

Botrychium minganense

MINGAN ISLAND MOONWORT

Family: Ophioglossaceae

Agency Status:

US Fish & Wildlife Service: None.

US Forest Service: SOLC-Bighorn NFR2

Heritage Rank:

Global: G4G5

State: S3

Range Context: Widespread/Edge; peripheral

Wyoming Contribution Rank: Low

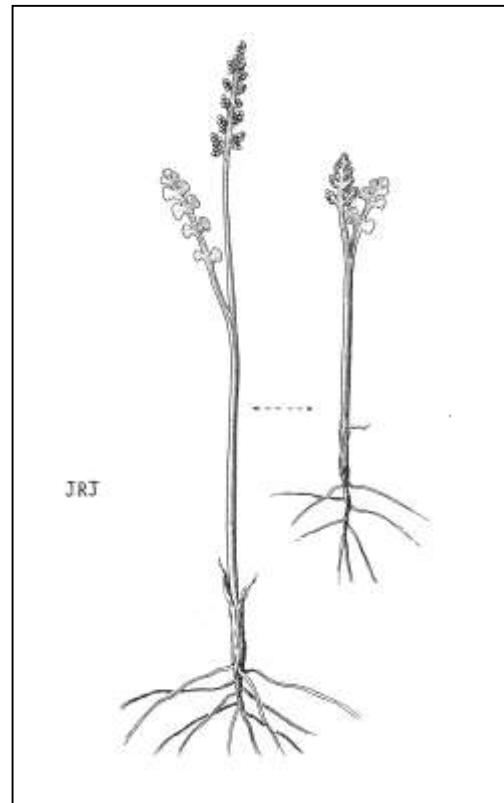
Description: Mingan Island moonwort is a perennial fern relative, 5-28 cm tall with a single leaf divided into two dissimilar segments. The vegetative (sterile) segment is short-petioled to nearly sessile, with a once-pinnately compound dull-green blade 1-9 cm long and 0.5-2.5 cm wide. Leaflets are wedge or fan-shaped, non-overlapping, and entire or with one or more shallow lobes on the margin. The vegetative leaf segment is trough-shaped (when fresh) due to the leaflets diverging from the main axis at an angle. The spore-bearing (fertile) leaf segment is once-pinnate, 1.5-15 cm long and is 1.5-2.5 times longer than the vegetative segment and has a rounded apex, joined to the vegetative segment by a common leafstalk 3-13 cm long (Lellinger 1985, Wagner and Wagner 1993; Farrar and Popovich 2012).

Synonym: *Botrychium lunaria* var. *onondagense* (misapplied)

Local field characters: Non-overlapping, wedge to fan-shaped leaflets with smooth to indented margins and trough-shaped vegetative blades (due to the leaflets diverging at an angle from the leafstalk) are characteristic.

Similar Species: *Botrychium lunaria* has broadly fan-shaped, overlapping leaflets with smooth margins on the vegetative leaf blades. *B. crenulatum* has fan-shaped leaflets with rounded-toothed margins. *B. ascendens* has

sharp-toothed, wedge-shaped leaflets. *B. campestre* has flat vegetative blades that are nearly equal in length to the fertile blades (Lellinger 1985; Dorn 2001).



Left:
Botrychium minganense by
Jeanne Janish
from Hitchcock
et al. 1969



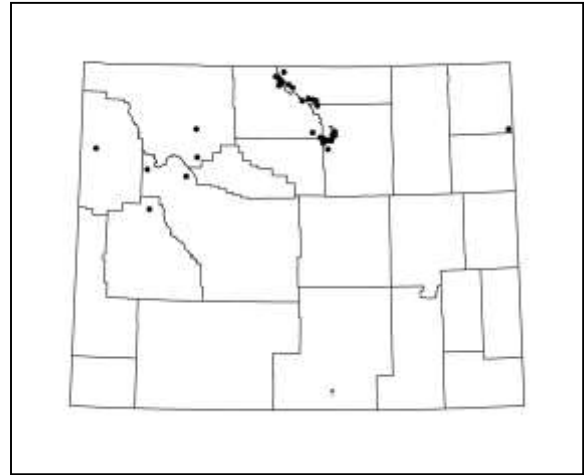
Above: *Botrychium minganense* specimen by Ben Legler (13241 RM)

Phenology: Late June-early September.



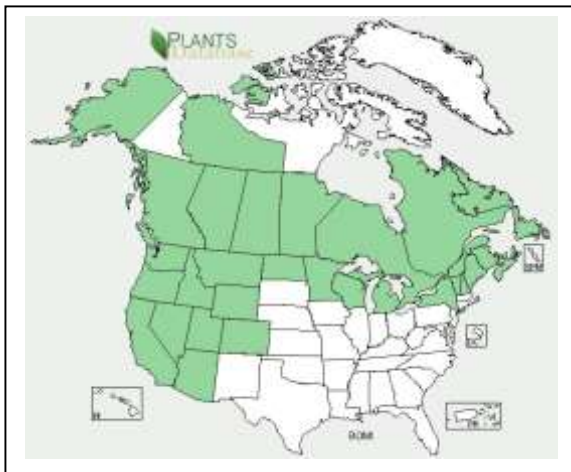
Above: *Botrychium minganense* by Ben Legler

and possibly Sierra Madre Ranges (Big Horn, Crook, Fremont, Johnson, Park, Sheridan, Sublette, Teton, Washakie and possibly Carbon counties).



Above: Wyoming distribution of *Botrychium minganense*

Habitat: Widespread in the mountains, from dense forest to open meadows (Farrar 2011, Farrar and Popovich 2012). Wyoming populations are in moist meadows, *Picea engelmannii* forest and riparian vegetation.



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



Above: *Botrychium minganense* habitat by Ben Legler

Distribution: Occurs in Alaska and Northwest Territories, across Canada, throughout western states, and eastward in states from North Dakota to Maine. ; one of the most widespread moonworts in North America. In Wyoming, known from the Absaroka, Big Horn, Teton and Wind River Ranges, the Black Hills

Occurrences in Wyoming: Known from 36 extant occurrences in Wyoming (last observed in 2014) and one historic record (in 1956).

Abundance: Population size is not known, although confirmed sites are extremely small.

Trends: Not known.

Protection Status: One occurrence is located within Grand Teton National Park. A vague, unconfirmed record is also known from the Beartooth Butte area (possibly within the potential Beartooth Butte RNA on Shoshone National Forest). All other known occurrences are on public lands managed for multiple use.

Threats: Unknown.

Managed Areas: Occurs in Grand Teton National Park and on lands managed by Bighorn, Black Hills, Medicine Bow and Shoshone National Forests.

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