

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Adiantum aleuticum</i> / Aleutian Maidenhair Fern			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	B	<p>Aleutian Maidenhair Fern is sporadic in the Rocky Mountains near the southern edge of its range. In Wyoming, all known populations are west of the Continental Divide, outside of Region 2. Colorado and South Dakota distribution data are needed.</p> <p>It occupies wet rock fissures and moist ravines. It is possibly in Shoshone National Forest, which is closest to known Wyoming populations. It is likely in the Black Hills National Forest of Wyoming; it is already known in Black Hills NF of South Dakota (Ode and Marriott 1990).</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • Dorn and Dorn 1972 • Dorn 2001 • Ode and Marriott 1990 • Flora of North America 1993
2 Distribution outside R2	C	<p>Aleutian Maidenhair Fern is a circumboreal species that is widespread in the wooded parts of temperate North America and eastern Asia, most common along the West Coast, with scattered inland occurrences east to the Rocky Mountains of Nevada, Colorado and Wyoming. It is widely scattered on the East Coast from Newfoundland to Georgia.</p> <p>Outside of Region 2, it is known in Wyoming from the east slope of the Teton Range and Yellowstone Plateau in Teton County</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Hitchcock et al. 1969 • Flora of North America 1993 • Great Plains Flora 1986 • University of Wyoming 1998 • Wyoming Natural Diversity Database 2001
3 Dispersal Capability	C	<p>Its spores readily disperse across unsuitable habitat.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • -
4 Abundance in R2	D	<p>It is not present in that part of Wyoming that falls within Region 2.</p> <p>Colorado and South Dakota abundance data are needed.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • -
5 Population Trend in R2	D	<p>Not applicable for Wyoming. Outside of Region 2, the 4 Wyoming populations appear to be secure. One occurrence in Grand Teton NP is near a trail but appears to be protected by physical barriers. No populations in Wyoming are known to be harvested for medicinal values.</p> <p>Confidence in Rank NA</p>	<ul style="list-style-type: none"> • -

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6 Habitat Trend in R2	D	Not applicable for Wyoming. Confidence in Rank NA	• -
7 Habitat Vulnerability or Modification	D	Not applicable in Wyoming. Confidence in Rank NA	• -
8 Life History and Demographics	D	Aleutian Maidenhair Fern is a perennial arising from creeping rhizomes, with fragile fronds that seem vulnerable to dessication. Spores can be produced during most of the growing season, June-September. 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. Additional information on the species, including population structure, longevity, and mortality, are not available. Confidence in Rank High	<ul style="list-style-type: none"> • Vitt et al. 1988 • Hitchcock et al. 1969
Initial Evaluator(s): Bonnie Heidel			Date: 12 Oct 2001

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	X		Shoshone NF		?
White River NF						Halsey NF			Buffalo Gap NG			Bighorn NF		
Routt NF						Nebraska NF			Ft. Pierre NG			Black Hills NF		X
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														

Literature cited

Clark, T.W., A.H. Harvey, R.D. Dorn, D.L. Genter, and C. Groves, (eds). 1989. Rare, Sensitive, and Threatened Species of the Greater Yellowstone Ecosystem. Northern Rockies Conservation Cooperative, Montana Natural Heritage Program, The Nature Conservancy, and Mountain West Environmental Services.

Cronquist, A., A.H. Holmgren, N.H. Holmgren, and J.L. Reveal. 1972. Intermountain Flora, Volume 1: Geological and Botanical History of the Region, its Plant Geography and a Glossary. The Vascular Cryptogams and the Gymnosperms. The New York Botanical Garden, New York.

Dorn, R. D. and J. Dorn. 1972. Ferns and Pteridophytes of Montana, Wyoming, and the Black Hills of South Dakota.

Dorn, R.D. 2001. Vascular Plants of Wyoming. Mountain West Publishing.

Fertig, W. 2000. Rare vascular plant species in the Wyoming portion of the Utah-Wyoming Rocky Mountains Ecoregion. Prepared for the Wyoming Nature Conservancy by the Wyoming Natural Diversity Database, Laramie, WY.

Flora of North America Editorial Committee. 1993. Flora of North America North of Mexico. Vol. 2 Pteridophytes and Gymnosperms. Oxford Univ. Press, New York.

Gleason, H.A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Canada. New York Botanical Garden, Bronx, NY.

Great Plains Flora Association. 1986. Flora of the Great Plains. University Press of Kansas, Lawrence.

Hitchcock, C. L., A. Cronquist and M. Ownbey. 1969. Pt. 1. Vascular cryptogams, gymnosperms and monocotyledons. In: Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson (eds). Vascular Plants of the Pacific Northwest. Univ. Washington Publ. Biol. 17(5): 1-343.

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- Hulten, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press. Palo Alto, CA. 1008 pp.
- Marriott, H.J. 1993. Rare Plants of Grand Teton National Park, Final Report. Prepared for the National Park Service by the Wyoming Nature Conservancy.
- Ode, D. J., and H. Marriott. 1990. Sensitive plant surveys in the northwestern Black Hills. Unpublished GFP Report No. 90-3 to the Black Hills National Forest, Spearfish and Bearlodge Ranger Districts, prepared by the South Dakota Natural Heritage Program and the Wyoming Natural Diversity Database.
- Shaw, R.J. 1976. Field guide to the vascular plants of Grand Teton National Park and Teton County, Wyoming. Logan: Utah State University Press.
- Shaw, R.J. 1992. Annotated checklist of the vascular plants of Grand Teton National Park and Teton County, Wyoming. Moose, WY: Grand Teton Natural History Association, 92 pp.
- University of Wyoming – Rocky Mountain Herbarium. 1998. Atlas of the Flora of Wyoming. Posted electronically through 1998 at: <http://www.esb.utexas.edu/tchumley/wyomap/> and unposted accession information at the Rocky Mountain Herbarium through 2001.
- Vitt, D. H., J. E. Marsh, and R. B. Bovey. 1988. Mosses, Lichens and Ferns of Northwest North America. Lone Pine Publishing, Edmonton, Alberta.
- Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins, (eds). 1993. A Utah Flora, second edition, revised. Brigham Young University Print Services, Provo, UT.
- Wyoming Natural Diversity Database. 2001. Ongoing documentation of sensitive species distribution, biology, status, and references for the state of Wyoming. University of Wyoming, Laramie.