

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Cystopteris montana</i> (Lam.) Bernh. ex Desv./ Mountain Bladder Fern / CYMO3			
Criteria	Rank	Rationale	Literature Citations
<p>1 Distribution within R2</p>	A	<p>In R2, mountain bladder-fern is disjunct by hundreds of miles from the nearest occurrences in Glacier National Park. It occurs in scattered locations in the central and southern mountains of Colorado in Chaffee, Conejos, Grand, Gunnison, Ouray, Pitkin, San Juan and Summit counties.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Lellinger, A Field Manual of the Ferns and Fern-Allies of the US and Canada (1985) • Colorado Rare Plant Field Guide (1997)
<p>2 Distribution outside R2</p>	C	<p>Mountain bladder-fern is circumboreal and although never abundant, occurs in the US in Alaska and northwestern Montana. In Canada, it occurs in Alberta, British Columbia, New Brunswick, Newfoundland, North West Territories, Nova Scotia, Ontario, Quebec, Saskatchewan and the Yukon. Greenland and Eurasia also support populations.</p> <p>Mountain bladder-fern is rare in Glacier National Park, Montana. It is considered threatened in Britain.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • PLANTS database • Flora of North America (V. 2) • Lellinger, A Field Manual of the Ferns and Fern-Allies of the US and Canada (1985)
<p>3 Dispersal Capability</p>	C	<p>CYMO3 has excellent medium and long-range dispersal potential, as it reproduces by means of wind-dispersed spores. As potential habitats in R2 are relatively small and isolated, the chances of new populations becoming established is low.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Lellinger, A Field Manual of the Ferns and Fern-Allies of the US and Canada (1985)

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<p>4 Abundance in R2</p>	A	<p>Unknown, but total numbers in R2 are probably very low. Lellinger describes CYMO3 as being "very rare", while Weber states that it is "local in moist, rich spruce forests".</p> <p>Mountain bladder-fern has been reported from eight locations in Colorado: one site on the west side of Rocky Mountain National Park, two in the Sawatch Range and on the north side of Hoosier Pass in central Colorado, three locations in the San Juan Mountains and two in the Elk mountains of southwestern Colorado. These locations are isolated from one another, and all are small. Because only two of the populations have been visited in the past 20 years, it is unknown how many of these populations exist, or how large they are.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> Weber, W.A., Colorado Flora 3rd ed.) University of Colorado herbarium Lellinger, A Field Manual of the Ferns and Fern-Allies of the US and Canada (1985)
<p>5 Population Trend in R2</p>	A	<p>Unknown. Only two of the eight localities have been confirmed as still extant in the past 20 years. One population was nearly destroyed by logging in the 1940s but was confirmed as extant in 1990.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> University of Colorado herbarium
<p>6 Habitat Trend in R2</p>	A	<p>Unknown, but it is probable that habitats have stabilized after historic declines. Mountain bladder-fern grows in moist or wet woods and along mossy streambanks in mountains, sometimes on calcareous substrates. Mountain bladder fern has been reported at 9000 to 11,000 feet in Colorado.</p> <p>The areas in which CYMO3 grows include the most productive forest types in the southern Rocky Mountains – north-facing, wet, rich Engelmann spruce forests. Many such forests were logged in the 20th century, although logging activity in Colorado, especially near streams, has declined in the past several decades. Increased recreation along trails and roads near known populations may result in further declines in habitat integrity.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> USDA Forest Service Fire Effects Information System (1990) Colorado Rare Plant Field Guide (1997) Hulten, Eric. Flora of Alaska.

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7 Habitat Vulnerability or Modification	A	All populations in R2 occur on USDA Forest Service-administered lands, or on mining claims immediately adjacent to them. Only one occurs in wilderness (Weminuche), one in the Fraser Experimental Forest and one in Rocky Mountain National Park. All others are on USDA-Forest Service or private lands are subject to multiple uses. Weber mentions that the Hoosier Ridge population was nearly destroyed in the late 1940s by logging, but that by 1951 it was recovering. The South Lottis Creek population could be negatively affected if the proposed Union Park reservoir were built. Most populations have roads or trails adjacent to them, which could result in negative impacts to the populations. The known populations are relatively isolated from one another, and potential habitats are also extremely limited; this habitat type must be considered to be very vulnerable. Confidence in Rank High	<ul style="list-style-type: none"> • Checklist of Plants of RMNP (1998) • Flora of North America (V. 2) • University of Colorado herbarium
8 Life History and Demographics	D	Little is known of the life history and demographics of CYMO3. Mountain bladder-fern reproduces both sexually and vegetatively, and grows by means of long-creeping rhizomes. It is not cultivated, and does not hybridize with other species of <i>Cymopteris</i> . Confidence in Rank Medium	<ul style="list-style-type: none"> • USDA Forest Service Fire Effects Information System (1990). • Lellinger, A Field Manual of the Ferns and Fern-Allies of the US and Canada (1985)
Evaluator(s): Janet J. Coles			Date: September 28, 2002

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>		<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				
Arapaho-Roosevelt NF	X		Cimarron NG			Samuel R.McKelvie NF			Black Hills NF			Shoshone NF			X
White River NF		X				Halsey NF			Buffalo Gap NG			Bighorn NF			
Routt NF		X				Nebraska NF			Ft. Pierre NG			Black Hills NF			
Grand Mesa, Uncompahgre, Gunnison NF	X					Ogalala NG						Medicine Bow NF			X
San Juan NF	X											Thunder Basin NG			
Rio Grande NF		X													
Pike-San Isabel NF	X														
Comanche NG															
Pawnee NG															