

NATURE DETECTIVES

Fall 2001

Stamping With Grass

Though grass is common, all around us everyday, it can inspire us to draw and write and appreciate nature. The grassy environment has inspired poems, songs, stories, art and even stamps. The US Postal Service was inspired by the grasslands to issue a special souvenir sheet of ten stamps entitled the Great Plains Prairie. The ten stamps together show a beautiful illustration of who lives above, below and on the prairie. The Great Plains Prairie stamp collection was released in April and is now available at the Post Office for \$3.40 (ten stamps).

For more information on the prairie stamps, visit the U.S. Postal Service web site: www.usps.com. Another interesting website to explore is the National Wildlife Federation site: www.nwf.org.
Happy stamping.

Pull Out and Save

GREAT PLAINS PRAIRIE

THIRD IN A SERIES



Big Bluestem

N A T U R E O F A M E R I C A

And the Green Grass Grew All Around...

Vast treeless grasslands puzzled the first white men who explored the land that would later become Colorado. Many thought land with so few trees and shrubs must be a desert. They held little hope that people or animals could live here. Soon it was discovered that these large grasslands, called prairies, were not desert. Certainly they do not get as much rain as the eastern part of our country, and trees did not have enough water to grow, except along streams and rivers. But special grasses and wild flowers are suited to the hot, dry, windy climate. Before long, the early pioneers discovered that the grasses were nutritious for their cows and other livestock. By 1870, countless livestock were eating the grasses of Colorado.

People also discovered that they could plow the prairie and grow crops. Before long most of the native grasses were gone, either because they were over-grazed or plowed under. Today, many people value native grasses and hope to see them thrive again on the dry soils of Colorado.

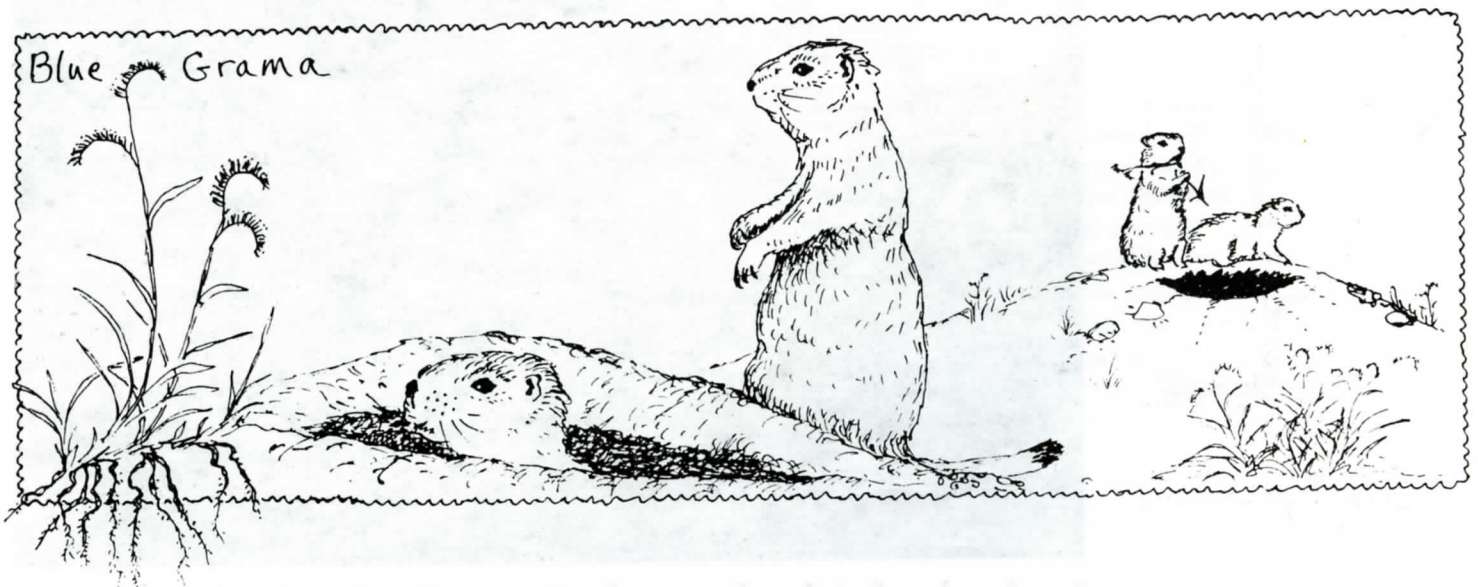
Tall Grass, Mid-grass, Short Grass

East of Colorado where there is more rain, the pioneers found grass growing so tall children and horses could get lost in it. In Colorado, we have a little tall grass, but only where it can get enough water. One example of tall grass is big bluestem. It only looks blue in the spring. In the fall it turns a pretty reddish shade and has a seed head that looks like a turkey foot.

Some areas have enough moisture for mid-grass to grow. Mid-grass is about knee-high. Needle-and-thread grass (Can you guess why it is called this?), and western wheat grass are two mid-grasses that grow in Colorado.

Short grasses are the grasses that stand up to the worst conditions that Colorado weather can bring: hail, wind, bright sun, freezing cold, tiny amounts of rain. The most common short grasses are blue grama grass and buffalo grass. They survive by growing very long roots that go down in the ground six feet or more. They also grow short roots right under the soil that can immediately soak up water from the briefest of rain showers.

NEEDLE- & THREAD GRASS SEED



Short Grass Survival

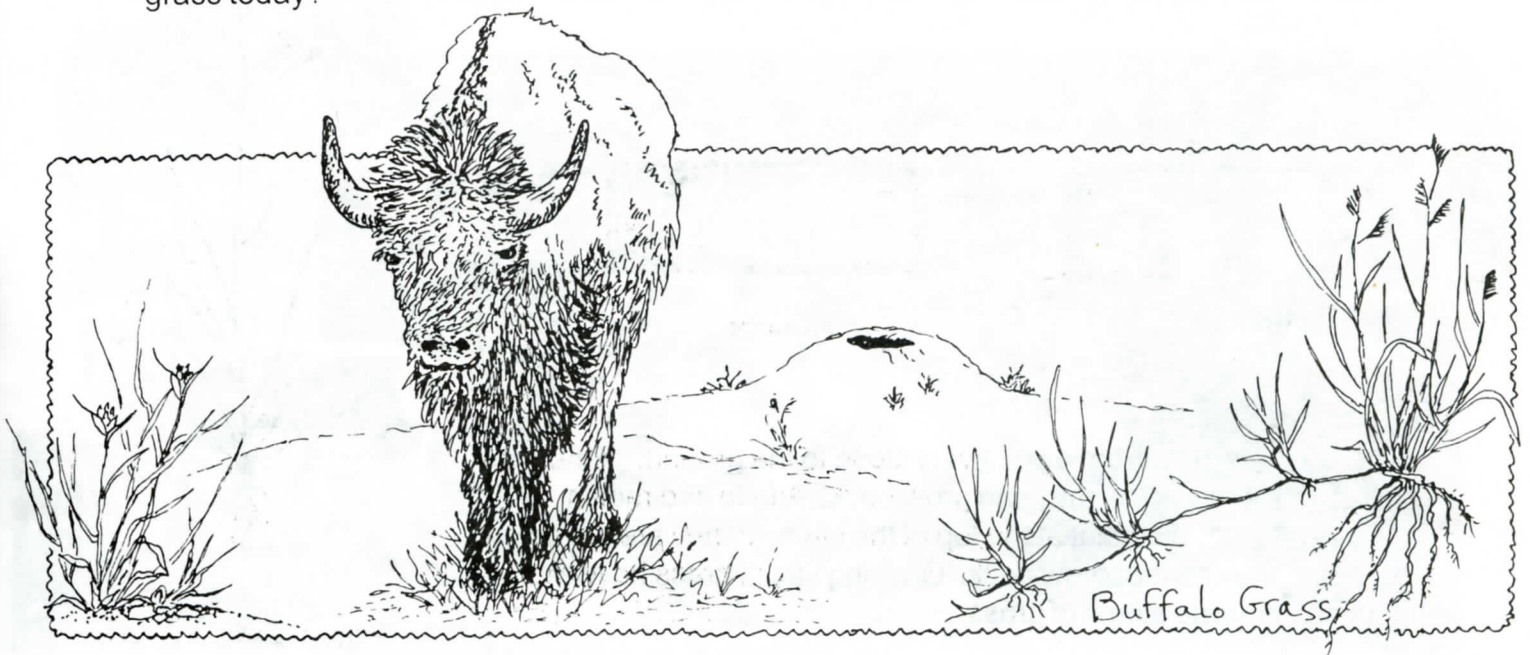
Grass is shaped to survive hot sunny days. The straight-up leaves receive the most sunlight during the coolest parts of the day, the morning and evening. The least amount of sunlight falls on the leaves during the hot mid-day when the sun is directly overhead. The prairie winds help grasses make seeds because short grass flowers are pollinated by the wind. Since there is lots of wind on the prairie, these grasses are pollinated the easiest way possible. Grass buds under the soil allow the plants to survive freezing weather, drought, or fire.

Sometimes wild fires race across the prairie. Lit by lightning, the fires spread quickly through dry grass. The fast fires burn only the tops of the grasses. The unharmed roots under the soil soon send up new shoots. The fire benefits the grasses by returning nutrients to the soil in the form of ash and by getting rid of old grass so sunlight can reach the new shoots.

Prairie Dogs, Bison, and People

Prairie dogs and bison lived in great numbers on the short grass prairie. Bison liked prairie dog towns. They rolled in the soft mounds of soil at the prairie dog holes. This was not such a bad thing for the prairie dogs because after the bison had smashed the mound, buffalo grass often sprouted there. And, buffalo grass is a favorite meal for prairie dogs. Prairie dogs keep plants around their burrows short so they can see enemies coming easily. And, bison like to eat the short, rodent-cropped grasses. Perhaps chewed-off grass tastes best to them. Plant scientists know that the prairie-dog-clipped grass quickly re-grows. Actively growing grass is high in nitrogen, and nitrogen is a nutritious element that is good for bison health. Thus, prairie dogs and bison co-existed well on the prairie. Now they are mostly gone and people live on the prairie in great numbers.

People and bison and prairie dogs have something else in common besides liking to live on the prairie. We all eat grass. Of course people don't usually eat wild grasses. We eat grasses that have been developed over the decades as food plants for people. These grasses include: wheat, corn, barley, oats, rice, rye, and sugar cane. Have you eaten any grass today?



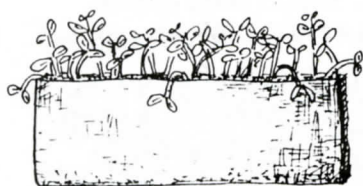
An Experiment to Discover How Grass Survives Being Eaten

You will need:

2 planting pots or trays
potting soil
grass seeds
sprout seeds (such as alfalfa or radish)
scissors



GRASS



SPROUTS

1. Fill the pots or trays with the potting soil and sprinkle sprout seeds on top of the soil in one pot. Sprinkle grass seeds on top of the soil in the other pot. Water the soil until it is evenly moist. Put the pots where they will have some light. Watch as the seeds sprout and the plants begin to grow. Keep the soil moist but not soppy wet. Measure the height of the plants in each pot every day.

2. When the seedlings in the pots are two inches tall, cut them off a little above their base where they grow out of the soil. Watch your plants for another week or so.

What happens to the plants in each pot after you cut them? Why?*

Draw what your grass and sprouts look like a week after you cut them.



GRASS



SPROUTS

* Grass plants grow from a point very close to the ground. If they are cut off above this point, they can grow back. Alfalfa and radish sprouts grow from a point at the top of the stem. If they are cut below this point, they cannot grow back. Growing tips of grass have more nutrition than long stems of grass.



NEEDLE- and - THREAD GRASS