



Missouri National Recreational River
508 East 2nd Street
Yankton, SD 57078

**MISSOURI
NATIONAL
RECREATIONAL
RIVER**

Phone: (605) 665-0209

We're on the Web!
www.nps.gov/mnrr

**Find us on Facebook and
Twitter!**

Mail to:

**UPCOMING EVENTS and VOLUNTEER
OPPORTUNITIES**

- February 26 to March 3: Invasive Species Week. More info: <http://www.nisaw.org/>
- April 21: Jr. Ranger Day with US Fish & Wildlife Service at the hatchery in Yankton, SD
- April 22: Vermillion-area Clean Up at Mulberry Bend Overlook and boat ramp and Clay County Park.
- April 26-28: The Missouri River Educational Festival Lecture Series at Ponca State Park, Ponca, NE.
- May 4: Missouri River Education Festival at Riverside Park, Yankton, SD
- May 5: Missouri River Cleanup at Yankton, SD
- May 26-27: South Dakota Kayak Challenge (www.sdkayakchallenge.org)
- May 28 Fort Randall Re-Enactment and Festival--Fort Randall Dam, Pickstown, SD
- Interested in volunteering? Call our office at (605)-665-0209

Did You Know?

The MNRR is now on Facebook and Twitter! Like us on Facebook at "Missouri National Recreational River" or follow us on Twitter at @MissouriRecNPS. You can also find park information by going to www.nps.gov/mnrr. We've added several new features:

- Completely new "Plan Your Visit" section with brochures, maps, & directions.
- Updated details about operating hours and seasons, fees and reservations
- Enhanced pages on things to do, things to know before you come, rules and regulations, and much more!

In the coming months, the website will get a face-lift with a new & improved homepage.



**Missouri National Recreational River
Nebraska/South Dakota**

National Park Service
U.S. Department of the Interior



"Current" News

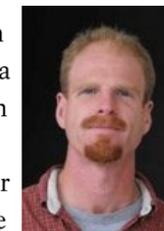
Newsletter of the Missouri National Recreational River

Winter/Spring 2011-2012

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New Faces Spotlight



Chris Wilkinson

Chris Wilkinson joined the MNRR staff as the Chief of Interpretation in October of 2011. Chris, a North Carolina native, moved to South Dakota from Montana where he served as the Chief of Interpretation at Bighorn Canyon National Recreation Area. Chris has brought with him the knowledge and experience he gained while working in interpretation for the last eight years. He began his work in interpretation at Andersonville National Historic Site in Georgia followed by Jewel Cave National Monument in Custer, South Dakota, Minuteman Missile National Historic Site in Philip, South Dakota and spent the last two years at Bighorn before coming to MNRR. Chris has already made a noticeable impact by putting the MNRR on the social media "map." Chris has created and maintains the MNRR Facebook and Twitter pages. Along with improving the website, Chris's goals for the MNRR interpretation program include conducting public outreach to create greater awareness of the park within the community and carrying out the MNRR Long Range Interpretation Plan. Classroom visits will be a major part of the outreach initiatives. He also hopes to expand programming to put more visitors on the water through the use of boat tours. Welcome, Chris!

Interesting Facts:

- Gavins Point Dam releases are approximately 22,000cfs and Fort Randall Dam releases are roughly 18,600cfs. These flows are about 5,000cfs above normal for winter flows. Flows will remain at these levels through February, pending ice-related concerns downstream.
- Mountain snowpack above Fort Peck is currently below normal at 87% of average. In the reach between Fort Peck and Garrison, mountain snowpack is tracking at 96% of average.

MNRR: Outstanding Remarkable Values (ORVs)

As a unit of the Wild and Scenic Rivers System, MNRR contains several Outstanding Remarkable Values (ORVs); characteristics which make these segments of river "remarkable". The ORVs found in MNRR include: cultural, ecological, fish and wildlife, geologic, recreational, scenic, water quality, and free-flow values. Stakeholders, including local landowners, river users, and



Geology is a MNRR ORV.



MNRR is known for its many scenic vistas.

local, state, and federal agencies, worked together to further define and describe the ORVs within MNRR at a workshop at USD in Vermillion. The final document will help with management and policy questions as well as interpretive messages. Contact MNRR for more information or for a copy of the document.

MNRR Stakeholder Boat Tours

MNRR hosted two stakeholder boat tours to discuss river issues and experience the post-flood Missouri River. The first tour, held on October 26, highlighted the 59-Mile District of the MNRR. The trip began at the St. Helena boat ramp and continued for 23 river miles downstream to the Mulberry Bend boat ramp. The second tour, held October 27, showcased the 39-mile District of the MNRR, beginning at Fort Randall Dam and ending at the Verdel boat ramp, about 28 river miles downstream. Stakeholders included local landowners, congressional representatives, news reporters, County Commissioners, and representatives from the

Nebraska Game and Parks Commission, Izaak Walton League, US Fish and Wildlife Service, US Army Corps of Engineers, and the National Park Service.

More boat tours are being planned for the spring and summer of 2012.



Stakeholders traveling the Missouri River

Special thanks to the Gavins Point Project (USACE) for providing an additional boat and driver and to the Missouri River Institute at the University of South Dakota for assisting with shuttles and logistics.

Photos from the boat tour can be accessed on the park website by going to <http://www.nps.gov/mnrr/photosmultimedia/photogallery.htm>

Prairie Restoration at Mulberry Bend Overlook

Some new plants will be springing up at the Mulberry Bend Overlook this spring. Last fall MNRR took the first steps in restoring a six acre site on the west side of Highway 15, across from the Mulberry Bend Overlook parking area.

The restoration began with seed collection in the fall of 2010. Native grasses and wildflowers were collected both with a mechanical seed harvester and by student volunteers from Vermillion High School as part of National Public Lands Day (see issue 1). Seed collection was conducted on native prairie sites managed by The Nature Conservancy and Nebraska Game and Parks Commission. At least 25 native species were collected with many more likely in the mix.

Last fall the site was sprayed with Glyphosate to kill the non-native grasses, and then seeded with a no-till drill. The no-till drill allowed the site to be seeded without plowing or disking which would subject the site to

erosion and weed establishment. Also not tilling the site protects archeological resources which could be present below the soil surface. The

Nebraska Game and Parks Commission was kind enough to let MNRR use one of their tractors for the seeding.

This spring should yield a more diverse grassland full of native species, reminiscent of how the site would have looked when Lewis and Clark passed through Mulberry Bend.



Seeding Mulberry Bend Overlook.

What Will Grow? Vegetation Following the Flood

After nearly an entire growing season below water, much of the vegetation in flooded areas along the Missouri River was drastically altered. The disturbance leaves a lot of questions regarding what survived and what will establish. That is why MNRR studied what vegetation and seeds were left behind on the flooded portion of Bow Creek Recreation Area (BCRA) this fall.

Twenty-four randomly selected study sites at BCRA were sampled in November. Vegetation was sampled in 1 meter square plots, or Daubenmire quadrats, at each site. Half pound soil samples were collected near the plots and taken back to the office to be searched for seeds.



Study site on a newly formed sandbar .

Most of the sample sites (16) landed on barren sand in what was a side channel in 2010. None of those sites contained any living plants. Of the plants found on preexisting soil, Kentucky bluegrass (*Poa pratensis*) and sedges (Cyperaceae) were each found in 20% of the plots. Like other species present, their ground cover was less than 25% in those plots. Twelve other species were found, all were known to be in the immediate area prior to the flood, and about half of which were native. While many of the species are considered weedy plants, only three sites had noxious weeds present. One plot had several mullein (*Verbascum thapsis*) seedlings; two plots had leafy spurge (*Euphorbia esula*) plants that had

likely sprouted from the roots of plants present prior to the flood. Several seedlings from native trees like green ash (*Fraxinus pennsylvanica*) and elm (*Ulmus* spp.) were found.

Much like the vegetation, seeds were not present in barren sand. On the remaining sites, over 400 seeds from 26 different species were found. Half were from exotic species, but of those only 8 individual seeds (2% of total) were from noxious weeds (6 leafy spurge, 1 musk thistle [*Carduus nutans*], and 1 plumeless thistle [*C. Acanthoides*]). Nearly all of the species found were known to be in the area prior to the flood. The four most common seeds found were: Kentucky bluegrass (29%), spotted spurge (*Euphorbia maculata*, 24%) a harmless native annual that is not at all like leafy spurge, wooly verbena (*Verbena stricta*, 8%) a native wildflower, and sweet clover (*Melilotus* spp., 6%) an introduced legume. The remaining species all comprised less than 5% of the total seeds.

Over all, there were a decent amount of plants re-growing, and a lot of seeds in upland sites. Revegetation should occur fairly quickly if the dry conditions end this spring, if not, we may be dealing with a lot of bare ground for several years. Sand deposits, may take quite a while to revegetate due to the lack of vegetation and seeds on top of already difficult growing conditions (no water near the soil surface, shifting soil, etc.). About half of what was found was non-native, but noxious weeds made up a smaller portion than expected.

Here are my suggestions for flood damaged property this spring. First, make sure you treat known noxious

weed infestations early. The plants are currently stressed, but the reduced competition from other plants will allow them to recoup and flourish by next fall. Second, keep any noxious weeds from setting seed near the flooded area; that will limit their ability to colonize in the following growing seasons. Closely monitor what regrows in the flooded areas, and treat noxious weeds early. It may not be necessary to completely spray and replant the area, native weedy plants, and many of the non-natives with the exception of noxious weeds, fill an important role in revegetating disturbed areas. They quickly cover the ground and control erosion while slow growing, long lived plants like native grasses and trees slowly spread, eventually forcing the weeds out. Weedy plants also increase the diversity of food and cover for wildlife over monocultures of grass. If you feel it is necessary to replant, use a mixture of native grasses and forbs adapted to floodplains, they will be more likely to survive if a flood like last year were to happen again.

For the next few years MNRR will monitor the vegetation trends on BCRA; including tree mortality which will not become apparent for one to several growing seasons.



A patch of native floodplain sedges surrounded by barren ground in the study area

Interpretation Corner: "The REAL Missouri River"

A reflection from MNRR's new Chief of Interpretation, Chris Wilkinson. Chris joined the MNRR Stakeholders boat tour of the 39-Mile MNRR during his first days at MNRR.

Fifteen years ago I first saw the Missouri River. While driving westward on a trip to the Dakotas I crossed North America's longest river along the interstate just outside of St. Louis. I spied it from my vehicle, craning my neck to look between the steel girders of a bridge. I looked down upon its dark waters flowing benignly along the last stretch of a 2,341 mile long journey to its mouth. On this same trip, I would see it several more times, always looking relatively the same; flowing relatively straight within its starkly confined course. Could this really be the river that had once been known for its wild and unpredictable sojourns? The river that was said to recreate itself season after season?

Fifteen years later, I once again saw the Missouri River for the first time, but on this occasion I saw the REAL MISSOURI RIVER. I had



Cottonwood forest along the 39-Mile MNRR.

come to work at Missouri National Recreational River (MNRR), a National Park along the South Dakota/Nebraska border that truly embodies the rich natural and cultural history of this incredible waterway. Setting out by boat along what is known as the 39 mile reach, just below the remnants of historic Fort Randall, I traveled downstream with my fellow rangers and park stakeholders. Suddenly we were floating through a waterscape of braided channels, chutes and gigantic sandbars. A historic flood in 2011 had seen the river revert to its older, natural self. The flooding created new side channels, washed away sandbars, and recreated marvelous new ones just a few hundred yards away. This flooding left behind prime habitat for threatened and endangered species that call the MNRR home.

On this journey we passed by the Karl Mundt National Wildlife Refuge which is known for its prime eagle nesting habitat. Off limits to foot or vehicle travel, the refuge could be seen from our boat. On the river banks I saw multiple cottonwoods ornamented with eagle nests. Our national symbol could even be spied soaring gracefully above the ever shifting channel as we traveled downstream. We soon saw a kingfisher pursue its lunchtime meal, only to lose its catch among the waters.

Stopping along one newly created sandbar stretching over a hundred yards in length, I



New sandbars along the Nebraska bluffs.

learned that two other rare species of bird would soon be enjoying a new home. These are the threatened Piping Plover and the endangered Least Tern, which rely on bare sandbars for nesting habitat. Birdwatchers can enjoy their own views of these wonderful creatures from multiple shoreline view points. The MNRR is a bird lovers paradise as it is along one of the continents great migratory flyways.

As we neared our journey's end we witnessed an explosion of fall colors atop the cottonwoods lining the banks. One majestic cottonwood was said to be the tallest in the state of South Dakota. Leaving the river at Verdel, Nebraska, our adventure ended not far from the confluence of the Missouri and Niobrara Rivers. The meeting of these two Wild and Scenic Rivers, as well as dramatic sweeping panoramic vistas, can best be viewed from the river bluffs at Niobrara State Park. What a day it had been, but this was only the beginning!

Cultural Resource Corner: General Land Office Records

History!

When you think of that word what comes to mind? In southeastern South Dakota and northeastern Nebraska many of us think of Native American tribes such as the Ponca, Santee or Yankton, Lewis and Clark also often come to mind or the intrepid fur traders that followed and were the vanguard of westward expansion. These are some of the more prominent subjects and people who inhabit our historical imagination. More personally though, many of the readers of this newsletter may think of homesteading.

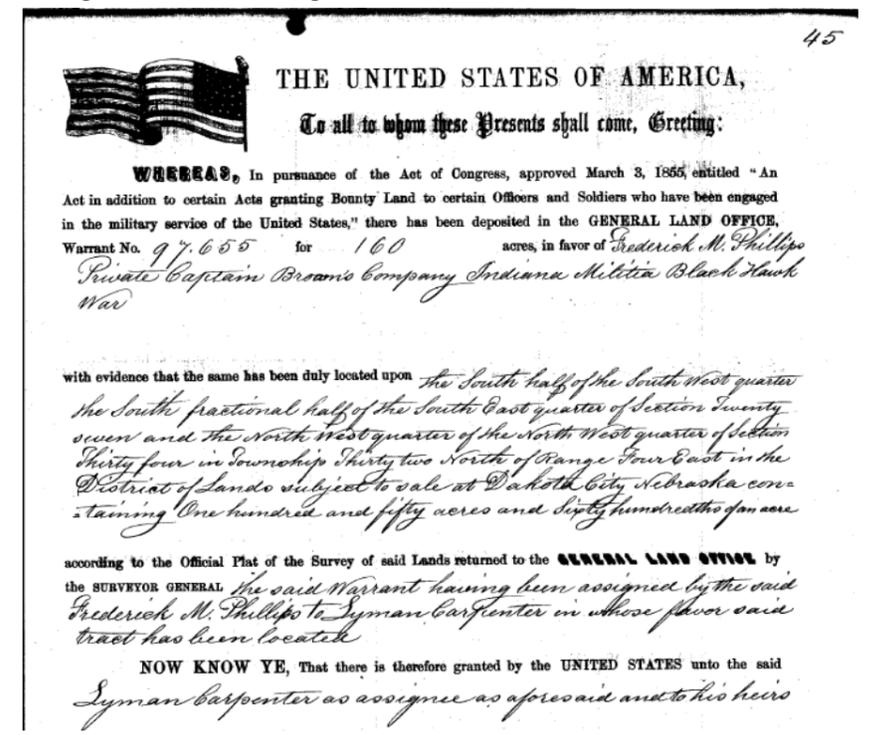
Along the Missouri River corridor the settlement era began around 1860 and rapidly progressed in the coming decades. Many of those who own land or live adjacent to the Missouri National Recreational River (MNRR) corridor may have ancestors that homesteaded the rich river bottom bottomlands. If you are one of these folks, then history is a highly personal experience that may have made you look a lot closer at your own ancestry. Even if your own personal history in this area only goes back a few decades it can be quite intriguing to look at those who owned the land before you.

At MNRR we recently came across a website that allowed us to discover the first documented

landownership of the Mulberry Bend property which is now part of the park. The website, General Land Office Records <http://www.glorerecords.blm.gov/search/default.aspx> is run by the Bureau of Land Management, one of our fellow agencies in the Department of the Interior. It contains over nine million records including patents, survey plats, field notes and land status records. This information helped our staff locate a land transfer of the Mulberry Bend property from Frederick M. Phillips to Lyman Carpenter in 1865.

Who were these men? Well after doing a bit more searching around

the internet we discovered Mr. Phillips immigrated to Nebraska from Indiana and was a veteran of the Black Hawk War (Trivia fact: as was Abraham Lincoln). Many others who came to the area were veterans of the Civil War. We have not been able to locate any further information on Lyman Carpenter thus far, but with resources such as the General Land Office Records as our starting point who knows where this research could lead. The same discoveries await present day land owners and citizens who live along the MNRR corridor. Getting in touch with the past is just a few keystrokes away!



A portion of the original land transfer of 160 acres to Lyman Carpenter from Frederick Phillips