



**Natural Heritage  
& Endangered Species  
Program**

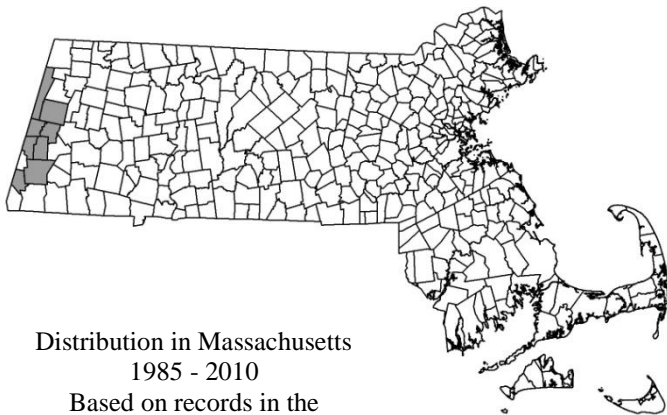
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*Massachusetts Division of Fisheries & Wildlife*

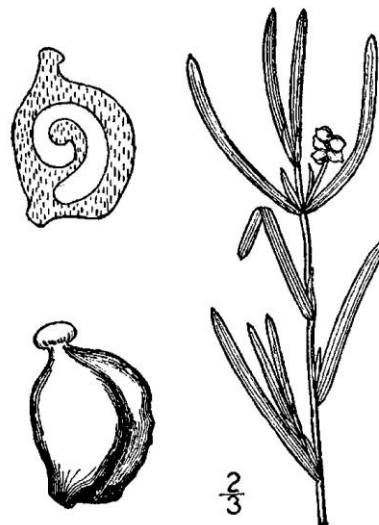
**Hill's Pondweed  
*Potamogeton hillii*  
Morong**

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

**DESCRIPTION:** Pondweed, a member of the Pondweed family (Potamogetonaceae), is an herbaceous, submersed aquatic plant with very slender stems. The branched stems reach up to 1 m (3.3 ft.) in length, and both stems and leaves are entirely beneath the surface of the water. The genus name comes from the Greek words *potamos* and *geiton*, meaning *river* and *a neighbor*, respectively. (Slow-moving streams are one of the plant's typical habitats). Hill's Pondweed's pale green, three (occasionally five)-nerved leaves are 3 to 7 cm (1.2 - 2.75 in.) long, linear in shape and only 1 to 2.2 mm wide. Most of the leaf tips end in bristles. On each side of the mid-rib of the leaves are one to two rows of translucent tissue called lacunae. The stipules (appendages at the base of leaf stalks or leaves) are fibrous and whitish. The small inflorescence on Hill's Pondweed consists of one to four small, crowded flowers. The buoyant 3 to 3.6 mm long fruits mature in August.



Distribution in Massachusetts  
1985 - 2010  
Based on records in the  
Natural Heritage Database



Top: Photo showing Hill's Pondweed in its pond habitat. Photo: Jennifer Garrett, NHESP. Illustration from: USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. 3 vols. Charles Scribner's Sons, New York. Vol. 1: 82.

**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.

[www.mass.gov/nhesp](http://www.mass.gov/nhesp)

**SIMILAR SPECIES:** Both Leafy Pondweed (*P. foliosus*) and Straight-leaved Pondweed (*P. strictifolius*) could be mistaken for Hill's Pondweed. Of the two, only Leafy Pondweed is typically associated with *P. hillii*. In contrast to Hill's Pondweed, Leafy Pondweed has four to six flowers in its inflorescences. In addition, its fruits are smaller than those of *P. hillii*--only 1.5 to 2.7 mm. Both the leaves and branches of Straight-leaved Pondweed are rigid. Also unlike Hill's Pondweed, Straight-leaved Pondweed has distinct glands where the leaves grow out from the stem and a distinctive, bold margin around the leaves.

**HABITAT IN MASSACHUSETTS:** Hill's Pondweed's best habitat is cold, clean, alkaline bodies of water, where it provides a source of food for waterfowl and shelter for various aquatic organisms. It grows in various other habitats as well: some examples of the Massachusetts habitats of Hill's Pondweed are swamps, marshy areas, rivers, and various ponds--including farm and beaver ponds. Associated species include Floating Pondweed (*Potamogeton natans*), Leafy Pondweed (*P. foliosus*), Naiad or Bushy Pondweed (*Najas flexilis*), Coontail (*Ceratophyllum demersum*), Northern Waterweed (*Elodea canadensis*), Yellow Water-lily (*Nuphar variegata*), White Water Lily (*Nymphaea odorata*), a Spike Rush (*Eleocharis acicularis*), and duckweeds (*Lemna* sp.). Non-vascular Stoneworts (*Chara* spp.) are often in the same calcium rich waters as Hill's Pondweed.

**RANGE:** Hill's Pondweed has been documented as occurring in Ontario, Vermont, New York, western Connecticut, Michigan, western Massachusetts, Pennsylvania and Ohio. It is very local in distribution and one of the least common pondweeds in the United States. NatureServe ranks Hill's Pondweed as globally Vulnerable, G3, since it is somewhat uncommon throughout its range.

**POPULATION STATUS:** Hill's Pondweed is listed under the Massachusetts Endangered Species Act as a Species of Special Concern. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. The "Special Concern" status means that, although the species is not presently endangered or threatened in the state, it is rare and the species could become threatened due to a continuing decline, small

numbers of plants, or limited habitat. All current (1985-2010) and historic records are from Berkshire County. About one-third of all global occurrences of Hill's Pondweed occur in Massachusetts. Hill's Pondweed is also considered rare in Connecticut, Michigan, Ohio, Pennsylvania, and Vermont.

**MANAGEMENT RECOMMENDATIONS:** Many of the sites with Hill's Pondweed have non-native species. Sites should be monitored for invasions of exotic plants; if exotic plants are crowding and out-competing this species, a plan should be developed, in consultation with the Massachusetts Natural Heritage & Endangered Species Program, to remove the invaders. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

**REFERENCES:**

- NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: December 17, 2010).
- USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>, 17 December 2010). National Plant Data Center, Baton Rouge, LA 70874-4490 USA. <http://plants.usda.gov/java/profile?symbol=POHI4>

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