

REDISCOVERING A RARE PLANT COMMUNITY: THE NATURAL HISTORY, FLORA, AND RESTORATION ECOLOGY OF WET PRAIRIE PLANT COMMUNITIES OF THE ANOKA SAND PLAIN OF EAST CENTRAL MINNESOTA, USA.

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Abstract: Wet prairie was an abundant plant community of the Anoka Sand Plain ecoregion of east central Minnesota at the time of European settlement (circa 1850), comprising approximately 160,000 acres (or 13.2%) of the land cover of this ecoregion. As of 2009, fewer than 500 acres of wet prairie remain within the Anoka Sand Plain ecoregion. Loss of wet prairie in the Anoka Sand Plain is due to direct impacts, such as past ditching, draining, agricultural conversion, and development, as well as indirect impacts, such as wildfire suppression, altered disturbance regimes, invasive species establishment, lack of management, and plant community succession. The wet prairies of the Anoka Sand Plain are highly diverse plant communities that are floristically similar to sand plain wet prairies and coastal marshes of the Central Sand Plains ecoregion of Wisconsin and lakeplain wet prairies of eastern Michigan. Anoka Sand Plain wet prairies support some of Minnesota's rarest vascular plant species, many of which are Eastern Coastal Plain disjuncts. State-listed rare species occurring within these habitats include: *Xyris torta*, *Juncus marginatus*, *Polygala cruciata* var. *aquilonia*, *Platanthera flava* var. *herbiola*, *Botrychium rugulosum*, *Viola lanceolata*, *Trichophorum clintonii*, *Fimbristylis autumnalis*, *Rubus stipulatus*, *Rubus vermontanus*, *Rotala ramosior*, and *Aristida longespica* var. *geniculata* (a recent state record native grass). I have surveyed for, discovered, inventoried, and restored several high quality Anoka Sand Plain wet prairie remnants over the past decade. Restorations of wet prairie sites have been achieved, in part, through stimulation of diverse native seed banks persisting within saturated organic soils.