

Introduction to Illinois' Prairies

What is a Prairie?

A prairie is a type of grassland. Its name comes from the French word for "meadow." You may have heard of the steppes in Asia, the pampas in South America or the veldt in Africa. These are all types of grasslands, too. Grasslands are the largest habitat in North America.

Prairies usually form on level or smoothly rolling landscapes. These areas have a dry or cold season that kills the plants. Most North American prairies are in locations with a low amount of annual rainfall. The prairies in Illinois receive enough rainfall to support trees, but frequent fires eliminate tree species before they can become established.

How Did the Illinois Prairies Form?

Most of the land in the northern two-thirds of Illinois is flat. The movement of glaciers through what is now Illinois shaped the land. Four major glaciers have covered parts of Illinois during its past, the last about 12,000 years ago. One of the glaciers traveled almost as far south as the location of present-day Carbondale.

Weather conditions in Illinois over thousands of years helped determine that prairies would exist in the state. Climate in prairies is characterized by hot, dry summers and cold winters. When these conditions developed about 8,300 years ago, the tallgrass prairie became a major part of the Illinois landscape.

Types of Prairies

Prairies are a mixture of grasses and forbs. Forbs are plants with soft stems and broad leaves, like wildflowers. Grasses have narrow leaves and soft stems. Grasses are the dominant plants in a prairie. To compete with grasses, some forbs have very deep roots that reach water and nutrients that grass roots cannot. Short forbs bloom early in spring before the grasses start growing, while taller forbs bloom later in the season.

Prairies are classified as wet, mesic or dry. Wet prairies hold a lot of water in the soil. Plants like cordgrass, mountain mint and New England aster grow here. Mesic prairies are moist through much of the growing season. Big bluestem, black-eyed Susan, compass-plant and rattlesnake master are some of the plants of mesic prairies. Dry prairies include the hill prairies and sand prairies where the soil drains rapidly. Little bluestem, leadplant, purple prairie clover and rough blazing star can be found in dry prairies.

Fires

Fires occurred often on the original Illinois prairies, and because the ground was flat and unbroken by roads or other objects, they moved quickly and covered huge areas. Fire is important to prairie ecosystems. It removes the dead stems and leaves of prairie plants without killing the roots. The plants grow back from their roots or seeds. It returns nutrients to the soil quickly. It stops the growth of shrubs and trees by killing the living parts above ground. These plants cannot grow back as easily from the roots as prairie grasses and forbs. Today, prescribed fire is used as a management tool for prairies.

Distribution of Illinois Prairies

In 1820, Illinois had 22 million acres of prairie land and 14 million acres of forests. Prairies were mainly in the northern two-thirds of the state with forests in the southern one-third. All but nine counties had large areas of

prairies. In central Illinois, trees could only be found in scattered sites called “prairie groves” or along waterways.

By 1900, most of Illinois’ prairies were gone. The majority of these lands were converted to agricultural practices. By 1978, less than 2,300 acres of high quality prairie remained in the entire state. Most of the undisturbed prairie sites today are found along railroad rights-of-way, in pioneer cemeteries and in places that are not suitable for farming.

Prairie Plants

When settlers arrived in Illinois, many believed the prairie soil was poor because no trees grew on it. That belief was wrong. The soil is very rich in nutrients that plants need to grow. Bacteria and fungi break down dead organisms to return nutrients to the soil. Fire ashes contain plant nutrients, too. Grasses grow so densely on the prairie that the soil is packed with their roots. This prairie “sod” helps to conserve both soil and water. It acts like a sponge with rainfall. Some settlers even used sod to build their homes.

Hundreds of plant species live in prairies. Big bluestem is our state prairie grass. It may grow to a height of 12 feet! Compass-plant has leaves arranged in a north-south orientation to absorb the maximum amount of sunlight. It may grow 10 feet tall! Rattlesnake master was used to make a drink as an antidote to rattlesnake venom. Pioneers believed that if this plant was present, then the prairie rattlesnake, or eastern massasauga, would also live in the area.

Prairie Animals

Prairie animals need to be able to withstand changing weather, danger from predators, dry conditions and other hazards, like fire. To meet these challenges, many prairie animals are able to burrow underground, run fast, fly or blend in with their surroundings. Prairie birds often nest on the ground.

The monarch butterfly, our state insect, lives on the prairie. The female lays her eggs on milkweed plants that the larvae use for food after they hatch. The monarch is a migratory species. The sedge wren builds its nest in prairie grasses. This tiny bird eats insects and spiders that it finds in grasses or on the ground. The thirteen-lined ground squirrel eats prairie plants and insects. It lives in a burrow in the soil.

Endangered and Threatened Species of the Prairie

Because much of the prairie has been destroyed, many of the organisms that depend upon it for their habitat needs (food, water, shelter and space) have been forced to move to new habitats or have become very scarce in the state. Did you know that bison and elk once lived in Illinois? They were the largest mammals of the prairie. Many were killed by pioneers for food and hides. Others lost their habitat to agriculture and settlement. These animals were extirpated from the state. They no longer live in Illinois but can be found in the wild in other places in the world.

Today the list of threatened and endangered species in Illinois includes plants, insects, amphibians, reptiles, birds and mammals that are all prairie residents. Without the large, continuous grasslands, these organisms will always find survival to be difficult. Prairie restoration efforts will help keep these species alive.

Restoration

It is not possible to return to the days of vast expanses of prairie in Illinois. They are gone forever. Today, we need to protect, manage and learn from the prairie remnants that remain, and restore prairie where we can.

There are many reasons for entering into a prairie restoration or landscaping project, including the creation of wildlife habitat, aesthetics, education or the sheer enjoyment of prairie plants. Unlike gardens where annual flowers are planted to bloom for one year, prairie plants require about three years to develop from seed. There are many places where prairie plants grown from seeds or roots can be purchased to accelerate the process. Once established, prairie sites can be maintained with a minimal amount of effort and expense for many years. These native plants are well adapted to withstand dry conditions and do not need to be watered regularly like many nonnative annual plants. The initial investment yields beautiful and long-lasting dividends.

Celebrate the Prairies

The third full week in September is celebrated as "Prairie Week." This annual event was created by a law passed by the state legislature in order to promote awareness of and appreciation for prairies.

Where Can You Visit a Prairie?

While prairies are ever-changing and beautiful throughout the year, late summer and early fall are especially good times to visit a prairie. Several state parks and recreation areas feature prairies and prairie restorations. Visit the IDNR Web page for directions and visitor information.

- Fults Hill Prairie (Monroe County)
- Goose Lake Prairie (Grundy County)
- Henry Allen Gleason Nature Preserve in Sand Ridge State Forest (Mason County)
- Illinois Beach State Park (Lake County)
- Sand Prairie-Scrub Oak Nature Preserve (Mason County)
- Jim Edgar Panther Creek State Fish and Wildlife Area (Cass County)
- Weldon Springs State Park (DeWitt County)

More Information

The following Web pages provide more information about Illinois prairies.

<http://www.inhs.uiuc.edu/~kenr/tallgrass.html>

<https://www.dnr.illinois.gov/education/Pages/EduPrairies.aspx>

Resources

Resources about prairie restoration and wildlife habitat development can be found on the IDNR Publications page at <https://www.dnr.illinois.gov/publications>

