

construction and firewood. Settlers originally thought the soil was poor because no trees grew on it. It actually was (and still is) one of the most fertile soils in the world. But the dense sod was almost impossible to cut through with their plows. That changed in 1837 with the invention of the self-scouring steel plow. Within 50 years most of the prairie in Illinois was converted to cropland. Along with agriculture came the development of towns and cities where prairie used to be.

As the prairies disappeared, so did many of the animals that depended on them. Animals that needed large ranges to survive felt the effect first from hunting as well as from habitat loss. As they disappeared so did their predators. Many smaller mammals and birds were able to adapt to agricultural land, but as it has been increasingly converted to row crops with less pasture, hayfield, fence row, and roadside vegetation they are feeling pressure also.

Prairies Today

Two hundred years ago prairie covered 60% of Illinois. Only 1/100th of 1% of that original prairie remains. Many species of prairie plants and animals are endangered or threatened.

Much of what remains of the prairie are small remnants in old cemeteries, along railroad right-of-ways, or in areas not suitable for cultivation or development. Some degraded remnants have been restored, and new prairies of all sizes (mostly black soil prairies) are being constructed by both public and private entities. Remnants can be a source of seeds of plants adapted to local conditions which can then be used for reconstructions in the area.

Cemetery prairies may be invaded by ornamental plantings or bouquets left on the graves. All remnants are susceptible to encroachment from the perimeter by invasive species and herbicide drift and will degrade without human intervention.

The original prairie has disappeared, in Illinois and elsewhere, but in a sense the land is still true to its original nature. Much of the tallgrass region grows corn, a tall grass, while wheat is grown in the mixed grass regions, and cattle roam the shortgrass prairie instead of bison. But the original prairies were far more diverse, supporting thousands of species of plants and animals, and holding tight to the rich soil they had produced.

The Importance of Prairies

Prairie formed our deep fertile agricultural soils and is still building soil today. It is a reservoir for genetic diversity with plants and animals that evolved under our conditions. It provides food and habitat for wildlife and pollinators. It prevents erosion and runoff, and filters water.

Prairie is a native ecosystem, a part of our heritage and history. Prairies are also good for the soul, peaceful places to reflect and wander, offer stress relief and solitude. If you look closely, there is a flurry of activity engaging all the senses with the color and texture of the plants, the sound and motion of the wind, and the sound and movement of thousands of insects and birds.

Looking for Prairies

We can never experience the vast expanses the original settlers did, but there are still places where you can get an idea of what the prairie was like. Many small remnants are being preserved - the Illinois DNR has a [list of Nature Preserves](#), many of them prairies.

[Nachusa Grasslands](#) and [Midewin National Tallgrass Prairie](#) are examples of larger areas that have been developed by combining smaller remnants with reconstructed prairie. This may give a better feel for the "endless prairie."

Prairies are at their best in late summer and early fall. Many plants start growth later in the season so there is not much to see in spring unless you look closely - then you may find all sorts of treasures.

Look for guided tours in your area to help understand prairie sites better. Seek out knowledgeable people to help you learn more and suggest places to visit.

It's not possible or even desirable to return to what we had before, but we can protect what is left and restore and reconstruct where appropriate. Today prairies cannot survive without human intervention and ongoing maintenance.

As more people become interested in the plight of pollinators there is more concern for some of these prairie plants and habitats. We can not only honor our heritage but learn from what was here before.

For more information on gardening please visit:
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Prairies in the Prairie State



Garden Tips from Knox County Master Gardeners & Master Naturalists

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Illinois is called the prairie state, but many have never seen a prairie and don't know exactly what one is. Grasslands are found around the world and consist of grasses and flowering plants (forbs) with few or no trees, on flat or gently rolling terrain, often in the interior of land masses where rainfall is too low to support forests and weather is often extreme. North American grasslands are referred to as prairies, from the French word for meadow. Prairies include not only plants but the animals that have evolved with them and depend on them.

History of Prairies

Illinois prairies are a relatively recent ecosystem. They formed after the last of the glaciers retreated about 12,000 years ago. Prairies further west and south developed much earlier in areas not covered by the glaciers. The glaciers were followed by a period of tundra and then forests. As the climate gradually became drier and warmer, prairies began to advance from the west with trees becoming restricted mainly to river valleys.

At one time prairies covered the continent from southern Canada to Texas, and from the shadow of the Rocky Mountains east to Indiana and beyond. Tallgrass prairies grew in the eastern portion of the area where moisture was more plentiful, transitioning to mixed grass and then short-grass prairies as one moved further west and available moisture decreased. Most of the northern 2/3 of Illinois was part of the tallgrass prairie, which extended west as far as the eastern portions of the Dakotas, Nebraska, and Kansas.

Illinois was part of the "prairie peninsula" which was surrounded by forests on the north, east, and south, and at one time extended as far east as western Pennsylvania. Fluctuating climate caused the border to advance and retreat over the years. The transition could be abrupt or gradual. Climate has changed again in the last 1000 years, becoming cooler and wetter. Illinois currently receives enough rainfall to support forests, but prairie fires prevented them from becoming established.

The Elements of a Prairie

The prairie ecosystem was a result of interactions between the plants, animals and climate. Prairies developed because of climate and were

maintained by fire and grazing as well as by climate.

Plants: We often think of prairies as a boring expanse of grasses, but a variety of plants are found on the different types of prairies and at different stages of prairie development. Most of the plant mass is grasses but the flowering plants provide more diversity. Young prairies contain many annuals, biennials, and short-lived perennials, which then give way to other plants. Many plants in a mature prairie are very long-lived, with few new plants able to take hold.

Many of the taller plants in the prairie are warm season plants - they begin growing later in the season after the soil has warmed. This allows shorter forbs to grow and bloom before they become overwhelmed. In early spring the prairie is much shorter and may not look like much from a distance, with flowering plants and grasses getting taller as the season progresses.

Prairie plants are adapted to survive weather extremes and the fires that often moved across prairies. Deep roots allow the plants to obtain water in times of drought. Roots may extend further down in the soil than the height of the plant. Many plants have narrow leaves which reduce water loss. Growing points are located just under the soil surface where they are not damaged by fast moving fires or grazing animals.

Prairie plants are largely responsible for the deep rich soil we enjoy today. The deep roots helped loosen the soil and added organic matter as they decomposed.

A few examples of prairie plants include

Grasses:

Big Bluestem	Little Bluestem
Indian Grass	June Grass
Prairie Cordgrass	Prairie
Sideoats Grama	Dropseed
	Switchgrass

Flowering Plants:

Asters	Bee Balm
Black-eyed Susan	Blazing Star
Blue Flag	Cardinal Flower
Compass Plant	Coneflower
Coreopsis	Culver's Root
Goldenrod	Great Blue Lobelia
Ironweed	Joe Pye Weed
Leadplant	Milkweeds
Mountain Mint	New Jersey Tea

Partridge Pea	Prairie Clovers
Prairie Dock	Prairie Gentian
Rattlesnake Master	Rosinweed
Shooting Star	Spiderwort
Sunflowers	Wild Indigo
Wild Lupine	Wild Quinine

Animals: Prairies supported a wide variety of animals by providing food and cover for them. Animals as well as plants had to be able to survive extreme conditions.

Bison are symbolic of the prairie, with a population of up to 60 million at one time. They were more common further west in the mixed and shortgrass prairies, but were also found in Illinois along with elk and large predators such as wolf and cougar. The bison provided Native Americans with food, clothing, shelter, and tools.

Large animals kept grasses in check by grazing (allowing forbs more water and light) and contributed fertilizer though their waste products. Their trampling opened up space for plants that preferred disturbed soil.

Other mammals included deer, coyote, fox, badger, skunk, rabbit, ground squirrel, gopher, mice, shrews, and weasels. Many smaller animals burrowed underground to escape predators and prairie fires.

A wide variety of grassland birds, many nesting on the ground, fed on seed from the grasses or on insects. Hunters such as eagles, hawks, and owls preyed on small mammals.

Over 3000 species of insects pollinated plants, ate plants, and were a food source for other animals. Some required specific plant species to complete their life cycle.

Fire: Fire was common on the prairie, moving rapidly and covering large areas, and was one of the major forces that helped maintain the prairie. Trees were much more susceptible to fire than prairie plants, so periodic fires helped keep the forest at bay. Fire releases nutrients, produces black ash that accelerates soil warming in spring (helping early flowering species), and removes dead plant debris allowing light, moisture, and heat to reach the soil surface.

Some fires were probably started by natural causes, but Native Americans also used fire as a tool to drive herds in a certain direction for hunt-

ing, to promote fresh vegetation to attract game, as a weapon in warfare, or to increase visibility or safety and make travel easier.

The Different Types of Prairies

While all of Illinois is in the tallgrass prairie region, prairies in Illinois are classified into six types depending on the soil on which they are based. Some types are further classified by the amount of available soil moisture as dry, mesic (moist but well-drained), or wet. Dry prairies are usually found in areas with porous soil or on hilltops with wet or mesic in flatter areas or bottomlands. There may also be specialized areas such as prairie groves, sloughs, and marshes within a larger prairie.

Black Soil Prairie: This was the most common type in Illinois with deep fine-textured soils, and once covered much of central Illinois. It is rare now because it is such good farmland. Can be wet, dry, or mesic.

Sand Prairie: Coarse textured soil, often found along lakeshores and rivers. Often dry but can be mesic or wet depending on terrain.

Gravel & Dolomite Prairie: Usually slightly to highly alkaline. Occurs in rocky ground or where bedrock is less than 5 feet below the surface. Rare - found scattered mainly in northern Illinois.

Hill Prairie: Often found on steep, exposed, south or west facing bluffs overlooking floodplains. Usually dry.

Shrub Prairie: Rare, usually acidic sandy soil. Shrubs dominate the plant community.

Savanna: Not a type of prairie, but consists of prairie vegetation with widely scattered trees, mainly oak, that can survive occasional fires.

Prairies After Settlement

Pioneers traveling from the eastern forests encountered a scene unlike anything they had ever seen before. Some were awed by the vast expanse of the great "inland sea," but many also found the prairie frightening with extreme weather, grass so tall you couldn't see over it, frequent fires, hordes of insects, and no trees to serve as landmarks.

Settlements were first built along rivers and at the edge of the prairie. Trees were needed for