NOT JUST GRASS. WHAT IS A PRAIRIE?

A PRAIRIE IS A DIVERSE ECOSYSTEM

of mainly native grasses and flowering plants with prairie wildlife, soil, geology, and fire playing important roles. More than 100 plant species can occur in a prairie of less than five acres. They are one of the most recently developed ecosystems—formed about 8,000 years ago. The word ‘prairie’ generally refers to grasslands in North America, especially the tallgrass prairie that extended from southern Canada to San Antonio. About one percent of the original North American prairie still exists. Texas was once three-quarters prairie, savanna and other types of grasslands.

The “big four” grasses of the tallgrass prairie are big bluestem, little bluestem, Indiangrass and switchgrass. These grasses can grow as tall as ten feet in the midwestern prairies. The soil underneath a prairie is a dense tangle of roots and bulbs. Some prairie plants put out roots that extend as deep as 12 feet below the soil surface. Each year some of the roots die. Large quantities of organic matter are added to the soil as roots die and decompose making a fertile soil. These deep, rich soils were why prairies were plowed for cropland.

The pastures you see when driving down the highway generally have been grazed more or less continuously since settlement times. Livestock will eventually graze all but the inedible plants. Fields that have been plowed are usually replanted with a single crop and not the native plants which were here in pre-settlement times. These days, pastures are often planted in one species of grass introduced from other parts of the world, like Johnson-grass, bermudagrass and King Ranch bluestem.

When seeking a native prairie, look for a field of grasses and wildflowers that seems to have a lot of different kinds of plants. In a good quality prairie, different kinds of grasses abut each other in a mosaic of textures and subtle color changes as one population of prairie plants yields to another. Get the free booklet *Know your Grasses* from your County Extension Agent. Little bluestem is a common indicator of many native grasslands in Texas, and sideoats grama (our state grass) is another.

Examine the land, and notice its features. Has it obviously been plowed or have contours bulldozed into it? Is it a monoculture of plants or a field of crops in rows? Native prairies can have geologic features like the gilgai or potholes found in Blackland soil. Another feature found on native prairies are mima or pimple mounds.

The tallgrass prairie is a proud part of our heritage. It is the landscape that the pioneer settlers experienced. And it is invaluable to future generations. How can we speak of the tallgrass prairie in schools and have none to show our children? Work with NPAT to restore and conserve them. Learn more at texasprairie.org
THE IMPEERILED TALLGRASS PRAIRIES OF TEXAS need our help. Of the original 20 million acres of tallgrass prairie, less than 1% now remains. Why should we care?

OUR NATURAL HERITAGE: The tallgrass prairie's rich soils have been responsible for our nation's agricultural success. But it has also been their undoing. More than 99 percent of this ecosystem experienced by early Texans has been plowed for croplands or fundamentally altered through heavy grazing or other land management practices. This has made tallgrass prairie the most-endangered ecosystem in North America. An additional threat is now due to family lands being sold for development.

ABOVE GROUND: Native prairies are composed of a highly diverse set of flowering plants and grasses. Many of these plants are not found anywhere else. A high-quality prairie can have hundreds of plant species—even more diversity than a rain forest, on a smaller scale.

Native prairie remnants provide local seed sources for future restoration projects. Protecting local Texas ecotypes of native plant seed sources is critically important for restoration efforts. Because actual remnants are so rare, restorations become very important to prairie conservation—even if they provide just a snapshot of an actual remnant.

WILDLIFE: The rich native plant communities of the tallgrass prairies provide food and shelter for wildlife. Grassland birds, like quail and meadowlarks, are experiencing the greatest declines of all bird groups due to the loss of our prairies and grasslands.

Recent studies show a decline in insects like the Monarch butterfly, bees and other pollinators. Pollinators are needed for their service to agriculture. These native insects thrive on the diverse plant life of the prairie ecosystem. In turn, insects provide food sources to prairie wildlife and help pollinate the flowering plants of the prairie.

Deep prairie soils allow burrowing animals, like prairie dogs (a keystone species) to survive in underground tunnel systems. There are lots of burrowing animals in prairies!

BELOW GROUND: Prairies aren’t tall like timberlands, and can be quite short at certain times of year. They have actually been called upside-down forests because much of their mass is underground. Prairie roots form a fibrous network reaching many feet below ground. These deep roots make prairies very drought resistant and adaptable to climate changes.

WATER: Because of these deep, fibrous roots, native grasslands protect the watersheds in which they occur. They increase water infiltration and reduce erosion—helping to slow down and absorb floodwater. This also reduces sediment and pollution from runoff, and increases water quality.

THE CARBON QUESTION: It’s back to the soil. Unplowed prairies store lots of carbon in the ground, and this is being studied. While grasslands store carbon differently than forests, they can be a more reliable carbon sink. Climate change is impacting our forests with droughts and insect damage. When they burn, they actually become carbon sources.

Help us save Texas prairies for future generations!