

FIELD GUIDE TO THE AQUATIC PLANTS OF PILLINGS POND

JULY 2005



Prepared By:



GEOSYNTEC
CONSULTANTS

289 Great Road
Acton, MA 01720
(978) 263-9588 www.geosyntec.com

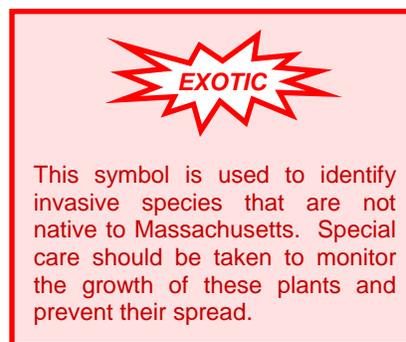
This ***Field Guide to the Aquatic Plants of Pillings Pond*** has been developed to assist volunteers in conducting regular aquatic vegetation monitoring at Pillings Pond.

Massachusetts lakes and ponds host a great variety of aquatic plants. If you find a plant in Pillings Pond which is not included in this field guide, there are a number of more comprehensive field guides that can be used as a reference for species identification. Some recommended references include the following:

- *A Guide to Aquatic Plants in Massachusetts*. New England Aquarium and the Massachusetts Department of Environmental Management. 1999.
- C.B. Hellquist and Massachusetts Department of Conservation and Recreation (MA-DCR). *A Guide to Invasive Non-native Aquatic Plants in Massachusetts*. (Available free of charge from MA-DCR)
- G.E. Crow and C.B. Hellquist. 2000. *Aquatic and Wetland Plants of Northeastern North America*. The University of Wisconsin Press.
- Fassett, N.C. 1940. *A Manual of Aquatic Plants*. The University of Wisconsin Press.

Line drawings for this field guide have been reprinted with permission from Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England*. New Hampshire Agricultural Experiment Station.

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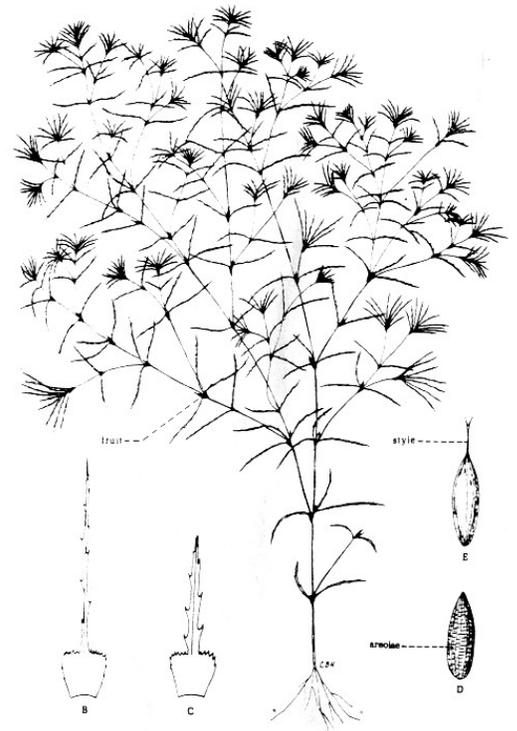
This field guide is based on the results of an aquatic vegetation survey of Pillings Pond conducted by GeoSyntec Consultants on July 15, 2005. Emergent wetland plants were recorded only if they were rooted in standing water within the perimeter of Pillings Pond.

European Naiad (*Najas minor*)

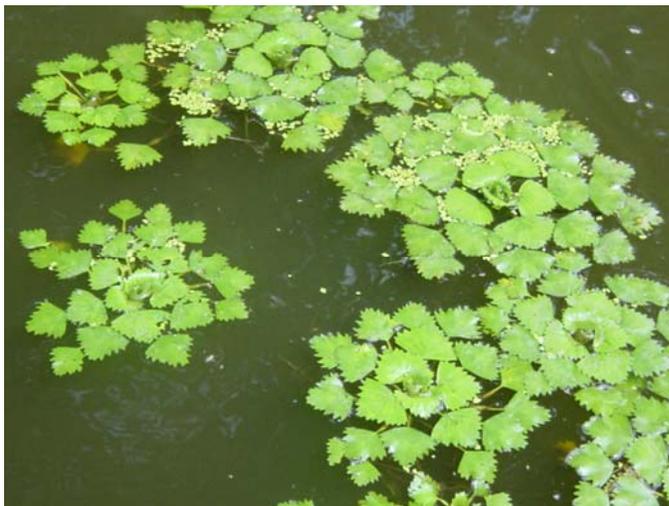


Note: *Najas minor* can be distinguished from other *Najas* species by its conspicuous leaf serrations.

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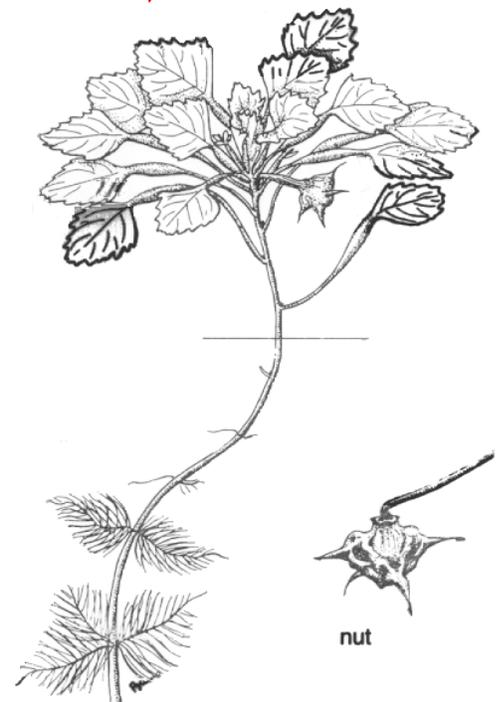


Water Chestnut (*Trapa natans*)



Note: Water chestnut is an invasive non-native plant that can spread rapidly. Small pioneer infestations of water chestnut were identified and pulled out of the northern section of Pillings Pond during the 2005 vegetation survey. Future monitoring efforts should carefully watch for this plant.

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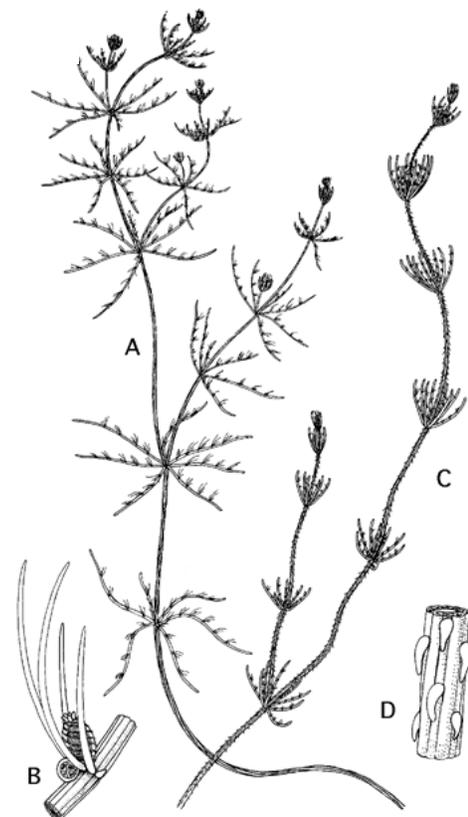


Coontail (*Ceratophyllum demersum*)



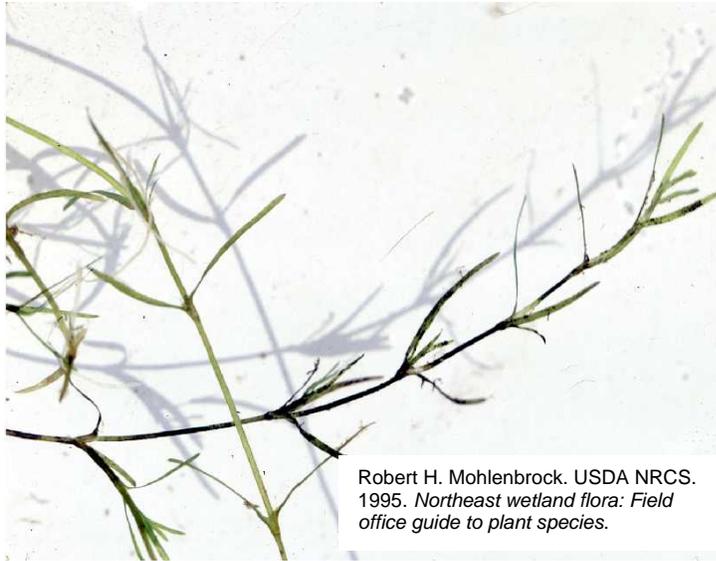
Note: Named for its appearance (similar to a raccoon's tail), the leaves of this plant have conspicuous teeth on one side. This plant may be confused with Musk Grass (see below).

Musk Grass (*Chara vulgaris*)

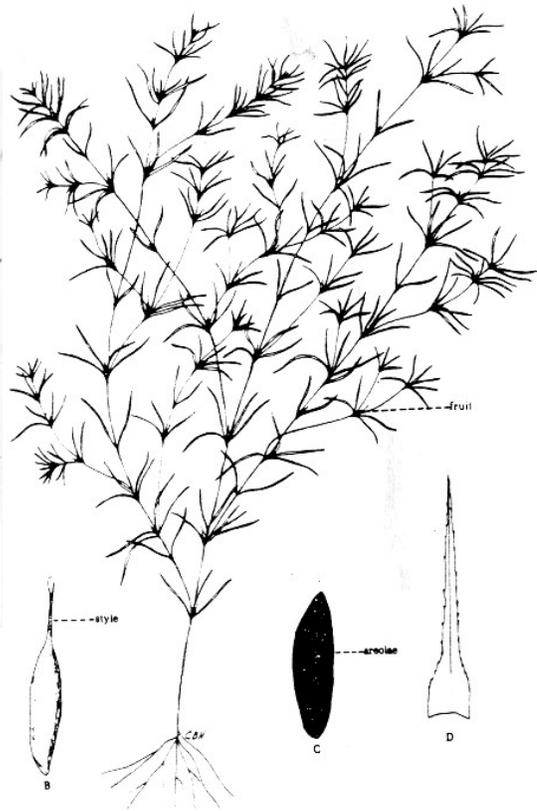


Note: Musk grasses have a distinct musky odor and are brittle when crushed between two fingers. Similar-looking vascular plants such as Bushy pondweed (*Najas spp.*) and Coontail (*Ceratophyllum demersum*) do not produce an odor when crushed.

Bushy Pondweed (*Najas flexilis*)



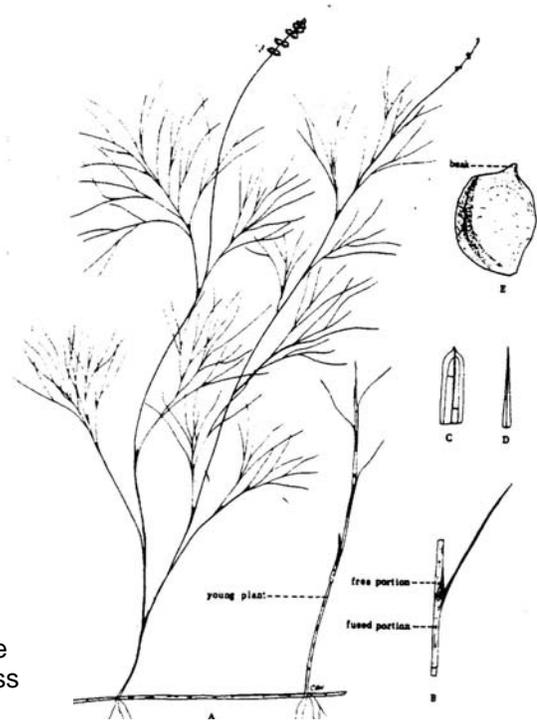
Note: *Najas flexilis* can be distinguished from the similar-looking *Najas quadalupensis* by its pointed leaf tips.



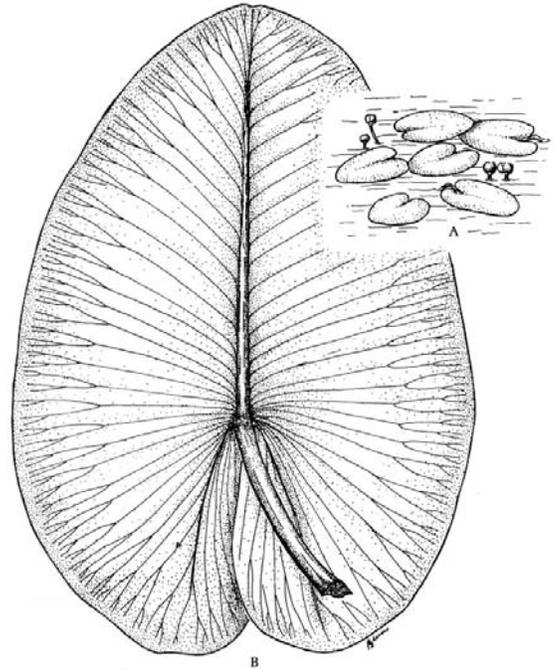
Sago Pondweed (*Potamogeton pectinatus*)



Note: Sago Pondweed is one of the thin-leaved pondweeds. The leaves of this plant are thread-like, one to five inches long and less than 1/16-inch wide.

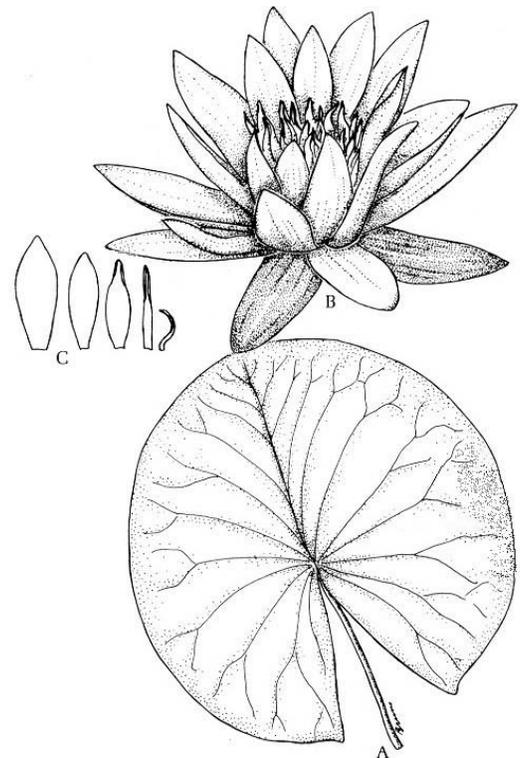


Yellow Water Lily (*Nuphar spp.*)



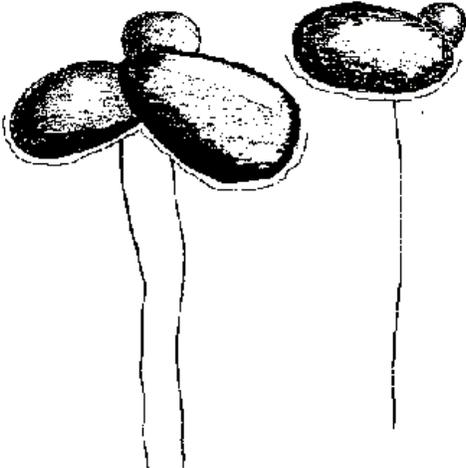
Note: Yellow water lilies have yellow flowers and floating leaves with rounded lobes that frequently overlap.

White Water Lily (*Nymphaea spp.*)



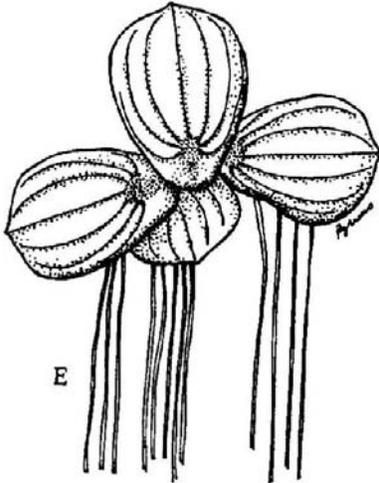
Note: White water lilies have white flowers and floating leaves with pointed lobes that rarely overlap. Pillings Pond also has a pink-flowered hybrid variety of this plant.

Lesser Duckweed (*Lemna minor*)



Note: Lesser duckweed is a small (2-3 mm) floating aquatic perennial plant with three veins and a single root. Duckweed can form mats covering areas of slow moving water.

Big Duckweed (*Spirodela polyrhiza*)



Note: Spirodela is the largest of the duckweeds and can be found in slow-moving or stagnant water. It has two to three rounded leaves and several roots (up to nine) beneath each leaf.

Water-meal (*Wolffia* spp.)



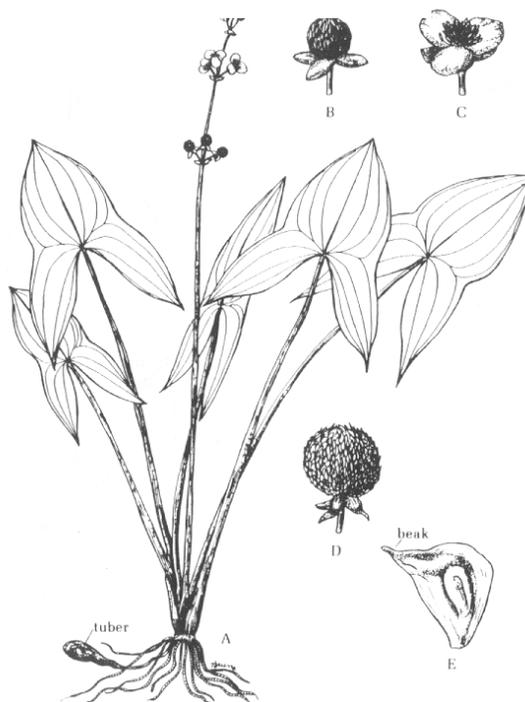
Note: Water-meal is a tiny floating plant (0.4-1.2 mm long) with no roots. This plant is commonly found growing alongside duckweed in shallow, slow-moving waters.

Soft Rush (*Juncus effusus*)



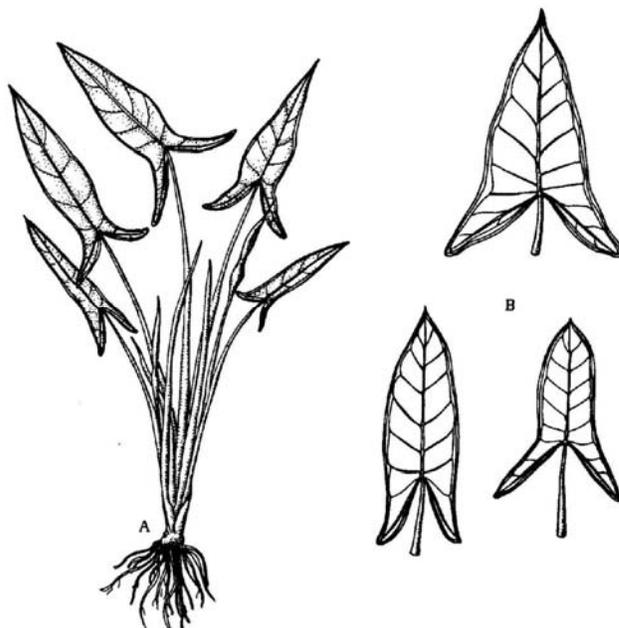
Note: Soft rush can be found in fresh or saltwater and is recognized by its pale-green stems approximately two to five feet tall. While it has no leaves, each branch has 30-100 small, greenish-brown flowers.

Arrowhead (*Sagittaria latifolia*)



Note: Arrowhead grows in shallow water on the fringe of ponds, lakes, and streams. It has distinctive arrow shaped leaves and white flowers. The submerged leaves are lance-shaped or even bladeless and linear. Key features of arrowhead include pointed triangular lobes and veins that radiate from a central point.

Arrow Arum (*Peltandra virginica*)



Note: Arrow arum is found in swamps, marshes and lake margins. The leaves are arrowhead-shaped and typically 10-12 inches long and the stalks can be three feet long. Its flowers are small and light yellow. This plant can be distinguished from Arrowhead by (1) a distinct vein that outlines the leaf and (2) rounded triangular lobes radiating from a central vein, not a central point.

Common Reed (*Phragmites australis*)



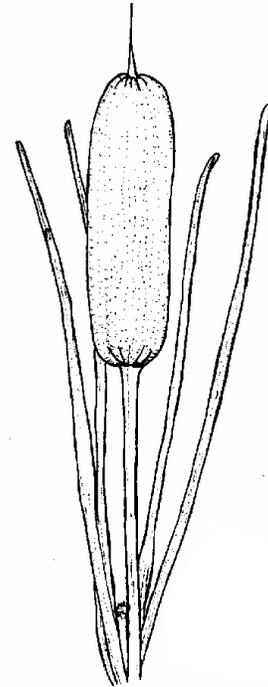
Note: Common reed is a large grass plant that can grow up to 16 feet tall. The leaves are 2 feet long and no more than one inch wide. The flowers are up to ½ inch long and the stem tip often drapes to one side.

Purple Loosestrife (*Lythrum salicaria*)



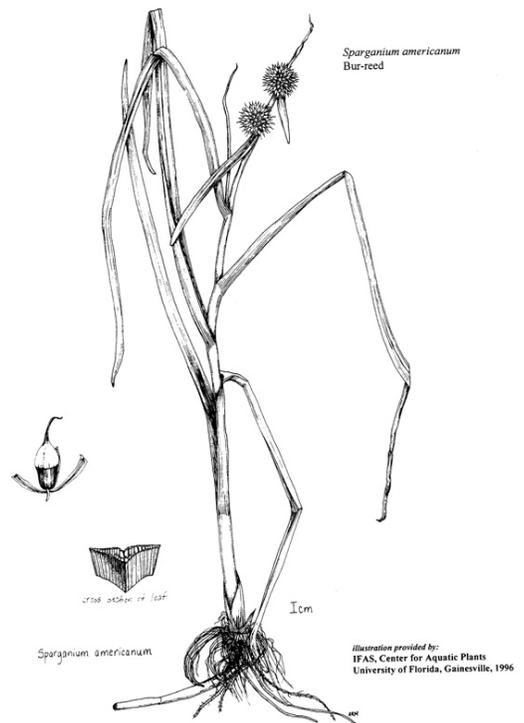
Note: Purple loosestrife flowers have either 5 or 6 pink-purple petals and small yellow centers. The leaves have smooth edges and are arranged in pairs around the stalk which can be 6 feet tall.

Cattail (*Typha* spp.)



Note: Cattails are easily identified by their tall, sword-shaped leaves and fruiting spikes. Broad-leaved Cattail is distinguished from Narrow-leaved Cattail by its broader leaves and fruiting spikes with no separation between the male and female sections.

Bur-reed (*Sparganium* sp.)



Note: Bur-reed is an emergent wetland plant that typically grows up to two feet tall. Its bright green, strap-like leaf blades are up to 1 inch wide. The plants distinctive spherical flower heads are green in early season, becoming brown and bur-like later.

Lurid Sedge (*Carex lurida*)



Note: The grass-like leaves of the Lurid Sedge grow up to 3 feet tall, but the seedheads do not grow above the foliage.



Button Bush (*Cephalanthus occidentalis*)



Note: Button Bush is a woody shrub with fragrant ball-shaped flower heads that grows along the perimeter of lakes and ponds.



Illustration provided by:
IFAS, Center for Aquatic Plants
University of Florida, Gainesville, 1996