

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: ***Lemna minuta* Kunth least duckweed**

SYNONYM: "*L. minima* Phil." [Rydberg 1932; Harrington 1954]; *L. minuscula* Herter [Kaul 1991; Weber & Wittman 2001]

**Evaluator's note:** In his discussion of the tortuous nomenclatural history of this species (Cronquist et al. 1977) and his subsequent neotypification of the name *L. minuta* (1990), Reveal has pointed out that, of the two names historically applied to this taxon by students of the flora of R2, *L. minuta* Humb. ex Phil. is a nomen nudum and *L. minuscula* Herter is a nomen superfluum.]

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	A	Widely scattered throughout R2. Known only from a few localities, but perhaps overlooked by botanists and more common than herbarium records suggest. Reported by Landolt from n-central (Johnson Co) WY; central NE (Cherry, Garden, Keith, and Thomas Cos); and ne and sw KS (Douglas, Kiowa, and Meade Cos). Reported by Weber from Boulder Co, CO, and by Weber & Wittman from e CO without comment. Not reported by Hartman from WY. [Vouchers at KANU from Douglas and Meade Cos, KS; and Cherry, Garden, Keith, Keya Paha Cos, NE.] <b>Note:</b> This species is similar to congener <i>L. valdiviana</i> Phil., apparently an even rarer taxon in R2 (status: G5; KS S1; NE S?; WY S1; known in KS from two collections and from w WY from one collection). Kaul did not consider the two taxa to be sufficiently different to warrant separation of the taxa and treated all material from the Great Plains as <i>L. valdiviana</i> . However, Freeman has attributed the latter species only to KS and NE in the Great Plains, while <i>L. minuta</i> is known from KS, NE, OK, and WY. It's likely that the two species have been confused by botanists and herbarium material assigned to one or the other species should be checked carefully. Status: G4; KS (probably) S1; NE S1 Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	<ul style="list-style-type: none"> <li>• Freeman in prep.</li> <li>• Hartman 1997</li> <li>• Kaul 1991</li> <li>• Landolt 1986</li> <li>• Weber 1995</li> <li>• Weber &amp; Wittman 2001</li> </ul>
2 Distribution outside R2	C	Reported by Landolt from scattered locations throughout the US (although mostly w in distribution), s to scattered localities in Mexico, Central America, the Carribean. Apparently widely distributed in w and s South America. Introduced to w Europe and Japan. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	<ul style="list-style-type: none"> <li>• Landolt 1986</li> </ul>
3 Dispersal Capability	B	Species is limited by habitat requirements [see sect 6], but individual plants are probably dispersed by a combination of vectors, including water and animal dispersers, especially water fowl. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	<ul style="list-style-type: none"> <li>• Landolt 1986</li> </ul>
4 Abundance in R2	A	With the possible exception of the NE Sandhills, species appears to be rare throughout R2. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	
5 Population Trend in R2	D	Evaluator was able to find no information about population trends in R2. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	

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Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	A	Shallow ponds and pools, primarily known in R2 from the NE Sandhills. Ostlie et al. report that wetlands of the NE Sandhills have experienced loss of 15–45% of their area, with most of the Sandhills managed for livestock grazing. It is unknown whether grazing itself results in degradation to habitat required by species. However, native wetlands in this have been adversely affected by draining for improved forage or by the very presence of nearby croplands, as center-pivot irrigation has lowered the water table and changed hydrology. It is probable that species has already suffered some habitat loss, but further study is warranted and rank A is qualified. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	<ul style="list-style-type: none"> <li>Ostlie et al. 1997</li> </ul>
7 Habitat Vulnerability or Modification	A	Species is rare throughout the region. It is likely that habitat is vulnerable to modification [see sect 6] and should be protected wherever possible. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	
8 Life History and Demographics	B	(Pseudo-)perennial, floating aquatic forb; overwintering by turions. Mostly vegetative, apparent from spring throughout fall; very rarely flowering and fruiting. Members of genus reproduce vegetatively and may be locally abundant, quickly covering calm bodies of water. Duckweeds are consumed by a wide variety of animals, including mammals, water fowl, reptiles, fish, gastropods and arthropods. Larger members of this guild are cited as important dispersal agents by Landolt; none is known to exert significant pressures on duckweed populations. Confidence in Rank <b>High</b> or <b>Medium</b> or <b>Low</b>	<ul style="list-style-type: none"> <li>Landolt 1986</li> </ul>
Evaluator: Caleb A. Morse, R.L. McGregor Herbarium (KANU), University of Kansas Campus West, 2045 Constant Ave, Lawrence KS 66047			Date: 01/08/02

**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>Known</u>	<u>Likely</u>	<u>Kansas NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Nebraska NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>South Dakota NF/NG</u>	<u>Known</u>	<u>Likely</u>	<u>Wyoming NF/NG</u>	<u>Known</u>	<u>Likely</u>
Arapaho-Roosevelt NF			Cimmaron NG		X?	Samuel R. McKelvie NF	X2		Black Hills NF			Shoshone NF		
White River NF						Halsey NF		X	Buffalo Gap NG			Bighorn NF		X?
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														
Pawnee NG														
Pike-San Isabel NF														
Comanche NG														

2 KANU catalog # 116191: NE, Cherry Co: ca 10 mi S, 4 mi E Nenzel, McKelvie NF, T32N R32W S2 NE ¼ NE ¼, 23 Jul 1995, S.B. Rolfsmeier 11854.

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