



## Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

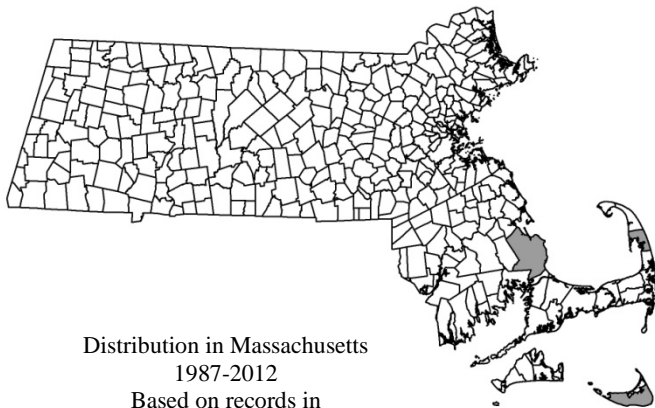
## Slender Bladderwort *Utricularia subulata* L.

State Status: **Special Concern**  
Federal Status: **None**

**DESCRIPTION:** Slender Bladderwort is a tiny semi-aquatic plant composed of a subterranean system of delicate, unbranched, bladder-bearing (traps for invertebrates) stems from which thread-like, leafless flower scapes emerge 4 to 18 cm (1.5-6 in.) above the substrate. Small, uncut, leaf-like branchlets may also be present, borne on the underground stems. The tiny yellow flowers, commonly 2 to 4 per stalk, appear from early June to late summer. They have a bilabiate (two-lipped) corolla, the upper lip smaller and rounded, the lower one large, broad and shallowly 3-lobed with a short spur pressed beneath it. More often, however, the flowers lack any well-developed petals and look simply like fruiting capsules. These cleistogamous (hidden) flowers are fertilized without the flower ever expanding. A colony of them looks like tiny hatpins stuck in the sand or mud.



Richard A. Howard Image Collection, courtesy of Smithsonian Institution.



Distribution in Massachusetts  
1987-2012  
Based on records in  
Natural Heritage Database

**RANGE:** Southeastern Massachusetts and southern Nova Scotia represent the northern limit of this species' range which extends south along the coastal states to Florida, westward to Texas, inland to Arkansas and Tennessee, and then skips to northern Indiana and southern Michigan. It is also found throughout South America, tropical Africa, Madagascar, Thailand, and Borneo.

**SIMILAR SPECIES:** Slender Bladderwort is similar to two other yellow-flowered bladderworts, Horned Bladderwort (*U. cornuta*) and the Humped Bladderwort (*U. gibba*). Horned Bladderwort has a divergent spur, while Slender Bladderwort has the corolla spur appressed to the lower lip. Humped Bladderwort has floating or creeping branches with many finely dissected leaves and scattered bladders, separately or together, while Slender Bladderwort has only underground bladders and few, if any, simple (undivided) leaves. Slender Bladderwort is usually found stranded away from current water levels, whereas the Humped Bladderwort is usually emergent at the water's edge.

*A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan*

## Massachusetts Division of Fisheries & Wildlife

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Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

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**HABITAT IN MASSACHUSETTS:** This species primarily grows in wet, sandy to peaty soils on the margins of shallow Coastal Plain freshwater ponds which undergo pronounced seasonal fluctuations in water level. These permanent bodies of water were created from buried blocks of glacial ice and are found scattered throughout the glacial outwash which was deposited over much of southeastern Massachusetts. A rich community of specially adapted species, many rare and threatened, is able to thrive because the encroachment of trees and shrubs is prevented by the recurring high water levels in these ponds. Slender Bladderwort is also found in boggy depressions and on peaty scrapes where saturated and sunny conditions are also conducive to the growth of certain low, herbaceous species. Commonly found growing with Slender Bladderwort are Thread-leaved Sundew (*Drosera filiformis*), Yellow-eyed Grass (*Xyris difformis*), Bog Buttons (*Eriocaulon aquaticum*), White Beak-sedge (*Rhynchospora alba*), and Redroot (*Lachnanthes caroliana*), another listed plant species which happens to reach its northern range limit at the same location as Slender Bladderwort.

**POPULATION STATUS:** Slender Bladderwort is listed as a Species of Special Concern in Massachusetts. It is also considered rare in Delaware, Indiana, Maryland, Michigan, Missouri, New York, Oklahoma, Rhode Island, Tennessee, Virginia, and Nova Scotia. It existed historically in Pennsylvania, but is currently presumed to be extirpated from that state. Extensive populations of Slender Bladderwort occur at several Massachusetts sites and are currently protected at seven coastal plain ponds. Historically (prior to 1990), it was more prevalent and was documented from 21 sites in the state. However, through recent development and recreational use of many of the region's coastal ponds, this species' habitat has significantly decreased.

Updated 2019

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