

USGS-NPS Vegetation Mapping Program
Badlands National Park

Artemisia longifolia Badlands Sparse Vegetation

COMMON NAME Longleaf Sage Badlands Sparse Vegetation
SYNONYM Badlands Longleaf Sage Sparse Vegetation
PHYSIOGNOMIC CLASS Sparse Vegetation (VII)
PHYSIOGNOMIC SUBCLASS Unconsolidated material sparse vegetation (VII.C)
PHYSIOGNOMIC GROUP Sparsely vegetated soil slopes (VII.C.3)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (VII.C.3.N)
FORMATION Dry slopes (VII.C.3.N.b)
ALLIANCE ARTEMISIA LONGIFOLIA SPARSELY VEGETATED ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM Terrestrial

RANGE

Badlands National Park

The Long-leaf Sagebrush Badlands Sparse Vegetation type is rare within Badlands NP, restricted to small patches on exposed clay knobs and hillslopes.

Globally

This type is found in the badlands regions of the northern Great Plains.

ENVIRONMENTAL DESCRIPTION

Badlands National Park

The long-leaf sagebrush type occupies exposed clay soils on hillslopes and knobs (haystack mounds) weathered from the Chadron Formation. This type is rarely observed and occurs in small patches of less than 250 square meters.

Globally

Stands, which may be less than 0.1 ha in size (at least in Badlands National Park, South Dakota, are found on sparsely vegetated eroding slopes or flat clay ridges. Some slopes may be acidic, others more alkaline. Soils are poorly consolidated clays and silts. Stands may be particularly common on bentonite clay bands found on the ridges and slopes of the badlands (Von Loh *et al.* 1999).

MOST ABUNDANT SPECIES

Badlands National Park

Stratum Species
Shrub *Atriplex canescens*, *Eriogonum pauciflorum*, *Gutierrezia sarothrae*, *Artemisia longifolia*

Globally

Stratum Species
Information not available.

CHARACTERISTIC SPECIES

Badlands National Park

Artemisia longifolia, *Gutierrezia sarothrae*

Globally

Artemisia longifolia, *Eriogonum pauciflorum*, *Gutierrezia sarothrae*

OTHER NOTABLE SPECIES

Globally

Stratum Species
Short Shrub *Artemisia longifolia*, *Atriplex nuttallii*

VEGETATION DESCRIPTION

Badlands National Park

This long-leaf sagebrush type typically has less than 5% cover. The type is extremely rare at Badlands NP, occupying small areas of exposed Chadron Formation clays. Species that are often present are long-leaf sagebrush (*Artemisia longifolia*) and snakeweed (*Gutierrezia sarothrae*).

Globally

The vegetation is sparse, often much less than 10% cover, and species richness is very low. Short shrubs are the most conspicuous. *Artemisia longifolia* is the most frequent, and it may be associated with *Atriplex nuttallii*, *Eriogonum pauciflorum*, or *Gutierrezia sarothrae*.

CONSERVATION RANK G?.

DATABASE CODE CEG002195

USGS-NPS Vegetation Mapping Program

Badlands National Park

MAP UNITS The Long-leaf Sagebrush Sparse Vegetation type is included in the Badlands Sparse Vegetation Complex, Map Class 2, on the vegetation map. There is no separate map unit for this type.

SIMILAR ASSOCIATIONS

Badlands Sparse Vegetation Complex (This badlands complex includes this association.)

Eroding Great Plains Badlands Sparse Vegetation (This type contains virtually no vegetation.)

COMMENTS

Badlands National Park

This long-leaf sagebrush type is only rarely observed in the park, occurring in small patches on the slopes of eroded Chadron Formation clays. They occur as small inclusions within the Badlands Sparse Vegetation Complex. Only a few stands were surveyed during preparation of the vegetation map. A two hectare stand of *Atriplex canescens* is included in this type. It occupies a large badlands flat and erosion fan, consisting of hardpacked silty clay. This area collects and holds run-off water for a period of time following rainfall. The shrubs are large (0.5-2 m) and trap windblown particles of silt and clay, creating mounds up to 0.5 m high (Von Loh *et al.* 1999). Associated shrubs include *Gutierrezia sarothrae* and *Opuntia polyacantha*. Associated herbs include *Salsola iberica*, *Pascopyrum smithii*, *Bouteloua gracilis*, and *Stipa comata*.

Globally

In Badlands National Park, South Dakota, a two hectare stand of *Atriplex canescens* is included in this type. It occupies a large badlands flat and erosion fan, consisting of hardpacked silty clay. Associated shrubs include *Gutierrezia sarothrae* and *Opuntia polyacantha*. Associated herbs include *Salsola iberica*, *Pascopyrum smithii*, *Bouteloua gracilis*, and *Stipa comata* (Von Loh *et al.* 1999).

REFERENCES

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.