dewberry



Key characteristics: leaves are compound with serrated margins; stems have prickles and may have a reddish color, woody raspberry like

Common Milkweed



Key characters: Opposite leathery thick leaves with prominent white veins
milky sap

Eastern nightshade



Key characteristics: hypocotyl has hairs; often, the underside of the leaves and petioles will have maroon-colored markings; leaves are alternate. Flowers star shaped white with purple tinge, fruit are glossy black berries. Tomato family