

***Botrychium lanceolatum* var.
*lanceolatum***

LANCE-LEAVED MOONWORT

Family: Ophioglossaceae

Agency Status:

US Fish & Wildlife Service: None.

US Forest Service: SOLC-Bighorn NFR2, SOLC-Med Bow NFR2-Thunder Basin NGR2

Heritage Rank:

Global: G5T4

State: S2

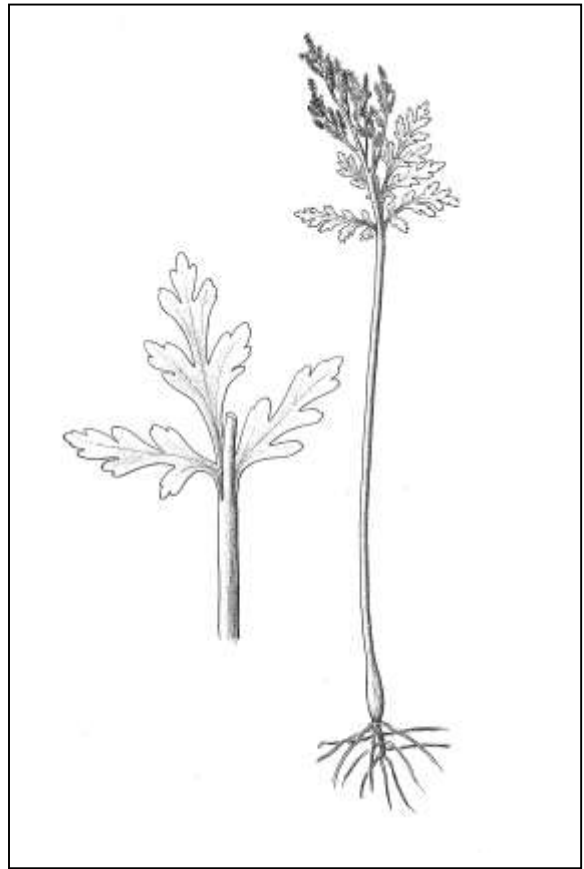
Range Context: Widespread/Edge; peripheral

Wyoming Contribution Rank: Low

Description: Lance-leaved grapefern is a perennial fern relative 5-35 cm tall with a single leaf divided into two dissimilar segments. The vegetative (sterile) segment is sessile, glabrous, with a triangular, twice-pinnately divided blade 1-6 cm long and 1-6.5 cm wide. The pinnae and pinnules (leaflets) of the blade are mostly longer than wide, lobes of the basal pinnae are eongate and pointed, and all but the uppermost pinnae are acutely pointed. The spore-bearing (fertile) leaf segment is 1.5-8 cm long, multi-branched, and usually extends beyond the vegetative segment, joined to the vegetative segment by a common leafstalk 3-14 cm long (Cronquist et al. 1972, Lellinger 1985, Farrar and Popovich 2012). Our material may represent two varieties.

Local field characters: Sessile, triangular-shaped, twice-pinnately compound vegetative leaf blades are characteristic.

Similar Species: *Botrychium virginianum* has vegetative leaf blades 5-25 cm long and 3-4 times pinnately compound. *B. multifidum* has long-stalked vegetative leaf segments attached to the spore-bearing (fertile) leaf segment at ground level. Most other *Botrychium* species in Wyoming either have stalked vegetative leaf blades or blades that are significantly longer than wide (Dorn 2001; Farrar and Popovich 2012).



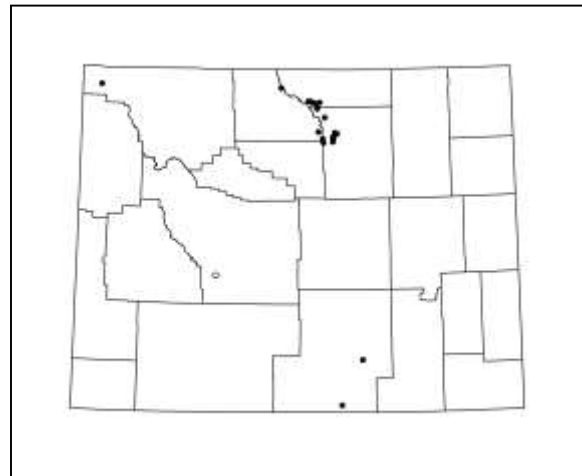
Above: *Botrychium lanceolatum* var. *lanceolatum* specimen by Jeanne Janish from Hitchcock et al. 1969



Above: *Botrychium lanceolatum* var. *lanceolatum* specimen by Ben Legler (11809 RM)



Above: *Botrychium lanceolatum* var. *lanceolatum* by Ben Legler



Above: Wyoming distribution of *Botrychium lanceolatum* var. *lanceolatum*

Habitat: Moist or wet open places in the mountains, sometimes at high elevations (Hitchcock et al. 1969, Farrar 2011). Wyoming populations are along streams, willow thicket margins, springs and other transition to wetland habitat, in grassy meadows, aspen groves, hummocky *Salix planifolia*/*Carex utriculata* vegetation and roadsides.

Occurrences in Wyoming: Known from 19 extant occurrences and one historical occurrence in Wyoming, 18 of which have been observed since 1996 (most recently in 2014). These include an unpublished variety.

Abundance: Not known, but presumed low.

Trends: Not known.

Protection Status: None of the known occurrences are found on lands receiving special management attention. The occurrence on Elk Mountain is on state lands within a large private land conservation easement on the Elk Mountain Ranch.

Threats: Unknown.

Managed Areas: Occurs in Yellowstone National Park and lands managed by Bighorn, Medicine Bow and Shoshone National Forests.

References:

Cronquist, A., A. H. Holmgren, N. H. Holmgren, and J. L. Reveal. 1972. Intermountain Flora; Vascular Plants of

Phenology: Late June-September.

Distribution: Occurs from Alaska to Saskatchewan and south to California and New Mexico; also in Greenland and south to Quebec and Newfoundland. Known from the Big Horn, Medicine Bow and Wind River Ranges and Yellowstone Plateau (Albany, Big Horn, Carbon, Fremont, Johnson, Park and Sheridan counties).



Above: Rangewide distribution of *Botrychium lanceolatum* var. *lanceolatum* from USDA, NRCS. The PLANTS Database (<http://plants.usda.gov>). National Plant Data Team, Greensboro, NC 27401-4901 USA.

the Intermountain West, U.S.A. Volume 1: Geological and Botanical History of the Region, its Plant Geography and a Glossary. The Vascular Cryptogams and the Gymnosperms. Hafner Publishing Company, New York, NY.

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Extracted from database: 18-MAY-15

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