

Stipa comata - Bouteloua gracilis - Carex filifolia Herbaceous Vegetation

COMMON NAME	Needle-and-thread - Blue Grama - Threadleaf Sedge Herbaceous Vegetation
SYNONYM	Needle-and-Thread Grass - Blue Grama Mixedgrass 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 (V.A.5.N.c)
ALLIANCE	<i>Stipa comata</i> - <i>Bouteloua gracilis</i> Herbaceous Alliance
CLASSIFICATION CONFIDENCE LEVEL	1
USFWS WETLAND SYSTEM	Upland

RANGE

Globally

This community is common in Montana, Wyoming, and is in Nebraska, North Dakota, South Dakota, southern Saskatchewan, and southern Manitoba. In Nebraska it is apparently absent from extreme northwest and east-central regions (Steinauer and Rolfsmeier 1997).

Wind Cave National Park

Needle-and-thread - blue grama/threadleaf sedge vegetation is uncommon at Wind Cave NP. The largest stands were found in the northeast part of the Park on the summits of broad ridges with thinner, rockier soils. Small patches were found elsewhere as inclusions in other grassland types.

ENVIRONMENTAL DESCRIPTION

Globally

This community is found on flat to gently sloping sites, predominantly with sandy loam or loam soil. The soil is typically 40-100 cm deep.

Wind Cave National Park

Needle-and-thread - blue grama/threadleaf sedge grassland was found on flat to gently sloping sites, with southerly and easterly aspects. The largest stands were found in the northeast part of the Park on the summits of broad ridges with thinner, rockier soils. Small patches were found elsewhere as inclusions in other grassland types.

MOST ABUNDANT SPECIES

Globally

<u>Stratum</u>	<u>Species</u>
Herbaceous	<i>Bouteloua gracilis</i> , <i>Carex filifolia</i> , <i>Pascopyrum smithii</i> , <i>Stipa comata</i>

Wind Cave National Park

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CHARACTERISTIC SPECIES

Globally

Bouteloua gracilis, *Carex filifolia*, *Stipa comata*

Wind Cave National Park

Bouteloua gracilis, *Carex filifolia*, *Stipa comata*

VEGETATION DESCRIPTION

Globally

This midgrass prairie community is dominated by graminoids that are usually between 0.5 and 1 m tall. The vegetation cover is moderate. The dominant species are *Bouteloua gracilis*, *Carex filifolia*, and *Stipa comata*, with *Stipa comata* usually the most dominant. *Pascopyrum smithii* is constant in this community and can be locally abundant. *Carex duriuscula* is not always present but is abundant at some sites. Forbs that are typical of this community are *Heterotheca villosa* var. *villosa*, *Guara coccinea*, *Liatris punctata*, and *Phlox hoodii*. Sandier areas often have *Calamovilfa longifolia* present. Shrubs rarely grow taller than the grasses, but *Artemisia frigida* is very common in this community. Other grasses that are likely to be present are *Aristida purpurea* var. *longiseta*, *Koeleria macrantha*, and *Sporobolus cryptandrus*. ^On 19 stands in west-central Montana the cover by the different strata was as

USGS-NPS Vegetation Mapping Program
Wind Cave National Park

follows: shrubs - 6%, graminoids - 67%, forbs - 11%, bryophytes - 14%, litter - 55%, rock 4%, bare soil - 9% (Mueggler and Stewart 1978). Thilenius et al. (1995) found that the average cover on 14 stands in eastern Wyoming was 42%. Tolstead (1942) described this community as the climax on the level lands of the northern part of Cherry County, Nebraska.

Wind Cave National Park

Stands of needle-and-thread - blue grama/threadleaf sedge have moderate herbaceous cover, typically between 25 and 75%. Needle-and-thread (*Stipa comata*), blue grama (*Bouteloua gracilis*), and threadleaf sedge (*Carex filifolia*) are the dominants. Other frequently-occurring graminoids include western wheatgrass (*Pascopyrum smithii*), junegrass (*Koeleria macrantha*), buffalograss (*Buchloe dactyloides*) and little bluestem (*Schizachyrium scoparium*). Low shrubs are often present, but cover is sparse - less than 20% typically. Prairie sagebrush (*Artemisia frigida*) and downy indigo-bush (*Amorpha canescens*) are the most frequently occurring shrubs.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G5. This is an exceedingly common type, manifesting any number of permutations, some of which are related to disturbance and some of which appear to be related to the expected geographic distinctions in a such a broadly distributed type. The only reason to consider it a G4 is that it has received, and continues to receive, significant grazing pressure, which combined with the surge in alien weed populations, pose a significant threat to its quality.

DATABASE CODE C EGL002037

MAP UNITS

The needle-and-thread - blue grama/threadleaf sedge community corresponds to map unit 18, needle-and-thread - blue grama/threadleaf sedge herbaceous vegetation, on the Wind Cave vegetation map.

COMMENTS

Wind Cave National Park

Needle-and-thread - blue grama/threadleaf sedge vegetation is uncommon at Wind Cave NP, and only a few stands large enough for sampling and mapping were found.

REFERENCES

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