**Botrychium ascendens** W.H. Wagner
triangular-lobed moonwort
Ophioglossaceae - adder's-tongue family
status: State Sensitive, Federal Species of Concern, BLM 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. pedunculosum* 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.