

Restoring Your Texas Native Prairie

Native prairie restoration can be a rewarding activity with benefits ranging from increased water quality to greater diversity of wildlife. Various approaches can be utilized based on available resources. See the reference section for additional research.

Certifying Your Texas Native Prairie Remnant

Most large parcels of Texas native prairies have been destroyed by turning the rich soil into cropland, urban development, or mismanaged rangeland.

However, Texas contains thousands of small acreage parcels that have remained in native prairie. Texas Master Naturalists has created a project to identify, recognize, and potentially certify such a parcel as a Texas Native Prairie Remnant.

Certification is granted after a site inspection, plant inventory, and historical perspective has been collected and analyzed. Recipients receive a mounted highway sign acknowledging the site.

For more information contact the Texas Master Naturalists – Gideon Lincecum Chapter:

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Native Prairie Remnants



Education Preservation Stewardship

A Project of the Texas Master Naturalists

Texas Native Prairies – Threatened Habitat

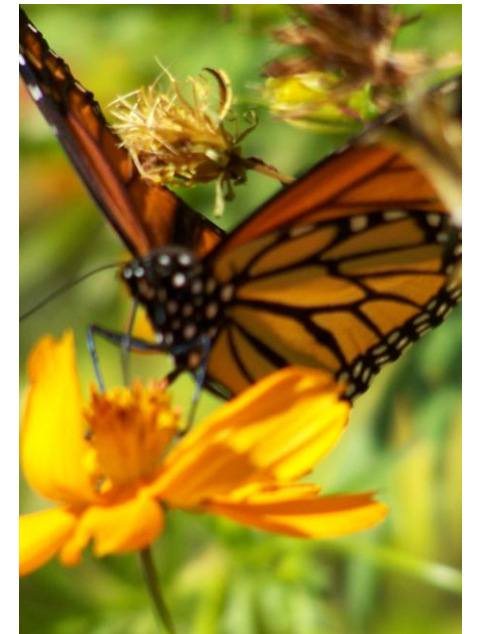
The North American Prairie is one of the most endangered ecosystems on Earth--perhaps even more endangered than the South American Rainforest. Up to 99.5 percent of the prairie has been destroyed in just the last 125-150 years.

The area known as the Great Plains was once the largest grassland prairie on earth and covered over a quarter of the continental U.S. along with portions of southern Canada and northern Mexico. The prairie stretched from the Rocky Mountains eastward for over 800 miles and extended more than 3,000 miles from north to south.

The grasslands of North America began to form about 20 million years ago. Created from sediment washed out of the Rockies over millions of years, the plains also included rubble from glaciers and windblown deposits of silt, sand, and clay. All of this rested on the bed of what was once a shallow inland sea. The Rocky Mountains also intercepted the flow of moist air from the Pacific and dried out the interior of the continent, producing a climate that favored grasses over trees.

Grasses are the basic fabric of the prairie since they are uniquely adapted for life in the open. Most plants grow from their tips to add length. By contrast, grass grows from its base, emerging from a bud at, or just under, the soil where the sensitive growth tissues remain protected from the elements and from grazing. In periods of extreme heat or cold, grasses become dormant. Roots of some native grass species extend 10-15 feet into the soil and can extract moisture from deep underground during dry periods.

Although prairies may be grasslands in terms of sheer volume of vegetation, about three out of every four plant species found there are wildflowers.



Monarch Butterfly on Plains Coreopsis

Prairie Management

BISON/COW

Historically, large herds of bison, sometimes as large as 1,000 animals, ranged the prairies and savannahs, where they would consume quantities of grasses, trample organic matter, and then distribute seed into the disturbed soil. The grazing pressure was not continuous, and the large herds would move on allowing the grassland to recover. Today, cattle ranching with rotational grazing and haying provide a similar impact.



Prescribed Native Prairie Burn

FIRE

Fire was an important element in both forming and maintaining the prairie. In the eastern prairie, there is enough rainfall to support trees as well as grasses. Fire helped the tallgrass prairie by retarding tree and shrub growth. Since prairie plants evolved with fire, their deep roots remain unharmed and in a short time, the plant will grow again. The ashes then act as fertilizer.

Historically, burns occurred with regularity in Texas, usually in the summer. In natural prairie ecosystems, fire not only gets rid of accumulated thatch, it also helps reduce woody plant invasion and stimulates the growth of many native grasses and wildflowers. Timing of burns and the choice of a cool burn versus a hot burn will have different effects on species composition.

A prescribed burn is a useful and necessary maintenance tool since the prairie plant community evolved under a periodic fire and grazing regime. Conducting a safe prescribed burn requires expertise and planning. Be certain to check local regulations and permit procedures.

WATER

Native prairies act as exceptional water filtration systems. Water quality improves as water is filtered through the depths of the native prairie, rather than running off into a stream, lake, or sewer. Pollutants are filtered out, and local aquifers are recharged. An additional benefit is that the soil is stabilized, and erosion is reduced.



Plant Identification

NATIVE PRAIRIE FACTS

Tallgrass prairies once covered over 400,000 square miles of North America. Less than one percent remains.

America's grasslands are home to more than 7,000 species of plants and animals.

A 70% decline in grassland bird species and populations is due to the drastic decline in native prairie habitat.

A good native prairie would contain over 250 species of vascular plants that would play host to a variety of microbotic and macrobotic organisms.

Forest regions contain about 20-50 tons of topsoil per acre. An acre of tall grass prairie contains as much as 250 tons of topsoil.

Highly diverse mixed stands of native prairie plants are 240% more effective at CO₂ sequestering than a single grassland monoculture and more effective than trees!

Prairie species adapt to natural rainfall conditions from flooding to drought.

REFERENCES

Caesar Kleberg Wildlife Research Institute

<http://ckwri.tamuk.edu/>

Ladybird Johnson Wildflower Center

<http://www.wildflower.org/>

Natural Resources Conservation Service

<http://www.nrcs.usda.gov/>

Texas AgriLife Extension Service

<http://tce.tamu.edu/>

Texas Parks and Wildlife Department

<http://www.tpwd.state.tx.us/>

Native Prairies Association of Texas

<http://www.texasprairie.org>

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