

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: **Botrychium simplex** E.Hitchc. / least moonwort / BOSI  
(Scientific Name/Common Name/National Code for Plants – USDA PLANTS)

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	AB	nw WY, Mtns of CO, Black Hills of SD (also ne SD). To be expected elsewhere?  Confidence in Rank <b>Medium</b>	<ul style="list-style-type: none"> <li>RM 2001, Dorn &amp; Dorn 1972, CONHP 2000, Harrington 1964, SDNHD 2001.</li> </ul>
2 Distribution outside R2	C	Western N.Am. Population: BC & se AK south to CA NV, CO. Eastern N.Am. Population: Nfdl. to Ont. south to IA, IL, OH, WV, NC. also in Europe.  Confidence in Rank <b>High</b>	<ul style="list-style-type: none"> <li>FNA 1993, Tryon 1980.</li> </ul>
3 Dispersal Capability	BC	Wind dispersed spores. Mycorrhizal associate. Seemingly wide array of habitats.  Confidence in Rank <b>Medium</b>	<ul style="list-style-type: none"> <li>FNA 1993.</li> </ul>
4 Abundance in R2	AB	CO: ca. 3 occurrences in 3 widely separated counties. WY: 8 collections in 3 nw counties. SD: single historical record for Black Hills (also in ne SD) (Seemingly rare almost everywhere in N.Am.)  Confidence in Rank <b>Medium</b>	<ul style="list-style-type: none"> <li>CONHP 2000, RM 2001, SDNHD 2001, NatureServe 2001.</li> </ul>
5 Population Trend in R2	D	"concrete demographic data are lacking," (p. 17, Kolb & Spribille 2001).  Confidence in Rank <b>Medium</b>	<ul style="list-style-type: none"> <li>Kolb &amp; Spribille 2001.</li> </ul>
6 Habitat Trend in R2	D	Habitats variously described as: dry fields, bogs, swamps, roadside ditches, 0 - 2200 m elevation. Midmontane meadows. Patures, gravelly slopes, moraines. Open woods. Black Hills occurrence in picnic ground meadow. "occurs primarily in disturbance-derived habitats," (p. 13, Kolb & Spribille 2001), in which case potential habitat has increased.  Confidence in Rank <b>Medium</b>	<ul style="list-style-type: none"> <li>FNA 1993, Harrington 1964, Weber 1976, Hitchcock &amp; Cronquist 1973, Tryon 1980, Kolb &amp; Spribille 2001.</li> </ul>

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7 Habitat Vulnerability or Modification	D	Seems like soil/site microenvironment is the most critical habitat component for this diminutive plant. How this component is affected by air pollution, e.g. increased nitrates, acid rain, etc. or by exotic species, e.g. fungi, nematodes; may be more important than the human caused threats to terrestrial habitats that we typically think of like logging or overgrazing.  Confidence in Rank <b>Medium</b>	•
8 Life History and Demographics	D	Perennial with juvenile forms. Subterranean gametophyte dependent on mycorrhizal associate. Does not produce vegetative gemma. Short above-ground lifespans (2 -5 yrs.). Predominately self-fertilized.  Confidence in Rank <b>Medium</b>	• Farrar & Johnson-Groh 1990, Kolb & Spribille 2001.
Evaluator(s): David J. Ode			Date: 6 December, 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.

Species Name: ***Botrychium simplex***

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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
	?	Cimarron NG		Samuel R. McKelvie NF		Black Hills NF	X	Shoshone NF	X
				Halsey NF		Buffalo Gap NG		Bighorn NF	
				Nebraska NF		Ft. Pierre NG		Black Hills NF	X
				Ogalala NG				Medicine Bow NF	
	?							Thunder Basin NG	
	?								

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