

Artemisia cana / Pascopyrum smithii Shrubland

COMMON NAME Coaltown Sagebrush / Western Wheatgrass Shrubland
SYNONYM Silver Sagebrush / Western Wheatgrass Shrub Prairie
PHYSIOGNOMIC CLASS Shrubland (III)
PHYSIOGNOMIC SUBCLASS Evergreen Shrubland (III.A)
PHYSIOGNOMIC GROUP Microphyllous evergreen shrubland (III.A.4)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (III.A.4.N)
FORMATION Temporarily flooded microphyllous shrubland (III.A.4.N.c)
ALLIANCE ARTEMISIA CANA TEMPORARILY FLOODED SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Terrestrial

RANGE

Theodore Roosevelt National Park

This community is common along the floodplain and slightly elevated terraces of the Little Missouri River and its major tributaries.

Globally

This community is found in western North and South Dakota, eastern Montana, and is rare in Nebraska.

ENVIRONMENTAL DESCRIPTION

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Silver sagebrush / western wheatgrass shrublands form the prominent and relatively large “sagebrush flats” that occur on nearly flat and gently sloping floodplains, and the slightly elevated terraces along the Little Missouri River and its major tributaries.

Globally

This community occurs on flat alluvial deposits on floodplains, terraces or benches, or alluvial fans. The soils are moderately deep to deep (USFS 1992) and either silt loam, clay loam, or sandy loam (Johnston 1987, Hansen and Hoffman 1988). The soils may have moderate salt content (Hansen and Whitman 1938). Flooding occurs periodically and this tends to retard soil profile development (Hirsch 1985).

MOST ABUNDANT SPECIES

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<u>Stratum</u>	<u>Species</u>
Tree Canopy	<i>Fraxinus pennsylvanica</i> ,
Short Shrub	<i>Artemisia cana</i> , <i>Symphoricarpos occidentalis</i> , <i>Prunus virginiana</i> ,
Herbaceous	<i>Pascopyrum smithii</i> , <i>Bromus inermis</i> , <i>Euphorbia esula</i>

Globally

<u>Stratum</u>	<u>Species</u>
Short Shrub	<i>Artemisia cana</i>
Graminoid	<i>Bouteloua gracilis</i> , <i>Nassella viridula</i> , <i>Pascopyrum smithii</i>

CHARACTERISTIC SPECIES

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Artemisia cana, *Pascopyrum smithii*

Globally

Artemisia cana, *Nassella viridula*, *Pascopyrum smithii*

VEGETATION DESCRIPTION

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Artemisia cana is the dominant shrub species with *Pascopyrum smithii* as the major species found in the herbaceous layer. *Symphoricarpos occidentalis* often occurs as dense clones, above and below the minimum mapping size, within this alliance. Cover of *P. smithii* usually decreases in the more dense *Symphoricarpos* patches. *Bouteloua gracilis* tends to increase on portions that appear to be heavily utilized by bison. *Euphorbia esula* and *Bromus inermis* are frequent components. This shrubland is most often bordered by the *Populus deltoides* / *Juniperus scopulorum* Woodland and the *Bromus inermis* Grassland Alliance, the latter usually associated with the park roads.

USGS-NPS Vegetation Mapping Program
Theodore Roosevelt National Park

Globally

This community is dominated by a combination of shrubs and graminoids. The total vegetation cover is typically moderate, but depends on frequency of flooding. The USFS (1992) found that on 14 stands in western North Dakota, shrubs averaged 28 percent canopy cover, graminoids 59 percent, and forbs 2 percent. The tallest and most conspicuous stratum is a shrub layer that is usually 0.6-1.2 m, but it may be as short as 0.4 m or as tall as 1.5 m (Hansen and Hoffman 1988). The variation in soils within and between stands of this community results in variable species composition. *Artemisia cana* and *Pascopyrum smithii* are the dominant shrub and graminoid species, respectively. *Symphoricarpos occidentalis* is frequently present. There are also shorter shrubs such as *Artemisia frigida*, *Krascheninnikovia lanata*, *Rosa woodsii*, and *Gutierrezia sarothrae*. The most abundant graminoid is *Pascopyrum smithii*. This species is typically 0.5-1.0 m tall. It is often accompanied by *Nassella viridula* and sometimes *Koeleria macrantha*, *Poa pratensis*, and *Stipa comata*. *Bouteloua gracilis* is the most abundant short graminoid. Typical forb constituents of this community are *Achillea millefolium*, *Gaura coccinea*, *Sphaeralcea coccinea*, and *Lactuca tatarica* var. *pulchella*.

CONSERVATION RANK G4.

DATABASE CODE CEGL001072

SIMILAR ASSOCIATIONS

COMMENTS

Periodic flooding occurs in many stands of this community.

REFERENCES

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