MINNESOTA COUNTY BIOLOGICAL SURVEY
Department of Natural Resources
Section of Wildlife
Natural Heritage and Nongame Wildlife Programs
500 Lafayette Road, St. Paul, MN 55155-4007

Minnesota County Biological Survey Map Series: No. 3 (1991)
Lac Qui Parle County, Minnesota

THREATENED NATURAL COMMUNITIES AND RARE SPECIES

LAC QUI PARLE COUNTY, MINNESOTA 1987-1989

By
Carmen K. Converse, plant ecologist
Al Epp, data compiler

Natural Communities are functional units of the natural landscape, classified and described by considering vegetation, hydrology, landforms, soils, and natural disturbance regimes. The Natural Community Types on this map are classified primarily by vegetation and major habitat features. Natural Community areas were located by air photo-interpretation[1] and confirmed by field inventory[2]. Native prairie is emphasized; woodlands, wetlands (other than Wet Prairie), and aquatic communities were not surveyed extensively in Lac Qui Parle County. Uncolored areas are primarily cropland or other lands where the natural vegetation has been destroyed by human activity. These lands include overgrazed and non-native grasslands, planted woodlots, gravel pits, and rock quarries. Mature woodland areas, which have developed mostly since the onset of European settlement and fire suppression, and wetland and aquatic communities are also not mapped. Classification and inventory of Natural Communities in Minnesota is an ongoing effort of the Natural Heritage Program and the Minnesota County Biological Survey[3].

DESCRIPTION OF MAP UNITS

PRAIRIE

MP Mesic Prairie – prairies on deep, moderately drained to well-drained loamy soils formed in calcareous glacial till or alluvium. Occurring mostly on level terraces in the Minnesota River Valley and in abandoned glacial-river channels. Cover grasses are mainly big bluestem *(Andropogon gerardii)*, Indian grass *(Sorghastrum nutans)*, and little bluestem *(Schizachyrium scoparium)*. Common forbs are heartleaf golden alexanders *(Zizia aptera)*, purple prairie-clover *(Petalostemum purpureum)*, white prairie-clover *(P. candidum)*, smooth blue aster *(Aster laevis)*, Missouri goldenrod *(Solidago missouriensis)*, Flodman's thistle *(Cirsium flodmanii)*, northern bedstraw *(Galium boreale)*, rattlesnake-root *(Prenanthes racemosa)*, violet wood sorrel *(Oxalis violacea)*, Maximilian's sunflower *(Helianthus maximiliani)*, lead plant *(Amorpha canescens)*, and rough blazing star *(Liatris aspera)*.

HP Hill Prairie – prairies on well-drained, loamy soils formed in calcareous glacial till, often with boulders at the surface. Typically occurring along terraces and associated coulees of the Minnesota River Valley. Cover grasses are mostly little bluestem, side-oats grama *(Bouteloua curtipendula)*, and porcupine grass *(Stipa spartea)*. Common forbs are pasque flower *(Pulsatilla nuttalliana)*, purple coneflower *(Echinacea angustifolia)*, gray goldenrod *(Solidago nemoralis)*, rigid sunflower *(Helianthus rigidus)*, silky aster *(Aster sericeus)*, upland white aster *(Solidago ptarmicoides)*, dotted blazing star *(Liatris punctata)*, and lead plant.

GP Gravel Prairie – prairies on well-drained gravelly loam soils, often with boulders at the surface. Occurring mostly on calcareous glacial till deposited as a series of northwest-southeast trending ridges and knolls in the western part of the county. Cover grasses are mainly blue grama, *(Bouteloua gracilis)*, side-oats grama, little bluestem, porcupine grass, and needle and thread *(Stipa comata)*. Other common plants are sand reedgrass *(Calamovilfa longifolia)*, Wilcox's panic grass *(Panicum wilcoxianum)*, spike rush sedge *(Carex elecharis)*, dotted blazing star, scarlet gaura *(Gaura coccinea)*, golden aster *(Heterotheca villosa)*, and aromatic aster *(Aster oblongifolius)*.

WP Wet Prairie – prairies on deep, poorly drained, silty clay loam to sandy loam soils. Typically occurring within abandoned glacial-river channels in the Minnesota River Valley and in broad northwest-southeast trending drainageways in the western part of the county. Cover grasses are mainly prairie cordgrass *(Spartina pectinata)*, northern reedgrass *(Calamagrostis inexpansa)*, and sedges, (e.g., *Carex tetanica, C. lanuginosa*, and *C. sartwellii*). Common forbs are great blazing star *(Liatris pycnostachya)*, yellow stargrass *(Hypoxis hirsuta)*, New England aster *(Aster novae-angliae)*, golden alexanders *(Zizia aurea)*, bottle gentian *(Gentiana andrewsii)*, and giant goldenrod *(Solidago gigantea)*.

PRIMARY COMMUNITIES

RO Rock Outcrop – plant communities growing in fissures and shallow depressions on granite outcrops in the Minnesota River Valley. Characteristic plants of rock outcrops are rock spike-moss *(Selaginella rupestris)*, sand dropseed *(Sporobolus cryptandrus)*, false pennyroyal *(Isanthus brachiatus)*, prickly pear cactus *(Opuntia fragilis)*, ball cactus *(Coryphantha vivipara)*, slender-leaved bluet *(Houstonia longifolia)*, rusty woodsia *(Woodsia ilvensis)*, fameflower *(Talinum parviflorum)*, awned cyperus *(Cyperus aristatus)*, aromatic aster, and golden aster.

MFC Mud Flat Saline Subtype – plant communities in shallow saline basins that flood and draw down seasonally. Exposed sediments provide habitat for a distinctive community of plants that tolerate high salinity. Characteristic plants are glasswort *(Salicornia rubra)*, Nuttall alkali-grass *(Puccinella nuttalliana)*, prairie bulrush *(Scirpus paludosus)*, salt-grass *(Distichlis stricta)*, and sea-blite *(Suaeda calceoliformis)*. The only example in the county is Salt Lake, an important migration stopover for waterfowl and shorebirds.

RARE SPECIES SITES

Rare plants and animals that are listed or are candidates for listing under the provisions of the Federal or Minnesota Endangered Species Acts.[4] Mapped sites were determined from ground inventory and historical records.

- ★ Vascular Plants
- ♦ Birds
- ◊ Colonial Waterbirds
- ▼ Reptiles
- ■ Mammals
- ☆ Butterflies

MISCELLANEOUS FEATURES[5]

- Minor Civil Divisions
- Streams
- Lakes and Rivers
- Managed Areas
- Primary Roads
- Other Roads
- Railroads

NWR – National Wildlife Refuge
WPA – National Waterfowl Production Area
WMA – State Wildlife Management Area
SP – State Park
SNA – State Scientific and Natural Area

FOOTNOTES

1. Natural communities were photo-interpreted from 1:65,000 color infrared photography taken in May, 1980 (National Aeronautics and Space Administration), 1:58,000 color infrared photography taken in April, 1984 (National High Altitude Photography Program, U.S. Geological Survey), and color slides taken in July, 1984 (Agricultural Stabilization and Conservation Service).
2. Data are available from the Minnesota Natural Heritage Information System, Department of Natural Resources, St. Paul, Minnesota.
3. Almendinger, J. C., compiler and editor; N. E. Aaseng, R. P. Dana, B.C. Delaney, H.L. Dunevitz, K.A. Rusterholz, and N.P. Sather, contributors. 1991. A key to natural communities in Minnesota, version 1.3. Biological Report No. 20. Minnesota Natural Heritage Program, Department of Natural Resources, St. Paul, Minnesota.
4. Federal and state legislation concerning endangered species is detailed in Coffin, B. and L. Pfannmuller. 1988. Minnesota's endangered flora and fauna. University of Minnesota Press, Minneapolis, Minnesota.
5. Miscellaneous features were digitized from 1:24,000 U.S. Geological Survey topographic base maps. Data obtained from the Land Management Information Center, Minnesota State Planning Agency, St. Paul, Minnesota.

THE ORIGINAL VEGETATION OF LAC QUI PARLE COUNTY

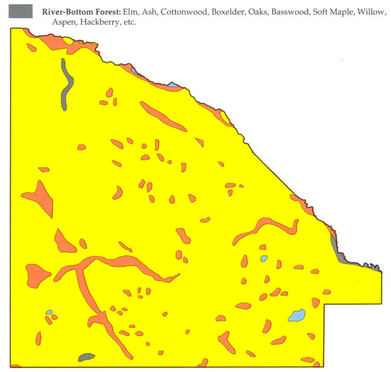
DESCRIPTION OF MAP UNITS

Original Vegetation of Lac Qui Parle County from Public Land Survey Records as interpreted by Francis J. Marschner[1]. Equivalent Natural Communities surveyed in 1987-1989 are given in parentheses. Rock Outcrops and Mud Flats were not mapped by Marschner.

Prairie (Mesic Prairie, Hill Prairie, Gravel Prairie)

Wet Prairies, Marshes, and Sloughs: Marsh-grasses, Flags, Reeds, Rushes, Wild Rice, with Willow and Alder-brush in places. (Wet Prairie)

River-Bottom Forest: Elm, Ash, Cottonwood, Boxelder, Oaks, Basswood, Soft Maple, Willow, Aspen, Hackberry, etc.



FOOTNOTE

1. Marschner, F.J. 1974. The original vegetation of Minnesota (map scale 1:500,000). USDA Forest Service, North Central Forest Experiment Station, St. Paul, Minnesota. (redraft of the original 1930 edition)

Diagram showing how sections are numbered in a township

0 1 2 3 4 5 6 Miles
0 1 2 3 4 5 6 7 8 9 10 Kilometers
(1:100,000)

Cartography by Greg Chu, Tanya J. Mayer and Carlos J. Ruiz at the University of Minnesota Cartography Laboratory
Text layout by Thomas R. Klein, Minnesota Department of Natural Resources

Primary funding provided by the Legislative Commission on Minnesota Resources and The Nature Conservancy, Minnesota Chapter

Copyright © 1991 State of Minnesota, Department of Natural Resources
Printed by the University of Minnesota Press, 1991