

Photographic Guide to Common Grasses and Legumes of our Pastures

Appendix 1 of a Report
“The Flora & Fauna of some Columbia County Farms:
Their Diversity, History, and Management”
by the Farmscape Ecology Program in 2005
with partial support from the Hudson River Estuary Program

Appendix1. Photographic guide to common grasses and legumes of our pastures.



HABIT:

- Medium size (to 100 cm)
- Perennial
- Bunchgrass
- Leaves ribbed and rough above, glossy below
- Leaf margins +/- smooth
- Inflorescence is a long spike with spikelets facing central axis with their narrow side (compare with quackgrass)
- Spikelets awned



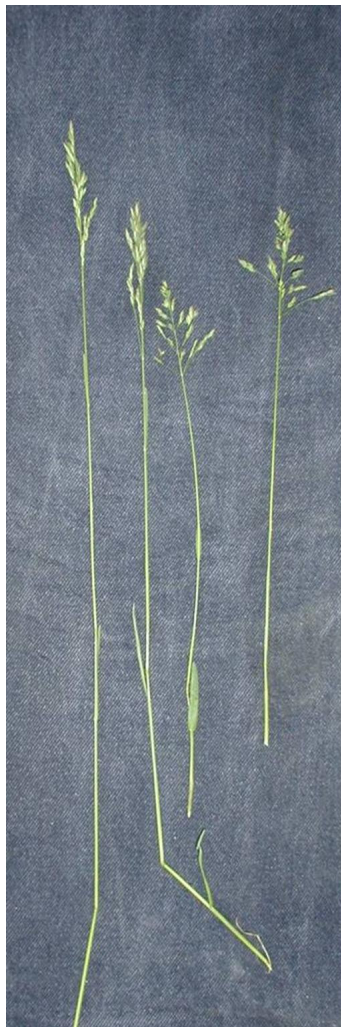
COLLAR REGION:

- Ligule very short (<1mm)
- Prominent claspings auricles (similar to quackgrass)
- Sheath open

GENERAL OBSERVATIONS:

- Seems to occur in most pastures
- Starts flowering in early June
- Without flowers, easily confused with tall fescue
- Supposedly produces excellent quality forage

Italian Ryegrass
(*Lolium perenne* var. *aristatum*)



HABIT:

- Small to medium size (30-100cm)
- Perennial
- Sod-former, spreads with rhizomes
- Leaves short and narrow
- Characteristic prow-shaped leaf tip
- No hairs

COLLAR REGION:

- Ligule +/- 2mm
- No auricles
- Open sheath, margins might touch up to collar

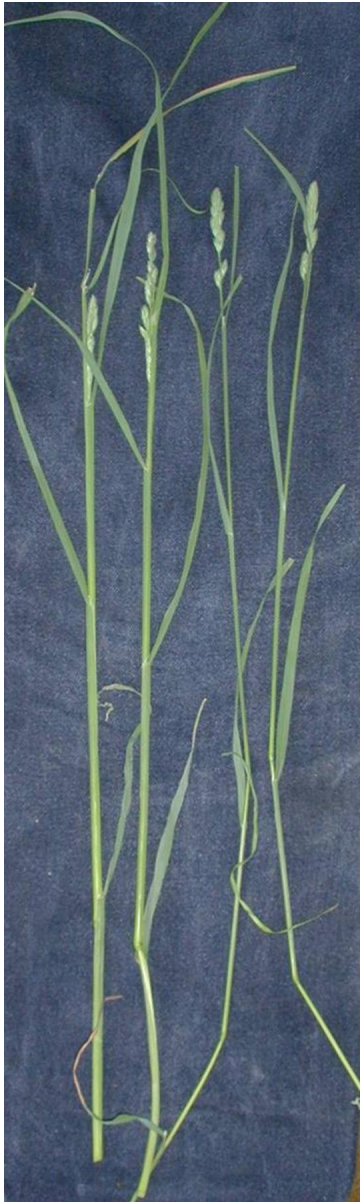


Kentucky Bluegrass

(Poa pratensis)

GENERAL OBSERVATIONS:

- The most common pasture grass, also the most common lawn grass; it survives repeated grazing or cutting because its growing point remains low to the ground
- One of the first to grow in spring, starts to flower in May



Orchard Grass
(*Dactylis glomerata*)

HABIT:

- Medium size (60-120 cm)
- Light green
- Perennial
- Bunchgrass
- Young shoots flattened
- No hairs
- Leaves +/- soft on both surfaces
- Margins not cutting

COLLAR REGION:

- Ligule 5-7 mm (similar to that of reed canary grass and timothy)
- No auricles
- Sheath open, but margins touching

GENERAL OBSERVATIONS:

- One of the most common pasture grasses; the moderately low growth habit allows it to withstand grazing
- One of the first to grow in spring, starts flowering in May
- The cows like to eat the young plants, but avoid the inflorescence

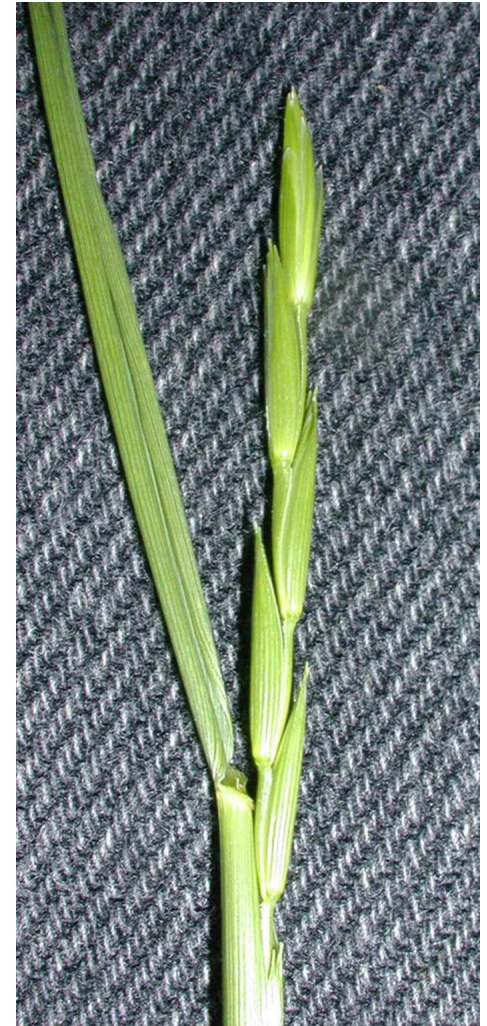


**HABIT:**

- Medium sized (50-100 cm)
- Perennial
- Creeping rhizomes
- Leaves sparsely hairy
- Inflorescence is a long spike with spikelets facing the central axis with their broad side (compare with ryegrass)

COLLAR REGION:

- Ligule very short [<1 mm]
- Prominent clasping auricles (similar to those of ryegrass)
- Sheaths open
- Lower sheaths may have short hairs



Quackgrass

(*Elytrigia repens*

syn. *Agropyron repens*)

GENERAL OBSERVATIONS:

- Occurs here and there in the pastures
- Starts to flower in early June

**HABIT:**

- Tall (60-150 cm)
- Bluish green
- Perennial
- Spreads slowly with short, thick rhizomes
- Leaves without hairs
- Leaf margins rough

**COLLAR REGION:**

- Ligule 3-6 mm (similar to those of orchard grass and timothy)
- Broad collar
- Sheath open, but margins tightly overlapping up to collar
- Ligule membrane continues down along margins of sheath

GENERAL OBSERVATIONS:

- Occurs in wet areas in the pastures and also grows in and along the creek
- Starts growing early in spring but 1st flowers seen only in early June
- Supposedly needs to be kept grazed down to less than 12", otherwise becomes unpalatable to cows

Reed Canary Grass

(Phalaris arundinacea)



HABIT:

- Medium size (50-100 cm)
- Perennial
- Sod-former spreading with short rhizomes
- No hairs
- Leaves +/- smooth on both surfaces

COLLAR REGION:

- Ligule 1.5-2 mm
- No auricles
- Collar wide and sometimes folded
- Characteristic closed sheath(!)



Smooth Brome Grass (*Bromus inermis*)

GENERAL OBSERVATIONS:

- Occurs here and there in most pastures
- Its leaves supposedly provide excellent early spring grazing
- Starts flowering in early June and can be seen mostly along the edges of pastures (and roads)

HABIT:

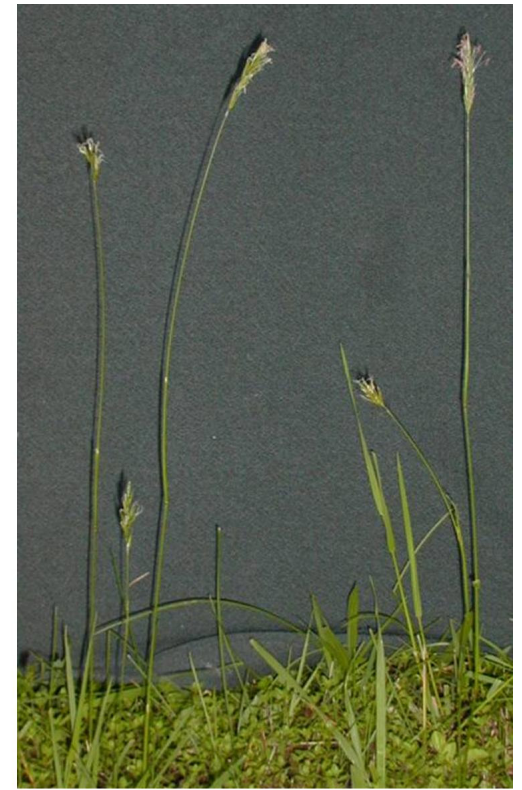
- Small to medium size (30-60 cm)
- Grows in small clumps
- Perennial
- Leaves very short (!)

COLLAR REGION:

- Ligule +/- 2mm
- No auricles, but characteristic fringe of hairs at the margins of the leaf base (!)
- Open sheath

GENERAL OBSERVATIONS:

- Spread throughout most of our pastures
- One of the first grasses to grow and flower in spring (first flowers seen in late April)
- Supposedly has little nutritional value for the cows



Sweet Vernal Grass

(*Anthoxanthum odoratum*)



Timothy
(*Phleum pratense*)

HABIT:

- Medium size (50-100 cm)
- Perennial
- Bunchgrass with short rhizomes and stolons
- Stems whitish and swollen (bulb-like) at the base

COLLAR REGION:

- Ligule 2-4 mm (resembles that of orchardgrass)
- No auricles
- Sheaths open

GENERAL OBSERVATIONS:

- Seems to be quite common in some pastures
- Starts flowering in early June
- Supposedly the best all-around pasture grass



HABIT:

- Medium size (50-120 cm)
- Perennial
- Bunchgrass with short rhizomes, can form dense sod
- Leaves ribbed and rough above, glossy below
- Leaf margins rough

COLLAR REGION:

- Ligule very short [<1 mm]
- Auricles blunt and lobe-like with or without hairs (sometimes similar to those of ryegrass and quackgrass)
- Sheaths open



Tall Fescue (*Festuca elatior*)

GENERAL OBSERVATIONS:

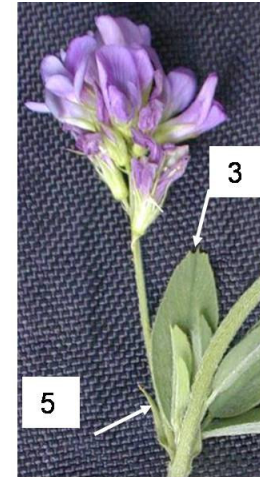
- Occurs here and there in the pastures
- Supposedly tolerates continued close grazing



- Erect and bushy (1-3 ft tall)
- Flowers purple, in short raceme
- Trifoliate (each leaf is composed of three leaflets) {1}
- Leaflets elliptical to obovate, margin toothed mostly in upper half {2}, small projecting tip {3}
- Terminal leaflet stalked, often turning upward {4}
- Stipules lance-shaped with a long, narrow tip {5}

! Without flowers, it is similar to other trifoliate legumes with stalked terminal leaflets. However, *black medick* does not grow as tall and tends to have more roundish leaflets; *sweet clovers* have entirely toothed margins.

*Alfalfa has been seeded into some of pastures and hayfields. Native of the Caspian area.



Alfalfa
(*Medicago sativa*)

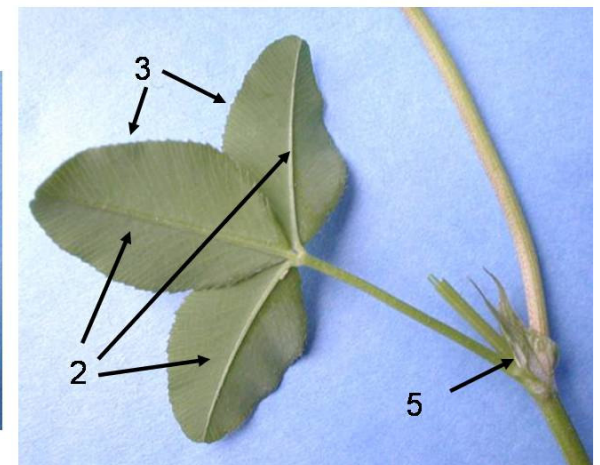


- Ascending, glabrous (not hairy)
- Pink to white flowers in stalked flower heads {1}
- Trifoliate (each leaf is composed of three leaflets) {2}
- Leaflets oval (tend to be broadest near the middle), with pronounced serration {3}, never with a light-colored V-shaped line or triangular patch {4}
- Stipules light colored with a broad base attached to the stem and a long narrow free tip {5}

! Without flowers, the leaves might be confused with those of *red clover*, which has a similar leaflet size and shape, but is pubescent and not as strongly serrate, or with those of *white clover*, which has smaller, more rounded leaflets that are not as strongly serrate.



*Found on almost all our pastures and hayfields.
Native of Eurasia.



Alsike Clover
(*Trifolium hybridum*)



- Prostrate to suberect
- Big (1.5 cm) yellow flowers in few-flowered umbells
- Trifoliate (each leaf is composed of three leaflets), but the stipules have the size and shape of leaflets {1}, so that the leaf appears to have five leaflets
- Leaflets elliptic to oblanceolate, margins entire (no serration)

! Not easily confused with any other clover, because none of our other clovers has stipules of the size and shape of its leaflets, and none has such large yellow flowers.

* It grows in almost every meadow and pasture. Native of Europe.



Birdsfoot Trefoil
(*Lotus corniculatus*)

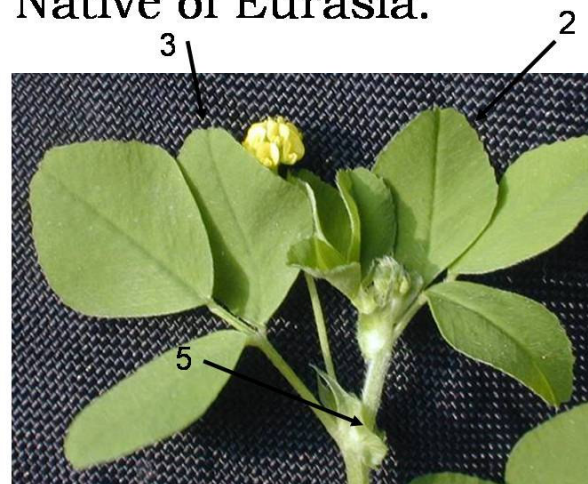


- Sprawling
- Flowers yellow, in tiny, round, long-stalked inflorescences
- Trifoliate (each leaf is composed of three leaflets) {1}
- Leaflets obovate, margin toothed at least in upper half {2}, small projecting tip {3}
- Terminal leaflet stalked, often turning upward {4}
- Stipules lance-shaped {5}

! Quite similar to hop clovers, the most common of which, *palmate hop clover*, does not have stalked terminal leaflets and grows taller. Also similar to *alfalfa* and the *sweet clovers*, which grow much taller and tend to have more elliptical leaflets.

*Occurs in small amounts in almost all pastures and hayfields. Native of Eurasia.

Black Medick
(*Medicago lupulina*)





- Trailing or climbing with tendrils {1}
- Flowers purple, in many-flowered, one-sided racemes
- Leaflets 5-11 pairs

! Without flowers, it is similar to *crown vetch*, but can be distinguished by its tendrils. The other common vetch, *four-seeded vetch*, has shorter leaves (2-5 pairs) and tiny flowers born singly or in pairs.

* Sometimes found along the edges of pastures and hayfields. It is a native of Eurasia and possibly of northeastern North America.

Bird- or Cow Vetch
(*Vicia cracca*)





- Loosely ascending
- Flowers pinkish, in stalked umbels
- Leaflets 11-25
- No tendrils

! Without flowers similar to Cow-Vetch, but lacking tendrils.

* Found along the margins of most pastures and hayfields, very common along roadsides. It is a native of the Mediterranean region.

Crown-Vetch
(*Coronilla varia*)





- Trailing or climbing with tendrils {1}
- Flowers light purple to white, born singly or in pairs
- Leaflets 2-5 pairs
- Seedpods with 4 seeds

! Much more delicate than the other vetches.

* Easily overlooked, but found in most pastures and hayfields. Native of Eurasia.



Four-Seeded Vetch
(*Vicia tetrasperma*)





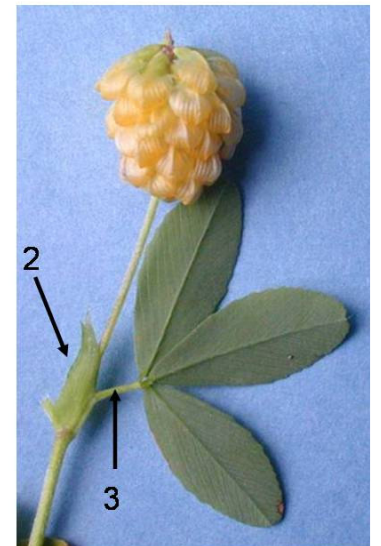
- Ascending, much branched, stems appressed-hairy
- Flowers yellow, in short-cylindrical, stalked inflorescences
- Trifoliate (each leaf is composed of three leaflets) {1}
- Leaflets oval and serrate
- Stipules {2} tend to be approx. as long as the leaf stalk {3}

! Might be confused with *black medick*, which has stalked terminal leaflets, a much smaller flower head and is generally a smaller plant. *Pinnate hop-clover* is smaller, has a stalked terminal leaflet, and leaf stalks that are longer than the stipules.

* Found interspersed in many meadows, mostly along the edges. Native of Eurasia.

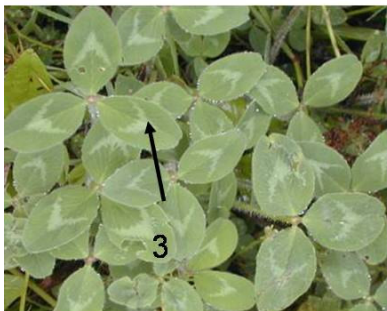
Palmate Hop-Clover

(*Trifolium aureum*)

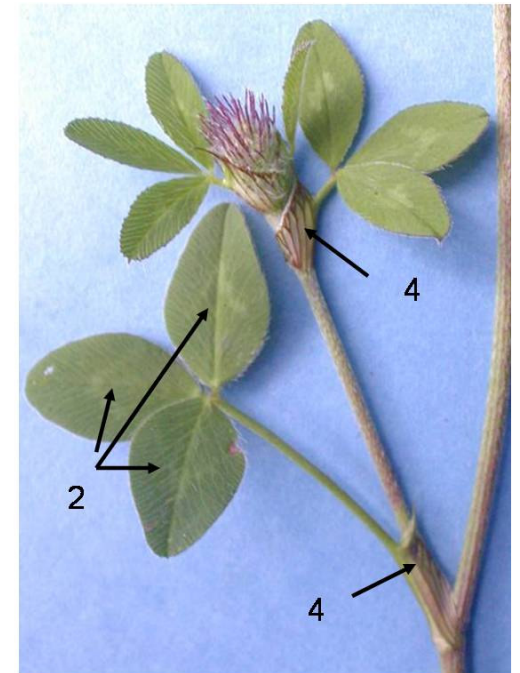




- Ascending, pubescent (hairy)
- Red to magenta or pinkish flowers in stalkless flower heads (sitting on top of a pair of leaves) {1}
- Trifoliate (each leaf is composed of three leaflets) {2}
- Leaflets oval (tend to be broadest near the middle), very shallowly serrate, sometimes marked with a light-colored triangular patch {3}
- Stipules “baggy”, light colored with dark veins, attached to stem for three-quarters of their length, with short, narrow free tip {4}



! Without flowers, the leaves might be confused with those of *alsike clover* or *white clover*, but the combination of pubescent leaves and “baggy” stipules allows for positive identification.



Red Clover (*Trifolium pratense*)

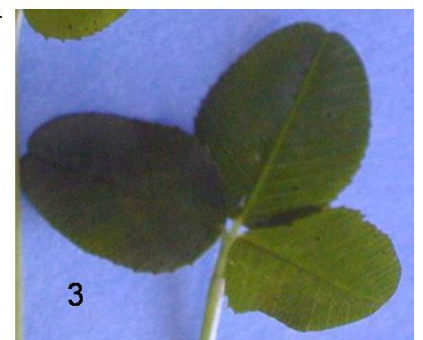
* Common in all pastures and hayfields.
Native of Europe.



- Creeping, entire plant glabrous (not a bit hairy)
- Flower heads and leaves emerging on individual stalks {1} which branch off the main stem {2} creeping along the ground
- Flowers white to pink, in round, long-stalked inflorescences
- Trifoliate (each leaf is composed of three leaflets) {3}
- Leaflets broad elliptic to obovate, somewhat serrate, sometimes marked with a light-colored V-shaped line {4}



! Without flowers, the leaves might be confused with those of *alsike clover*, which are also glabrous, but tend to be more oval with pronounced serration of the margins, or with those of *red clover*, which have a pubescent (hairy) underside. The light-colored leaf markings of red clover leaves tend to be more in the shape of a triangle



White Clover (*Trifolium repens*)

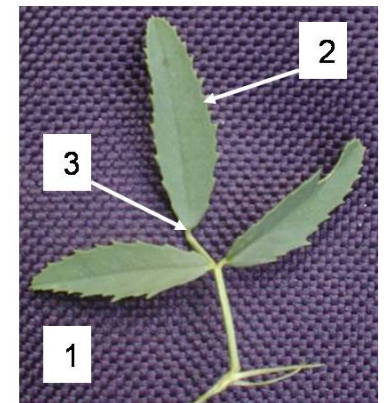
* One of the most common pasture plants. Native of Europe.



- Erect, much branched, 3-8 ft tall
- Flowers white, in many-flowered racemes
- Trifoliate (each leaf is composed of three leaflets) {1}
- Leaflets quite narrow and serrate {2}
- Terminal leaflet stalked {3}

! Without flower, this plant is hard to distinguish from *yellow sweet clover*. Might also be confused with *alfalfa*, which has a similar leaflet shape and a stalked terminal leaflet, but the serration on *alfalfa* leaflets is limited to the upper half.

* Typically a plant of road-sides, but sometimes found along the edges of pastures and hayfields. Native of Eurasia.



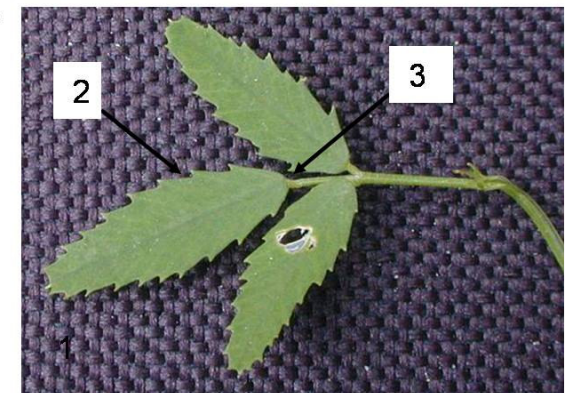
White Sweet Clover
(*Melilotus alba*)



- Erect, much branched, 3-8 ft tall
- Flowers yellow, in many-flowered racemes
- Trifoliate (each leaf is composed of three leaflets) {1}
- Leaflets quite narrow and serrate {2}
- Terminal leaflet stalked {3}

! Without flowers, this plant is hard to distinguish from *white sweet clover*. Might also be confused with *alfalfa*, which has a similar leaflet shape and a stalked terminal leaflet, but the serration on *alfalfa* leaflets is limited to the upper half.

* Typically a plant of road-sides, but sometimes found along the edges of pastures and hayfields. Native of Eurasia.



Yellow Sweet Clover
(*Melilotus officinalis*)