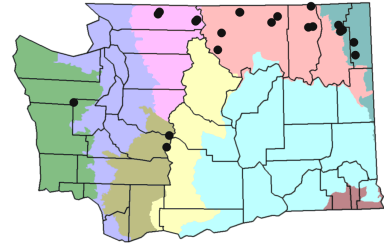


Botrychium ascendens W.H. Wagner

triangular-lobed moonwort

Ophioglossaceae - adder's-tongue family

status: State Sensitive, Federal Species of Concern, BLM sensitive, USFS sensitive
rank: G3 / S2



General Description: Adapted from Flora of North America (1993+): Perennial fern up to 20 cm tall. Produces 1 branched stem per season, with a sterile leafy portion and fertile spore-bearing branch sharing a common stalk. Sterile leaf blade solitary, yellow green, oblong to oblong-lanceolate, up to 6 x 1.5 cm, 1-pinnate. Pinnae wedge-shaped or triangular, arranged in up to 5 well-spaced pairs that do not overlap, strongly ascending, margins sharply toothed and cut; venation fanlike, lacking a central midrib. Lower pinnae sometimes bear sporangia.

Reproductive Characteristics: Fertile branch 1.3-2 times the length of the sterile segment, erect, bearing clusters of globelike sporangia. Leaves appear in late spring to midsummer; plants are fertile June to September.

Identification Tips: This species is not in Hitchcock & Cronquist (1973), where it, *Botrychium minganense*, and *B. crenulatum* will all key to *B. lunaria* var. *onondagense*. *B. ascendens* is the only of these with conspicuous, sharp minute teeth and lacerations on the margins of strongly ascending pinnae. *B. minganense* has up to 10 pairs of pinnae, which are horizontal (not strongly ascending), nearly circular to fan-shaped, with shallowly rounded teeth or lobes on the margins. *B. crenulatum* is distinguished by its broadly fan-shaped basal pinnae with shallowly rounded lobes. *B. lunaria* is a fleshy plant; it has 4-9 pairs of pinnae with entire to wavy (rarely toothed) margins. *Botrychium ascendens* and *B. pedunculatum* are the only *Botrychium* species that often have extra sporangia on the lower pinnae.

Range: AK south to CA, east to NV, MT, WY, and Alberta. Also in eastern Canada and MN.

Habitat/Ecology: Coniferous forests, wet and dry meadows, stream banks, pastures, roadsides, ravines, moist decayed litter, organic and rocky soil; often with other *Botrychium* species. Elevations in WA: 640-1950 m (2100-6400 ft).

Comments: Cattle grazing at known sites should be deferred until spores have been shed. This taxon is rare throughout its range.

References: Douglas et al. 1998-2002, vol. 5; Flora of North America 1993+, vol. 2; Stensvold et al. 2002.



© Steve Matson