

## Eroding Great Plains Badlands Sparse Vegetation

COMMON NAME	Eroding Great Plains Badlands Sparse Vegetation
SYNONYM	Alkaline Badlands
TNC SYSTEM	Terrestrial
PHYSIOGNOMIC CLASS	Sparsely Vegetated
PHYSIOGNOMIC SUBCLASS	Unconsolidated material sparse vegetation
PHYSIOGNOMIC GROUP	Sparsely vegetated soil slopes
FORMATION	Dry slopes
ALLIANCE	Large Eroding Cliffs Sparse Vegetation

CLASSIFICATION CONFIDENCE LEVEL 2

### RANGE

This community is found in northwestern Nebraska, western South Dakota, western North Dakota, and southern Saskatchewan.

#### *Scotts Bluff National Monument*

This community occurs on the north side of the north overlook of Scotts Bluff.

### ENVIRONMENTAL DESCRIPTION

#### *Globally*

This community is found on moderate to steep slopes, predominantly with a southerly aspect. Soils are thin and highly erodible. On steeper slopes soils may be entirely absent. Parent material is sandstone or siltstone.

#### *Scotts Bluff National Monument*

This community is found on irregularly eroded slopes of dissected plains at elevations below 1300 meters (4000 ft). Vegetation occurs on siltstone outcrops within the Orella Member of the Brule Formation. There is very little soil development.

USFWS WETLAND SYSTEM Not applicable

### MOST ABUNDANT SPECIES

#### *Globally*

<u>Strata</u>	<u>Species</u>
Short shrub	<i>Artemisia longifolia</i> , <i>Ericameria nauseosa</i> ssp. <i>nauseosa</i> var. <i>nauseosa</i> , <i>Sarcobatus vermiculatus</i>
Herbaceous	<i>Gutierrezia sarothrae</i> , <i>Phlox hoodii</i>

**USGS-NPS Vegetation Mapping Program**  
**Scotts Bluff National Monument**

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*Scotts Bluff National Monument*

Strata

Species

Short shrub     *Atriplex canescens*, *Ericameria nauseosa* ssp. *nauseosa* var. *nauseosa*

Herbaceous     *Elymus lanceolatus* ssp. *lanceolatus*, *Gutierrezia sarothrae*, *Salsola* spp.

DIAGNOSTIC SPECIES

*Globally*

*Artemisia longifolia*, *Ericameria nauseosa* ssp. *nauseosa* var. *nauseosa*, *Eriogonum pauciflorum* var. *pauciflorum*, *Gutierrezia sarothrae*, *Sarcobatus vermiculatus*

*Scotts Bluff National Monument*

*Atriplex canescens*, *Astragalus pectinatus*, *Ericameria nauseosa* ssp. *nauseosa* var. *nauseosa*, *Iva axillaris*

VEGETATION DESCRIPTION

*Globally*

Vegetation cover in this community is absent to sparse. In locally more favorable places, vegetation cover can be moderate. The vegetation that does occur in this community is dominated by shrubs approximately 0.5 meter tall. *Artemisia longifolia*, *Ericameria nauseosa* ssp. *nauseosa* var. *nauseosa*, and, in the more mesic areas, *Sarcobatus vermiculatus* are the dominant shrubs. These exist as scattered individuals on the face of the slope. Herbaceous species that can be found in this community are *Cryptantha celosioides*, *Eriogonum pauciflorum* var. *pauciflorum*, *Gutierrezia sarothrae*, *Iva axillaris*, *Opuntia* spp., *Phlox hoodii*, and *Sphaeralcea coccinea*.

*Scotts Bluff National Monument*

This community is mostly unvegetated siltstone. *Atriplex canescens* and *Ericameria nauseosa* ssp. *nauseosa* var. *nauseosa* are scattered on the slopes. Native herbs include *Astragalus pectinatus*, *Gutierrezia sarothrae*, and *Iva axillaris*. Exotic herbs, such as *Kochia scoparia*, *Salsola collina*, and *S. kali* are often present. In areas where there is some soil development, the grasses *Elymus lanceolatus* ssp. *lanceolatus*, *Oryzopsis hymenoides*, and *Stipa comata* predominate along with other prairie plants. The deeper draws have been invaded by mesophytic plants not native to this community. This has been caused by drainage and seepage from the Gering Canal.

OTHER NOTEWORTHY SPECIES

*Astragalus pectinatus*, which is uncommon in Nebraska, is found in this community and the surrounding prairie. *Lappula cenchrusoides* was found in prairie at the margins of these badlands; it is apparently restricted to this habitat in Nebraska.

CONSERVATION RANK    Information not available.

RANK JUSTIFICATION    Information not available.

COMMENTS

The slopes on which this community is found are actively eroding.

*Scotts Bluff National Monument*

This community grades into Siltstone-Clay Butte Sparse Vegetation at elevations near 1300 meters (4000 ft).

REFERENCES

Judd, B. I. 1939. Plant Succession on Scoria Buttes of Western North Dakota. *Ecology* 20(2):335-336.

The Nature Conservancy (TNC). 1991a. Nebraska State Community Abstract, Badlands. Midwest Regional Office, Minneapolis, MN.

The Nature Conservancy (TNC). 1991b. North Dakota State Community Abstract, Barren Slope. Minneapolis, MN.