

NOTE: Check your illustration booklet (Sights of Spring, Summer, ETC) for the drawing to help you identify the different grasses as you see them.

THE WEED COMMUNITY

1. At this point you are standing in the midst of the results of man's destruction of the environment. Over one hundred years ago, farmers pastured their pigs and cattle here. They were followed by heavy machinery used for constructing the nature trail and removing fill from the pond for building the parking lot. Native prairie grasses and wildflowers (called forbs), which can withstand very little soil disturbance or heavy traffic, have been overrun by European and Asian plants. We commonly call these plants weeds.

In one sense, weeds are pioneer plants. They are the first plants to inhabit areas that have been severely disturbed by farming or construction, or by natural disasters such as floods. They help hold bare ground and thereby stop erosion of the valuable soil that has taken thousands of years to build.

The key to most weeds' success is their ability to get an early start on native plants and crops. Weeds also reach maturity quickly and go to seed before most native plants. The common weeds along the trail here are common ragweed, common milkweed, wild carrot and brome grass.

A weed is any plant growing in a place that you do not want it to grow.

EFFECT OF GLACIERS

2. This pond was originally carved out of the prairie by the Wisconsin glacier over ten thousand years ago. The boulders in the foreground are called glacial erratics. They were left behind as glacial debris when huge sheets of ice melted and the glacier retreated north again. Many glacial erratics are present along the nature trail. Some may possibly be lying in one of the ancient channels of the Illinois River. The river was once much shallower and broader than it is today and at one time covered part of what is now Goose Lake Prairie State Natural Area.

Some dirt was removed from the pond area for fill in the parking lot and around the Visitor Center.

BEDROCK

3. The large rock fragments here at the east end of the pond are part of the sandstone bedrock that lies beneath most of the area. These fragments were unearthed when the pond was enlarged to provide fill for the

parking lot. Most of the soil in the area is very shallow, (less than 10 feet), and rock out-crops occur naturally in several areas.

The log cabin across the pond is a replica of the log cabin built by John Cragg in 1834-35. The cabin, nicknamed the "Palace" because of its two-story design, was one of the first in Grundy County. It is believed to have been a station on the Underground Railroad.

High school youth built this cabin during the summers of 1980-81, as a project for the Youth Conservation Corps Program.

COMPARE & CONTRAST WEEDS ON THE PRAIRIE

4. Have you noticed the gradual change to the uniform appearance of the prairie from the ragged appearance of the area surrounding the pond? Instead of a random selection of various plants, notice stands of native grasses. At first these stands are isolated, but they become more numerous farther down the trail.

The grasses, along with the broad-leafed flowering plants known collectively as forbs, make up the community known as prairie. Most of the prairie grasses and forbs are perennial, coming up each year from long-lived roots. These roots may live for decades, even centuries, deep in the soil. Some prairie plants have roots that go down ten feet or more. This allows the prairie plants to withstand the prairie fires and re-grow quickly.

The prairie is a climax community, stable and settled. At this site, it is about 10,000 years old, dating to the last glacier in this part of Illinois.

DRESDEN BLUFFS

5. Looking due northeast from this stake, you can see the Dresden Bluffs. They mark the confluence of the Kankakee and Des Plaines Rivers. The structures in the distance are the Dresden Nuclear Power Plant and the General Electric Midwest Fuel Recovery Plant. To give you some idea of how the prairie can dwarf distances, these two plants are two and one half miles away.

This bluff was formed some 10,000+ years ago by the last glacier in this part of Illinois.

NORTHERN PRAIRIE DROPSEED

6. The gracefully arched bunches of fine-leafed grass seen in this vicinity belong to the Northern Prairie Dropseed. This grass is common in areas of medium soil wetness known as a mesic prairie. Northern Prairie Dropseed grows to just two feet tall, a rather short height for a prairie grass. It usually grows best where the other

prairie vegetation is not too high. As this grass dries up in the fall, the leaves curl into a spiral shape and give the impression of dozens of hanging corkscrews. The seeds of the Northern Prairie Dropseed have a peculiar odor much like buttered popcorn.

TREE INVASION

7. As the trail enters the nature preserve, it passes a large, very dense grove of hawthorns. Hawthorns, in small numbers, were native to the prairie. As livestock was pastured here and fire was eliminated from the grasslands, the hawthorn seedlings were able to compete successfully with native grasses and wildflowers for sunlight and water. The result is evident throughout the park. Hawthorns, and to a lesser extent prairie crab apple, wild plum, and quaking aspen, are beginning to dominate the prairie along the drier ridges.

Dead lower branches on large trees and dead smaller trees are evidence of the controlled prairie burning program carried out at the park. Burning will kill the seedlings of unwanted trees and help bring the prairie to its natural state. Some trees along the trail have been cut down in an attempt to reclaim the more heavily infested areas. This grove of hawthorns will be left to show how fire interacts with and effects older hawthorn groves.

BIG BLUESTEM

8. Big Bluestem is the trademark of the tall grass prairie. Its common name, turkeyfoot, refers to the seed heads, which resemble a bird's foot. It is the dominant grass of prairie soils that are moderately wet but Big Bluestem will grow sparingly in other habitats.

Big Bluestem spreads by underground stems known as rhizomes. This enables "Big Blue" to occupy large areas by forming a dense sod of roots and rhizomes, much like the bluegrass in lawns. If it were to spread only by seed, it would spread very slowly because other grasses and wildflowers produce a dense shade and make competition for light a severely limiting factor for the bluestem seedlings. Its roots form such a tough, tangled sod that its own seedlings cannot penetrate. Big Bluestem is an excellent forage crop which was used to feed livestock. It is far more nutritious than most presently used forage crops.

PRAIRIE POTHOLE

9. The retreat of the Ice Age glaciers left the Goose Lake Prairie area riddled with shallow depressions. These shallow spots, called prairie

potholes, soon filled with water and became wildlife havens.

A pothole's shoreline is usually a dense mass of cattails and reeds inhabited by ducks, rails, herons and marsh wrens. Mink and coyotes prowl the shore looking for meadow voles and careless muskrats. Especially during periods of low water, the relatively slow-witted and slow-footed muskrat is likely to be separated from his home by dry land.

The long and slender mink is capable of entering the muskrat's home through the entrances, but the coyote must resort to tearing into the house from above. This becomes nearly impossible during the winter months when the house and the pond freeze solid.

Bullfrogs and leopard frogs abound in prairie potholes where they often fall prey to raccoons, water snakes and the occasional snapping turtle.

Because of the seasonal fluctuations in the water levels of the ponds, fish survive only in the larger potholes. A pothole that is full to the vegetation line in early June can be bone dry in August. Any creature that cannot migrate over land to find water is doomed by such fluctuations. Larger ponds do support populations of minnows, sunfish, carp and bullheads.

SWITCH GRASS

10. Switch Grass grows in nearly pure stands in several areas along the nature trail. Although it is one of the most common native prairie grasses, it is seldom found away from stands of Big Bluestem, Prairie Cordgrass, or Indian Grass. Switch Grass prefers moist soil and readily occupies slightly disturbed areas along the nature trail and the banks of drainage ditches. At any time during the growing season, Switch Grass can be distinguished from other common prairie grasses by the slight bend in the stem at the stem joints (called nodes) and by its medium green coloration. In August, masses of Switch Grass take on a reddish-brown color as the seeds ripen. When growing under ideal conditions, Switch Grass often reaches a height of six to seven feet.

This grass is found throughout the Bluestem belt of the Eastern and Central Great Plains and on certain prairie sites in other parts of the United States. While Switch Grass is best adapted to lower areas of moist soils, it is winter-hardy and drought-resistant. It can be found growing under a wide range of soil, water, and climatic conditions.

INDIAN GRASS

11. Indian Grass is one of the common native prairie grasses, but is difficult to distinguish from Big Bluestem until it comes into bloom in mid August. At that time, the reddish-brown tassel-like flowers make Indian Grass quite easy to identify. Indian Grass thrives in slightly disturbed areas just as Switch Grass does, but it prefers slightly drier soil. It has very short rhizomes and rarely forms a sod. Indian Grass will grow up to eight feet tall.

Indian Grass is found growing throughout the Bluestem belt of the United States and is one of the most important tall grasses. It is very nutritious and readily eaten as green forage or dry prairie hay.

LITTLE BLUESTEM

12. Although Little Bluestem is the most widespread grass on the North American prairie, it is not very common at Goose Lake Prairie. It is generally a grass of dry soils, river bluffs, and high slopes. It is more common on the western prairies.

Little Bluestem usually develops a root system that can be sixteen feet deep. At Goose Lake Prairie, root growth is limited by shallow bedrock and roots never develop to their full potential. The deep root system enables Little Blue stem to withstand much more severe drought than can Prairie Cordgrass or even Big Bluestem.

Little Bluestem does send out rhizomes, but it will produce a sod only under high soil-moisture conditions. It usually forms solitary bunches two to four feet tall. Some wildflowers that occur with Little Bluestem are flowering spurge, partridge pea, and several species of asters, sunflowers and goldenrod.

This native grass provides nutritious grazing during the growing season and has been used for hay since the time of the first pioneers. At one time Little Bluestem was the most abundant grass in the midlands of America. It is still the most important grass in parts of Kansas & Oklahoma.

PRAIRIE MANAGEMENT

13. The science of ecology deals with the relationship between living organisms, their environment, and each other. Recently, emphasis has been on the study of pyroecology; pyro is the Greek word for fire. Fire ecologists study the effects that fire has on communities of organism.

Scientific research in fire ecology, coupled with historical accounts of the prairie, has shown that tall grass prairie must be burned every few years. Fires

prevent tree invasion and stimulate vigorous growth and seed production in grasses and wildflowers.

Each year in late March or early April, selected areas of the park are set aflame and allowed to burn. Burning at this season of the year does not hurt native prairie vegetation because it does not start growing until mid-to-late April. Birds have not yet started to nest. Little or no wildlife is lost.

The park also carries out a systematic program of both tree cutting and a carefully controlled program of selective herbicide spraying in order to kill some of the more persistent hawthorn trees.

WATER ON THE PRAIRIE

14. The major reason Goose Lake Prairie survived to be preserved was that it was generally far too wet for growing crops. Why then do we find a water pump on a prairie too wet to farm?

Although Goose Lake Prairie was heavily used for pasture, it has very few constant sources of running surface water, as is the case on most prairies. Since much of this area has a very shallow water table, it was a simple matter to construct windmills to bring the water to the surface for the thirsty livestock. The nearly constant daylight winds make the windmill the ideal power source for such a pump.

PRAIRIE CORDGRASS

15. Prairie Cordgrass is one of the most conspicuous grasses on the prairie. It prefers wet areas like this low spot and usually forms dense, pure stands. Cordgrass is by far the tallest prairie grass, commonly reaching heights of eight to twelve feet.

Carefully run your finger along the edge of a leaf. Those tiny sawlike teeth can inflict a painful cut on a bare arm or leg. This explains the sometimes used name of rip-gut. It has also been called marsh-grass and slough-grass because it grows on deep, heavy, wet, lowland soils.

In July the comb-like flowers appear along the top foot of the flower stalk. Cordgrass grows in such dense stands that seedlings can get started only outside the colony.

Cordgrass belongs to a community of plants known as Wet Prairie. This type of plant must be able to withstand prolonged flooding during spring and early summer and prolonged dry spells during the late summer and fall. Some wildflowers that commonly occur with Cordgrass are blue vervain, hedge nettle, swamp milkweed, and water hemlock.

BLUEJOINT

16. Bluejoint is the most abundant grass on the marsh edges and wet prairie lands. Easily recognized by its coarse bluish-green leaves, it is quite unlike the many shades of green displayed by other prairie grasses. Bluejoint often occurs in such dense stands that all other vegetation is excluded. Bluejoint is one of the earliest prairie grasses to bloom, and by early July, the whitish seed heads lend a sharp contrast to the otherwise green hue of the wet prairie.

Large areas of Bluejoint prairie were spared from pasturing because the ground was too wet to plant and the fact that cattle prefer the other prairie grasses. In between stands of Bluejoint, wildflowers such as seedbox, loosestrife, and swamp milkweed can be found along with several species of triangular-stemmed sedges.

PRAIRIE SOILS

17. Every year, Illinois ranks number one in soybean production and number one or two in corn production. This superiority is the result of the state's black prairie soil, which is thick and rich with organic matter. This dark color and high productivity are created when soil is formed under grassland.

Prairie grasses range in height from two to twelve feet and have extensive root systems. Each year, the tops of the grasses and some of the roots die, returning their nutrients to the soil. Prairie soil has a higher mineral content than forest soil because the decaying grasses contain less acid than the decaying matter in forest vegetation. Therefore, less acid is mixed with rainwater and fewer minerals are leached from the soil.

NOTE: For more information about prairie, upcoming programs and other events stop in the Visitor Center or Contact:

Goose Lake Prairie State Natural Area
5010 North Jugtown Road
Morris, Illinois 60450
Phone: 815-942-2899

Goose Lake Prairie

State Natural Area

Interpreters Trail Guide

