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The 1979 Resource Inventory
for
Pankratz Prairie North
Polk County, Minnesota

South $\frac{1}{2}$, Section 8
Township 149 North, Range 45 West
Harold Quadrangle

Prepared by
The Scientific and Natural Areas Section
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INTRODUCTION

Scope and Organization

This report documents the information collected during a 1979 inventory of Pankratz Prairie North. The inventory recorded information on climate, geology, soils, hydrology, plant communities, flora, birds, mammals, amphibians, reptiles, and land use history of the natural area. Data supplied by this document will be used by the Minnesota Natural Heritage Program and other evaluators to assess the site as a potential Scientific and Natural Area (SNA). The document can also be used by scientists, educators, and others interested in the area. Should the site be designated an SNA, management plans can be written using this document as a reference.

This report is divided into five sections including: introduction, abiotic, vegetational, and zoological components, and land use history of the site. Methodologies and results are presented for each section.

The inventory of Pankratz Prairie North was part of a larger 1979 effort in which eighteen natural areas in east central, northwest, and southeast Minnesota were surveyed. Inventory team members were: John Borowske, SNA Planning Coordinator; Cherry Keller, Karen Lustig, Deb Schowalter, and Jeff Weigel, Researcher/Writers; Kathy Bolin, Community Specialist; and Nancy Berlin, Tony Busche, Barbara Eikum, Peter Farrell, Joanne Herman, Laura Hill, Susan Ottoson, Deanna Schmidt, Marianne Severson, Angela Tornes, and James Ziegler, Researchers. Gerald Jensen, Coordinator, Scientific and Natural Areas Program, and Mark Heitlinger, Coordinator of Preserve Management, The Nature Conservancy, Minnesota Chapter served as

inventory advisors. Michael Rees, Project Editor, The Nature Conservancy, provided editorial assistance. Other individuals who assisted in the preparation of the inventory are mentioned in the appropriate sections. Their help is gratefully acknowledged.

Description of Study Area

Pankratz Prairie North is a 320 acre unit in western Polk County, approximately 7 miles southeast of Crookston, Minnesota. The area's climate is mid-continental, relatively cool and moist, with warm summers and cold winters. Wave deposited beach ridges of Glacial Lake Agassiz are found on and adjacent to the tract. Pankratz Prairie North is generally flat, with a gradual westward downslope. The poorly drained soils of the natural area formed in lacustrine and beach ridge sand and glacial till under tall prairie grasses and wetland vegetation. Present vegetation is primarily wet meadow and prairie, but some aspen woods and willow thickets are found on the tract.

The flora and fauna of Pankratz Prairie North are mostly typical of native Minnesota grassland. Species observed on the tract include: 168 vascular plants, 61 birds, 8 mammals, 4 amphibians, and 1 reptile.

Pankratz Prairie North lies in a small grain, sugar beet, sunflower, potato, and hay production area. It has probably never been plowed or grazed, but was hayed extensively prior to preservation. A section of the Burlington Northern Railroad crosses the tract. There is also an abandoned railroad grade present.

Preliminary Assessment of Significance

This section lists features identified by the Minnesota Natural Heritage Program (MNHP) as potential elements¹, and identifies other aspects of the preserve believed by the authors to be important components of Minnesota's natural diversity, or which otherwise might qualify the site for SNA designation. Criteria for SNA evaluation are enumerated in "Minnesota Department of Natural Resources Policy Plan for Scientific and Natural Areas", dated July 6, 1976.

Pankratz Prairie North is notable as a tract of native prairie vegetation near the edge of the prairie-forest transition zone. It is located on the edge of well-developed Glacial Lake Agassiz beach ridge. Four species of national and/or state significance were identified on the site during the 1979 inventory. The White Lady-Slipper (Cypripedium candidum), specific to wet prairie-calcareous soil habitats (Gleason and Cronquist, 1963), and the White Fringed Prairie Orchid (Habenaria leucophaea; Platanthera l. - Fernald, 1950), a species with restricted habitat requirements, have been proposed for federally threatened status by the Smithsonian Institute (Ayense & De Filipps, 1978). The Minnesota Natural Heritage Program lists the White Lady-Slipper, White Fringed Prairie Orchid, the Sedge Carex scirpiformis, The Greater Prairie Chicken Tympanuchus cupido), and the Marbled Godwit (Limosa fedoa) as potential elements of state significance. In addition to sightings on the tract, Greater Prairie Chickens were observed booming on adjacent cultivated fields.

¹ An element is a natural feature of particular interest because it is exemplary, unique, threatened, or endangered on a national or statewide basis.

Two species found at Pankratz Prairie North are at the edge of or beyond their main ranges. Cylindric Blazing Star (Liatris cylindracea) is disjunct from its main range to the southeast (University of Minnesota herbarium collection). A positive nesting record was obtained for the Sharp-tailed Grouse (Pedioecetes phasianellus); this species is at the western edge of its range at Pankratz Prairie North (Green & Janssen, 1975).

The natural area's location on the gently sloping edge of the Campbell beach ridge of the former Lake Agassiz accounts for moisture conditions ranging from wet to dry. Three prairie vegetation types are found, represented by species such as Cord Grass (Spartina pectinata) and Indian Hemp (Apocynum sibiricum) in the wettest areas, Indian Grass (Sorghastrum nutans) and Big Bluestem (Andropogon gerardi) on mesic sites, and Porcupine Grass (Stipa spartea) and Little Bluestem (Andropogon scoparius) in the driest locations.