

NATURE DETECTIVES

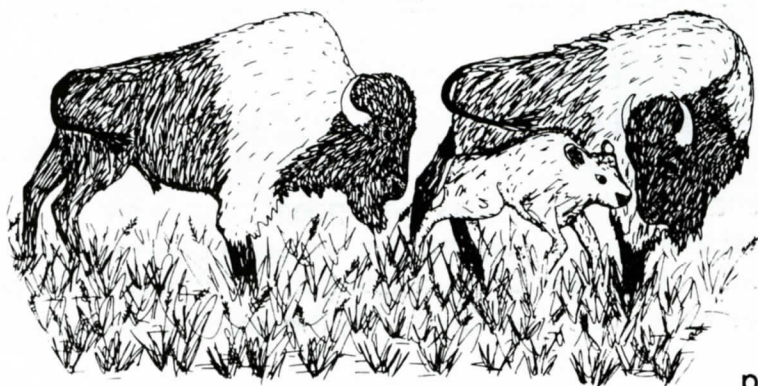
Looking Into the Prairie

"When I was seven, like you," Grandma says, "the sky was the biggest thing in my world. As far as I could see to the east there was grass and this immense blue sky." My white-haired grandma lifts her arms wide toward the sky, disrupting the rhythm of the porch swing. "The prairie stretched from right here in Boulder County all the way to the Mississippi River."

"Weren't there any trees to climb, Grandma?" I ask. "Well yes, there were *some* trees, especially along creeks and rivers. And there were shrubs with yummy fruits -- prairie plum, currant, wild rose. But there are three things about the prairie that make it difficult for anything but grasses to grow -- weather, grazing and fire. The western plains just don't get enough rain or snow for trees to grow into big forests. Most summers there's a drought. The grasses turn brown and look dead, but they're not. Their roots are still alive underground. And many grasses have rhizomes, which are root-like stems that spread out under the prairie surface, where their growth nodes are protected from drying, trampling and grazing. When buffalo trampled and ate the grass, growth would continue from the base of the grass's stem. Did you know there were millions and millions of buffalo, elk, deer and pronghorn grazing the prairie before settlers came west? And every summer lightning storms started wildfires. But fire didn't kill the grasses. It just burned away the old, dry plant material above ground, making room for new green shoots."



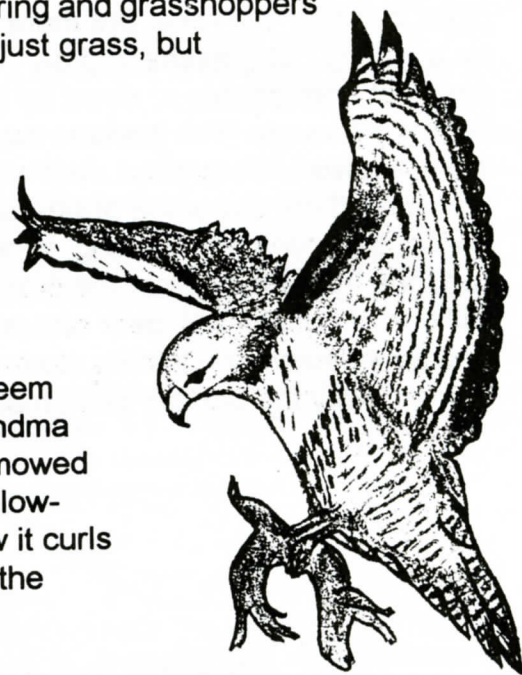
I can't wait to share what I am learning in school, so I spit it out quick or Grandma will keep talking. "Did you know,



Grandma, that Native Americans used to light prairie fires? They did! They knew it would make the new grass grow and that would bring the buffalo to graze. Did you see buffalo when you were growing up on the prairie, Grandma?"

"No, the buffalo were mostly gone by then. But I did see deer and pronghorn and vast colonies of prairie dogs. Sometimes I'd watch a coyote hunting mice. It would leap into the air and pounce on all four paws, then trot off with a mouse gripped in it's teeth. On hot summer afternoons the grass came alive with butterflies fluttering and grasshoppers hopping. Oh, the prairie is full of life. It may look like just grass, but there are plants and animals galore. Lets go have a look."

Grandma and I step off the porch to take a walk in the open field behind her house. The wind whooshes in my ears and makes the grasses bend and sway. "This, my dear, is a small piece of the short grass prairie I knew as a child." I don't like being called 'dear' and the grass doesn't seem short to me as it swishes around my knees. But Grandma explains that the grass *is* short. It's just longer than mowed grass. Grandma stoops down to show me a curly yellow-green grass. "This is buffalo grass -- do you see how it curls like the buffalo's fur? This grass was a main part of the buffalo's diet."



As we walk on we hear the yip-yip of prairie dogs that live in a maze of underground burrows. We see two prairie dogs wrestling playfully, another one nibbling grass and several others digging into the ground. Suddenly we hear loud barks coming from the prairie dog town. The prairie dogs scatter, running for their burrows. A dark shadow spreads over the grass. Grandma and I look up to see a bird diving straight for the ground. "It's a hawk!" I exclaim. The bird's talons look huge. In the blink of any eye the hawk grips a prairie dog and lifts it off the ground. The bird beats its powerful wings and flies away with the with its meal.

"Wow, Grandma! I didn't even see the hawk coming! It must have awesome eyesight to see such a little animal." We watch the bird get smaller and smaller as it flies away in the bright blue sky. "That was a red-tailed hawk," Grandma says. "And you're right. They do have great eyesight. They're able to see a prairie dog from more than a mile away." We watch the prairie dogs slowly creep out of their burrows. "A prairie dog is a favorite meal of hawks and other raptors," Grandma explains, "and other animals -- foxes and black-footed ferrets. Not only that, but prairie dogs provide homes and nesting areas for wildlife. Burrowing owls, rattlesnakes and bullsnares live and raise their young in abandoned prairie dog burrows."



It's getting late and I'm hungry so we turn around and head back to Grandma's house. If we're lucky," says Grandma, "we might see the burrowing owl that lives near me. It's home is an old prairie dog burrow, and it has returned there to nest every spring for years now. There aren't many burrowing owls left because of all the houses being built here." She points to the subdivision that stretches east like the prairie used to do when she was little.

"You know," she says, "not only is the prairie important for wildlife, it is important for humans too. Native Americans could live on the prairie because of all the animals to hunt and edible plants to harvest. When settlers like my family came west, they started to raise cattle and grow corn and wheat in the rich prairie soil. The prairie feeds people in the United States and all over the world. But we're losing the prairie to houses and malls, and because of the way we've ranched and farmed it. In the past, we overgrazed it and too many chemicals have robbed the soil of nutrients." She shakes her head sadly. The evening wind whispers sadly too -- *whish-whoosh, whish-whoosh*.



Then I notice a small brown bird with long legs and a rounded head. It is standing near a dark hole in the ground. I tug on Grandma's sleeve and point. We both stop, not wanting to scare the little burrowing owl away. "There it is," whispers Grandma, smiling again.

Grasses are Great!

Some Grasses Look Like Feathers!

New Mexico feather grass grows in dry, rocky places. Attached to its seed is a long tail, called an awn. The awn is covered with silvery, feather-like hairs. These hairs help the seed to be carried on the wind, like a feather! The awn twists when it's dry and untwists when it's wet -- this acts like a corkscrew, drilling the seed into the ground. Look for this grass at Hall Ranch.



New Mexico Feathergrass

Some Grasses Look Like Eyelashes!

Look for blue grama grass in short and mixed grass prairies. Blue grama's thick, one-sided tufts give it the appearance of eyelashes. Watch for blue grama batting its eyelashes at you on the trail's edge at Bald Mountain.



Blue Grama

Earth Houses

How would you build a house if you had no trees to cut into lumber and no stones to gather? This is the dilemma the first prairie settlers faced. Their solution? They built homes of grassy earth! With special iron plows they dug earth strips and cut them into bricks. They often dug one wall of a house into the hillside, then laid up the sod bricks, just the way you'd lay clay bricks today. Willow branches topped with sod for roofs, paper windows, buffalo hide doors -- these early sod houses were dark, damp and dirty!

