# Field Guide

# To The Aquatic Plants of Cobbett's Pond

May 2010




Prepared for:

**Cobbett's Pond Improvement Association**

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**This Field Guide to the Aquatic Plants of Cobbett's Pond has been developed to assist in efforts to conduct regular aquatic vegetation monitoring at Cobbett's Pond.**

**New Hampshire lakes and ponds host a great variety of aquatic plants. If you find a plant in Cobbett's 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:**

- Aquatic Plants & Algae of New Hampshire's Lakes and Ponds. New Hampshire Department of Environmental Services. (Available online at: www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-05-30.pdf)
- 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.

This field guide is based on the results of an aquatic vegetation survey of Cobbett's Pond conducted by Geosyntec Consultants in July 2009. Emergent wetland plants were recorded only if they were rooted in standing water within the perimeter of Cobbett's Pond. The species identified during the survey are listed in the table on the following page.

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# Rough Stonewort (Chara aspera)

Chara species are structured forms of algae rather than true vascular aquatic plants. Chara aspera is similar in structure to Chara vulgaris (below), but smaller.

Illustration from: Sowerby's English Botany 3rd Edition. Vol 12. Cryptogamia. 1886.

# Musk Grass (Chara vulgaris)

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


Illustration from: G.E. Crow and C.B. Hellquist. 1982. Aquatic Vascular Plants of New England. New Hampshire Agricultural Experiment Station.

# Small Waterwort (Elatine minima)

This tiny plant is typically found growing in shallow water.
Its leaves are rounded at the tip and up to 4 mm long.

# Waterweed (Elodea canadensis)

This Elodea species has leaves with blunt tips that whorl around the stem (3 or 4 leaves per whorl). This plant can be confused with the Najas species, which have opposite leaves rather than whorled leaves.

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Water Star-grass (Heteranthera dubia)

This plant has limp reddish-green submerged leaves that are 3-4 inches long and approximately 1/8-inch thick. Although similar in appearance to Potamogeton, Waterstar Grass leaves lack a distinct midvein. Flowers (when present) are yellow.

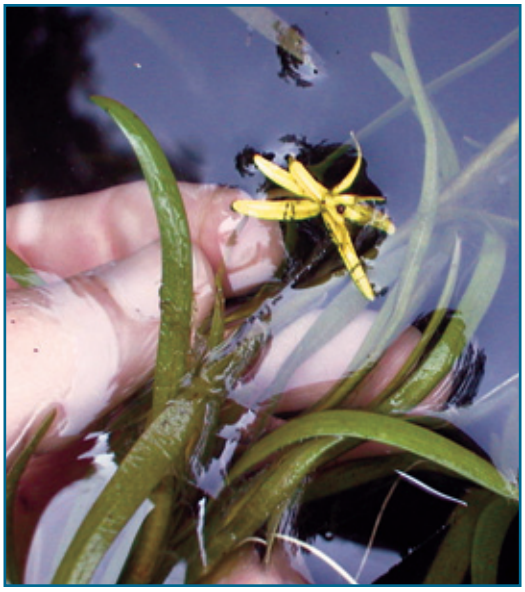


Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Quillwort (Isoetes sp.)

The leaves of this plant become narrower from the base toward the sharply pointed tip. This plant looks similar to Pipewort, but does not have cross lines on its roots.

Illustration from: G.E. Crow and C.B. Hellquist. 2000. *Aquatic and Wetland Plants of Northeastern North America.* The University of Wisconsin Press.

# Variable Milfoil (Myriophyllum heterophyllum)

This non-native milfoil has a reddish 3 mm - 8 mm diameter stem and whorled submersed leaves. This plant flowers in green to reddish spikes which are raised above the water surface and 2 to 12 inches long.

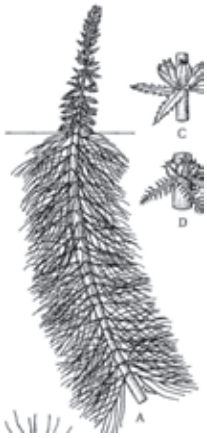



Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Bushy Pondweed (Najas flexilis)

Bushy Pondweed can be distinguished from other Najas species by the pointed tips of its oppositely arranged leaves.



Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Snailseed Pondweed (Potamogeton bicupulatus)

This pondweed has submersed and floating leaves that are spirally arranged. The floating leaves, although not always present, have 3-7 veins.

Illustration from: Britton & Brown's Illustrated Flora of the Northern United States and Canada, 2nd ed.

# Variable Pondweed (Potamogeton gramineus)

This pondweed has a highly variable appearance and may look differently depending on water depth. Floating leaves (1.5-7 cm long, 1-3 cm wide) are on stalks longer than the leaf blades.

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Clasping Pondweed (Potamogeton perfoliatus)

The floating leaves of this pondweed are approximately 2 cm long and clasp the stem. The leaf has 3 to 7 prominent nerves and the edges of the leaf are wrinkled or wavy.

Illustration from: USDA-NRCS PLANTS database.

# Heartleaf Pondweed (Potamogeton pulcher)

This pondweed has submersed leaves which are wide and flat, and often appear wrinkled. Its floating leaves are heart shaped and are widest at the base.

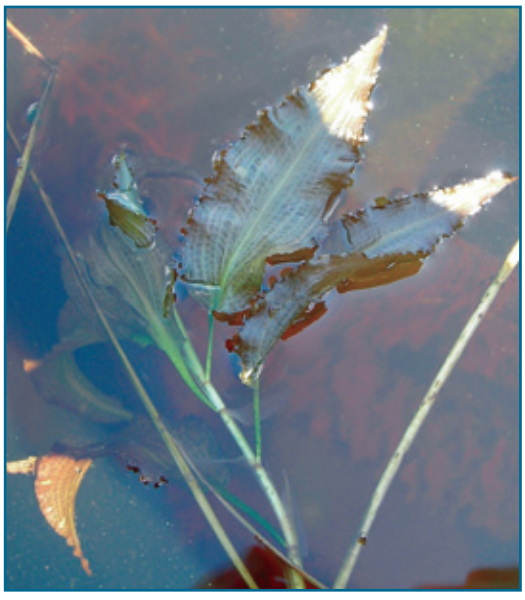


Illustration from: USDA-NRCS PLANTS Database / **Britton, N.L., and A. Brown**. 1913. *Illustrated flora of the northern states and Canada*. Vol. 1: 76.

# Small Pondweed (Potamogeton pusillis)

This pondweed has narrow leaves (about 2mm wide) with an inner midrib. Stipules are blunt or rounded.

Illustration from: USDA-NRCS PLANTS database.

# Robbin's Pondweed (Potamogeton robbinsii)

Also known as Fern-leaf Pondweed, this Potamogeton species has a fern-like appearance and leaves that are 3-8 mm wide.

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England*. New Hampshire Agricultural Experiment Station.

# Little Floating Bladderwort (Utricularia radiata)

This bladderwort is easily recognized by yellow flowers that are supported above the water surface by oblong leaves that act as pontoons for the plant. The part of the plant that is underwater looks like Common Bladderwort, but its leaf forks are more zigzag shaped.

Illustration from: Fassett, N.C. 1940. *A Manual of Aquatic Plants*. The University of Wisconsin Press.

# Common Bladderwort (Utricularia vulgaris)

Bladderworts are carnivorous plants which capture and digest zooplankton (microscopic animals) in clusters of "bladders" for which they are named. Common Bladderwort is the largest of the four species of bladderwort found in the Cobbett's Pond. When in bloom, this plant has small yellow flowers.

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England*. New Hampshire Agricultural Experiment Station.

# Water Celery (Vallisneria americana)

Wild celery has ribbon-like leaves with bluntly rounded tips. A distinct light green stripe runs down the center of the leaves, which is most visible when the leaf is held up to light.

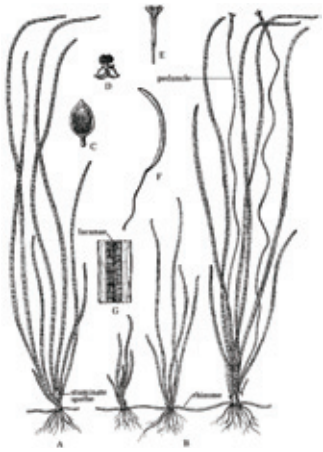
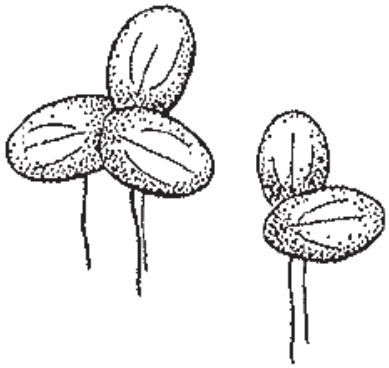


Illustration from: G.E. Crow and C.B. Hellquist. 1982. Aquatic Vascular Plants of New England. New Hampshire Agricultural Experiment Station.

# Lesser Duckweed (Lemna minor)

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.



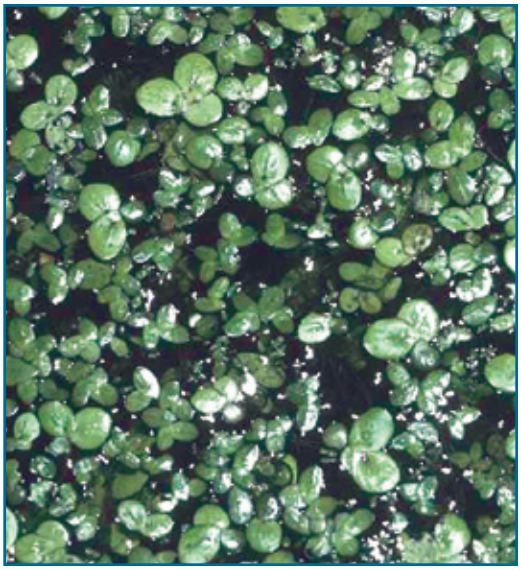
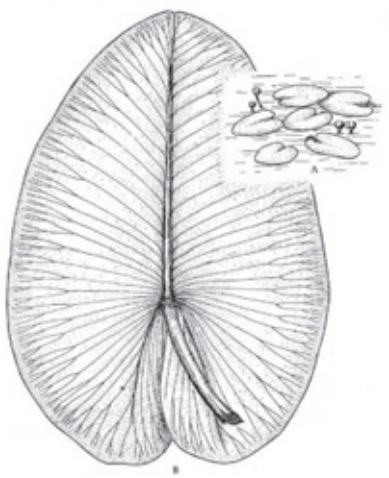


Photo Credit: Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1995. Northeast wetland flora: Field office guide to plant species. Northeast National Technical Center, Chester, PA.
Illustration from: Crow, G.E. and Hellquist, C.B. 1982. Aquatic Vascular Plants of New England. New Hampshire Agricultural Experiment Station.

# Yellow Water Lily (Nuphar spp.)

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



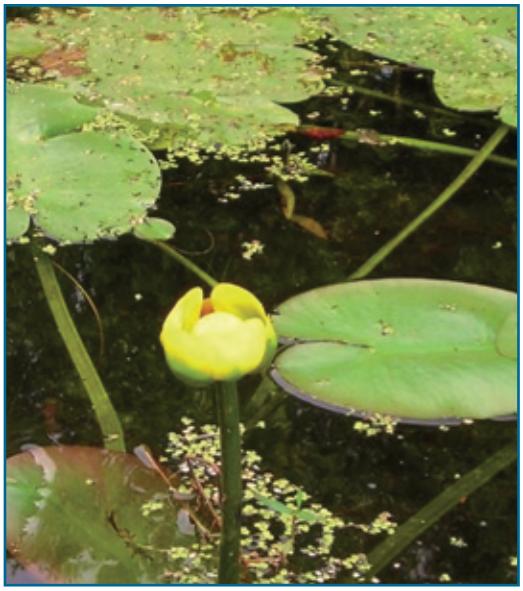
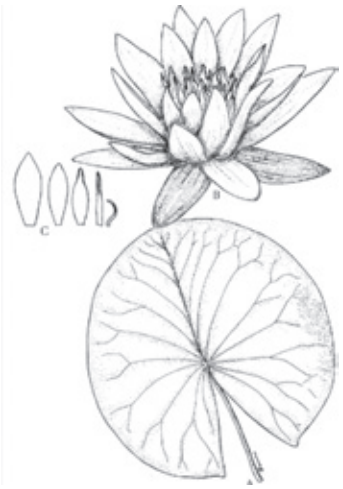


Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England*. New Hampshire Agricultural Experiment Station.

# White Water Lily (Nymphaea odorata)

White water lilies have white flowers and floating leaves with pointed lobes that rarely overlap.



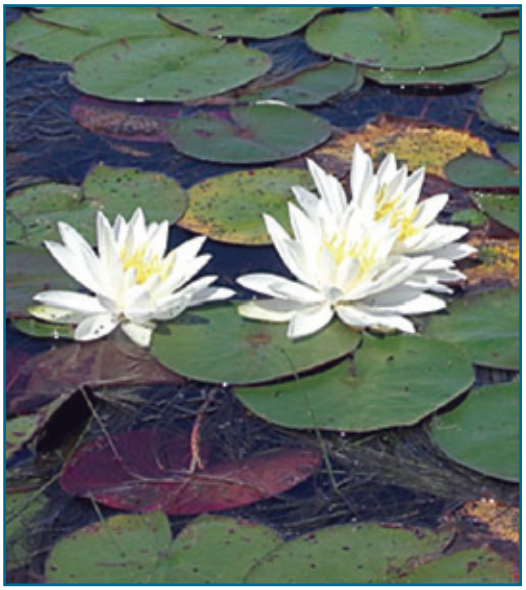


Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station

# Floating Leaf Pondweed (Potamogeton natans)

Submersed leaves are narrow (1-2 mm wide, 10-20 cm long), often disintegrating with age, tapering to an obtuse tip. Floating leaves are oval shaped and 3-10 cm long.


Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

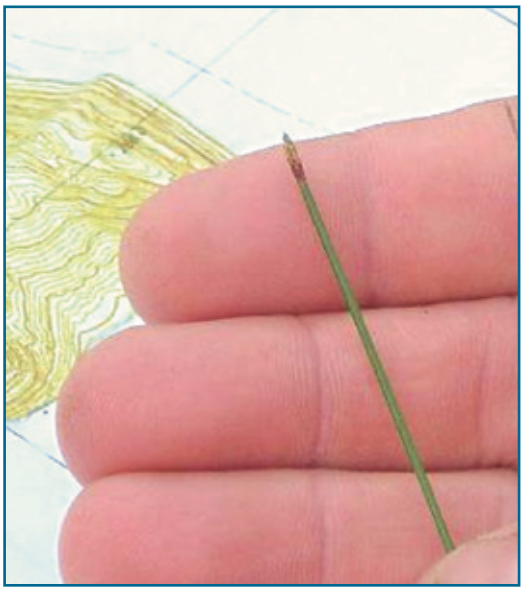
# Water Plantain (Alisma plantago-aquatica)

The water plantain has broad, flat bladed leaves. The nutlets grow out from the stalk in a ringed formation. A major identifying feature is the white petals.

Illustration from: Crow and Hellquist, Aquatic Vascular Plants of New England

# Robbins' Spike Rush (Eleocharis robbinsii)

The soft green stems of this plant often grow clumped together with oval shaped spikelets forming at the tips.



# Pipewort (Eriocaulon septangulare)

The most prominent feature of this plant is its white roots that have cross lines on them. At the end of the Pipewort's stalk there often is a button-like white flower that emerges.

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Canada Rush (Juncus canadensis)

This rush can grow up to 3' tall and tends to grow in small groups.

Illustration from: USDA-NRCS PLANTS Database / USDA NRCS. *Wetland flora: Field office illustrated guide to plant species.*

# Pickerelweed (Pontederia cordata)

This perennial emergent plant can grow up to 4' tall. The leaves are waxy and can vary in size and shape. The violet flowers grow at the end of a vertical spike

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Rannoch Rush (Scheuchzeria palustris)

This plant occurs in shallow areas and shorelines. Leaves are linear and tubular. Fruits occur in clusters of three.


Illustration from: USDA-NRCS PLANTS database.

# Bur-reed (Sparganium sp.)

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

Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.

# Cattail (Typha latifolia)

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 that don't have a separation between the male and female sections.

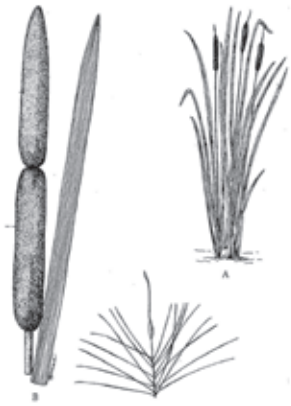


Illustration from: Crow, G.E. and Hellquist, C.B. 1982. *Aquatic Vascular Plants of New England.* New Hampshire Agricultural Experiment Station.