

Botrychium yaaxudakeit

YAKUTAT MOONWORT

Family: Ophioglossaceae

Agency Status:

US Fish & Wildlife Service: None.

Heritage Rank:

Global: G3G4

State: S1

Range Context: Disjunct

Wyoming Contribution Rank: Medium

Description: Yakutat moonwort is a perennial fern relative, 8-25 cm tall with a single, green leaf divided into two dissimilar segments. The vegetative (sterile) segment is oblong to ovate, short-stalked with a leathery blade 1.75-11 cm long x 1.25-6 cm wide that is once compound with 4-7 strongly overlapping pairs of fan-shaped leaflets (pinnae). The lowest pair of pinnae are short-stalked and the largest, spanning an arc of 180°-250°. All pinnae are entire to undulate, occasionally denticulate or shallowly cleft. The spore-bearing (fertile) leaf segment is longer than the vegetative segment and once to twice-pinnately divided into leaflets bearing round, grape-like sporangia. Vegetative and spore-bearing segments are joined to a common basal stem for 1-5 cm (Farrar 2011; Stensvold et al. 2002).

Local field characters: Leaflets strongly overlapping one another and with the central axis, the basal leaflet spanning an arc greater than 180°.

Similar Species: *Botrychium lunaria* has leaflets that do not overlap with the central axis, and the basal leaflet spans an arc less than 180°. The pinnae of *Botrychium crenatum* are spreading with crenulate margins.

Phenology: Mid August.

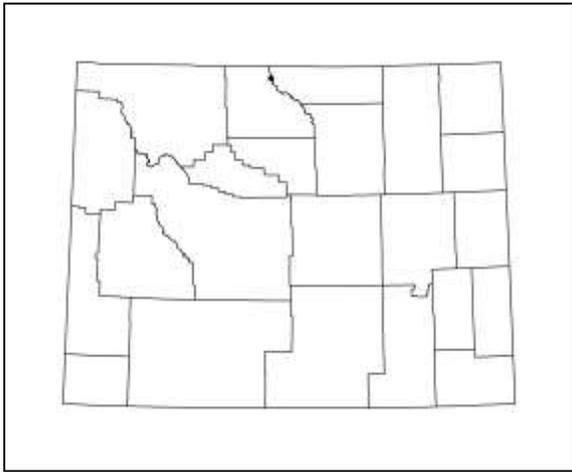


Above: *Botrychium yaaxudakeit* by Ben Legler



Above: Rangewide distribution of *Botrychium yaaxudakeit* from NatureServe. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>.

Distribution: Occurs in Alaska, Yukon, British Columbia, Montana, Wyoming, Oregon, and east California. In Wyoming, known only from the Big Horn Mountains (Johnson and Big Horn counties).



Above: Wyoming distribution of *Botrychium yaaxudakeit*

Stensvold, M.C., D.R. Farrar, and C. Johnson-Groh. 2002. Two new species of moonworts (*Botrychium* subg. *Botrychium*) from Alaska. *American Fern Journal* 92(2):150-160.

Original authors: Bonnie Heidel and Joy Handley
Extracted from database: 18-MAY-15

Habitat: Beaches, meadows, talus and roadsides (Farrar 2011). The Wyoming population is in subalpine meadows over limestone, among scattered *Picea*.

Occurrences in Wyoming: Known from a single occurrence in Wyoming discovered and last seen in 2012.

Abundance: Only one plant observed.

Trends: Unknown.

Protection Status: The one extant occurrence is on public land managed for multiple use.

Threats: Unknown.

Managed Areas: Occurs on land managed by Bighorn National Forest.

References:

Farrar, D. R. 2011, December last update. *Botrychium yaaxudakeit* species description, map, and photo page. In Farrar, D.R. 2011, December last update. Moonwort (*Botrychium*) systematics. Department of Ecology, Evolution and Organismal Biology, Iowa State University, Ames. Online. Available: <http://www.public.iastate.edu/~herbarium/botrychium.html>