



Prairie Monitoring at Pipestone National Monument

Importance: Rare *Sioux quartzite prairie, remnant prairie and restored prairie managed since 1937*

The tallgrass prairie community embodies a culturally significant historic background to the Pipestone quarries. Today, 160 acres of virgin tallgrass prairie remain in the monument with an additional 80 acres of restored prairie. Sioux quartzite prairie at Pipestone NM represents one of the few intact examples of a globally rare plant community.

Long Term Monitoring: *Achieving goals in three prairie types¹*

Plant community monitoring detects and quantifies change in species diversity, composition and structure in each community. The Heartland Network Inventory and Monitoring Program samples randomly located, paired transects within three distinct prairie community types. Scientists assess species frequency and foliar cover (area within the shadow of a plant) to inform monument managers of change in the communities and the achievement of restoration goals.



Figure 1: Pipestone NM prairies represent healthy native communities.

Status and Trends: *Functioning Native Communities*

Species richness and diversity show that the restored prairie and remnant prairie function similarly as healthy native communities. Managers have maintained the rare Sioux quartzite prairie community in good condition. Additionally, scientists discovered that:

1. Prescribed fire between 1997 and 2006 helped maintain consistent species richness, diversity and composition.
2. Exotic and woody species persist at measurable levels in all three prairie communities.
3. Analysis of the Sioux quartzite prairie data showed the unique nature of this community as compared to the restored and remnant tallgrass prairies.

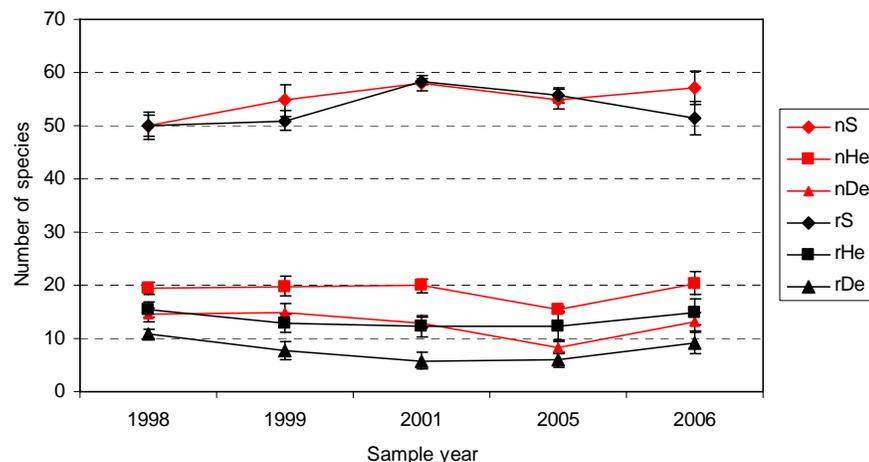


Figure 2: Comparison of restored (black) and native (red) tallgrass prairie sites for species richness (S) and two measures of species diversity (square and triangle).

The quality of the three prairie communities along with continued exotic species management contributes to the effective interpretation of cultural resources of the monument.

Heartland Network Inventory and Monitoring Program of the National Park Service. Visit www.nps.gov/im/units/htln/index.htm

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