Home on the Plains

In the southwestern corner of the state, Blue Mounds State Park harbors a tallgrass remnant that resembles Minnesota prairie as it once was—bison and all.

By Chris Welsch
The sun stretched my shadow long and thin as I walked across the grass to a seat on a boulder of pinkish stone. I sat down to watch the late June day come to a close. Every shift in breeze registered in the movement of prairie grasses and wildflowers. In the long view, the ground appeared uniformly green, but around my feet there was spread an infinitely fragmented patchwork quilt of color and form. Light caught in the translucent yellow flowers of the brittle cactus (Opuntia fragilis), a tough-as-nails native prickly pear of southwestern Minnesota. The pink, spherical blooms of common milkweed (Asclepias syriaca L.), framed by waving fingers of porcupine grass (Stipa spartea), bobbed in the wind. I twirled a seed from the porcupine grass in my fingers; the barbed seed was finer than the most beautifully knapped flint arrowhead. The awn—a shaft attached to the seed—will twist
like a corkscrew with changes in humidity, drilling the seed into the dirt. The seeds were also very effective at finding a home in my bootlaces.

The plain reached the edges of the sky. A quarter of a mile to the west, a couple of bison cows and their calves grazed, heads to the earth. Closer at hand, a western meadowlark on a plum bush whistled a rapid cluster of sweet notes, which arrived and disappeared so quickly that the ensuing silence grew to fill the expanse of the place.

This simple seat on a rough hump of Sioux quartzite is a familiar place of much comfort. I moved to Minnesota from Nebraska 20 years ago, and every two or three years I make a pilgrimage to Blue Mounds State Park to reacquaint myself with the vastness and intricacy of the prairie. This, for me, is the landscape of home.

Here, on a rise roughly in the middle of the park, my eyes were the highest points on the horizon. I could see a farm three miles distant and hear the faint diesel growl of a tractor in rows of soybeans. That was a reminder that this fragment of prairie—about 1,800 acres—is a small oasis in what used to be a sea of grasses and flowers that stretched from the Rockies to Indiana, from Manitoba to Texas.

Most of Blue Mounds State Park resides on a plateau of bedrock, rising about 100 feet above the fertile farmland around it. That bedrock explains why much of the ground was never plowed, and why the land exists now as a park rather than more fields of corn and soybeans.

The Sioux quartzite—a remnant of an ancient seabed more than 1.5 billion years old—forms an unbreakable spine that would wreck any sod-busting plow.

These dichotomies are what I love about Blue Mounds State Park. Ephemeral flowers grow on ancient stone. On close examination, endless vistas expose intricate ecology. Overwhelming and intimate at the same time, these former hunting grounds of the Dakota people remain awe-inspiring today.

Map Maker. The French explorer Joseph Nicollet traveled in this region in June 1838. He met the Dakota and charted the first accurate map of the region, described then as the Coteau des Prairies. (Coteau is a French term for hill or slope.) Nicollet’s journals make only passing note of the rocky cliff line now called Blue Mounds, but his descriptions left no doubt that he recognized the wonder of the Coteau prairies. “There is almost always a breeze over them... a far spreading verdure, relieved by a profusion of variously colored flowers; the azure of the sky above, or the tempest that can be seen from its beginning to end; the beautiful modifications of the changing clouds; the curious looming of objects between earth and sky, taxing the ingenuity every moment to rectify;—all, everything, is calculated to excite the perceptions, and keep alive the imagination.”

The world he encountered changed rapidly. Within 60 years, the Dakota people had been exiled to reservations, the mil-

Stand Alone Rock is one of many fascinating rock formations in Blue Mounds State Park. The rock here is Sioux quartzite, the remains of an ancient seabed. In some of the stone, ripples in what once was beach illustrate the tide line of an age before humanity.
ions of roaming bison exterminated by settlers and big-game hunters, and most of the prairie plowed under for farm fields. Today in Minnesota less than 1 percent of what was originally more than 18 million acres of tallgrass prairie remains, which makes this park all the more precious.

At twilight, I stood up and walked back toward my tent. Nighthawks—hunting bugs—buzzed overhead with whirring wings. I stumbled through a patch of *Artemisia ludoviciana*, commonly referred to as prairie sage; I could tell what it was without looking as my footsteps wafted its sharp, sweet fragrance into the air.

My walk-in campsite was in the oldest part of the park, near its northern boundary, along Mound Creek. The creek was dammed in two places as part of a Works Progress Administration project when the park opened as a recreation area in 1937. Those dams—which created two small lakes—and an amazingly sturdy latrine building crafted from the park’s Sioux quartzite are now on the National Register of Historic Places.

**Rock and Grass.** The next day, I awoke to the harsh cry of a rooster pheasant. I had my coffee as the sky lit up, then I set off on a walk toward a wall of rosy-pink Sioux quartzite that forms a 1.5 mile-long, curving line. Some people say the cliff—nearly 100 feet high in places—inspired the name Blue Mounds. From a distance, back-lit by the afternoon sun, the cliffs do take on a bluish cast. In the morning light, however, the stone glowed a lovely rose hue.
As I walked south along the cliff line, I came to the remains of a crushed rock quarry—only a loading ramp, grown over with greenery, and squared out walls remain. Blue Mounds quarries provided the building blocks for many 19th century buildings in downtown Luverne and downtown Pipestone.

Cheaper sources of building materials put this quarry out of business in 1931, but the area nearby still sees use of another kind. A group of rock climbers, toting ropes and other gear, passed me. Vertical, hard rock cliff faces—with cracks, crags, and challenging overhangs—make Blue Mounds popular with rock climbers.

As I neared the southern end of the cliff face, I came across a heap of recently cut trees, another sign of changing times at the park. The trees were box elder, ash, and hackberry, species that spread out along the cliff as settlement ended the great prairie fires.

The cliff line restoration and other work to increase native plant health and diversity at Blue Mounds are the domain of David Breifogle, southwest parks resource specialist for the Department of Natural Resources. "A big chunk of the park was never plowed, that's true; but it had its history of being overgrazed and of indis-

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Indian grass (left) is one of the native plant species being returned to Blue Mounds State Park through prairie restoration. The namesake Blue Mounds (above) form a rock wall 100 feet high and a mile and a half long. Hikers can follow the Lower Cliff line Trail to walk along the base of these prairie cliffs.
Prairie Sky

The big sky is the only prairie remnant in this grassland; the dried stems that dominate the scene here are nonnative smooth brome. Of Blue Mound’s 1,800 acres, 20 percent was plowed for farming. The DNR is working to reconstruct prairie on these former farmlands, but the task is challenging—a healthy tall-grass prairie can harbor as many as 300 native plant species.
Fire and Bison

Little is known about the former abundance of bison in Minnesota. It is accepted, however, that herds of grazing bison and wildfires—which burned primarily during spring and fall—were major forces that defined the prairie landscape and its plant and animal communities. Bison closely grazed recently burned areas. Unburned areas became more susceptible to fire, as each season left a new layer of dry plant stalks. This mosaic of heavily thatched areas and grazed grass provided habitat for a diverse population of prairie-dwelling birds. Illustration by Bill Reynolds.
criminate herbicide use," said Breyfogle, who has spent more than 10 years on this work. "A lot of diversity had been compromised."

Of the park's 412 once-plowed acres, 237 acres is in the arduous process of "reconstruction." After applying a herbicide such as Roundup, workers reseed it with native species.

By some estimates, a healthy tallgrass prairie harbors more than 300 plant species. Neither Breyfogle nor plant ecologist Fred Harris of the Minnesota County Biological Survey can guess at the number of species in the park today, but both agree there's much work to be done.

As a model of robust prairie, Breyfogle uses 13 acres that had been fenced to protect a radio tower. The fence and tower were removed after the area became parkland. Protected from cattle, the patch harbors western prairie-fringed orchid (Platanthera praeclara) and other rare plants that botanists say are "conservative," or less resilient to heavy grazing.

At the other end of the spectrum are invasive nonnative species and native plants that thrive in disturbed ground. "Common ragweed is a native prairie plant, but if you overgraze a piece of land, you get a flush of ragweed," Breyfogle said. Nature is quick to fill a void, he noted, and ragweed's exuberance is a natural response to disturbance. Breyfogle and his staff have a difficult job when trying to reestablish native plant communities, whether they are reconstructing prairie in old plowed fields or trying to restore ground that has been overgrazed.
Park workers have a variety of tools for reconstruction and restoration, but for Breyfogle and park manager Rick White, the most intriguing management tools are the oldest ones: Fire and bison.

Animal and Element. Two great forces shaped the life cycle of prairies: herds of millions of bison and prairie fires that might burn thousands of acres in one fast blaze. Fire cleared plant litter and left heat-absorbing blackened ground, creating a seedbed for new plants. Grazing bison also shaped prairie diversity.

“Bison and prairie are integral: One made the other,” White said. “We want to represent as best we can what a free-roaming herd of bison looked like on the open prairie.”

In 1961 the park adopted three bison from Niobrara National Wildlife Refuge in Nebraska. Today, a herd of around 80 adult bison reside in a 509-acre enclosure, almost all of it open grassland. DNR biologists have calculated that the enclosure could support up to 100 adult bison. With plenty of forage, the bison aren’t motivated to leave. White said, “The fence is there as much to keep the people out as [it is to keep] the bison in. The fence is no obstacle to a bison if he

Competing theories about a shiny rock in Blue Mounds (left) hold that it gained luster as a bison rub or that it was shined by wind and blown sand. Bur oak (above) is a classic tree species of the prairie region evident within the state park. Bur oaks have tough, thick bark that can withstand space-clearing prairie fires.
gets a run at it.” Bison can weigh as much as 2,000 pounds and can run more than 30 miles per hour.

Each spring, if conditions allow it, park workers burn some or all of the bison enclosure. The native prairie plants are well-adapted to fire. The iconic species of the tallgrass prairie, big bluestem (Andropogon gerardii), can grow to 8 feet tall, but its roots can be even deeper.

“You have to think of a prairie the way you do an iceberg,” Breyfogle said. “While there are a few leaves and stems of grass above ground, two thirds of the mass is under the earth—their roots are very well-adapted to survive fire. In one field we tracked during the growing season after a burn, seed production was up two or three times.”

**Legendary Plains.** On my third day of wandering in the park, I stopped at the visitor center to pay my respects to one of Minnesota’s literary heroes, Frederick Manfred, who died in 1994. Built into a rocky slope, the visitor center was once Manfred’s home. The author, who stood 6 feet 9 inches tall, wrote outsized adventure tales set in his home country—where South Dakota, Minnesota, and Iowa meet. He dubbed the region “Siouxlnd.”

Manfred sold the sprawling house and hilltop land to the state and moved out in 1975. I climbed into the windowed rooftop turret that served as Manfred’s writing studio. From that viewpoint, I could see a panorama that stretches more than 50 miles on a clear day. Manfred used the prairie landscape—“as open as the endless universe”—as the stage for his stories, which are alive with the harsh beauty, calamitous weather, and legends of the Great Plains.

In the realm of legends, Blue Mounds has plenty, as a local poet once told me. The first time I visited the park, in 1994, I went to Luverne to see the Hinky House, a stately Victorian home built of Sioux quartzite by the quarry owner. There I met a tiny, elderly woman in pearls and a blue windbreaker. Carmen Christensen had lived near Blue Mounds for most of her life. When she heard I was a writer, she took my arm and asked if I’d like to hear a poem she’d written in 1944. Then she closed her eyes and recited in a strong and steady voice:

Proudly rising above the plain,
Immune to sun and wind and rain,
These scattered rocks and towering wall,
Like silent witnesses, recall
The history and ancient lore
Of ages vanished long before.
Here are legends carved in stone
That, once, forgotten men had known.
The rocks would tell you if they could,
What happened where they long have stood:
How frightful monsters roamed this place;
When first they saw the human race;
How once the red men with great cunning
Started herds of bison running
Over their cliffs to death below,
Where heaps of bleaching bones would show.
But all the secrets they have known
Are safely kept with tongues of stone.

[www.mndnr.gov/magazine](http://www.mndnr.gov/magazine) See a Jim Brandenburg prairie photo gallery with music by the Miller family.

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Rock outcrops within Blue Mounds act as reservoirs for lichens and some rare prairie plants specifically adapted to growing on bedrock. The rocks deterred the sod-busting plows of farmers, so they protect remnants of native prairie.