

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: *Athyrium americanum* / American Alpine Lady Fern (*A. distentifolium* var. *americanum*, *A. alpestre* ssp. *americanum*, *A. alpestre* var. *americanum*, *A. detentifolium*, *A. distentifolium* ssp. *americanum*)

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	AD	<p>Region 2 harbors the southern portion of American alpine lady-fern's distribution for the Rocky Mountains. Within Region 2, this boreal species is found in Colorado and the Snowy Range in southeast Wyoming, Albany County, on the Medicine Bow National Forest. Additional information is needed from Colorado to determine its Region 2 status.</p> <p>In Wyoming, this species occurs on wet rocky talus slopes and along rushing streams from 8300-11400 feet. This combination of habitats is discontinuous on the landscape, resulting in a patchy distribution.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Cronquist et al. 1972 • Dorn 2001 • Fertig 1993 • Hitchcock et al. 1969 • NatureServe 2002 • Nelson 1984 • University of Wyoming 1998
2 Distribution outside R2	C	<p>Outside of Region 2, American alpine lady-fern is found from Alaska to California and east to Quebec, Newfoundland, and southern Greenland. It is also present west of Region 2 in Utah. Within Wyoming this species occurs to the west of the Region 2 in Teton County.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Hitchcock et al. 1969 • Markow and Fertig 1993 • Marriott 1993 • Scott 1997 • Vitt et al. 1988
3 Dispersal Capability	C	<p>As a spore-producing vascular plant, this species readily disperses across unsuitable habitat.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • -
4 Abundance in R2	A	<p>This species is known from five locations in Wyoming, only one of which is within the Region 2. All have been discovered or relocated since 1991 (most recently in 1996).</p> <p>Populations are relatively small in Grand Teton NP, although not all of the potential habitat has been surveyed (Marriott 1993). Previously thought to be extirpated in Medicine Bow NF (Fertig 1993), but a small population was relocated there in 1996 (62 years after being last observed).</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • Fertig 2000

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Criteria	Rank	Rationale	Literature Citations
5 Population Trend in R2	AD	Overcollection for specimens may have reduced the Medicine Bow Peak population (many more mounted specimens of this species exist in various herbaria than are known to persist in the SBA). Confidence in Rank High	<ul style="list-style-type: none"> Fertig 2000
6 Habitat Trend in R2	B	The wet alpine environments within which this species occurs are well protected from human influences through topography. The habitat quality of the American alpine lady fern is most likely largely unaffected by human activity. Confidence in Rank Medium	<ul style="list-style-type: none"> Fertig 2000
7 Habitat Vulnerability or Modification	BC	Threats are low due to plant's rugged habitat. It is potentially threatened by trampling if trails are routed through its habitat. Overcollection for specimens may have reduced the Medicine Bow Peak population (see above). Three occurrences are protected in Grand Teton National Park and one is protected in the Medicine Bow Peak Special Botanical Area (Medicine Bow NF). Confidence in Rank Medium	<ul style="list-style-type: none"> Fertig 2000
8 Life History and Demographics	D	American alpine lady-fern is a perennial that grows in clumps. Spores are produced during the short growing season, July-August. They germinate to produce the gametophyte, a haploid life cycle stage that in most ferns is a heart-shaped green object less than 1 cm long. Sperms and eggs are produced on the same or different gametophytes. Genetic analysis of fern populations indicates that the predominant mode of breeding is cross-breeding. Sperms travel via water. Other life history information on this species, including population structure, longevity, and mortality are not available. Confidence in Rank High	<ul style="list-style-type: none"> Fertig 2000 Vitt et al. 1988
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National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY(L)¹ to occur:

<u>Colorado NF/NG</u>		<u>Kansas NF/NG</u>		<u>Nebraska NF/NG</u>		<u>South Dakota NF/NG</u>		<u>Wyoming NF/NG</u>	
Known	Likely	Known	Likely	Known	Likely	Known	Likely	Known	Likely
		Cimmaron NG		Samuel R. McKelvie NF		Black Hills NF		Shoshone NF	
				Halsey NF		Buffalo Gap NG		Bighorn NF	
				Nebraska NF		Ft. Pierre NG		Black Hills NF	
				Ogalala NG				Medicine Bow NF	X
								Thunder Basin NG	

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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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