

BOOM'S QUILLWORT

Isoetes boomii Luebke

Synonyms: none

Family: Isoetaceae (quillwort)

FNAI Ranks: G1/S1

Legal Status: US-none FL-Endangered

Wetland Status: US-none+ FL-OBL



No Image
Available

Field Description: Plants **aquatic**, emergent. **Rootstock** nearly globose, 2-lobed. **Leaves** deciduous, bright green, pale toward base, spirally arranged, to 45 cm, pliant gradually tapering toward tip. **Velum** covering less than 1/2 of . **Sporangium** wall \pm brown-streaked. **Megaspores** white, 460--610 μm diam., cristate to reticulate with thin ridges; girdle obscure. **Microspores** light gray in mass, 35--30 μm , papillose. $2n = 66$ (Flora of North America 2023).

Similar Species: *Isoetes boomii* is differentiated from similar related species with large thick walled megaspores over 500 μm in diameter, velum covering 50% or less of the sporangium, and brown streaked-sporangia wall. Appalachian quillwort (*Isoetes appalachiana*) is very similar but has smaller megaspores less than 500 μm in diameter. Winged Florida quillwort (*Isoetes flaccida*) can be differentiated by a large velum which completely covers the sporangium, and unpigmented sporangia wall (Brunton, D. F. 2015, Luebke, N. T. 1992).

Boom's quillwort

Isoetes boomii

Related Rare Species: In Florida there are several species in this genus that are rare: state endangered Appalachian quillwort (*Isoetes appalachiana*) in the FL Panhandle; Chapman's Florida quillwort (*Isoetes chapmanii*) endemic to Jackson County in the FL Panhandle; and state endangered wintergreen quillwort (*Isoetes hyemalis*) from Holmes County in the FL Panhandle.

Habitat: The shallow, flowing water of a swamp in partial shade (Weakley 2023).

Best Survey Season: Spores mature in late summer (Flora of North America 2023).

Range-wide Distribution: Known from southern AL, southern GA, and northeastern peninsular FL (Putnam and Clay County).

Conservation Status: Occupying a very limited range with only two known Florida records: (1) occurs on private land just south of the Greens Creek Mitigation Bank; (2) occurs on Etoniah/Cross Florida Greenway Florida Forever BOT Project. Grows along meandering blackwater stream and occasionally in shallow water of stream. Threatened by invasive species encroachment from proximity of roads. The longevity of this species would benefit from an evaluation of invasive species at Etoniah/Cross Florida Greenway Florida Forever BOT Project. Followed by invasive species management along Greens Creek and Rice Creek where known populations are located. In order to gain distribution data for *Isoetes boomii* a full survey of Etoniah/Cross Florida Greenway Florida Forever BOT Project should occur along creeks, and blackwater streams. Land acquisition of a population occurring on private land resulting in an extension of Greens Creek Mitigation Bank south to the road.

Protection and Management: Invasive species management along Greens Creek and Rice Creek.

References: Bruton 2015, Flora of North America (FNA) 2023, Kartesz 1994, Luebke 1992, Weakley 2023, Wunderlin and Hansen 2011.