

Pinus ponderosa / Carex inops ssp. heliophila Woodland

COMMON NAME	Ponderosa Pine / Sun Sedge Woodland
SYNONYM	Ponderosa Pine / Long Stolon Sedge 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	<i>Pinus ponderosa</i> Woodland Alliance

CLASSIFICATION CONFIDENCE LEVEL 1

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in Colorado, Wyoming, western South Dakota, and Montana.

Devils Tower National Monument

This community is best developed below the base of Devils Tower in areas underlain by buried talus. Elsewhere in the park, it typically occurs in mosaics with *Pinus ponderosa* / *Schizachyrium scoparium* Wooded Herbaceous Vegetation.

ENVIRONMENTAL DESCRIPTION

Globally

This community is often found on gentle and moderate south to west facing slopes (Hansen and Hoffman 1988, Hoffman and Alexander 1987).

Devils Tower National Monument

This vegetation type is best developed below the base of Devils Tower on gentle to moderate slopes (less than 15 degrees) underlain by buried talus. There is no clear correlation with aspect. Elsewhere in the park, especially in areas of sandstone outcrops, this community typically occurs in mosaics with *Pinus ponderosa* / *Schizachyrium scoparium* Wooded Herbaceous Vegetation.

MOST ABUNDANT SPECIES

Globally

<u>Strata</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Herbaceous	<i>Carex inops</i> ssp. <i>heliophila</i> , <i>Danthonia spicata</i>

Devils Tower National Monument

<u>Strata</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Subcanopy	<i>Pinus ponderosa</i>
Herbaceous	<i>Carex inops</i> ssp. <i>heliophila</i> , <i>Danthonia spicata</i>

USGS-NPS Vegetation Mapping Program
Devils Tower National Monument

DIAGNOSTIC SPECIES

Globally

Pinus ponderosa, *Carex inops* ssp. *heliophila*

Devils Tower National Monument

Pinus ponderosa, *Carex inops* ssp. *heliophila*

VEGETATION DESCRIPTION

Globally

The tree canopy and subcanopy are dominated by *Pinus ponderosa*. *Juniperus scopulorum* and *Quercus macrocarpa* are occasionally found in the subcanopy. Shrubs are infrequent in this type. The herbaceous layer is dominated by *Carex inops* ssp. *heliophila*, with inclusions of *Danthonia spicata*, *Schizachyrium scoparium*, and *Pseudoroegneria spicata* -- generally in areas with more open canopies.

Devils Tower National Monument

Stands of this vegetation type are dominated by *Pinus ponderosa*. Below the base of Devils Tower on gentle to moderate slopes underlain by buried talus, canopy and subcanopy coverages both typically are between 25 and 50%, resulting in relatively high tree cover. Herbaceous cover is quite variable, ranging from 15 to 75%. It is in these situations that *Danthonia spicata* commonly is found with *Carex inops* ssp. *heliophila*. Elsewhere in the park, smaller stands of *Pinus ponderosa* / *Carex inops* ssp. *heliophila* Woodland occur in mosaics with *Pinus ponderosa* / *Schizachyrium scoparium* Wooded Herbaceous Vegetation.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G3

RANK JUSTIFICATION

DATABASE CODE C EGL000849

COMMENTS

Globally

The canopy in this type is usually moderately open but can become nearly closed in undisturbed stands (i.e., where the natural disturbance regime has been disrupted).

The stands used to document the *Pinus ponderosa* / *Carex inops* ssp. *heliophila* Woodland Habitat Type described by Hoffman and Alexander (1987) and Hansen and Hoffman (1988) had very high basal area and densities for a woodland, possibly due to their sampling procedure. The dense structure may have affected the floristic makeup of the stands. This type, however, is a woodland (not forest) type in its typically high-quality state.

REFERENCES

Hansen, P. L. and G. R. Hoffman. 1988. The vegetation of the Grand River/Cedar River, Sioux, and Ashland Districts of the Custer National Forest: A habitat type classification. General Technical Report RM-157. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 68 p.

Hoffman, G. R. and R. R. Alexander. 1976. Forest vegetation of the Bighorn Mountains, Wyoming: A habitat type classification. Research Paper RM-170. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 38 p.

Hoffman, G. R. and R. R. Alexander. 1987. Forest vegetation of the Black Hills National Forest of South Dakota and Wyoming: A habitat type classification. Research Paper RM-276. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 48 p.

McAdams, A. G., D. A. Stutzman, and D. Faber-Langendoen. 1998. Black Hills Community Inventory, unpublished data. The Nature Conservancy, Midwest Regional Office, Minneapolis, MN.