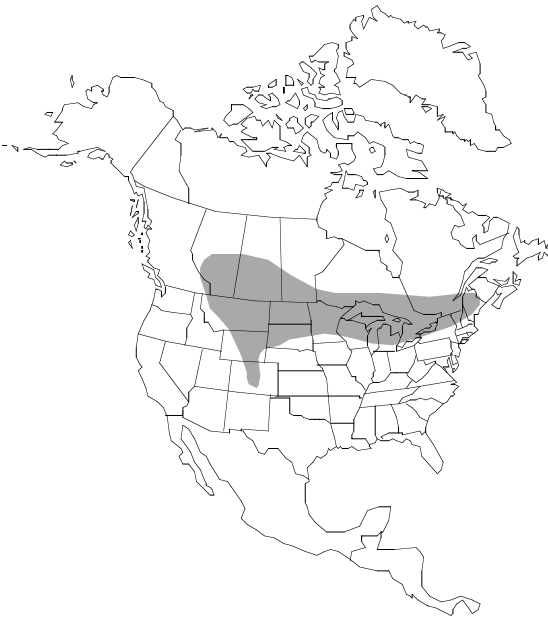


Botrychium pallidum

Family:	Ophioglossaceae
Genus:	<i>Botrychium</i>
Subgenus:	<i>Botrychium</i> (syn. <i>Eubotrychium</i>)
Species:	<i>Botrychium pallidum</i> W. H. Wagner
Common Name:	Pale Moonwort
Ploidy:	Diploid



Photograph by Steve Mortensen

Published description: Suggesting a very pale, dwarf form of *B. minganense*. Trophophore blade longitudinally more or less folded and trough-like when alive, narrowly oblong, up to 4 x 1 cm, 1-pinnate, the pinnae approximate, up to 5 pairs, small, up to 6 mm long, flabellate, the basal or both sides deeply concave, broadly attached, the larger ones ascending and strongly asymmetrical, tending toward two lobes, the upper one cleft and larger than the lower; outer margins entire to irregularly crenulate-denticulate; lamina herbaceous, glaucous pale green; lower sporophore pinnae with a large or small branch; spore diameter 23—28 μm ; chromosomes $n = 45$. (Wagner and Wagner 1990)

Identification

The trophophore of *Botrychium pallidum* is stalked, oblong in outline, and once pinnate with pinnae spanning an arc of about 90°, i.e., ¼ of a circle. In these characters it most closely resembles *B. minganense*. It is most easily distinguished from *B. minganense*, when alive, by its silvery gray-green color, but this character often does not persist in collected plants, especially if they are stored in a plastic bag. Other characters differentiating the two species are the curvature of the pinna sides and the cutting of their outer margin. The pinna sides of *B. minganense* are concave near the rachis and are more or less straight along the pinna blade. Pinna sides of *B. pallidum* are more concave throughout and most strongly so near their juncture with the outer margin, giving the pinna a mushroom shape. Outer pinna margins of *B. minganense* are entire, or if lobed, symmetrically so. Outer pinna margins of *B. pallidum* are often unevenly divided with the upper lobe longer and broader than the lower lobe. This unequal division can also be seen in the basal branches of the sporophore, those of *B. minganense* being symmetrically branched whereas those of *B. pallidum* are divided into a longer upper and shorter lower branch.

Pinnae of *B. gallicomontanum* may be similarly cut into larger upper and smaller lower lobes, but the lobes are more spreading and linear. The trophophore and sporophore stalks of *B. gallicomontanum* are shorter than those of *B. pallidum*, the sporophore stalk being less than ½ the length of the trophophore. Pinna of *B. ascendens* are wedge-shaped with little curvature in the side margins and outer margins are dentate or cleft symmetrically into spreading lobes. Spores of *B. pallidum* are much smaller than those of each of these three tetraploid species.

Distribution

Botrychium pallidum is broadly distributed from Maine across the Great Lakes and Black Hills to the Colorado Rocky Mountains and northward to the southern third of Alberta, Saskatchewan and Alberta.

Habitat

Botrychium pallidum is most often found growing in open fields of sparse to dense herbaceous vegetation but can also be found in partial shade of open-canopy woodlands.

Additional photographs of *Botrychium pallidum*:

