

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Fritillaria atropurpurea</i> Nutt. / Purple mission-bells, Spotted fritillary / FRAT			
Criteria	Rank	Rationale	Literature Citations
<p><b>1</b> Distribution within R2</p>	<p><b>C</b></p>	<p><i>F. atropurpurea</i> occurs throughout the northern part of R2. It is found in scattered sites throughout western Colorado (Delta, Eagle, Garfield, Mesa, Larimer, Moffat, Montezuma, Montrose, Routt, Summit counties). It is apparently secure in Wyoming, where it is widespread in Park, Teton, Big Horn Hot Springs, Washakie, Sheridan, Johnson, Campbell, Crook, Lincoln, Sublette, Uinta, Sweetwater, Carbon, Albany, Platte and Goshen counties.</p> <p>It is considered rare in Nebraska (northwestern part of the state); in North Dakota, purple mission-bells is occasional on grassy slopes, and in South Dakota it is described as infrequent on grassy slopes and prairies in the western half of the state (Black Hills region).</p> <p><i>F. atropurpurea</i> has not been found in southern Colorado and is not reported from Kansas.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> <li>• University of Colorado Herbarium</li> <li>• Van Bruggen. Vascular Plants of South Dakota (1976)</li> <li>• Dorn, Vascular Plants of Wyoming (3<sup>rd</sup> ed.)</li> <li>• Rocky Mountain Herbarium</li> <li>• Flora of the Great Plains (1986)</li> <li>• Petersen, N.F. Flora of Nebraska (1912)</li> <li>• Dorn, Flora of the Black Hills (1977)</li> </ul>
<p><b>2</b> Distribution outside R2</p>	<p><b>C</b></p>	<p>Purple mission-bells is also widespread in the western US outside of R2, in Idaho, Montana, Nevada, and Oregon. It is described as common in California, and broadly distributed through the mountainous parts of Utah. Collection is restricted in AZ, where it is restricted to 3 counties in the central part of the state. In northwestern Wyoming (R4) it is described as "Frequent on moraines in the coniferous forests of the Teton Valley". It is a species of concern in New Mexico, where it is considered peripheral and is restricted to plains and slopes, often in wooded areas in the northwestern corner of the state.</p> <p>The Uinta Basin Flora describes FRAT as "infrequent, seldom collected, scattered, widespread, many communities". It is rather infrequent and widely scattered in Nevada, as it is restricted to the higher mountains.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> <li>• PLANTS database</li> <li>• Shaw, Field Guide to the Vascular Plants of Grand Teton NP and Teton County, WY (1976)</li> <li>• Kearney &amp; Peebles, Arizona Flora (1960)</li> <li>• Goodrich &amp; Neese, Uinta Basin Flora (1986)</li> <li>• Martin &amp; Hutchins, Flora of New Mexico 1981)</li> <li>•</li> </ul>

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3 Dispersal Capability	D	Unknown. Fritillaries have flat, slightly winged seeds to help in short distance dispersal.  Confidence in Rank Medium	<ul style="list-style-type: none"> <li>• Intermountain Flora (V. 6)</li> </ul>
4 Abundance in R2	C	<i>F. atropurpurea</i> is considered infrequent in Colorado, rarely more than a few plants occurring together. In Wyoming the species is apparently secure; it widespread on hills and in forests.  Confidence in Rank High	<ul style="list-style-type: none"> <li>• Weber, W.A.. Colorado Flora (3<sup>rd</sup> edition)</li> <li>• Harrington, Manual of the Plants of Colorado (1964)</li> </ul>
5 Population Trend in R2	B	Unknown but probably stable in R2. This species is popular among rock-garden enthusiasts, and small, isolated populations may be threatened by overcollection of the bulbs. It is also known among herbalists to have medicinal properties, which further puts colonies at risk of overcollection.  The bulb growth habit makes estimates of abundance and population trends very difficult. Plants growing from bulbs may not emerge in dry years, and also may not be in evidence very early or late in the growing season.  Confidence in Rank Medium	<ul style="list-style-type: none"> <li>• National Association of Rock Garden Societies webpage</li> <li>• www.botany.com</li> </ul>
6 Habitat Trend in R2	B	Unknown but probably stable after a historic decline. Purple mission-bells has a broad habitat tolerance, and is found in leaf mold under trees in lodgepole, spruce-fir, and aspen forests, in sagebrush meadows and on grassy slopes between 6500 and 10000 feet.  These habitats have long been subjected to any number of alterations, from logging to grazing to recreation. The fact that the species persists is a tribute to the breadth of its tolerance for environmental disturbance.  Confidence in Rank Medium	<ul style="list-style-type: none"> <li>• PLANTS database</li> <li>• Weber, W.A.. Colorado Flora 3<sup>rd</sup> Edition)</li> <li>• Kearney &amp; Peebles, Arizona Flora (1960)</li> <li>• Intermountain Flora (V. 6)</li> <li>• Harrington, Manual of the Plants of Colorado (1964)</li> </ul>

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Criteria	Rank	Rationale	Literature Citations
7 Habitat Vulnerability or Modification	B	<p><i>F. atropurpurea</i> occurs in both Dinosaur National Monument as well as Mesa Verde National Park, although the MVNP populations have burned in the past five years.</p> <p>All other known populations are on public, state or private lands managed for recreation or resource production (grazing, logging, mining).</p> <p>One interesting note on an herbarium label states that purple mission-bells was found in a burn area.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> <li>University of Colorado herbarium</li> <li>Rocky Mountain Herbarium</li> </ul>
8 Life History and Demographics	D	<p>Little is known of the life history or demographics of purple mission-bells, other than that it is an herbaceous perennial that grows from bulbs.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> <li>Van Bruggen. Vascular Plants of South Dakota (1976)</li> </ul>
Evaluator(s): Janet J. Coles			Date: September 28, 2002

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