

Chrysothamnus nauseosus / Pseudoroegneria spicata Shrubland

COMMON NAME Rubber Rabbitbrush / Bluebunch Wheatgrass Shrubland
SYNONYM Common Rabbitbrush/Bluebunch Wheatgrass 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 CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM Terrestrial

RANGE

Badlands National Park

Rabbitbrush shrublands are rare within Badlands NP and are most easily observed where they are colonizing roadsides or other recently disturbed habitats. Small stands occur along the main park road in the North Unit and along Cunny Table Road and Red Shirt Road in the South Unit. The largest stand of rabbitbrush occurring in a non-human created habitat was observed in a small drainage near Plenty Star Table in the park's South Unit.

Globally

This Common Rabbitbrush shrubland type may occur across the northern Great Plains.

ENVIRONMENTAL DESCRIPTION

Badlands National Park

Rabbitbrush shrublands occur on nearly level to steep sites on road cuts and fill areas, and along moderately steep drainages. Dwarf rabbitbrush shrubs are also a component of Badlands Sparse Vegetation Complex types, described under other sections of this report.

Globally

As described from the Dakotas, stands occur either on dry, steep slopes along roadcuts or in heavily grazed floodplains.

MOST ABUNDANT SPECIES

Badlands National Park

| <u>Stratum</u> | <u>Species</u> |
|----------------|---------------------------------------------------------------------------------------------------------------|
| Shrub | <i>Gutierrezia sarothrae</i> , <i>Chrysothamnus nauseosus</i> |
| Herbaceous | <i>Bromus tectorum</i> , <i>Bromus japonicus</i> , <i>Artemisia dracuncululus</i> , <i>Pascopyrum smithii</i> |

Globally

| <u>Stratum</u> | <u>Species</u> |
|----------------|--------------------------------|
| Short Shrub | <i>Chrysothamnus nauseosus</i> |

CHARACTERISTIC SPECIES

Badlands National Park

Chrysothamnus nauseosus, *Pascopyrum smithii*, *Bromus japonicus*

Globally

Chrysothamnus nauseosus, *Pseudoroegneria spicata*

OTHER NOTABLE SPECIES

Globally

| <u>Stratum</u> | <u>Species</u> |
|----------------|------------------------------------------------------------|
| Graminoid | <i>Pascopyrum smithii</i> , <i>Pseudoroegneria spicata</i> |

VEGETATION DESCRIPTION

Badlands National Park

Rabbitbrush shrublands at Badlands NP are small and have moderate to dense shrub cover, from 30-65%. Rabbitbrush (*Chrysothamnus nauseosus*) occurs as a nearly monotypic stand, with few other shrubs present. The herbaceous cover is quite dense, dominated by either the native perennial western wheatgrass (*Pascopyrum smithii*) or the exotic annuals Japanese brome (*Bromus japonicus*) and cheatgrass (*Bromus tectorum*).

Globally

In the Dakotas, the vegetation has an open structure, with clumps of shrubs around 0.5 to 1 m tall scattered over a medium-tall herbaceous layer. *Chrysothamnus nauseosus* is the dominant shrub. Other less common shrubs include *Prunus virginiana* and *Symphoricarpos occidentalis*. The herbaceous layer may contain the graminoids *Elymus trachycaulus* ssp. *trachycaulus* and *Pascopyrum smithii*. Forbs include *Melilotus officinalis*. Stands may contain a variety of other weedy species, such as *Bromus*

USGS-NPS Vegetation Mapping Program
Badlands National Park

japonicus and *Bromus tectorum* (Von Loh *et al.* 1999). Further west, in Montana, the type may occur in entirely natural habitats, and the dominant graminoid is *Pseudoroegneria spicata*.

CONSERVATION RANK G3Q. Type may be weedy (semi-natural) as well as natural, making ranking difficult.

DATABASE CODE C EGL001330

MAP UNITS The rabbitbrush shrubland type is represented by map class 33 (Rabbitbrush Shrubland), on the Badlands NP vegetation map.

SIMILAR ASSOCIATIONS

COMMENTS

Badlands National Park

Although stands of rabbitbrush shrubland are classified as the *Chrysothamnus nauseosus* / *Pseudoroegneria spicata* Shrubland (CEGL001330), a type reported from Montana, they do not appear to fit that type concept very well, as no bluebunch wheatgrass (*Pseudoroegneria spicata*) occurs in this type. Because stands at Badlands NP are rather weedy, it may be difficult to define characteristic species. The global type has not been well described globally, so further review is still needed.

Rabbitbrush shrublands along natural drainages intergrade with silver sagebrush and are difficult to classify. This is a rare type at Badlands NP, but it is relatively well-sampled given this rarity.

Globally

Chrysothamnus nauseosus increases in abundance in heavily grazed floodplain stands of cottonwood (Thilenius *et al.* 1995). Stands in Montana contain *Pseudoroegneria spicata*. It's possible that the weedy stands in South Dakota should not be assigned to this type.

REFERENCES

- Lesica, P. and R.L. DeVelice. 1992. Plant communities of the Pryor Mountains. Preliminary Report prepared by the Montana Natural Heritage Program, Helena, MT.
- Thilenius, J. F., G. R. Brown, and A. L. Medina. 1995. Vegetation on semi-arid rangelands, Cheyenne River Basin, Wyoming. General Technical Report RM-GTR-263. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 60 pp.