Juniperus scopulorum / Oryzopsis micrantha Woodland

COMMON NAME	Rocky Mountain Juniper / Little-seed Mountain Ricegrass Woodland
SYNONYM	Rocky Mountain Juniper / Little-seed Ricegrass Woodland
PHYSIOGNOMIC CLASS	Woodland (II)
PHYSIOGNOMIC SUBCLASS	Evergreen woodland (II.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen woodland (II.A.4)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (II.A.4.N)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a)
ALLIANCE	JUNIPERUS SCOPULORUM WOODLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Terrestrial

RANGE

Badlands National Park

Rocky Mountain juniper / littleseed ricegrass woodlands occupy draws and the edges of buttes and tables, scattered throughout the park. The trees are probable hybrids between Rocky Mountain juniper and eastern red cedar.

Globally

This community is found in southeastern Montana, southwestern North Dakota, western South Dakota, eastern Wyoming, and western and central Nebraska.

ENVIRONMENTAL DESCRIPTION

Badlands National Park

Rocky Mountain juniper / littleseed ricegrass woodlands occupy dry draws and the small ledges and crevices that occur along crowns of buttes and tables. Draws tend to be steep and incised, and aspect does not seem to play a large role in the community's distribution, as it occupies all aspects.

Globally

This community typically occurs on moderate to steep (16-70%) north-facing slopes, but can occur on a variety of aspects (Johnston 1987, Von Loh *et al.* 1999). The soils are poorly developed, shallow, loamy sands, sandy loams, and clay loams, sometimes with high gravel content. These woodlands are frequently associated with outcrops of sandstone (DeVelice *et al.* 1995) or scoria and clay slopes (Girard *et al.* 1989).

MOST ABUNDANT SPECIES

Badlands National Park

Stratum	Species
Tree	*Fraxinus pennsylvanica*, *Juniperus virginiana*, *Juniperus scopulorum*
Shrub	*Rhus trilobata*, *Symphoricarpos occidentalis*, *Prunus virginiana*, *Juniperus virginiana*, *J. scopulorum*
Herbaceous	*Maianthemum stellatum*, *Pascopyrum smithii*, *Nassella viridula*, *Bouteloua curtipendula*, *Oryzopsis micrantha*

Globally

Stratum	Species
Tree canopy	*Juniperus scopulorum, Juniperus virginiana*
Short shrub	*Rhus trilobata, Symphoricarpos occidentalis*
Forb	*Campanula rotundifolia, Galium boreale, Maianthemum stellatum*
Graminoid	*Oryzopsis micrantha*

CHARACTERISTIC SPECIES

Badlands National Park

Juniperus scopulorum (Juniperus virginiana), *Oryzopsis micrantha*

Globally

Juniperus scopulorum, Juniperus virginiana, Oryzopsis micrantha

OTHER NOTABLE SPECIES

Globally

Stratum	Species
Graminoid	*Pascopyrum smithii*

VEGETATION DESCRIPTION

Badlands National Park

Stands of Rocky Mountain juniper / littleseed ricegrass woodlands typically have very closed canopies, from 50-90% cover. Rocky Mountain Juniper (*Juniperus scopulorum*) and its hybrid with Eastern Red Cedar (*Juniperus virginiana*) dominate the

stands. Under the tree canopy, shrub and herbaceous cover is sparse; however, alongside the woodland and in draw heads shrub cover can be extremely dense. Shrubs growing under the tree canopy typically include Rocky Mountain juniper, green ash (*Fraxinus pennsylvanica*), and choke cherry (*Prunus virginiana*), which together generally provide from 5-15% cover. Shrubs growing adjacent to tree stands and up draw heads include snowberry (*Symphoricarpos occidentalis*) and ill-scented sumac (*Rhus trilobata*). Littleseed ricegrass (*Oryzopsis hymenoides*) is the common understory herb but does not usually exceed 5% cover.

Globally
This woodland community is dominated by small *Juniperus scopulorum* trees through most of its range, and is replaced by *J. virginiana* and introgressant hybrids in the eastern portion of its range in Nebraska and South Dakota (Kaul *et al.* 1983, Von Loh et al. 1999). Some stands contain *Fraxinus pennsylvanica*. Most of these trees are 10-20 cm dbh and 4-6 meters tall (Nelson 1961, Hansen *et al.* 1984). Some trees can be up to 30-40 cm dbh. The basal area has been reported at 22-29 m2/ha in North Dakota (Hansen *et al.* 1984) and up to 22-41 m2/ha in southeastern Montana and northwestern South Dakota (Hansen and Hoffman 1988). Tree canopy is moderate to dense. In North Dakota, Girard *et al.* (1989) measured densities of 975 trees/ha. Where the canopy is dense the shrub and herbaceous strata are poorly developed. Where the canopy is less full, shrubs and herbaceous species are more abundant. On 7 stands in southwest North Dakota mosses and lichens covered 72% of the ground surface, shrubs covered 17.4%; graminoids - 69.1%; forbs - 9.4% (Hansen *et al.* 1984). Three stands in southeastern Montana had less coverage in each strata (Hansen and Hoffman 1988). Among the shrubs that may be found in this community are *Juniperus communis*, *J. horizontalis*, small *J. scopulorum or J. virginiana*, *Mahonia repens*, *Pentaphylloides floribunda*, *Prunus virginiana, Rhus trilobata, Ribes aureum, R. cereum, Rosa woodsii*, *Symphoricarpos albus*, and *S. occidentalis*. Typical herbaceous species include *Anemone patens, Antennaria microphylla, Campanula rotundifolia*, *Carex inops* ssp. *heliophila*, *Chenopodium fremontii*, *Elymus lanceolatus, E. trachycaulus, Galium boreale*, *Geum triflorum, Koeleria macrantha*, *Oryzopsis micrantha*, *Maianthemum stellatum, Parietaria pensylvanica*, and *Taraxacum officinale*. *Acer negundo* and *Fraxinus pennsylvanica* saplings are sometimes found in depressions where soil and moisture accumulate.

CONSERVATION RANK G3. A number of sites have been impacted by cutting for fenceposts or railroad ties. Fire suppression may increase the extent of the community within its range.

DATABASE CODE CEGL000747

MAP UNITS Rocky Mountain juniper / little-seed ricegrass stands are mapped under map class 44 (Rocky Mountain juniper / Little-seed ricegrass Woodland) on the Badlands NP vegetation map.

SIMILAR ASSOCIATIONS

COMMENTS
Badlands National Park
This type grades into green ash - American elm woodlands as the slope lessens and/or more mesic conditions are present in the draw. The type also grades into ponderosa pine (*Pinus ponderosa*) trees in the steepest draws of the southernmost South Unit. Where Rocky Mountain Juniper and ponderosa pine are co-dominant in the canopy, stands can be difficult to map, falling between class 43 and 44. Many stands were assessed while preparing the Badlands NP vegetation map.

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