

REGION 2 SENSITIVE SPECIES EVALUATION FORMSpecies: ***Sorex hoyi montanus (Microsorex hoyi montanus) / Pygmy shrew - Southern Rocky Mountain population***

Criteria	Rank	Rationale	Literature Citations
<p><b>1</b> Distribution within R2</p>	<b>B</b>	<p><i>Sorex hoyi</i> has a broad boreal distribution extending from Alaska to eastern Canada and New England. Disjunct, remnant populations occur farther south on the eastern seaboard and in the Southern Rocky Mountains of Colorado and southern Wyoming. This latter population is described as <i>S. h. montanus</i> and represents the total occurrence of the taxon in the Rocky Mountain Region except for a few marginal occurrences of <i>S. h. hoyi</i> in extreme eastern South Dakota (note there are no national forests units in this area). <i>Sorex hoyi washingtoni</i> (after Hall 1981) has been reported from northwestern Montana, and in some cases its range is mapped into extreme northwestern Wyoming, but there are no specimens from this region to support this extension. Throughout most of its range, <i>S. hoyi</i> has rather broad habitat tolerances; however, <i>S. h. montanus</i> appears to be strictly boreal. The "B" ranking is based on the fact that the taxon occurs only in a portion of the Rocky Mountain Region, and also because limited dispersal abilities probably increase the insularity of local population segments.</p> <p>Confidence in Rank <b>Medium</b></p>	<p>Brown, L. N. 1966. First record of the pigmy shrew in Wyoming and description of a new subspecies (Mammalia: Insectivora). Proceedings of the Biological Society of Washington 79:49-52.</p> <p>Clark, T. W. and M. R. Stromberg. 1987. Mammals in Wyoming. University Press of Kansas. Lawrence, Kansas.</p> <p>Hall, E. R. 1981. The mammals of North America. Second edition. John Wiley and Sons, New York, New York.</p> <p>Long, C. A. 1974. <i>Microsorex hoyi</i> and <i>Microsorex thompsoni</i>. Mammalian Species 33.</p> <p>Long, C. A. Pygmy shrew (<i>Sorex hoyi</i>). Pages 25-26 IN: D.E. Wilson and S. Ruff, editors. The Smithsonian book of North American mammals. Smithsonian Institution Press, Washington, D.C., in association with the American Society of Mammalogists.</p> <p>Mullican, T.R. 1992. Distribution of the pygmy shrew in South Dakota. Prairie Naturalist 24:257-259.</p>
<p><b>2</b> Distribution outside R2</p>	<b>A</b>	<p>As described above, <i>S. h. montanus</i> is a disjunct, Pleistocene-relict population that is restricted to Colorado and southern Wyoming. It is completely isolated from populations to the north.</p> <p>Confidence in Rank <b>Medium</b></p>	(see citations for criteria 1)

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3 Dispersal Capability	<b>A</b>	<p>Dispersal is not well understood, but small size (hence limited mobility) and short life span almost guarantee poor dispersal capabilities. Medium-to-large streams and large roads are likely dispersal barriers. Occurrence data indicate strong affinities for boreal environments in general, and moist boreal environments in particular; this level of habitat specificity may further limit dispersal.</p> <p>Confidence in Rank <b>Medium</b></p>	(see citations for criteria 1)
4 Abundance in R2	<b>B</b>	<p>As with most shrews, abundance patterns are not well known, but as more occurrence data has been collected the status of <i>S. h. montanus</i> has generally improved from rare to uncommon (note occurrence data on file at the Wyoming Natural Diversity Database - University of Wyoming). Based on distribution and habitat use, the vast majority of <i>S. h. montanus</i> probably occur on mountainous national forest units in Colorado and southern Wyoming (i.e., Medicine Bow NF).</p> <p>Confidence in Rank <b>Low</b></p>	(see citations for criteria 1)
5 Population Trend in R2	<b>D</b>	<p>This evaluator (G. Beauvais) is unaware of any data with which to estimate population trends for this taxon. Shrew populations are generally cryptic and understudied. Good estimates of current population levels and fluctuations are rare; historical population sizes and fluctuations are essentially unknown.</p> <p>Confidence in Rank <b>Medium</b></p>	

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<p><b>6</b> Habitat Trend in R2</p>	<p><b>D</b></p>	<p>This evaluator (G. Beauvais) is unaware of any data with which to estimate habitat trends for this taxon. Whereas <i>S. hoyi</i> to the north has rather broad habitat tolerances, <i>S. h. montanus</i> appears to be strictly boreal. Moreover, moist boreal environments such as bogs and marshes appear to be preferred. Habitat quality may vary with fine-scale variables such as local humidity, insolation, and invertebrate density; the spatial and temporal variation of such variables is not well known. Based on general distribution and habitat use, the vast majority of habitat for <i>S. h. montanus</i> occurs on mountainous national forest units in Colorado and southern Wyoming (i.e., Medicine Bow NF).</p> <p>Confidence in Rank <b>Medium</b></p>	<p>(see citations for criteria 1)</p>
<p><b>7</b> Habitat Vulnerability or Modification</p>	<p><b>D</b></p>	<p>As outlined above, habitat use and habitat quality for shrews are poorly understood, precluding reliable conclusions as to habitat vulnerability.</p> <p>Confidence in Rank <b>Medium</b></p>	

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<p><b>8</b> Life History and Demographics</p>	<p><b>C</b></p>	<p>In general, this taxon is not known to be especially susceptible to any specific environmental pressure. Small size (and thus small areal requirements), association with fine-scale (rather than patch or landscape-scale) habitat features, and general feeding habits allow occupation of multiple life zones. Although individuals are short-lived, reproductive output is likely adequate for populations to quickly rebound from temporary declines.</p> <p>Confidence in Rank <b>Low</b></p>	<p>Brown, L. N. 1966. First record of the pigmy shrew in Wyoming and description of a new subspecies (Mammalia: Insectivora). Proceedings of the Biological Society of Washington 79:49-52.</p> <p>Clark, T. W. and M. R. Stromberg. 1987. Mammals in Wyoming. University Press of Kansas. Lawrence, Kansas.</p> <p>Long, C. A. Pygmy shrew (<i>Sorex hoyi</i>). Pages 25-26 IN: D.E. Wilson and S. Ruff, editors. The Smithsonian book of North American mammals. Smithsonian Institution Press, Washington, D.C., in association with the American Society of Mammalogists.</p> <p>Mullican, T.R. 1992. Distribution of the pygmy shrew in South Dakota. Prairie Naturalist 24:257-259.</p>
<p>Initial Evaluator(s): <b>Dr. Gary P. Beauvais, Director, Wyoming Natural Diversity Database - University of Wyoming.</b></p>			<p>Date: <b>27 July 2001</b></p>

**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
X									
	X								
X									
X									X
	X								
	X								
	X								

Pawnee NG -

**NOTE: “?” refers to National Forest units where presence is suspected, but with a certainty of less than 50%.**