

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Shoshonea pulvinata</i> / <i>Shoshonea</i>			
Criteria	Rank	Rationale	Literature Citations
<p>1 Distribution within R2</p>	B	<p>Shoshonea occurs in the Absaroka Range and Owl Creek Mountains in Fremont, Hot Springs, and Park counties, Wyoming, on the Shoshone National Forest. It is not known from any other Region 2 state.</p> <p>This species is found on the shallow, stony, calcareous soils of exposed limestone outcrops, ridge tops, and talus slopes. It is associated with other low-growing forbs and cushion plants on sites with sparse cover. The elevation range is 5,800 to 9,200 feet. These habitats are patchy and discontinuous on the landscape and the range of this species is limited.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Dorn 2001 • Evert 1986 • Evert and Constance 1982 • Fertig 1992, 1997, 1998, 2000 • Fertig et al. 1994 • Fertig and Bynum 1994 • Fertig and Mills 2000 • Jones 1991 • Jones and Fertig 1992 • Jones and Fertig 1999 • Marriott 1988, 1992 • Mills and Fertig 1996 • Rosenthal 1998, 1999 • University of Wyoming 1998 • Welp et al. 2000
<p>2 Distribution outside R2</p>	B	<p>Shoshonea is a regional endemic and monotypic genus of northwest Wyoming and south-central Montana.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Clark et al. 1989 • Heidel 2001 • Lesica and Shelly 1991 • Shelly 1988
<p>3 Dispersal Capability</p>	D	<p>Not known.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • -

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4 Abundance in R2	BD	<p>Shoshonea is known from 8 occurrences in Wyoming, all of which have been discovered or relocated since 1982 (7 of these were intensively studied between 1989-1996). Three occurrences are on the Shoshone National Forest. Individual populations often number in the tens of thousands of mats, though the total area of occupied habitat is small. Dorn (1989) estimated the total number of plants in Wyoming at ca 210,000. Approximately 12,000 plants were reported in Montana in the late 1980s (Shelly 1988) where it is known from 4 occurrences. This species is ranked "S2" in Wyoming.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Dorn 1989 • Fertig 1997, 1998 • Fertig and Mills 2000 • Heidel 2002 • Shelly 1988 • University of Wyoming 1998 • USDA Forest Service 2001 • Welp et al. 2000 • WYNDD 2002
5 Population Trend in R2	D	<p>Trends appear to be stable at present. Species' numbers change very slightly from year-to-year, and recruitment appears to be the limiting life history stage.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Fertig and Mills 2000 • Heidel 2001
6 Habitat Trend in R2	D	<p>Not known.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • -
7 Habitat Vulnerability or Modification	BD	<p>The habitat of <i>Shoshonea</i> habitat is relatively inaccessible and not directly threatened. The species is in the Bald Ridge proposed Research Natural Area, in habitats that burned and were not burned by a recent fire. The direct effects of fire to individual plants are not known but the species persists among burned trees, on unburned outcrop habitat, and is present in the fire line (Heidel personal observation).</p> <p>This species occurs on lands managed for multiple use by the Shoshone National Forest, the BLM Cody and Worland Field Offices, and the Wind River Indian Reservation.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Clark et al. 1989 • Dorn 1989, 2001 • Evert and Constance 1982 • Fertig 1992, 1995, 1997, 1998 • Fertig and Mills 2000 • Welp et al. 2000 • WYNDD 2002

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8 Life History and Demographics	D	<p>Shoshonea is a mat-forming, perennial forb. Flowering and fruiting occur from May through July. Demographic monitoring indicates that it is a very long-lived over decades and slow-growing (Heidel 2001). It appears that fecundity and growth rate are higher in population segments that grow in the open compared to those in woodland, while mortality is also higher in these settings.</p> <p>Additional information on the species, including detailed information on life history stages, population structure, longevity, mortality, and seed biology, are not available.</p> <p>Confidence in rank High</p>	<ul style="list-style-type: none"> • Evert and Constance 1982 • Fertig and Mills 2000 • Heidel 2001
Initial Evaluator(s): Bonnie Heidel, Joy Handley and Scott Laursen			Date: May 20, 2002

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY(L)¹ to occur:

¹ Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.

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<u>Colorado NF/NG</u>	Known	Likely	<u>Kansas NF/NG</u>	Known	Likely	<u>Nebraska NF/NG</u>	Known	Likely	<u>South Dakota NF/NG</u>	Known	Likely	<u>Wyoming NF/NG</u>	Known	Likely
Arapaho-Roosevelt NF			Cimmaron NG			Samuel R. McKelvie NF			Black Hills NF			Shoshone NF	X	
White River NF						Halsey NF			Buffalo Gap NG			Bighorn NF		
Routt NF						Nebraska NF			Ft. Pierre NG			Black Hills NF		
Grand Mesa, Uncompahgre, Gunnison NF						Ogalala NG						Medicine Bow NF		
San Juan NF												Thunder Basin NG		
Rio Grande NF														
Pike-San Isabel NF														
Comanche NG														

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