

## Pinus ponderosa / Juniperus scopulorum Woodland

COMMON NAME Ponderosa Pine / Rocky Mountain Juniper Woodland  
SYNONYM Ponderosa Pine / Rocky Mountain Juniper 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 Round-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a)  
ALLIANCE PINUS PONDEROSA WOODLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Terrestrial

### RANGE

#### **Theodore Roosevelt National Park**

This woodland is found in the project area on only one site near Theodore Roosevelt NP.

#### **Globally**

The range of this community includes southeastern Montana, eastern Wyoming, southwestern North Dakota, western South Dakota, western Nebraska, and possibly northeastern Colorado. A community of this name has been reported in New Mexico but its present status and similarity to this community is uncertain. In southwestern North Dakota this type is restricted to near the Little Missouri River and its tributaries (Girard *et al.* 1989).

### ENVIRONMENTAL DESCRIPTION

#### **Theodore Roosevelt National Park**

*Pinus ponderosa* is the single dominant overstory species on somewhat steep (26-49%) north and northeast facing slopes. This alliance occurred in close association with *Fraxinus pennsylvanica* and *Juniperus scopulorum*.

#### **Globally**

This community has been found primarily on slopes between 16-45 percent with a variety of aspects. In the central and southern portions of its range, it is predominantly on dry-mesic north- or east-facing slopes. In more mesic local climates or with heavier soils this community can exist on south-facing slopes. In North Dakota, Girard *et al.* (1989) found *Pinus ponderosa* stands on level to gently sloping (0-15 percent) mostly south-facing slopes. Throughout its range, the type can be found on bedrock of sandstone, limestone, or shale. Soils are usually well-drained, shallow, very stony, clay loams, silt loams, and sandy loams.

### MOST ABUNDANT SPECIES

#### **Theodore Roosevelt National Park**

<u>Stratum</u>	<u>Species</u>
Tree Canopy	<i>Pinus ponderosa</i> , <i>Juniperus scopulorum</i> , <i>Fraxinus pennsylvanica</i>
Short Shrub	<i>Prunus virginiana</i> , <i>Pentaphylloides floribunda</i> , <i>Rhus trilobata</i>
Herbaceous	<i>Oryzopsis micrantha</i> , <i>Smilacina stellata</i> (= <i>Maianthemum stellatum</i> )

#### **Globally**

<u>Stratum</u>	<u>Species</u>
Tree Canopy	<i>Pinus ponderosa</i>
Tree sub-canopy	<i>Juniperus scopulorum</i>

### CHARACTERISTIC SPECIES

#### **Theodore Roosevelt National Park**

*Pinus ponderosa*, *Juniperus scopulorum*, *Pentaphylloides floribunda*, *Oryzopsis micrantha*

#### **Globally**

*Juniperus scopulorum*, *Pinus ponderosa*, *Schizachyrium scoparium*

**USGS-NPS Vegetation Mapping Program**  
**Theodore Roosevelt National Park**

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VEGETATION DESCRIPTION

**Theodore Roosevelt National Park**

*Pinus ponderosa* is the dominant tree species and is found locally in only one area within the project area on the south side of Interstate 90 at the end of the Medora eastbound exit. The woodland is generally found on mesic, north-facing slopes that support fairly high species richness. *Juniperus scopulorum* is a common associate of the overstory. Almost every shrub species found in the area was recorded in the sampled plots, with *Potentilla fruticosa* (= *Pentaphylloides floribunda*), *Prunus virginiana*, and *Rhus trilobata* as the principle species.

**Globally**

This community has a dense to moderately open canopy of *Pinus ponderosa* that is typically 10-20 m high. Most of the trees in the canopy are 20-40 cm dbh (Hoffman and Alexander 1987). *Juniperus scopulorum* forms a subcanopy that is 2-4 m high and is also moderately dense to open. There is usually a shrub layer that contains *Cercocarpus montanus*, *Rhus trilobata*, *Symphoricarpos occidentalis*, and *Yucca glauca*. The herbaceous layer is sparse or absent, especially under areas of dense canopy or on very steep, eroding slopes. Total vegetation cover averaged 33 percent in seven stands in southeastern Montana (Brown 1971). Litter can accumulate to a depth of 10 cm or more where conifers are dense (Thilenius *et al.* 1995). Where the herbaceous stratum is present it is dominated by prairie graminoids. These include *Bouteloua curtipendula*, *B. gracilis*, *Carex filifolia*, *Pseudoroegneria spicata*, and *Schizachyrium scoparium*.

CONSERVATION RANK G4. Type is fairly widespread across 4 states, though it is not known to be very extensive in any of its range. Protection status across the range of this type is not known.

DATABASE CODE CEGL000861

SIMILAR ASSOCIATIONS

*Juniperus scopulorum* / *Oryzopsis micrantha* Woodland (Stands dominated by both *Pinus ponderosa* and *Juniperus scopulorum*, but with less than 25% *Pinus ponderosa*, are placed in this type.)

*Juniperus scopulorum* Woodland (is very similar, but the density of *Juniperus scopulorum* is high.)

COMMENTS

REFERENCES

- Brown, R.W. 1971. Distribution of plant communities in southeastern Montana badlands. *The American Midland Naturalist* 85(2):458-477.
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- 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.
- Watson, J.R. 1912. Plant geography of north central New Mexico: Contributions from the Hull Botanical Laboratory 160 Botanical Gazette 54:194-217.