

Schizachyrium scoparium - Bouteloua (curtipendula, gracilis) - Carex filifolia Herbaceous Vegetation



Vegetation Plot #23



Vegetation Plot #24

***Schizachyrium scoparium* - *Bouteloua (curtipendula, gracilis)* - *Carex filifolia*
Herbaceous Vegetation**

Photographs taken by The Nature Conservancy

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COMMON NAME	Little Bluestem - Grama (Side-oats, Blue) - Threadleaf Sedge Herbaceous Vegetation
SYNONYM	Northern Great Plains Little Bluestem Prairie
PHYSIOGNOMIC CLASS	Herbaceous vegetation (V)
PHYSIOGNOMIC SUBCLASS	Perennial graminoid vegetation (V.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar grassland (V.A.5)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (V.A.5.N)
FORMATION	Medium-tall sod temperate or subpolar grassland (includes sod or mixed sod-bunch graminoids) (V.A.5.N.c.)
ALLIANCE	<i>Schizachyrium scoparium - Bouteloua curtipendula</i> Herbaceous Alliance
CLASSIFICATION CONFIDENCE LEVEL	2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in western North Dakota, western South Dakota, western Nebraska, eastern and northern Wyoming, central and eastern Montana, southern Saskatchewan, and southern Manitoba.

Agate Fossil Beds National Monument

This community occurs in uplands throughout the Monument.

ENVIRONMENTAL DESCRIPTION

Globally

This community is usually found on moderate to steep slopes with variable aspects (Johnston 1987, Hansen and Hoffman 1988). The soil may be loamy sand, sandy loam, loam, or clay loam. There may be a substantial component of gravel. Hansen *et al.* (1984) found 7-36% gravel by weight in 16 stands in western North Dakota. The soils are typically shallow and occur over sandstone or limestone (Johnston 1987, Thilenius *et al.* 1995).

Agate Fossil Beds National Monument

This community occurs on shoulders of flat-topped hills and on eroding sandstone slopes on the sides of hills. Hilltop outcrops are nearly level and consist predominately of small rock fragments, whereas those on eroded hillsides consist primarily of bedrock and small rock fragments. Soils are poorly developed or absent.

MOST ABUNDANT SPECIES

Globally

Stratum

Herbaceous

Species

Schizachyrium scoparium, Bouteloua gracilis, Bouteloua curtipendula, Carex filifolia

Agate Fossil Beds National Monument

Stratum

Herbaceous

Species

Arenaria hookeri, Cryptantha cana, Erigeron ochroleucus var. scribneri, Muhlenbergia pungens, Musineon tenuifolium, Paronychia depressa, Schizachyrium scoparium, Tetraneuris acaulis

DIAGNOSTIC SPECIES

Globally

Schizachyrium scoparium, *Bouteloua gracilis*, *Bouteloua curtipendula*, *Carex filifolia*

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Arenaria hookeri, *Cryptantha cana*, *Erigeron ochroleucus* var. *scribneri*, *Lesquerella alpina*, *Musineon tenuifolium*, *Paronychia sessiliflora*, *Stenotus armerioides*

VEGETATION DESCRIPTION

Globally

This community is predominantly composed of graminoid species less than 1 m tall. The vegetation cover is moderate to high. Thilenius *et al.* (1995) found that vegetation cover was 44% in Wyoming and Hansen and Hoffman (1988) found 75% cover in North Dakota. The dominant species is *Schizachyrium scoparium* with *Bouteloua curtipendula*, *B. gracilis*, and *Carex filifolia* as associates or co-dominants. *Carex inops* ssp. *heliophila*, *C. eleocharis*, *Koeleria macrantha* and *Calamovilfa longifolia* are often present. *C. longifolia* may be abundant on sandier soils. *Muhlenbergia cuspidata*, *Stipa comata*, *Pascopyrum smithii*, and *Nassella viridula* may also be present. *Pseudoroegneria spicata* may be found in the western portions of this community (Jones 1992). In Manitoba, the graminoids *Festuca ovina* and *Elymus trachycaulus* and the lichen *Selaginella densa* are more abundant (Greenall 1995). Forbs do not contribute greatly to the canopy, but many species may be found in this community (Hanson and Whitman 1938). Among the forbs that may be found are *Echinacea angustifolia*, *Aster oblongifolius*, *A. ericoides*, *Gaura coccinea*, *Lygodesmia juncea*, *Helianthus pauciflorus* ssp. *pauciflorus*, *Rosa arkansana*, *Liatris punctata*, *Psoraleidium argophyllum*, *Dalea purpurea*, *Phlox hoodii*, and *Campanula rotundifolia*. There are very few woody species; those that are present are usually short shrubs such as *Artemisa frigida*, *Juniperus horizontalis*, and *Yucca glauca*. Litter often accumulates and may cover more than 50% of the ground (Hirsch 1985).

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Most areas are relatively sparsely vegetated, with vegetative cover ranging from ca 25-50%. Level outcrops with no soil developed are dominated by dwarf, caespitose perennial forbs including *Arenaria hookeri*, *Erigeron ochroleucus*, *Paronychia depressa*, *P. sessiliflora*, *Phlox hoodii* ssp. *muscooides*, and *Stenotus armerioides*. The only common graminoid in these sites is *Muhlenbergia cuspidata*. Where shallow soils have developed, *Stipa comata* - *Bouteloua gracilis* - *Carex filifolia* Herbaceous Vegetation occurs as mosaic patches. On eroding slopes, graminoids are far more common, including *Bouteloua gracilis*, *Muhlenbergia pungens*, and *Schizachyrium scoparium*. These sites typically have more soil development. Species diversity is moderate.

OTHER NOTEWORTHY SPECIES

Agate Fossil Beds National Monument

Several species occurring in this community are of biogeographic interest, since they are common in similar habitats in the vicinity of the southwest corner of the Nebraska Panhandle, and are evidently disjunct northward at the Monument. These include *Lesquerella alpina*, *Paronychia sessiliflora*, *Phlox hoodii* ssp. *muscooides*, and *Stenotus armerioides*.

CONSERVATION RANK G3

RANK JUSTIFICATION

DATABASE CODE C EGL001681

COMMENTS

Agate Fossil Beds National Monument

This community has less vegetation cover at the Monument than is typical throughout its range. It may be desirable to separate the irregular rock outcrops from the level rock outcrops, but more sampling is needed to specifically address this problem.

REFERENCES

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