

Quillwort

Isoetes valida

Description

Quillworts as a group are mostly aquatic or semi-aquatic herbs that are considered to be relatives of ferns. Their tufted growth habit and elongate, slender leaves superficially resemble certain flowering plants, particularly rushes or grasses. Quillworts reproduce by spores, which are microscopic in size and grouped together at the spoon-like base of certain leaves. The species of quillworts, some of which are common in Pennsylvania, are difficult to distinguish and require detailed examination of the spores. The species highlighted here, *Isoetes valida*, differs from related species by its relatively small, irregularly ridged spores.

Distribution & Habitat

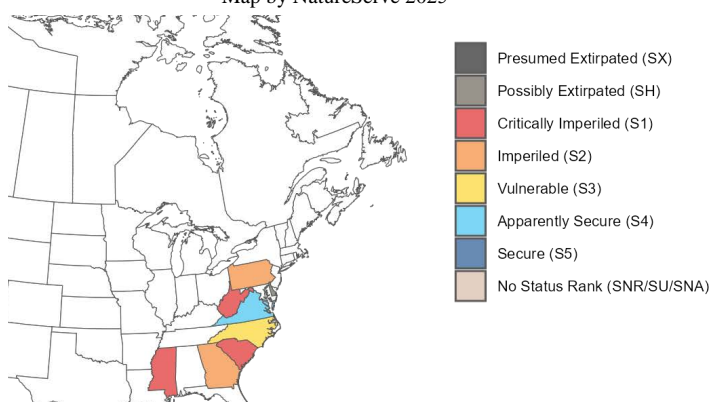
This species of quillwort can be found from Pennsylvania south into Georgia and Mississippi. In Pennsylvania, it has been documented historically in some southern counties, where it grows in low volume streamlets, seepages, impoundments, and other wet places.



Photo Source: PNHP

North American State/Province Conservation Status

Map by NatureServe 2025



Current State Status

The PA Biological Survey (PABS) considers this species of quillwort to be a species of special concern, based on the few occurrences that have been recently confirmed and its wetland habitat. It does not have a PA legal rarity status, but has been assigned a suggested rarity status of Undetermined by PABS. Fewer than 5 populations are currently known from the state, but more field surveys are needed.

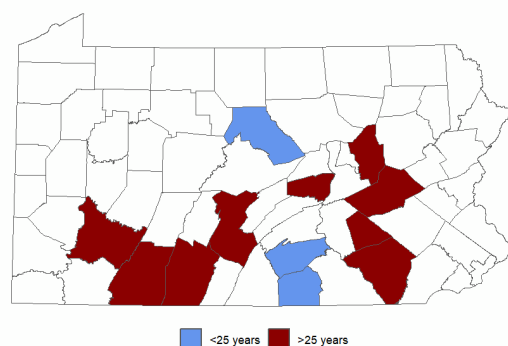
Conservation Considerations

The viability of populations of this species of quillwort and its habitat may be enhanced by creating buffers around wetlands, controlling of invasive species, and protecting the natural hydrology surrounding wetlands. More field surveys are needed to determine the range, relative abundance, and ecological requirements of *Isoetes valida*.

NatureServe conservation status ranks

G4? –Apparently globally secure; S1S3 – Imperiled in Pennsylvania

Quillwort (*Isoetes valida*)



References

- NatureServe. 2025. NatureServe Explorer [web application] NatureServe, Arlington, Virginia. Available at <https://explorer.natureserve.org> (Accessed: May 8, 2025)
- Rhoads, A.F. and T.A. Block. 2007. The Plants of Pennsylvania: An Illustrated Manual. 2nd edition. University of Pennsylvania Press, Philadelphia.
- Washington State Department of Ecology. 2007. An Aquatic Plant Identification Manual [web application]. Available at <http://www.ecy.wa.gov/programs/wq/plants/plantid2/>. Accessed April 17, 2007.

