

Artemisia filifolia / Calamovilfa longifolia Shrubland

COMMON NAME Sand Sagebrush / Prairie Sandreed Shrubland
SYNONYM Sand Sage / Prairie Sandreed Shrubland
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 Microphyllous evergreen shrubland (III.A.4.N.a)
ALLIANCE ARTEMISIA FILIFOLIA SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM Terrestrial

RANGE

Badlands National Park

Sand sagebrush shrublands occupy sand hills and high sand ridges, which are mostly distributed on Red Shirt and Blind Man Tables in the park's South Unit. A small amount of sand hills habitat lies within park boundaries southeast of Sheep Mountain Table and on the eastern edge of the Palmer Creek Unit.

Globally

This type is only reported from western South Dakota, where it is found in sandy habitats in Badlands National Park on Red Shirt and Blind Man Tables in the park's South Unit. A small amount of sand hills habitat lies within park boundaries southeast of Sheep Mountain Table and on the eastern edge of the Palmer Creek Unit (Von Loh *et al.* 1999).

ENVIRONMENTAL DESCRIPTION

Badlands National Park

Sand sagebrush shrublands are confined to the highest sand hills and ridges; this type forms a mosaic with yucca shrub grasslands on some lower sand ridges and where sand hills/ridges adjoin butte tops.

Globally

Sand sagebrush shrublands are confined to the highest sand hills and ridges; this type forms a mosaic with yucca shrub grasslands (*Yucca glauca*) on some lower sand ridges and where sand hills/ridges adjoin butte tops (Von Loh *et al.* 1999).

MOST ABUNDANT SPECIES

Badlands National Park

<u>Stratum</u>	<u>Species</u>
Shrub	<i>Opuntia polyacantha</i> , <i>Yucca glauca</i> , <i>Artemisia filifolia</i>
Herbaceous	<i>Bromus tectorum</i> , <i>Carex filifolia</i> , <i>Bouteloua gracilis</i> , <i>Calamovilfa longifolia</i>

Globally

<u>Stratum</u>	<u>Species</u>
Short Shrub	<i>Artemisia filifolia</i> , <i>Opuntia polyacantha</i> , <i>Yucca glauca</i>
Graminoid	<i>Bouteloua gracilis</i> , <i>Bromus tectorum</i> , <i>Calamovilfa longifolia</i> , <i>Carex filifolia</i>

CHARACTERISTIC SPECIES

Badlands National Park

Artemisia filifolia, *Yucca glauca*, *Opuntia polyacantha*, *Calamovilfa longifolia*, *Andropogon hallii*, *Bouteloua gracilis*, *Carex filifolia*, *Sporobolus cryptandrus*

Globally

Andropogon hallii, *Artemisia filifolia*, *Bouteloua gracilis*, *Calamovilfa longifolia*, *Carex filifolia*, *Opuntia polyacantha*, *Sporobolus cryptandrus*, *Yucca glauca*

OTHER NOTABLE SPECIES

Globally

<u>Stratum</u>	<u>Species</u>
Graminoid	<i>Schizachyrium scoparium</i>

VEGETATION DESCRIPTION

Badlands National Park

Sand sagebrush communities within Badlands NP have sparse to moderate cover, between 15-50%. Higher sand hills also have a large proportion of bare sand to vegetation between individual shrubs. The only shrub that becomes co-dominant with sand sagebrush (*Artemisia filifolia*) is yucca (*Yucca glauca*), and it typically occurs on lower sand ridges and places where sand hills interface with nearly flat butte tops. Herbaceous cover is sparse to moderate, typically consisting of blue grama (*Bouteloua gracilis*), prairie sandreed (*Calamovilfa longifolia*), sand dropseed (*Sporobolus cryptandrus*), threadleaf sedge (*Carex filifolia*),

USGS-NPS Vegetation Mapping Program
Badlands National Park

and sand bluestem (*Andropogon hallii*).

Globally

Sand sagebrush communities within Badlands National Park have sparse to moderate cover, between 15-50%. Higher sand hills also have a large proportion of bare sand to vegetation between individual shrubs. The only shrub that becomes co-dominant with *Artemisia filifolia* is *Yucca glauca*, and it typically occurs on lower sand ridges and places where sand hills interface with nearly flat butte tops. Herbaceous cover is sparse to moderate, typically consisting of *Bouteloua gracilis*, *Calamovilfa longifolia*, *Sporobolus cryptandrus*, *Carex filifolia*, and *Andropogon hallii*. Some stands may contain *Schizachyrium scoparium* (Von Loh *et al.* 1999).

CONSERVATION RANK G?.

DATABASE CODE C EGL002177

MAP UNITS Sand sagebrush shrublands are mapped under map class 32 (Sand sagebrush / Prairie sandreed Shrubland) on the Badlands NP vegetation map.

SIMILAR ASSOCIATIONS

Artemisia filifolia / *Andropogon hallii* Shrubland (*Andropogon hallii* occurs only rarely in 2177, but the habitat is similar. Types could well be combined upon range-wide review.)

Yucca glauca / *Calamovilfa longifolia* Shrub Herbaceous Vegetation

COMMENTS

Badlands National Park

Stands of the sand sagebrush shrublands have been classified as the *Artemisia filifolia* / *Calamovilfa longifolia* Shrubland type (CEGL002177). However, this type may overlap in concept with the *Artemisia filifolia* / *Andropogon hallii* Shrubland type (CEGL001459) reported from Nebraska, Wyoming and southward. Further range-wide review is necessary.

The sand sagebrush shrubland is confined to sandhills of the Valentine association, and to a lesser extent, sand ridges of the Anselmo association. It is on these sand ridges where sand sagebrush may form a mosaic with yucca shrub grasslands. Several stands were visited during field inventory work and they appeared quite consistent in vegetation structure and composition.

Globally

The sand sagebrush shrubland is confined to sandhills of the Valentine association, and to a lesser extent, sand ridges of the Anselmo association. It is on these sand ridges where *Artemisia filifolia* (sand sagebrush) may form a mosaic with *Yucca glauca* shrub grasslands, such as *Yucca glauca* / *Calamovilfa longifolia* Shrub Herbaceous Vegetation (CEGL002675) (Von Loh *et al.* 1999).

REFERENCES

- Steinauer, G. and S. Rolfsmeier. Terrestrial natural communities of Nebraska. Second Draft. Nebraska Game and Parks Commission, Lincoln, NE. 119 p.
- Von Loh, J., D. Cogan, D. Faber-Langendoen, D. Crawford, and M. Pucherelli. 1999. USGS-NPS Vegetation Mapping Program, Badlands National Park, South Dakota (Final Report). Technical Memorandum No. 8260-00-02. U.S. Bureau of Reclamation Technical Service Center. Denver Colorado.