

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Adiantum capillus-veneris</i> /Southern Maidenhair Fern			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	<b>A</b>	Found throughout mild temperate and tropical areas of the world; populations in South Dakota and British Columbia are disjunct from the main distribution of the species in North America. In Rocky Mountain Region, found in Colorado (S2) and South Dakota (S1).  Confidence in Rank High	<ul style="list-style-type: none"> <li>NatureServe: An online encyclopedia of life [web application]. 2001. Version 1.4 Arlington, Virginia, USA: Association for Biodiversity Information. Available: <a href="http://www.natureserve.org/">http://www.natureserve.org/</a>. (Accessed: July 9, 2001)</li> <li>Crook, Reed. 2001. Species assessment of <i>Adiantum capillus-veneris</i> in Black Hills National Forest.</li> </ul>
2 Distribution outside R2	<b>B</b>	South Dakota population is farthest north population in North America except for one in British Columbia. These are both disjunct occurrences from the main plant distribution and both these populations are unusual in their specific habitat requirement for a warm spring system.  Confidence in Rank High	<ul style="list-style-type: none"> <li>IBID</li> </ul>
3 Dispersal Capability	<b>B</b>	Disperses via spores or stream movement of mature plants, however, it can only disperse through suitable habitat. The warm spring system is very limited in extent throughout the Rocky Mountain region.  Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> <li>IBID</li> </ul>
4 Abundance in R2	<b>A</b>	Current number of populations is low enough that stochastic and other factors could lead to imperilment in the Rocky Mountain region.  Confidence in Rank High	<ul style="list-style-type: none"> <li>IBID</li> </ul>
5 Population Trend in R2	<b>D</b>	First survey of <i>A. capillus-veneris</i> on public land accomplished by BHNF in 2000. TNC surveying adjacent preserve land in 2001. No information on population trend is available except that it been persistent in the warm springs system.  Confidence in Rank High	<ul style="list-style-type: none"> <li>IBID</li> </ul>

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Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	A	The warm spring habitat for <i>A. capillus-veneris</i> has been fairly stable, however recreational use at Cascade Springs and Falls has been increasing in the last several years. People are swimming in the springs area as overflow from the falls area, and potential to impact the fern is greater at the springs. In addition, weed species including <i>Cirsium arvense</i> (Canada thistle) and <i>Elaeagnus angustifolia</i> (Russian olive) are a growing component of system.  Confidence in Rank High	<ul style="list-style-type: none"> <li>• IBID</li> </ul>
7 Habitat Vulnerability or Modification	A	Recreational use at Cascade Springs and Falls is increasing in recent years and will likely increase as tourism promotes the Cascade area. Recent TNC acquisition of the land between Cascade Springs and Falls will help in protecting some of the warm spring system, however the springs remain a major attraction for the public and may see increased use for swimming. This would severely impact <i>A. capillus-veneris</i> over time. The mesic environment of the springs makes it difficult to counter the increase of weedy species such as Canada thistle and Russian olive (e.g. can't spray near water, also proximity of weeds to <i>A. capillus-veneris</i> ).  Confidence in Rank High	<ul style="list-style-type: none"> <li>• IBID</li> </ul>
8 Life History and Demographics	D	The BHNF <i>A. capillus-veneris</i> species assessment recommended 2 studies as particularly needed in understanding <i>A. capillus-veneris</i> reproduction: 1) a detailed investigation of reproductive phenology of <i>A. capillus-veneris</i> in the field. 2) a survey for gametophytes in the field to determine if spores are viable and how well they survive in natural habitat. These studies would provide information allowing determination of the reproductive potential and health of the populations.  Confidence in Rank High	<ul style="list-style-type: none"> <li>• IBID</li> </ul>
Initial Evaluator(s):  Beth Burkhart, FR RD, BG NG			Date: 7/9/2001

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

<sup>1</sup> 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>		<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	X	Shoshone NF	
				Halsey NF		Buffalo Gap NG		Bighorn NF	
				Nebraska NF		Ft. Pierre NG		Black Hills NF	
				Ogalala NG				Medicine Bow NF	
								Thunder Basin NG	