PRAIRIE OVERVIEW

Prairies that once dominated the landscape now less than one percent remains

HISTORY - PRE 1850s

Prior to Euro-American settlement, more than 18 million acres of prairie covered Minnesota. Our prairie lands were part of the largest ecosystem in North America, which stretched from Canada to Mexico and from the Rockies to Indiana. A wealth of diverse species, habitats and cultures thrived here. At the time of Euro-American settlement, upland prairie spread across most of the land south and west of Mankato. Historically, fires burned annually over large areas of Southern Minnesota limiting freqency and location of trees (MCBS, 2007). The prairie landscape of the Midwest was one of our nation's most diverse terrestrial ecosystems. Over 900 species of plants have been recorded on remaining prairies in Minnesota, with up to 300 or more species per individual prairie remnant. Almost half of Minnesota's rare species are prairie plants and animals (DNR, 2008).

C Henderson

Rough blazingstar

TODAY

Prairies Converted to Cropland

Statewide, today only 180,000-200,000 acres of prairie remain compared to the 18 million acres of prairie prior to Euro-American settlement. In the Minnesota River Prairie subsection of the state (see map right, area in yellow) DNR researchers estimated landscape change from 1890s to 1990s that shows the conversion from prairie to cropland (DNR, 2006).

"Prairie is rolling or gently undulating and bearing most everywhere an unusually healthy growth of grasses are auspicious [for settlers]...except for the entire want of timber."

Public land surveyor David Watson describing the prairies in Swede Prairie Township of Yellow Medicine County in 1867 (MCBS, 2007).



	1890	1990
Prairie	77.6%	0.0%
Wetland		
(non-forest)	13.0%	1.9%
Grassland		9.0%
Cropland		83.0%





Yellow coneflower





Bison



PRAIRIE

ASK^{an} EXPERT ABOUT THE MINNESOTA RIVER

Minnesota's Remaining Prairie 100 Years After the Public Land Survey



The map above shows the small amount of native prairie that remains statewide. It depicts current native prairies documented by the MDNR's Minnesota County Biological Survey from 1987-2008 (shown in red), in comparson with the prairie vegetation recorded during the Public Land Survey from 1847-1908 (shown in yellow and tan). Less than 1 percent of the prairies recorded in Minnesota during the Public Land Survey remain (MCBS, 2009).

PRAIRIE **QUESTIONS & ANSWERS**

Imagine at one time a landscape filled by hundreds of plants of all shapes and sizes stretching to the far horizon. A vast tall-grass prairie dominated the Minnesota River Basin intermixed with wetlands and shallow lakes. Prairie plants build up a rich soil perfect for agriculture production and as a result today less than one percent of it remains. The prairie ecosystem holds the soil in place, provides a valuable food source to pollinators and diverse habitat for many different types of wildlife. Landowners like Mary Muller have restored hundreds of acres of prairie across the basin marking a positive effect on water quality. For people like Mary and Henry Panowitsch, prairies are a special and magical place.



"Prairies are defined by the plant communities which has a dominance of grasses and forbs and upland sedges. The prairie plants are defined by very deep root system that is very effective at breaking down soils and mineral soils to build rich agriculture soils that we see in the area. The black soil comes from those active systems and the amount of biomass that a prairie develops that contributes to soil formation." – Mary Mueller

What is the status of prairies in the Minnesota River Basin today?

"The old growth prairies are the native prairies that have not been disturbed for either urban development or cropland. There is only a very small percentage of old growth prairie left in the state – roughly one percent. Old growth prairies are very reliant on a number of systems. It's not just the plants, it's the animals, its insects, it's the soils. It's both organic and inorganic interplays that are happening."

-Mary Mueller

Why are prairies important?

armen Fern

"Prairie environments are very important part of our landscapes. The prairie itself was very instrumental in developing our rich agricultural soils that we see today but also they are efficient in sequestering carbon which again is something we are interested in today so it is a service. They are fantastic habitat. Prairies are very, very diverse native landscape. Plant diversity comes with a huge diversity in insects and birds. Birders love prairies because they can find a lot of different species of birds. There are also many mammals so a very, very important landscape for wildlife. If you walk an old growth prairie you will see the plant species change very subtly as you walk and those same changes will be reflected in the soils underneath the plant communities. They have adapted to a wide range of soil types, a wide range of moisture. They are able to continue that today as it evolves in areas of old growth prairie." - Mary Mueller

What is the value of prairies?

"I know sometimes during the summer if you have the right grass what really intrigues me it's taller than me. And I sort of get that image of what the pioneers had 150 to 200 years ago when they could get lost out in this grass. When you come to find out how this grass really made the fertile soil and it wasn't the grass on top it was the roots below. How those things dying and regrowing built the black soil. We are reaping those benefits yet today. Of course in this set up having this sort of as a water purifier for this area of land because the water comes in here and comes soaking in. And it's just a nice place to walk." - Carmen Fernholz



Mary Mueller

PRAIRIE QUESTION & ANSWERS







What are some of the benefits of prairie restorations?

"Some of the benefits of prairie restorations especially in this project is pollinator habitat. With the loss of habitat of native prairies in the wildflowers and other nectar pollen sources their populations have been crashing in recent years. This restoration site will have large amount of flowers, forbs and grasses which should make good pollinator habitat not only the nectar and pollen sources but also nesting sites, very valuable wildlife habitat. Many of the native grassland birds are really being diminished, decreasing in numbers due to lack of habitat. Many game and nongame species benefit from prairie restorations or native prairie." — Randy Schindle

Why are prairies special?

"You have to remember when you start a new prairie you start a new universe, a new world really. The sounds change, the smells change, the tastes change. So, if you lay down in the prairie the sound of the insect life is just different. The plant, when you take a leaf when you squeeze it the aromas you get is very diverse. The prairie is really a magical place. You know it takes a planted prairie maybe 50 years to become truly magical. If you see an original prairie it is moving experience because you look at the little plant that has survived and no one has messed with it. It has survived the chemicals, the grazing and so forth. To me I am very touched by that. It is a very spiritual experience to go into a prairie. Then when you see it in the fall when the flowers are really blooming, they are always blooming in different successions, different flowers. Then you see the monarchs that just get intoxicated by some of the flowers, then clouds of them just kind of floating over the prairie. You know the prairie is just a completely different experience. I find it incredibility refreshing to be in the prairie. It is like a different universe. It is sort of soul nourishing to go into a prairie." – Henry Panowitsch

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