



# Spirit Mound Trust News

P.O. Box 603, Vermillion, SD 57069

[www.spiritmoundsouthdakota.org](http://www.spiritmoundsouthdakota.org)

December 2007

Norma Wilson, editor

## Restoring our Native Prairie

Jim Heisinger

You may have been surprised this past summer to see horses grazing along Spirit Mound Creek. This is one of many methods being tried to control non-native plants and promote the restoration of native prairie species. Bill Whitney of Prairie Plains Resource Institute completed a management plan designed to help us achieve our long term goal of a highly-diversified prairie. The plan, financed by Trust funds and a National Park Service grant, calls for more aggressive utilization of nature's prairie maintenance forces: grazing and fire. Expect more surprises as the plan is implemented during 2008.

The management plan will serve only as a draft document and will continue to evolve as unforeseen climatic, biological and social forces arise and as our members express their hopes and ideas for the future. One addition to the plan is to manage small parts of the park as refuges for specialized prairie butterflies. These areas might be spared from fire. The undesirable plants might be controlled by light grazing and the careful spot application of herbicides. Prairie and butterfly enthusiasts Ann and Scott Swengel, biologists from Baraboo, Wisconsin, have generously offered to advise us on our efforts to increase winged beauty at the mound. During the coming year I hope to hear from our membership about what you want to see at Spirit Mound. Also please contact me at [jheising@usd.edu](mailto:jheising@usd.edu) when you observe an unusual or interesting plant, bird or insect there at our special place.

## Observations at Spirit Mound

Ron Thaden

Spirit Mound is attracting a good number of visitors. We do not have an estimate of the number who visit the Mound, except for the traffic meter across the east driveway. Summer vehicle numbers have been ranging from 550-750 per month. The early spring and late fall numbers are in the 250-350 range. The meter is read the first of each month and reset for the next month. Some cars enter and exit the east driveway, so are recorded twice. Buses bring many more visitors than are counted by the meter. Other ways of monitoring visitors are by counting the number of information brochures taken over time or the number of cars in the parking lot on certain days. Most people visit on weekends, the least on Mondays.

Those who visit may see people working at the Mound to encourage the renewal of its native grasses and forbs. For several years we have been trying to re-establish native vegetation on the area immediately east of the Mound. This area was where the feedlot and farmstead were located prior to 2001. First we renovated the area by removing buildings, trees and cement and by leveling piles of manure. Although this entire area was seeded with a mix of grasses and forbs in the spring of 2002, few of the seeds germinated in 2003 and 2004. The area was clipped each year to control weeds.

Soil tests indicated high levels of nutrients that are not conducive to native plant growth. Early in 2005 we seeded this area with alfalfa as a vegetative means of removing some of the excess nutrients. The alfalfa was harvested in 2006 and 2007. The area was then sprayed to kill the alfalfa in preparation for reseeding. The



seeding was completed October 29<sup>th</sup>. We planted the original mix of native grasses and forbs on about 16 acres. Unlike previous seeding attempts, the area was packed prior to and following the seeding. We will observe the results next spring.

Early last spring the Spirit Mound Trust Board decided to try intensive grazing, as an alternate approach to burning, to depress the growth of brome grass and other introduced species. As a result, plans were made to graze some of the unseeded areas where the cool season grasses were growing.

Two individuals responded to our published advertisements, one with horses, and the other with cattle. The cattle owner decided that the areas to be grazed were not large enough for his herd. The horse owner, who lives adjacent to the property, decided to graze the area. The five horses used in this project were allowed to graze areas along the creek, as long as there was sufficient water. The owner agreed to fence the area with electric fences and look after the horses which were confined to a 2.5-3 acre area until that area was grazed intensively, then moved. The first area was grazed from June 1-15, the second, from the 15<sup>th</sup> through July 5, and the third, from July 18-August 11. Each area was clipped after the horses were moved. The results of this trial will not be observed until next spring. Probably a better time to start grazing would be May 1.

In 2007 all our plans for burning were foiled by unfavorable weather conditions. Last spring we had planned to burn 40 acres in the southwest corner. Isolation strips were cut in mid-May, and the burn was planned for late May. Each time a burn was scheduled, a rain the previous day caused the vegetation to be too damp for carrying a fire. After mid-June, we gave up the plan.

We then made plans for a fall burn to take place in late October. The area to be burned was the whole west half of the Mound. Again, weather conditions limited opportunities. We had good rains in late September, and the weather stayed warm enough to prevent a killing frost until early November. So far, we have no plans for a spring burn in 2008.

Each summer has produced a different variety of grass and forb growth in many areas of the Mound. This is to be expected, due to varied weather conditions. Species are appearing in areas where I have not seen them before. I think that all species that were planted are growing somewhere on the site, either spreading or taking longer to establish in certain areas. I have found butterfly milkweed in more areas over the years. I have not found porcupine grass, but that grass was hand seeded separately in confined areas. I suspect that someday that grass will take hold. On the east slope of the mound where a number of species were planted as plugs, more of the planted forbs are appearing each year. However, it is hard to determine whether some of the forbs resulted from plugs or were already growing there.

Along with the desired native vegetation growth have come some thistles. Canadian thistles are being controlled using Transline herbicide. This chemical is up to 90% effective with one application in ridding the area of this perennial. Some thistle patches were not spotted until they were blooming. These areas were clipped, and the re-growth was sprayed in September. As the native plants establish themselves, there should be fewer perennial weeds.

## **Austin Elementary First Graders Walk Up the Mound**

Mary Lou Monfore

May 25, 2007, dawned bright and clear, along with a perfect temperature and just enough breeze to keep the insects at bay. This made for a fun-filled three hours as approximately 114 First Grade students from Austin Elementary School in Vermillion, along with their classroom teachers and volunteer chaperones, boarded school buses for a Field Trip to Spirit Mound. Everyone enjoyed a picnic lunch under the trees near the parking lot after which all of the students listened intently as I gave a short background speech on the history of Spirit Mound and how it came to be a historical landmark.

Following the speech, we First Grade teachers led our students on the walk to the top of the Mound, and each class posed for a photograph. On the walk to the top, we were able to see several species of birds, insects, and some flowers in bloom. This was a first-time experience for many of the first graders, as well as several of the teachers and chaperones.



It was quite a sight to see the long line of children traversing the path to the top—in fact, on the way down, I met a gentleman and his wife who were traveling from Missouri (The gentleman was riding his bike to follow the Lewis and Clark Trail and his wife was following in the "pick-up vehicle,"). I introduced myself, and the gentleman said, "I heard about the legend of the little devils who were said to have inhabited Spirit Mound but I never imagined that I would see '114 little devils' on the path." We all got a chuckle over that.



Upon reaching the kiosk at the bottom of the Mound, we once again had our pictures taken. We all agreed that it was a perfect end to our school year and a time to remember for all. We hope to make this an annual experience for our First Grade students—not only did everyone have a wonderful time, but they learned a bit more about an important part of history for our town, county, state, and nation.

## From the Mound to Mexico on Gossamer Wings

Mark Wetmore

Unlike in more recent years, Parks Division naturalist Jody Moats' first Spirit Mound monarch butterfly tagging event, on September 12, 2003, was poorly attended: only herself, her small daughter McKenna and I were there. But Jody recently learned that one of the monarchs they tagged that evening was recovered 1,616 miles away, in El Rosario, Mexico, six months later. The photos show Jody releasing the tagged butterfly at the beginning of its long flight.



Photos by Mark Wetmore

## An Architect's View on Historic Prairie

Tom Reasoner

During the Fall Semester of 2006, I taught a course entitled *ARCHITECTURES -- The Built Environments* in the Interdisciplinary Education and Action Program (IdEA) at The University of South Dakota. My students and I surveyed the history, theory and design of built environments--urban, suburban and rural, examining their sustainability within the shadows of looming environmental challenges. One assignment was meant to foster an

awareness and appreciation of landscape design and involved a field trip to Spirit Mound followed by a short essay assignment.

I explained to the students that even though it's a natural phenomenon, this historic site and prairie is part of our built environment. Its history has been designed and orchestrated. Their assignment was to describe a visit to Spirit Mound, not just as a collection of facts on flora, fauna and history; but as a journey of discovery. Students were to arrange their own trips up Highway 19 and once there, to walk the trail.

Their initial written responses to the venture ranged from a good hike to nascent thoughts on the routes and views encountered along the way. With a slide of the Historic Prairie site from the brochure as a background, we retraced our visits as a succession of experiences from arrival at the base of the Mound where we joined the Corp of Discovery to the final ascent of the north face when the horizon burst forth to remind us that we are part of a much larger history and world. During the procession, we not only saw this land through the eyes of Lewis and Clark, and Native Americans; but also through the lenses of geologists, botanists and cultural historians.

Departing from the trailhead kiosk and site amenities, we followed the meandering path into the dense, restored prairie, where one is lost in the timelessness of a vestigial ecosystem and the people that last inhabited it. We emerged on the western slope of the Mound sheltered from the highways of progress to enjoy the quiet solitude of Middle America. Continuing our climb, we encountered the exposed foundations of our quest and marveled at this geologic deconstruction before we embarked on the last leg of our journey.

From the summit, the seemingly endless horizons surrounded and beckoned us back and forth across the ages in a myriad of revelations. Together, on this journey back in time and place, we rediscovered not only an existing landmark, but a sense of the scope of historic changes as each reflected on our separate journeys.

## On the Trail of Lewis and Clark

Norma Wilson

The following image received from Mark Wetmore piqued my curiosity. I called the Sheriff's Department and talked with Chief Deputy Jerami West, who told me that the Clay County and Vermillion law enforcement officers have worn the patch on their sleeves for the past four years. In 2002 they were looking for an image to symbolize the area they serve and decided on the Lewis and Clark Trail, since that is their patrol. Mark Loder and others came up with the design, which can be found on the Department's website, [www.claysheriff.org](http://www.claysheriff.org). The logo has also been placed on the doors of the Vermillion Police and Clay County Sheriff's patrol cars. Notice Spirit Mound at the center, framed by the earth and sky.



## Spirit Mound Trust Board of Directors

Tim Cowman is the most recent addition to the Board of the Spirit Mound Trust. Tim is the new Director of the Missouri River Institute, and a long-time employee of the South Dakota Geological Survey. He brings to the board much needed skills in Geographic Information Systems (GIS) and digital mapping. Of equal importance is his love of nature.

Other Board members are James Heisinger, President, Mark Wetmore, Vice President & Treasurer, Norma Wilson, Ron Thaden, Brian Hazlett, Dianne Blankenship, Karen Olmstead, Jim Peterson and Wayne Evans.