Russell R. Kirt Prairie

Trail Guide

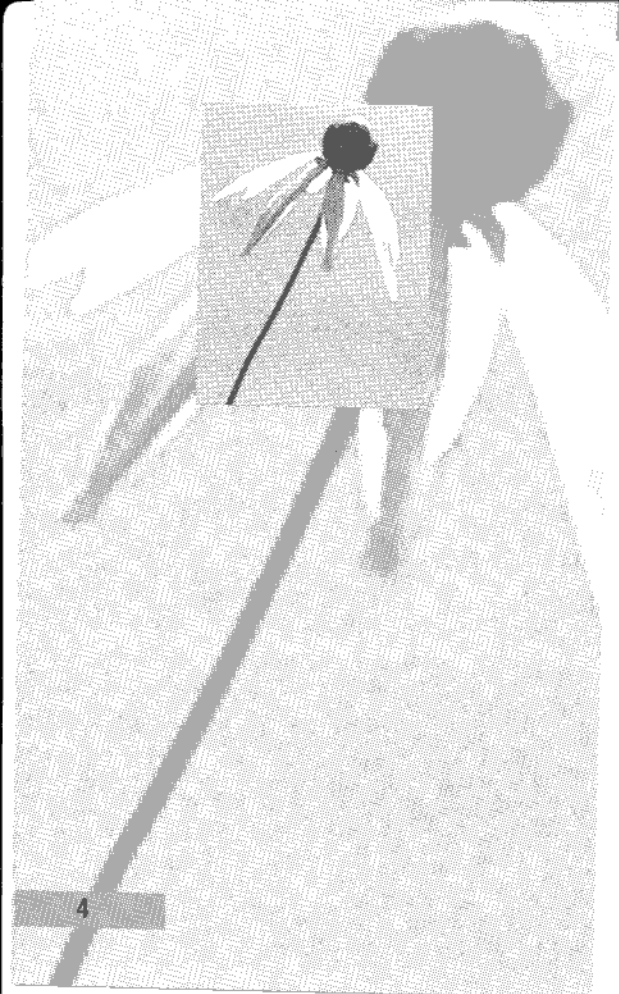
with an Introduction to the Prairie

by Russell R. Kirt, Retired Professor of Biology

College of DuPage

In the power of the sun and wind,
the vast greenness of treeless tracts and spacious skies,
and the changing seasonal moods
of color and texture,
the prairie has no equal in the North American landscape.

THOMAS B. SIMPSON, PH.D.
Former College of DuPage student



Forces That Created the Prairie

Over the past 12,000 to 15,000 years in the midcontinent of North America, forces of climate, fire and grazing created conditions that favored the development of grassland. This biome is generally known as "prairie" east of the 100th meridian and as "great plains" to the west of it.

Prairie rests on a firm foundation. A great plain of sedimentary rock underlies central North America. It is formed from shells, sand and silt of inland seas that periodically flooded the midcontinent during the Paleozoic Era, between 600 million and 280 million years ago. This sedimentary platform of limestone, sandstone and shale now lies hundreds of feet above sea level, but remains relatively flat.

Glaciers first crept southward from the frigid subarctic about two million years ago, at one time advancing as far south as the southern tip of Illinois and northern Missouri. Glaciers eroded the soft sedimentary rock and further flattened the landscape. On top of this flattened plain, glaciers dumped their load of ground-up bedrock. This mass of sand, silt, clay, pebbles and boulders covers glaciated terrain, often hundreds of feet thick. On top of this glacial till is a layer of silt, called "loess," blown by Ice Age winds from glacial river valleys. Loess deposits are more than 300 feet thick in western Iowa near the Missouri River, yet only a few inches thick in areas such as the Flint Hills of Kansas and Oklahoma.

In North America, most plant ecologists subdivide the prairie into tallgrass, midgrass and shortgrass prairie.

The Tallgrass Prairie

Illinois is a tallgrass prairie state. This ecosystem once covered almost 264,000 square miles from Canada to Texas and Nebraska to the Great Lakes. Most of the tallgrass prairie vanished in less than 50 years, converted to farmland and overgrazed by domestic livestock. Today, only small patches of tallgrass prairie remain, barely enough to remind us of its original grandeur.

The United States has no grassland national park; this ecosystem disappeared too quickly under the settlers' plows to be preserved. Only a few conservationists were interested in prairie preservation prior to the 1970s and as a result, pristine tallgrass prairie is the rarest of North America's major biomes. Approximately 99.99 percent of the tallgrass prairie has been destroyed. Some of what remains is protected, but even today, unprotected prairie remnants are threatened by construction of houses, shopping centers, roads and parking lots.

In tallgrass prairie, plant life is rich and diverse. Seas of grass grow as tall as, or taller than, a man's head. Spectacular flower blooms begin with prairie smoke, shooting star and cream wild indigo in early spring; coneflowers, blazing stars and sunflowers follow during the summer. The flowering season ends with asters and gentians in fall. No other ecosystem produces this continuous spectacle of wildflower blooms throughout the growing season.

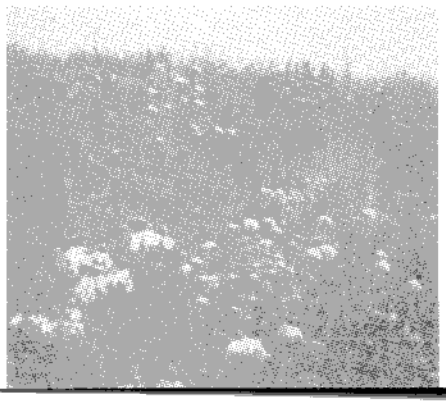
The Influence of Precipitation

Precipitation ranging from 10 to 35 inches per year, along with hot, dry summers and cold winters, is the climate needed for grasslands. A grassland climate also includes droughts, sometimes lasting a decade.

Grasslands just east of the Rocky Mountains receive an average of 16 inches of rainfall per year. In this region, known as shortgrass prairie, grass height varies from about six to 18 inches. Eventually, the rain shadow is alleviated somewhat by masses of moist air moving northward from the Gulf of Mexico. In western Kansas and Nebraska, average rainfall increases to about 25 inches per year; here midgrasses grow to a height of two to four feet. From central Nebraska to Indiana, the average rainfall increases to about 33 inches per year. In this tallgrass prairie, grasses grow to a height of six to seven feet.

Where the average rainfall approaches, or is greater than, 35 inches per year, the tallgrass prairie often blends into open forest. This mixture of prairie and forest is generally known as savanna. In a savanna, the tree canopy does not totally shade the ground; therefore, herbaceous plants have sunlight to photosynthesize for at least part of the day.

In the Midwest, especially in Illinois, savannas were referred to as "groves." At one time, 594 towns, villages and unincorporated municipalities in northern Illinois carried the last name "grove," for example, Downers Grove. The original name of Glen Ellyn was Babcock Grove. Where mesic (moderate moisture and drainage) soil conditions in tallgrass prairie exist, bur oak, *Quercus macrocarpa*, is the major tree species of savanna. Bur oak has thick bark, which makes it resistant to fire.



Increasing the greatly reduced population of prairie plant species is crucial. This task is accomplished by prairie restoration and/or reconstruction. Planting prairie helps to preserve gene pools of indigenous plants.

Preserving local ecotypes helps to ensure that today's restored prairies more closely resemble those of the past. Restored prairies are aesthetically satisfying plant communities, rich in texture and alive with colors. They provide habitats for a diversity of insects and other invertebrates, mammals, birds, amphibians and reptiles. Some animals specifically need the prairie.

At College of DuPage, the restoration process involved collecting seeds from within a 15-mile radius of the college and from The Morton Arboretum beginning in fall 1974. The collected seeds were used to restore prairie on the east side of campus and eventually served as a seed bank for restoration in the Russell R. Kirt Prairie which began in 1984. Approximately 23 acres of prairie have been restored/reconstructed at College of DuPage. Prior to the college's purchase of property in 1965, some of the land had been farmed and some remained as wetlands and marsh.

The Russell R. Kirt Prairie is rich and diverse in ecosystems. It includes four acres of shallow and intermittent water in marshes, two acres of marsh vegetation, seven acres of reconstructed mesic prairie, one-acre of reconstructed hill prairie, two acres of reconstructed oak savanna, one-acre of swales and a one-acre retention pond. Approximately one acre of grass border surrounds the preserve. (See preserve map, page 21.)

Wetlands and Marsh

These areas have been the focal point of preservation and other restoration activities. For the most part, marsh and wetland areas have been undergoing natural succession.

Mesic Prairie

Eight to 10 inches of gravel was spread on the northern half of this area in 1971 so that it could be used as a parking lot. Clay and rubble subsoil from a newly constructed college complex was then spread on the site in spring 1984. It was then top-dressed with three to four inches of black soil. This area was restored to mesic prairie from 1984 to 1986. In fall 1987, the Educational-Handicapped Trail was constructed for class and community use.

Retention Pond and Oak Savanna

During 1986, a one-acre retention pond was constructed to collect runoff water from newly constructed college parking lots. The area immediately surrounded by the pond was restored to prairie in 2000. Some of the oak savanna topography was shaped during 1986 and the remainder during 1990. Restoration in the oak savanna area began during 1991.

Hill Prairie and Swales

During 1990, clay and rubble from another college parking lot expansion project was placed on this site. Low-lying areas called swales were constructed to allow runoff water to enter the marshes. The hill was top-dressed with three to four inches of black soil, and its restoration began during 1991.

Prairie Beds

Beginning in 1997, one fourth mile along College Road and Lambert Road was planted with more than 60 species in prairie beds. This aggregation of plant species allows for easy plant identification and seed collection, in addition to aesthetics.

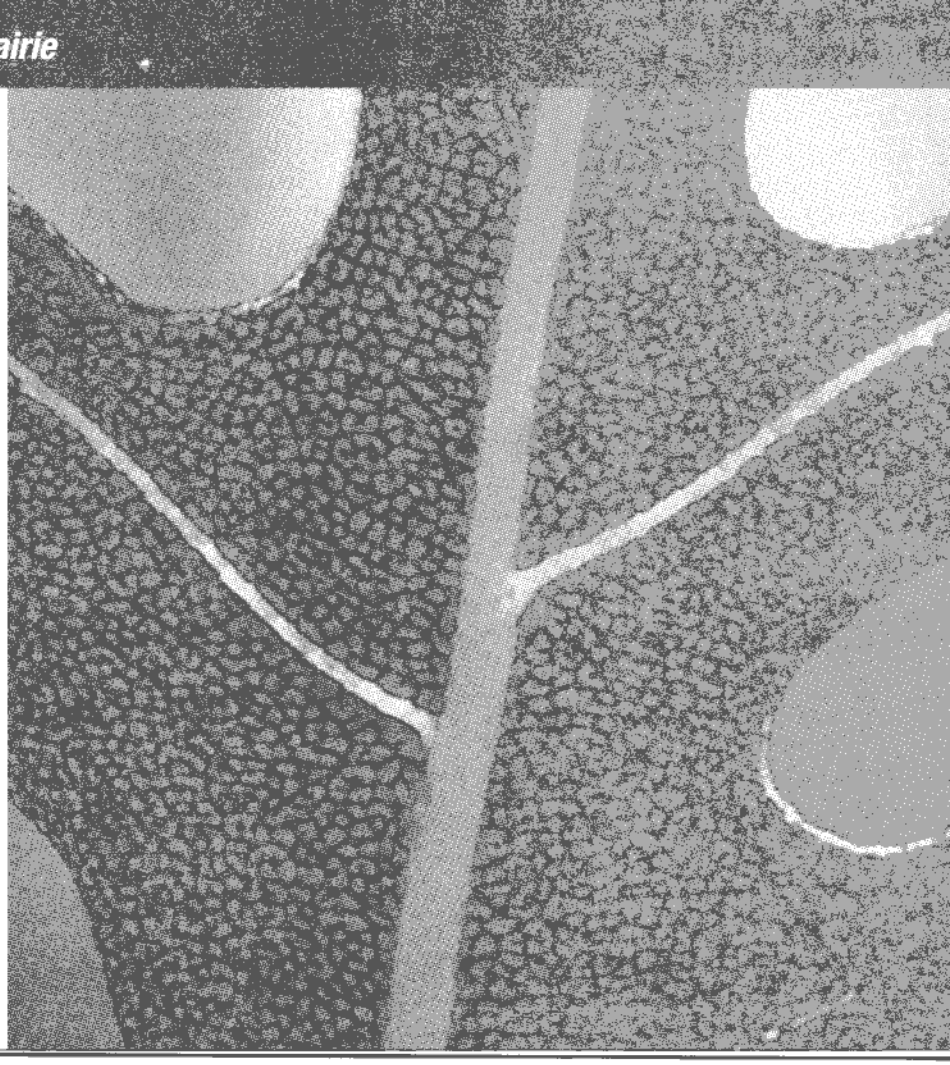
Official Designation

In December 1993, the College of DuPage Board of Trustees designated this 18-acre site as the West Prairie Marsh Nature Preserve. Then in November 1999, the College of DuPage Board of Trustees changed the name to the Russell R. Kirt Prairie.

All restoration activities were accomplished by College of DuPage students working under the direction of Russell R. Kirt, professor of biology at College of DuPage. Restoration activity in the Russell R. Kirt Prairie is an ongoing process targeting different areas each year. Many students participating in the college's prairie restoration projects have chosen some aspect of plant ecology as their career.

Current maintenance costs for the Russell R. Kirt Prairie are minimal. During the growing season, about 40 hours per week are spent maintaining this 18-acre natural and restored area. Little to no maintenance is required during the non-growing season.

Fire is the major requirement for maintaining these natural areas. Workers also do some selective weed removal. In addition to improving the prairie's purity, weed removal gives students the opportunity to learn which plants do not belong to stable communities and to learn concepts such as plant competition and growth habits.



Fire is a major factor in maintaining prairie ecosystems. In presettlement times, fires occasionally burned the prairie during fall or early spring when the plants were dormant and their stems and leaves were dead and dry. Prairie fires were caused by lightning and by Native Americans who routinely set them to attract large game animals. During fall, fires were started to herd large numbers of buffalo and other game mammals into areas where they could be easily hunted. Following spring fires, buffalo, elk and deer would graze on the profusion of tender, succulent green plants that grew. These animals were also subsequently hunted for food.

Most prairie plants are not harmed by fires. Roots and other underground organs comprise approximately two-thirds of most of these plants. Each year, herbaceous stems grow from buds, rhizomes and other plant tissue located beneath the soil's surface, safe from the fire's heat. This subterranean adaptation to fire gives prairie plants an advantage over trees and shrubs. Without fire, the prairie is weakened by the accumulation of unburned litter. The result is a cooler and shadier microclimate, a disadvantage to most prairie plants but an advantage to woody species.

Fire releases nutrients from mulch more quickly than decay. Burned prairies produce about twice the annual biomass of those not burned for several years. Fire also helps eliminate **weeds,** that is, plants that thrive in disturbed and degraded sites and are not part of a stable ecosystem.

Most prairie plants are long-lived perennials that are able to share water, light and nutrients with adjacent plants. Prairie plant species stagger their growth and flowering to lessen competition. In this rich and varied vegetation, an average of 15 species start blooming each week, beginning with prairie smoke in April and ending with bottle gentian in October.

When touring the prairie, refer to the phenological (flowering) chart, pages 24 to 26, to help aid in the identification of prairie plants.

Prairie Smoke

Ethnobotany is the study of human uses for plants. Man's quest for food has always been of paramount importance. During primitive times, humans had to possess a practical knowledge of edible plants to prevent famine. In the process, medicinal and other properties of plants were discovered.

About 25 percent of current prescription drugs contain active ingredients derived from plants. Because many valuable and desirable characteristics of plants are not yet known, it is important to protect plant species and entire communities, such as the prairie. Who knows from which plant species the next miracle cure might come?

Some Prairie Plants With Significant Ethnobotanical Uses

Visitors to the Russell R. Kirt Prairie can observe these plants along the prairie's edge and along the Educational-Handicapped Trail. See map, page 21, for location of these plants and others.

Nodding Wild Onion, *Allium cernuum*

All onion species are edible and useful as seasonings. This plant also was used to increase perspiration and urine flow. Early man rubbed the plant parts over his body to repel insects. The word "Chicago" is derived from the Algonquin name for nodding wild onion.

Nodding Wild Onion

Lead Plant

Lead Plant, *Amorpha canescens*

Native Americans used this plant to ward off neuralgia and rheumatism. Moistened pieces of this plant were attached to the skin and then burned. They used the dried leaves for tea and pipe smoking. Contemporary researchers have isolated cannabinoid chemical compounds from this plant species.

Butterfly Milkweed, Pleurisy Root, *Asclepias tuberosa*

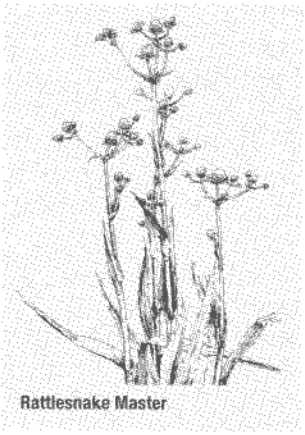
This species is useful in relieving symptoms of pleurisy, pulmonary edema and other respiratory diseases. Extractions from the root stimulate the vagus nerve, producing perspiration and bronchial dilation. In western states, Native Americans refer to this species as "immortal." They made pilgrimages to collect the plant, as it had many uses.

Butterfly Milkweed

Purple Coneflower, *Echinacea pallida*

Extracts from this plant are still used today as an antidote for snake bites, insect stings, burns, wounds and other venomous and poisonous conditions. Native Americans used the root stalks of the coneflower to treat toothaches, blood poisoning and some cancers. This popular "herbal" species is still sought by pharmaceutical companies.

Purple Coneflower



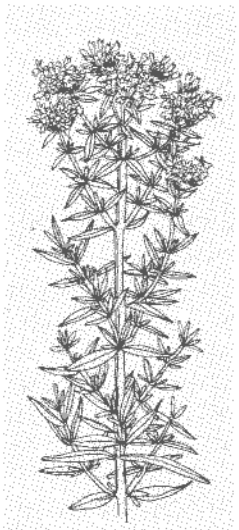
Rattlesnake Master

Rattlesnake Master,
Eryngium yuccifolium
The common name of this species comes from its former use in curing rattlesnake bites. Root extracts are still used to relieve muscular pain, rheumatism, respiratory ailments, bladder and kidney problems, headaches, nosebleeds and tonsil inflammation.

Wild Bergamot, Beebalm,
Monarda fistulosa
Bergamot oil, extracted from the dried, boiled leaves of this plant, is used to treat cold symptoms and bronchitis, to suppress menstruation, to cure skin eruptions, and as a stimulant to relieve stomach gases. A good tea can be made from this member of the mint family. The flowers have been used to scent closets, drawers and pillows.

Wild Bergamot

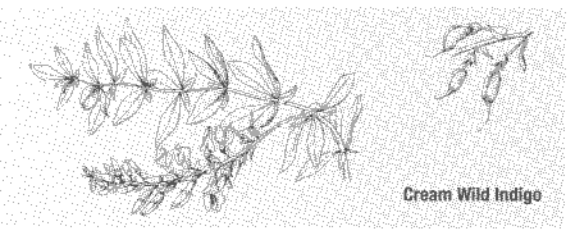
Common Mountain Mint,
Pycnanthemum virginianum
The leaves of this plant make an excellent tea especially when the flowers are in bloom. Common Mountain Mint is the most aromatic of the prairie plants.



Common Mountain Mint

The smallest and most numerous fauna in the prairie are insects. They serve as sensitive ecological indicators, revealing the health of the prairie in which they live. Halictid bees, bumblebees, and syrphid flies, along with butterflies and moths, are the major pollinators of flowers. Some prairie butterflies and other insects need specific plants for food and reproduction; in return, the insects pollinate the flower.

Examples of insect-plant relationships that visitors to the Russell R. Kirt Prairie can observe during different times of the growing season follow.



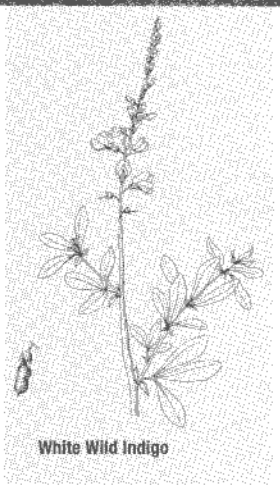
Cream Wild Indigo

Bumblebee-Indigo Pollination

Cream Wild Indigo is a low, drooping bushy plant that has two-to-12 thick stems covered with fine hairs. These stems are highly branched and widely spread. The plant blooms from mid-May to mid-June.

White Wild Indigo has a smooth, stout stem with a widely branched crown. Its shape resembles a miniature, bushy tree, and the plant blooms during June.

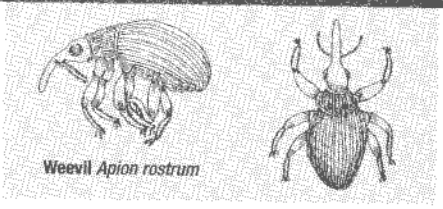
Indigos often have flowers in both the pistillate and staminate phase. Queen bumblebees walk horizontally between the flowers of Cream Wild Indigo's raceme, moving from staminate-phase flowers to pistillate-phase flowers, and by so doing release pollen. Pollinator movement for White Wild Indigo is upward and reverse, that is, the workers move from the pistillate to the staminate-phase flowers.



White Wild Indigo

Bumblebee and Honeybee-Wild Bergamot Pollination

Wild Bergamot (or Beebalm) has lavender flowers and blooms from mid-July through August. Each flower head is composed of several clusters, each with 10 or more flowers open at a time. The flowers with young stigmas have a delayed receptivity to accepting self-pollen. Bumblebees and halictid bees visit the flowers for nectar. Successful cross-pollination and outbreeding of Wild Bergamot is due, at least in part, to the continuous opening of the flowers during the day and the stigma's receptivity to cross-pollen prior to self-pollen.



Weevil *Apion rostrum*

Silphium Weevil-Silphiums Interrelationships

Silphium species are large and coarse; the four silphiums growing in the Russell R. Kirt Prairie are rosinweed, compass plant, cup plant, and prairie dock.

A silphium weevil (*Rhynchites* sp.) chews the stems of silphium species near the flower heads so that they droop and wilt. Next the weevil starts eating the disk flowers. Resin then oozes out of the stem, and the flower heads die. The weevil uses the buds of prairie dock as sites for egg laying and larval development.

Indigo-Weevil Interrelationships

Several insect species prey on the indigos (*Baptisia spp.*), primarily by feeding on seeds. A common pre-dispersal seed predator is *Apion rostrum*, a weevil. In late spring, the female weevil inserts one to several eggs into the wall of the ovary of an indigo flower. As the ovary matures into a seed pod, the weevil larvae consume the developing seeds as their only source of nutrition. The larvae reach the adult stage by August and then disperse when the seed pod splits.

The Cream Wild Indigo and White Wild Indigo produce an abundance of flowers to attract the few springtime pollinators. Successful pollination results in a high number of pods initiated by the plant, many of which cannot be maintained to maturity and will be aborted. It appears that pods with fewer seeds are aborted. The weevil interplays with selective pod abortion by consuming seeds. The advantage of the plant-seed predator relationship is not necessarily to the side of the weevil, for if pods are aborted, the encapsulated immature weevil will die as its remaining food source decays. High pod abortion rates can result in a large reduction of the weevil population. Hence, the interaction between the indigos and weevil is more complex than at first glance. Pod abortion appears to be a natural response by the indigos as a result of prolific flowering required to attract pollinators. Measured over years, the reproductive dynamics of the indigos may not be greatly affected by pre-dispersal seed predation by *A. rostrum*.

Importance of Ants in the Prairie

Approximately one dozen species of ants can be found in the Russell R. Kirt Prairie. The ants mix soil and recycle nutrients, and are major consumers of plants and animal material. Undoubtedly, ants are affecting the direction of ecological succession in the prairie. Look carefully for some mound-building ants. *Acanthomyops claviger* is a yellow-colored ant that nests and forms mounds within clump bases of the various grasses.

Plants suffer in hot, dry weather as water evaporates faster than the soil can replenish it via roots. Prairie plants possess several anatomical features that help them survive drought conditions.

• Many of the grasses have up to one mile of fibrous root system per plant.

• Plants such as compass plant, prairie dock, butterfly milkweed, and prairie clovers have enlarged and/or thickened roots that help store water.

• Spiderwort, wild onion and flowering spurge store water in their sticky juices.

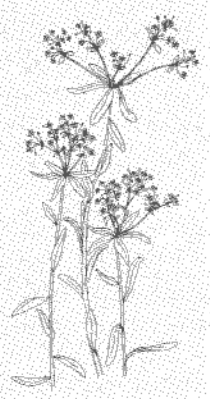
• Grasses and blazing stars have slender leaves.

• Plants such as prairie clovers and lead plant have finely divided leaves and leaflets.

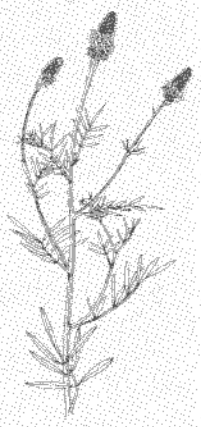
• Plants such as compass plant and prairie dock orient their leaves so that a minimum of surface area is exposed to the sun during the hottest part of the day.

Compass Plant

Compass Plant Root



Flowering Spurge



White Prairie Clover

Each year, approximately 600 College of DuPage students enroll in biology courses that include a detailed unit on the prairie. The college's restored prairie sites serve as a major outdoor educational resource. Students regularly conduct prairie experiments in the prairie restoration/reconstruction sites. Students and faculty also use the sites for joint scientific study. Several published papers and research grants have resulted from these studies.

Approximately 800 students have enrolled in prairie ecology and restoration courses. Some of these students have made botany/plant ecology their major educational pursuit and occupation. Several former students have earned doctoral degrees in plant ecology, and more than 20 have earned master's degrees in plant ecology or related areas. Several former College of DuPage students who worked in the restoration sites and later earned bachelor's degrees are employed full time by various conservation and ecological agencies.

The college's prairie and marsh restoration projects also serve as a creative resource, stimulating ideas for alternative landscaping approaches for innovative horticulturists who are incorporating native species into landscaping projects.

C.O.D. Courses That Include Study of the Prairie

Several courses offered by the Natural and Applied Sciences Divison include a detailed unit on the prairie. These courses are:

Biology 100
Survey of Biology

Botany 110
Humanistic Botany

Botany 120
Prairie Ecology

Botany 152
The Plant Kingdom

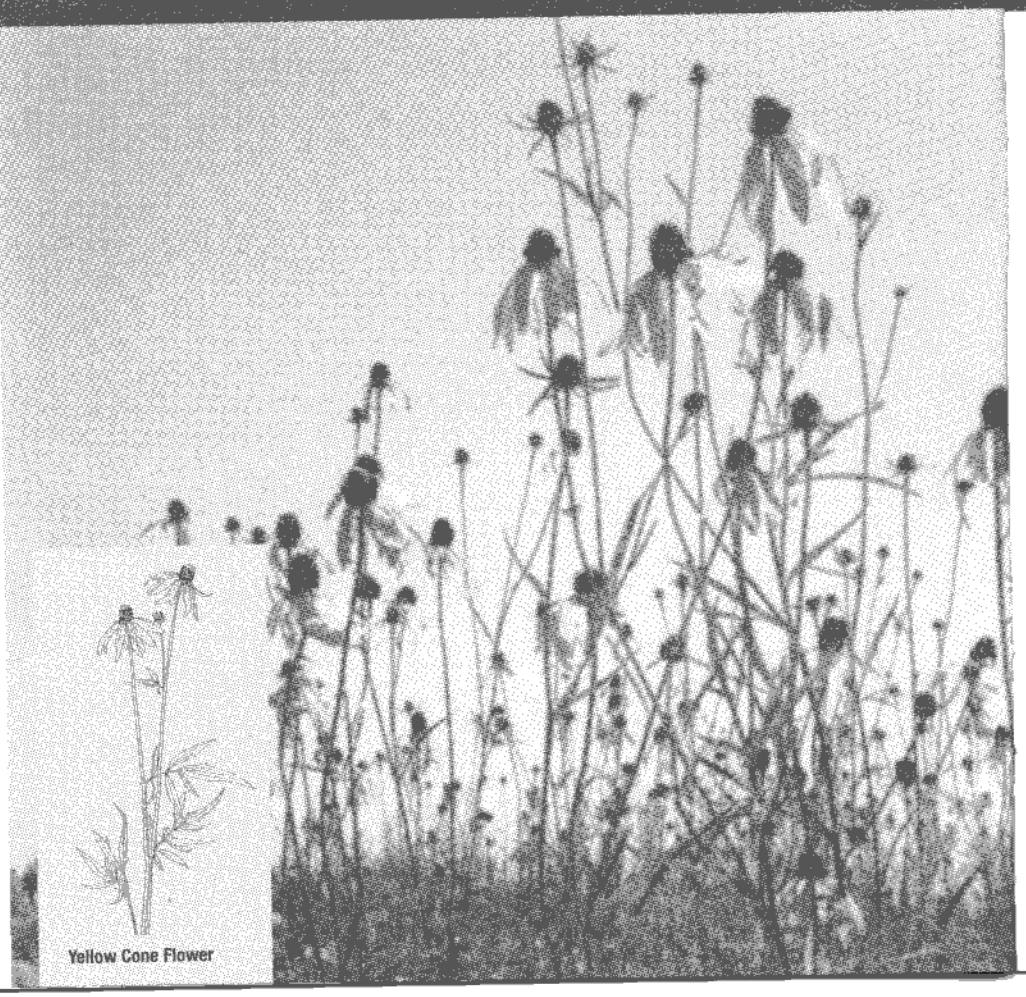
Biology 201
Ecology

Botany 120, *Prairie Ecology*, focuses exclusively on the prairie. The class provides an understanding of the rich vegetational heritage of tallgrass prairie, especially in northern Illinois. Students learn to identify more than 100 prairie plant species and participate in the ongoing prairie restoration project at College of DuPage.

Additional courses that include study of the prairie are offered by Field and Interdisciplinary Studies. For more information on these classes, call the office at (630) 942-2356 or stop by the Berg Instructional Center (IC), Room 3046a.

The Russell R. Kirt Prairie helps ensure that adequate space exists on campus for storage and infiltration of storm water runoff. As of 2000, College of DuPage's campus in Glen Ellyn had 64.3 acres of parking lots, 26.6 acres of buildings, 7.4 acres of streets and service roads, and approximately 3 acres of sidewalks. With this much paved surface, designated areas for storm water runoff are vital.

As new buildings and parking lots are built, a place for runoff water becomes increasingly necessary. Prairies and marshes surrounding open water are important water retention and buffer areas. The college's open marsh areas in this preserve alone hold up to two million gallons of standing water. This figure does not include water in retention ponds or water saturated in the soil.



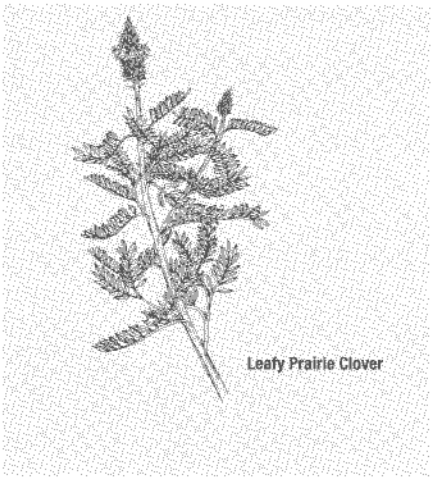
Yellow Cone Flower

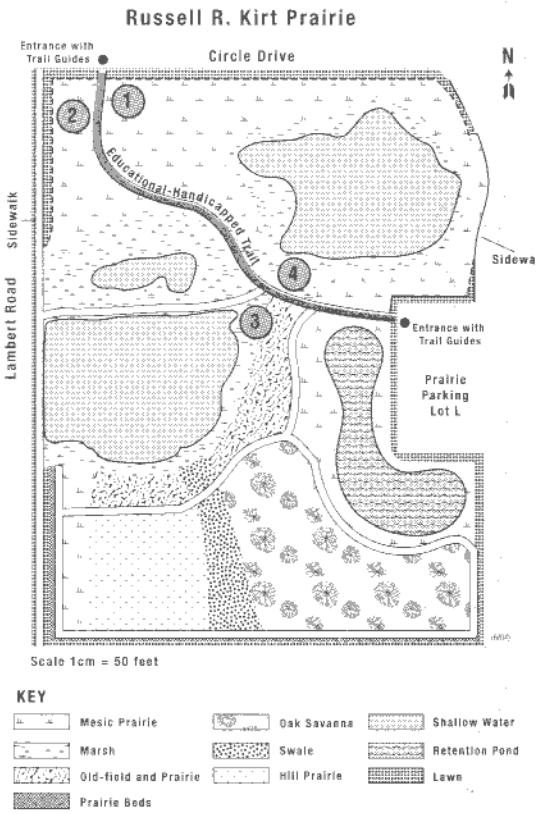
The populations of most native species of plants and animals have been greatly reduced by human activities. Rare species found in the Russell R. Kirt Prairie include:

Leafy Prairie Clover,
Petalostemum foliosum
One of America's rarest plants, Leafy Prairie Clover is on the federal endangered species list. It thrives in the college's prairies at several sites, including Location 1, along the Educational-Handicapped Trail.

Foxtail Dalea,
Dalea leporina
Look for this plant along the Educational-Handicapped Trail at Locations 2 and 4. These are the only sites where this western plant species has been found growing in the Chicago region.

Black-crowned Night Heron,
Nycticorax nycticorax
The Black-crowned Night Heron is an Illinois endangered species. Look for this and other wading birds at Location 3 or from the sidewalk along Lambert Road.


Leafy Prairie Clover

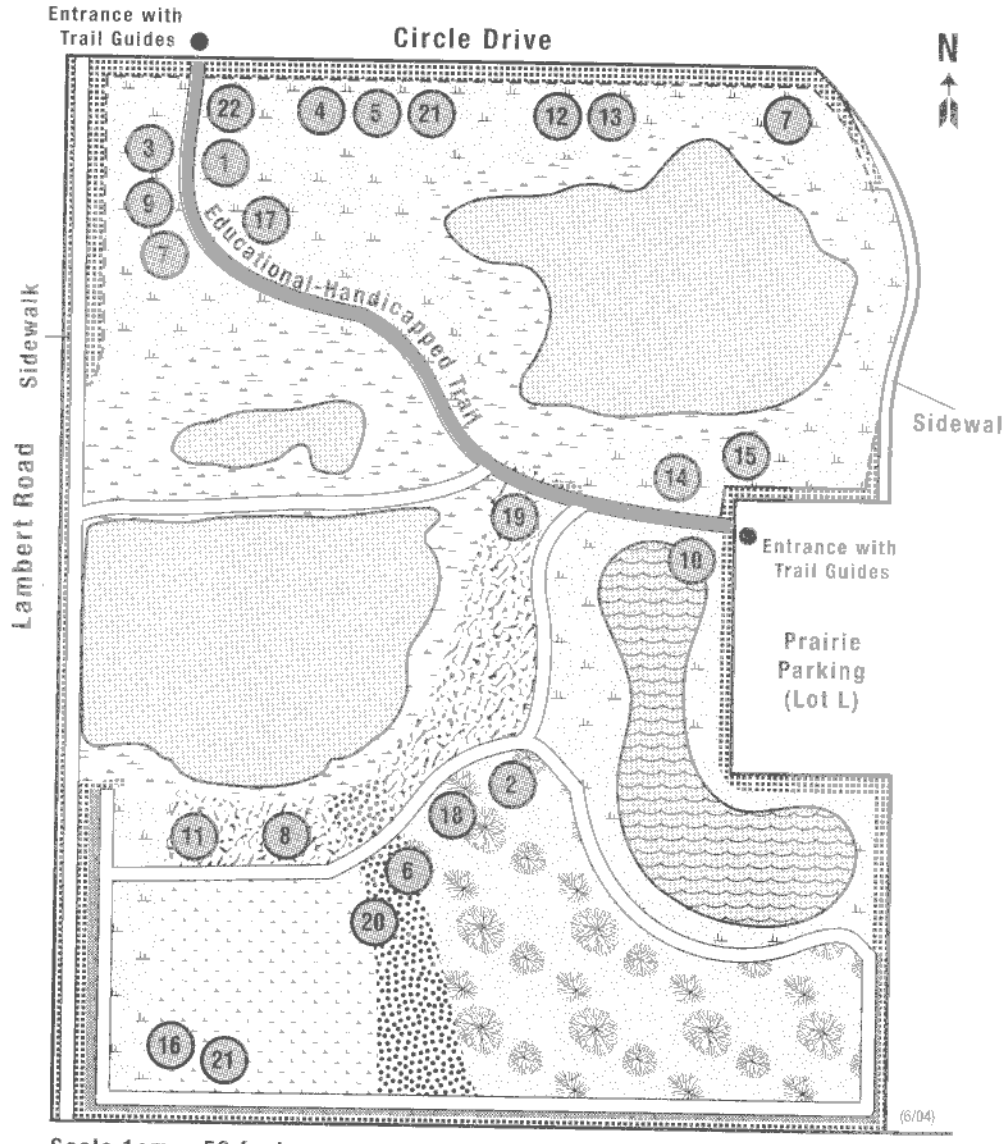


General Location of Selected Prairie Plants

Numbers correspond to locations on map below.

1. *Amorpha canescens*, Lead Plant
2. *Andropogon gerardii*, Big Bluestem
3. *Asclepias tuberosa*, Butterfly Milkweed
4. *Baptisia leucantha*, White Wild Indigo
5. *Baptisia leucophaea*, Cream Wild Indigo
6. *Calamagrostis canadensis*, Blue Joint Grass
7. *Coreopsis palmata*, Prairie Coreopsis
8. *Desmodium canadense*, Canada Tick Trefoil
9. *Echinacea pallida*, Purple Coneflower
10. *Eryngium yuccifolium*, Rattlesnake Master
11. *Monarda fistulosa*, Wild Bergamot
12. *Parthenium integrifolium*, Wild Quinine
13. *Penstemon digitalis*, Foxglove Beard Tongue
14. *Petalostemum candidum*, White Prairie Clover
15. *Petalostemum purpureum*, Purple Prairie Clover
16. *Pycnanthemum virginianum*, Common Mountain Mint
17. *Silphium laciniatum*, Compass Plant
18. *Solidago rigida*, *Rigid* Goldenrod
19. *Sorghastrum nutans*, Indian Grass
20. *Spartina pectinata*, Prairie Cordgrass
21. *Sporobolus heterolepis*, Prairie Dropseed
22. *Tradescantia ohiensis*, Spiderwort

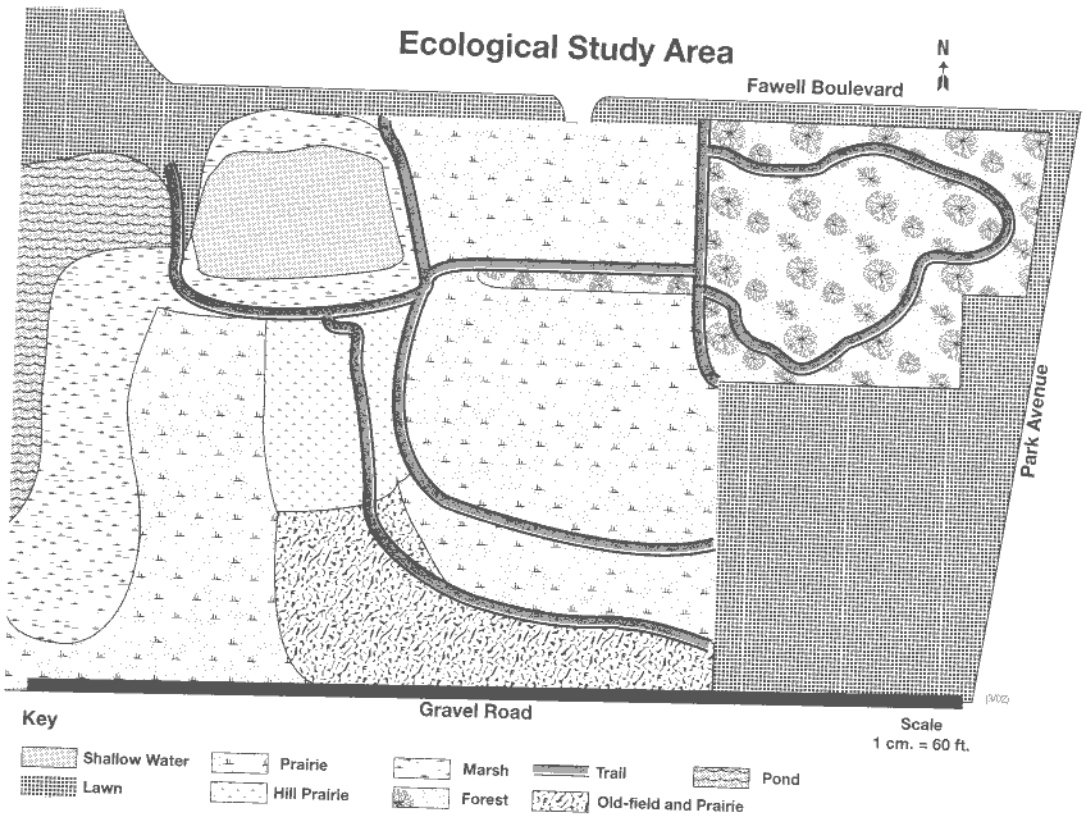
Russell R. Kirt Prairie



Scale 1cm = 50 feet

KEY

- Mesic Prairie
- Marsh
- Old-field and Prairie
- Prairie Beds
- Oak Savanna
- Swale
- Hill Prairie
- Shallow Water
- Retention Pond
- Lawn

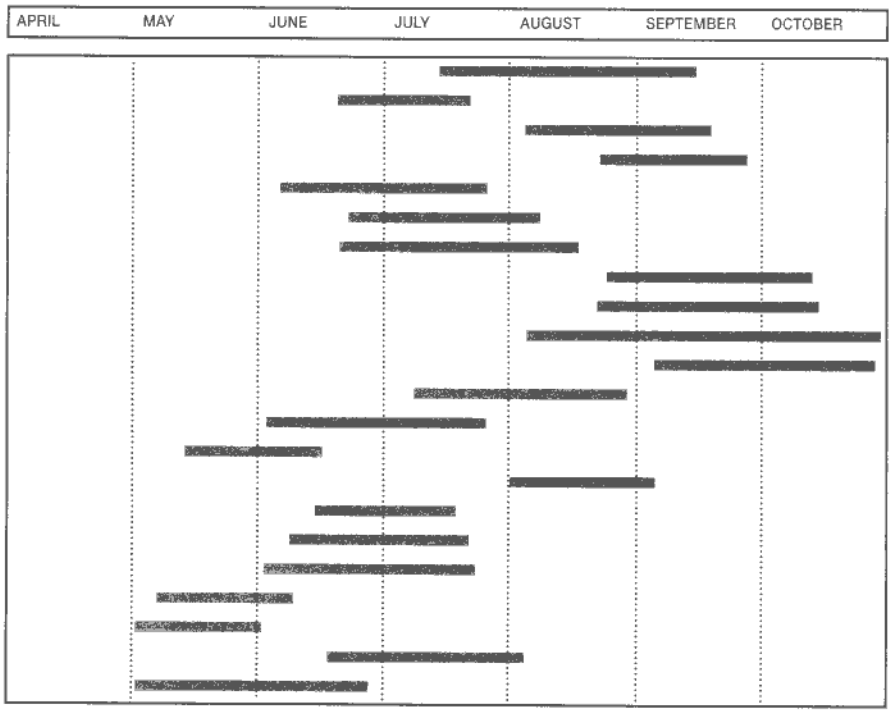


Additional Nature Sites on Campus

In addition to the Russell R. Kirt Prairie, two other campus locations offer opportunities to observe nature. The Ecological Study Area, located in the northeast corner of campus, is a secluded area where you can observe prairie, forest and wetland ecosystems. The B.J. Hoddinott Wildlife Sanctuary, in the southwest corner of campus, is a good place to observe wildlife that visits the area. For additional information on these areas, contact the Natural and Applied Sciences Division, College of DuPage, Berg Instructional Center (IC), Room 3028, (630) 942-2010.

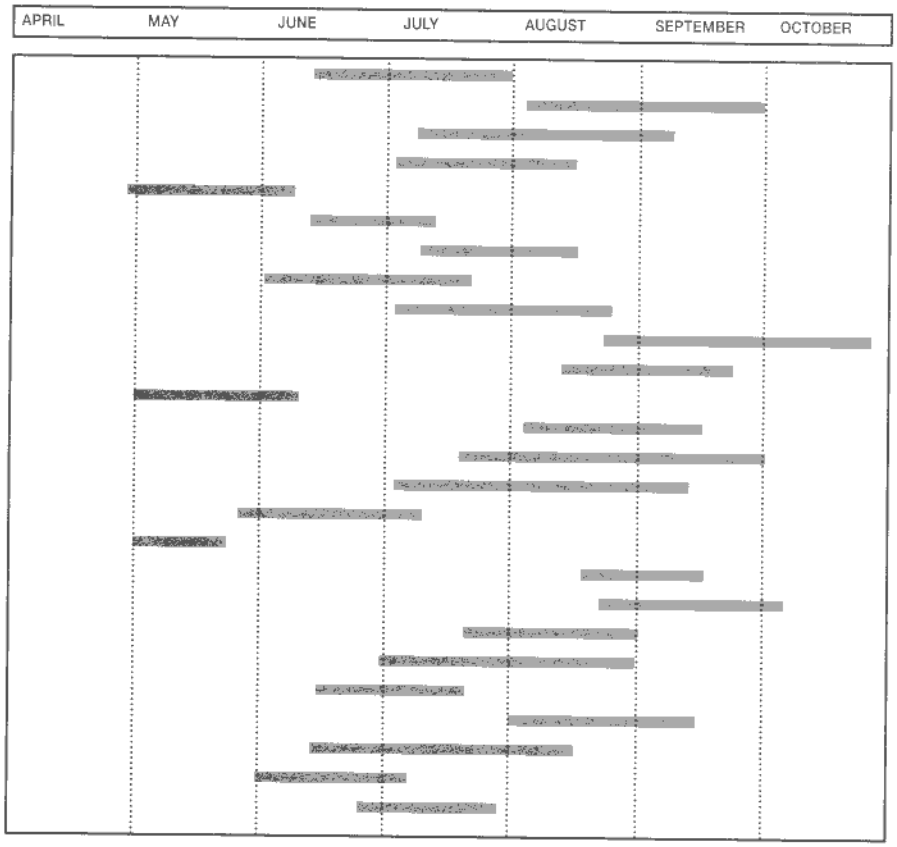
Phenological (Flowering Date) Chart

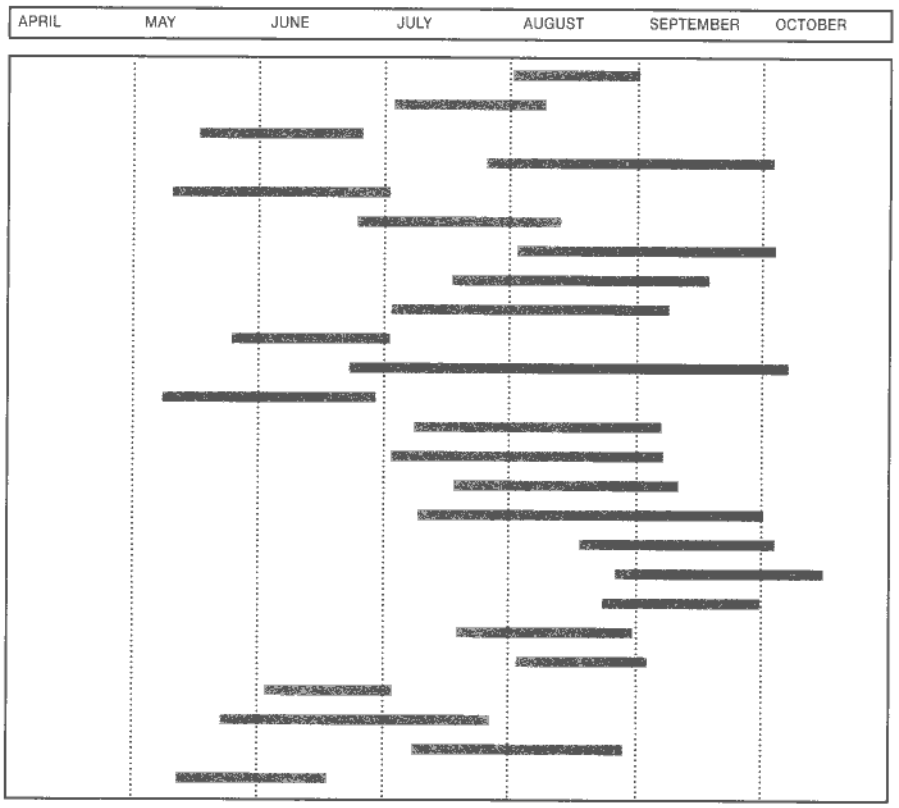
The solid line indicates the average blooming dates of some prairie plant species in College of DuPage's prairies.
This chart does not include the earliest flowering or latest flowering dates during years having a very early spring or a very late autumn.



Allium cernuum, Nodding Wild Onion
Amorpha canescens, Lead Plant
Andropogon gerardii, Big Bluestem
Andropogon scoparius, Little Bluestem
Anemone cylindrica, Thimbleweed
Asclepias sullivantii, Prairie Milkweed
Asclepias tuberosa, Butterfly Milkweed
Aster ericoides, Heath Aster
Aster laevis, Smooth Blue Aster
Aster novae-angliae, New England Aster
Aster sericeus, Silky Aster
Astragalus canadensis, Canadian Milk Vetch
Baptisia leucantha, White Wild Indigo
Baptisia leucophaea, Cream Wild Indigo
Bouteloua curtipendula, Side-oats Grama
Bromus kalmii, Prairie Brome
Cacalia plantaginea, Indian Plantain
Calamagrostis canadensis, Blue Joint Grass
Camassia scilloides, Wild Hyacinth
Carex bicknellii, Prairie Sedge
Ceanothus americanus, New Jersey Tea
Comandra umbellata, False Toadflax

Coreopsis palmata, Prairie Coreopsis
Coreopsis tripteris, Tall Coreopsis
Desmodium canadense, Showy Tick Trefoil
Desmodium illinoense, Illinois Tick Trefoil
Dodecatheon meadia, Shooting Star
Echinacea pallida, Purple Coneflower
Elymus canadensis, Canada Wild Rye
Eryngium yuccifolium, Rattlesnake Master
Euphorbia corollata, Flowering Spurge
Gentiana andrewsii, Bottle Gentian
Gentiana flavida, Yellowish Gentian
Geum triflorum, Prairie Smoke
Helianthus mollis, Downy Sunflower
Helianthus occidentalis, Western Sunflower
Heliopsis helianthoides, False Sunflower
Heuchera richardsonii, Alum Root
Hierochloe odorata, Vanilla Grass
Lespedeza capitata, Round-headed Bush Clover
Liatris aspera, Rough Blazing Star
Liatris pycnostachya, Prairie Blazing Star
Monarda fistulosa, Wild Bergamot
Opuntia humifusa, Prickly Pear
Panicum virgatum, Switch Grass
Parthenium integrifolium, Wild Quinine
Penstemon digitalis, Foxglove Beard Tongue
Petalostemum candidum, White Prairie Clover





Petalostemum foliosum, Leafy Prairie Clover
Petalostemum purpureum, Purple Prairie Clover
Phlox pilosa, Prairie Phlox
Physostegia virginiana, False Dragonhead
Polygala senega, Seneca Snakeroot
Potentilla arguta, Prairie Cinquefoil
Prenanthes aspera, Rough White Lettuce
Pycnanthemum virginianum, Common Mountain Mint
Ratibida pinnata, Yellow Coneflower
Rosa blanda, Early Wild Rose
Rudbeckia hirta, Black-eyed Susan
Senecio pauperculus, Balsam Ragwort
Silphium integrifolium, Rosin Weed
Silphium laciniatum, Compass Plant
Silphium perfoliatum, Cup Plant
Silphium terebinthinaceum, Prairie Dock
Solidago nemoralis, Old-field Goldenrod
Solidago rigida, Rigid Goldenrod
Sorghastrum nutans, Indian Grass
Spartina pectinata, Prairie Cord Grass
Sporobolus heterolepis, Prairie Dropseed
Stipa spartea, Porcupine Grass
Tradescantia ohiensis, Spiderwort
Veronicastrum virginicum, Culver's Root
Zizia aurea, Golden Alexanders

Prairie Plant Identification Books
Kirt, Russell R. 1995. *Prairie Plants of the Midwest: Identification and Ecology.* Stipes Publishing Company, Champaign, IL.

Ladd, Douglas M. 1995. *Tallgrass Prairie Wildflowers.* Falcon Press, Helena, MT.

Runkel, Sylvan T. and Dean M. Roosa, 1989. *Wildflowers of the Tallgrass Prairie: The Upper Midwest.* Iowa State University Press, Ames, IA.

Species Lists
A species list of plants and vertebrate animals found in the College of DuPage's natural areas is available from the Natural and Applied Sciences Division, Berg Instructional Center (IC), Room 3028, (630) 942-2010.

Volunteers
If you would like to volunteer to help maintain College of DuPage's natural areas, please call the Natural Areas Manager (630) 942-4047.

Credits
Illustrations by Roberta L. Simonds and Henrietta H. Tweedie

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For more information on prairies and other natural areas of Northeastern Illinois, visit College of DuPage's Natural Areas web page, www.cod.edu/visitors/prairie/home.htm

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