

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: *Listera convallarioides* / Broad-leaved Twayblade

Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	BD	<p>Broad-leaved Twayblade occurs in the Laramie, Medicine Bow and Bighorn ranges in Albany, Converse and Sheridan counties, Wyoming on the Medicine Bow and Bighorn national forests. It also occurs in Colorado on the Pike-San Isabel, Arapaho-Roosevelt, Routt, and White River national forests and in the Black Hills National Forest in South Dakota. Therefore, additional information is necessary in order to determine its status in Region 2.</p> <p>In Wyoming, this species is found along streambanks, lake margins, and in moist, shaded areas in coniferous forest and moist, grassy areas under aspen and alder at 6400 to 9000 feet. It occupies mesic microhabitat that is patchy on the landscape.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Dorn 2001 • Fertig 1999 • Girard 1992 • Markow and Fertig 2000 • University of Wyoming 1998 • USDA Forest Service 2001
2 Distribution outside R2	C	<p>Broad-leaved Twayblade is known from Alaska to Newfoundland, south to California, Arizona, Utah and Colorado. It occurs outside of Region 2 in the Teton Range of Teton County, Wyoming.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Colorado Native Plant Society 1997 • Cronquist et al. 1977 • Dorn 2001 • Evert 1985 • Hitchcock et al. 1969
3 Dispersal Capability	D	<p>Dispersal vectors are not known.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • -
4 Abundance in R2	BD	<p>Broad-leaved Twayblade is known from 4 extant occurrences and 2 historical records. Evert noted populations of several hundred individuals near Story in 1985. Census data are lacking for other populations. One extant population is on the Medicine National Forest and one historical record is on the Bighorn National Forest. This species is ranked "S1" in Wyoming and South Dakota, and "S2" in Colorado.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • Evert 1985 • Fertig 1999 • Girard 1992 • Markow and Fertig 2000 • University of Wyoming 1998 • USDA Forest Service 2001 • WYNDD 2002
5 Population Trend in R2	D	<p>Not known.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • -

ATTACHMENT SS2

Species: <i>Listera convallarioides</i> / Broad-leaved Twayblade			
Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	D	Not known. Confidence in Rank High	• -
7 Habitat Vulnerability or Modification	BD	Broad-leaved Twayblade may be threatened by overcollection, loss of moist forest habitat to logging, and impacts from recreation. It occurs on lands managed for multiple use by the Bighorn, Medicine Bow, and Targhee National Forests. It also occurs in Grand Teton National Park. An historical record from the Laramie Basin may be on lands managed by the BLM Rawlins Field Office. Confidence in Rank High	<ul style="list-style-type: none"> • Evert 1985 • Fertig 1999 • Girard 1992 • Markow and Fertig 2000 • University of Wyoming 1998 • WYNDD 2002
8 Life History and Demographics	D	Broad-leaved Twayblade is a perennial forb. Flowering and fruiting occur from July through September. Additional information on the species, including life history stages, population structure, longevity, mortality, and seed biology, are not available. Confidence in Rank High	<ul style="list-style-type: none"> • Cronquist et al. 1977 • Hitchcock et al. 1969 • Markow and Fertig 2000
Initial Evaluator(s): Joy Handley, Bonnie Heidel and Scott Laursen			Date: April 4, 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.

ATTACHMENT SS2

<u>Colorado NF/NG</u>	Known	Likely	<u>Kansas NF/NG</u>	Known	Likely	<u>Nebraska NF/NG</u>	Known	Likely	<u>South Dakota NF/NG</u>	Known	Likely	<u>Wyoming NF/NG</u>	Known	Likely
Arapaho-Roosevelt NF	X		Cimmaron NG			Samuel R. McKelvie NF			Black Hills NF			Shoshone NF		
White River NF	X					Halsey NF			Buffalo Gap NG			Bighorn NF	X	
Routt NF	X					Nebraska NF			Ft. Pierre NG			Black Hills NF		
Grand Mesa, Uncompahgre, Gunnison NF						Ogalala NG						Medicine Bow NF	X	
San Juan NF												Thunder Basin NG		
Rio Grande NF														
Pike-San Isabel NF	X													
Comanche NG														

Literature cited

Colorado Native Plant Society. 1997. Rare Plants of Colorado, second edition. Falcon Press Publ., Helena, MT.

Cronquist, A., A.H. Holmgren, N.H. Holmgren, J.L. Reveal, and P.K. Holmgren. 1977. Volume 6, The Monocotyledons. Intermountain Flora: Vascular Plants of the Intermountain West, USA. Columbia University Press, New York.

Dorn, R.D. 2001. Vascular Plants of Wyoming, third edition. Mountain West Publishing, Cheyenne, WY.

Evert, E. F. 1985. Rare Plants: Story Area. Unpublished report prepared by the author.

Fertig, W. 1999. The status of rare plants in the Bighorn Landscape. Report prepared for The Nature Conservancy Wyoming Field Office by the Wyoming Natural Diversity Database, Laramie, Wyoming.

Girard, M. 1992. Sensitive and Watch Plant Species of the Bighorn National Forest. Bighorn National Forest, 1969 S. Sheridan Ave., Sheridan, WY.

Hitchcock, C.L., A. Cronquist, and M. Owenbey. 1969. Pt. 1. Vascular Cryptogams, Gymnosperms, and Monocotyledons, IN: Hitchcock, C.L., A. Cronquist, M. Owenbey, and J.W. Thompson (eds). Vascular Plants of the Pacific Northwest. University of Washington Publications in Biology 17(1): 1-914.

Markow, S. and Fertig, W. 2000. State Species Abstract: *Listera convallarioides*. Wyoming Natural Diversity Database. Available on the internet at www.uwyo.edu/wyndd

Porter, C.L. 1965. A Flora of Wyoming: Part IV. Bulletin 434:1-88. Agricultural Experiment Station, University of Wyoming.

University of Wyoming – Rocky Mountain Herbarium. 1998. Atlas of the Flora of Wyoming. Posted electronically through 1998 at: <http://www.esb.utexas.edu/tchumley/wyomap/> and unposted accession information at the Rocky Mountain Herbarium through 2001.

ATTACHMENT SS2

USDA Forest Service – Region 2. 2001. “Wyoming plant species” evaluation list and criteria provided to Wyoming Natural Diversity Database. Denver, CO.

Wyoming Natural Diversity Database. 2002. Ongoing documentation of sensitive species distribution, biology, status, and references for the state of Wyoming. University of Wyoming, Laramie.