

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: *Bolophyta alpina* / Wyoming Feverfew, Alpine Feverfew (*Parthenium alpinum*)

Criteria	Rank	Rationale	Literature Citations
<p><b>1</b> Distribution within R2</p>	<b>A</b>	<p>Wyoming feverfew is endemic to southeastern and south-central Wyoming and northeast Colorado. Wyoming populations are found entirely on state, private, or BLM lands (although there is low probability that the plant could be found in Thunder Basin National Grassland). The entire known range of <i>Bolophyta alpina</i> in Wyoming (North Platte River valley and southeast plains of Carbon, Goshen, Natrona, Niobrara, and Platte Counties) falls outside of National Forest lands. In Colorado, it is on the Pawnee National Grassland.</p> <p>Populations in Wyoming are usually limited to semi-barren, chalky windswept ridges and thus may be patchy and discontinuous. This habitat type is not uncommon, especially in areas with a surface of Miocene volcanic ash.</p> <p>Confidence in Rank: High</p>	<ul style="list-style-type: none"> <li>• Fertig 2000</li> <li>• Hartman and Nelson 1995</li> <li>• Roderick et al. 1999</li> <li>• Smith 1999</li> <li>• Spackman et al. 1997</li> <li>• University of Wyoming 1998</li> </ul>
<p><b>2</b> Distribution outside R2</p>	<b>A?</b>	<p>Dr. Ronald Hartman of the University of Wyoming has suggested that allied species of <i>Bolophyta</i> (<i>B. ligulata</i> &amp; <i>B. tetraeuris</i>) from northwestern and south-central Colorado and adjacent Utah and New Mexico may not be taxonomically distinct from <i>B. alpina</i>. If this is true, <i>B. alpina</i> would occur outside of USFS Region 2.</p> <p>Confidence in Rank: High</p>	<ul style="list-style-type: none"> <li>* Fertig 2000</li> <li>* Fertig et al. 1994</li> <li>* Hartman and Nelson 1995</li> </ul>
<p><b>3</b> Dispersal Capability</p>	<b>B</b>	<p>Wyoming feverfew produces flattened achenes with 2 thickened pappus scales in flower heads borne at ground level (Fertig et al. 1994). Dispersal is probably by gravity or wind and dispersal distances may be short. In Wyoming, populations are often locally clustered, but occupy most available habitat. Seeds probably are limited to rocky areas of low vegetation for germination and thus dispersal reflects the patchiness of the plant's habitat.</p> <p>Confidence in Rank: High</p>	<ul style="list-style-type: none"> <li>* Fertig et al. 1994</li> </ul>

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4 Abundance in R2	A	<p>Although once considered rare in Wyoming, surveys since 1993 have documented over 40 new populations of <i>Bolophyta alpina</i>, several of which number in the hundreds of thousands of individuals (Fertig 2000, Smith 1999), together numbering in the low millions of individuals. None are on or near national forests or grasslands.</p> <p>In Colorado, <i>B. alpina</i> is less abundant and ranked S1 (critically imperiled) by the state heritage program (Spackman et al. 1997). Technically, this species is quite rare on Forest Service lands within Region 2 in Colorado, where it is present on the Pawnee National Grasslands, representing the edge of its range geographically and ecologically.</p> <p>This species is ranked S3 in Wyoming, but no longer tracked as a species of special concern by the WY Natural Diversity Database. <i>B. alpina</i> is a mat-forming plant with non-showy blooms that flowers very early (with the flower heads disintegrating shortly thereafter), making the species difficult to locate if surveyors are untrained. It is probably more widespread than currently known.</p> <p>Confidence in Rank: High</p>	<ul style="list-style-type: none"> <li>• Fertig 2000</li> <li>• Smith 1999</li> <li>• Spackman et al. 1997</li> </ul>
5 Population Trend in R2	D	<p>Trend data are needed for Colorado populations in USFS Region 2. Wyoming populations outside of USFS lands are probably stable. The recent surge in number of occurrences is clearly an artifact of improved survey effort.</p> <p>Confidence in Rank: High</p>	* Fertig 2000
6 Habitat Trend in R2	D	<p>Habitat trend data are needed for Colorado. In Wyoming, the habitat of this species has not declined appreciably in historic times, although could experience a small decline in the future from expanded mining for limestone or sand (see below).</p> <p>Confidence in Rank: High</p>	
7 Habitat Vulnerability or Modification	B	<p>Threat data are needed for Colorado populations. In Wyoming, some populations have been impacted by mining for limestone and silica sand (Fertig 2000). Otherwise, threats are low from grazing and recreation. This species is listed as Sensitive in USFS Region 2 and was once a candidate for listing under the federal Endangered Species Act. No populations in Wyoming are currently protected.</p> <p>Confidence in Rank: High</p>	* Fertig 2000

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8 Life History and Demographics	D	<p>Little data are available range-wide on the pollination biology and autecology of this species. This species is known to hybridize with <i>Parthenium argentatum</i> (guayule) and has potential for development as a source of natural rubber (West and Waines 1988)</p> <p>In Wyoming, anecdotal evidence suggests that populations are stable and largely unthreatened under present management (although inadequately protected). The species is much more common today than a decade ago when it was first listed as Sensitive and considered for possible listing under the Endangered Species Act.</p> <p>Confidence in Rank: Medium</p>	<p>* Fertig 2000 * Rollins 1950 * West and Waines 1988</p>
Initial Evaluator(s): Walter Fertig			Date: 6 February 2002

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

<u>Colorado NF/NG</u>	Known		<u>Kansas NF/NG</u>	Known		<u>Nebraska NF/NG</u>	Known		<u>South Dakota NF/NG</u>	Known		<u>Wyoming NF/NG</u>	Known	
	Likely			Likely			Likely			Likely			Likely	
Arapaho-Roosevelt NF	X		Cimmaron NG			Samuel R.McKelvie NF			Black Hills NF			Shoshone NF		
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														

<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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### Literature cited

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