

IF YOU FIND A SUSPICIOUS AQUATIC PLANT mark the location with a weighted buoy and carefully collect a specimen for confirmed identification. **Do not attempt to remove the entire plant!** Place the specimen in a container of water and store in a cool place. Contact the Maine Volunteer Lake Monitoring Program at 207-783-7733 or vlmp@mainevlmp.org for further instruction. For more information please visit www.mainevlmp.org.

Leaf Arrangement Examples



Alternate



Opposite



Whorled



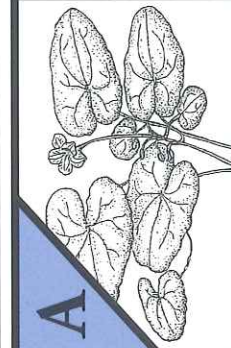
Maine Volunteer Lake Monitoring Program
Keeping a watchful eye on the health of Maine lakes since 1971

Quick Key

to Ruling Out Maine's Eleven Most Unwanted Invasive Aquatic Plants

- Brazilian Waterweed
- Curly Leaf Pondweed
- European Frogbit
- Eurasian Watermilfoil
- European Naiad
- Fanwort
- Hydrilla
- Parrot Feather
- Variable Watermilfoil
- Water Chestnut
- Yellow Floating Heart

STEP ONE: Select the category that best describes your plant.



Plants with primary leaves floating; leaves not ribbon-like

Three of the eleven invasive aquatic plants are found in this category.



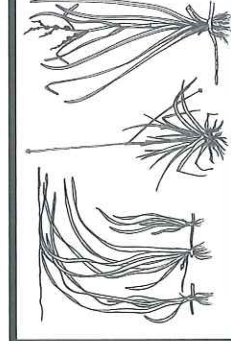
Plants with finely divided leaves arranged on submersed stems

Four of the eleven invasive aquatic plants are found in this category.



Plants with blade- or strap-shaped leaves arranged on submersed stems

Four of the eleven invasive aquatic plants are found in this category.



Everything Else

If your plant does **not** fit categories A, B, or C, rule out all eleven invaders listed above.

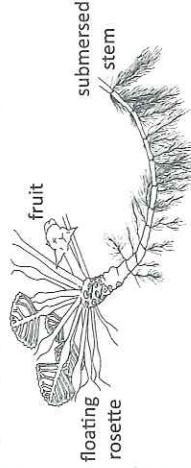
That WAS quick, wasn't it?

STEP TWO: If your plant fits into category A, B, or C, it *may* be an invasive aquatic plant. Continue on to the section that corresponds to your selected category.

A Plants with primary leaves floating; leaves not ribbon-like

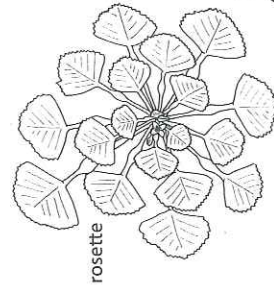
Read the numbered descriptions below, and follow additional guidance where indicated. If no descriptions match your plant, rule out the following three depicted invaders.

1) Floating leaves attached to stems are triangular and strongly serrated; leaf stems form 'floating rosette' which is attached to sediments by the main stem



SUSPECT

WATER CHESTNUT



rosette



fruit
(1/2 life-size)

Water Chestnut

(1/6 life-size)

If plant is not as described above, rule out this invasive plant.

2) Floating leaves, attached to stems, are heart-shaped or round and notched on one side to the stem



2a) Plant IS ROOTED to the sediments

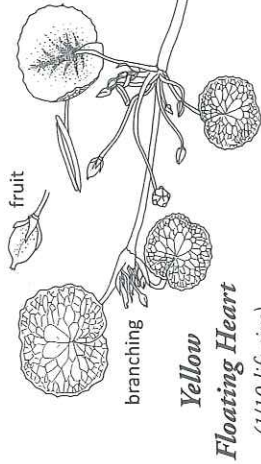
If there is branching along the main stem (*multiple side-stems connected to a single rooted stem*) and/or if the plant has showy, five-petaled yellow flowers



yellow flower

SUSPECT

YELLOW FLOATING HEART



branching

Yellow Floating Heart

(1/10 life-size)

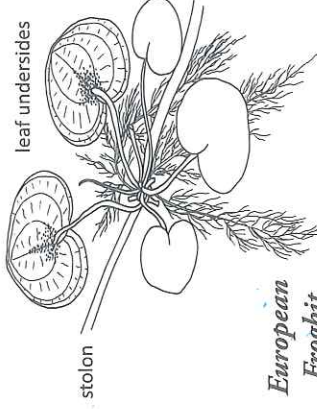
If no branching or flowers are observed, err on the side of caution and collect a specimen for identification.

2b) Plant IS NOT ROOTED to the sediments

If leaf stems are joined in a clump, with some attached to other clumps by stem-like runners (*stolons*)

SUSPECT

EUROPEAN FROGBIT



stolon

leaf undersides

European Frogbit

(1/3 life-size)

If plant is not as described above, rule out this invasive plant.

B Plants with finely-divided leaves arranged on submerged stems

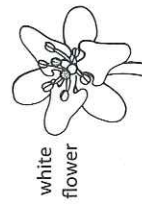
Read the numbered descriptions below, and follow additional guidance where indicated. If no descriptions match your plant, rule out the following four depicted invaders.

1) Leaves are fork- or branch-divided

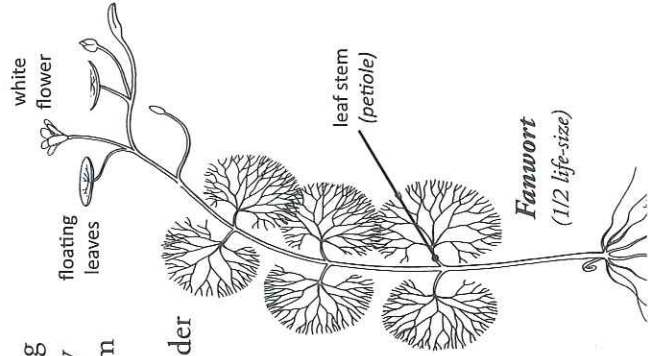


If broadly-branching leaves are oppositely arranged on the stem and attached to the main stem by a slender leaf stem (*petiole*)

SUSPECT FANWORT



If plant is not as described above, rule this invader out.

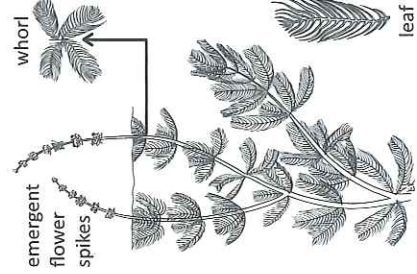


Fanwort
(1/2 life-size)

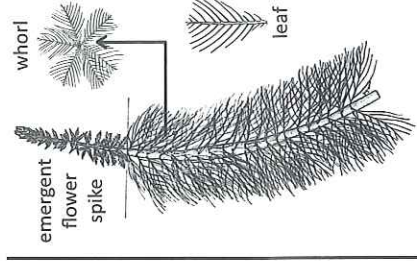
2) Leaves are feather-divided



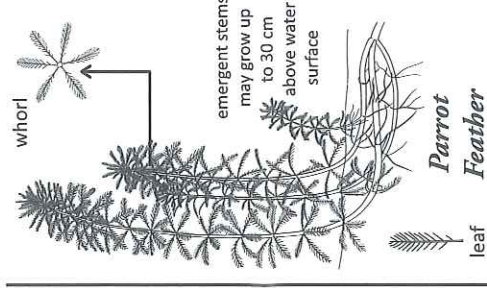
SUSPECT INVASIVE WATER-MILFOIL



Eurasian Watermilfoil
(1/3 life-size)



Variable Watermilfoil
(1/3 life-size)



Parrot Feather
(1/3 life-size)

ALL milfoils are suspicious until proven otherwise. Collect and submit a specimen as directed on the front side of the Quick Key.

C Plants with blade- or strap-shaped leaves arranged on submerged stems

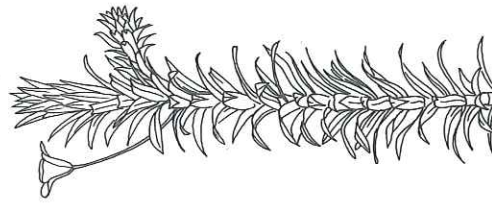
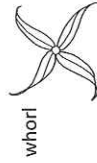
Read the numbered descriptions below, and follow additional guidance where indicated. If no descriptions match your plant, rule out the following four depicted invaders.



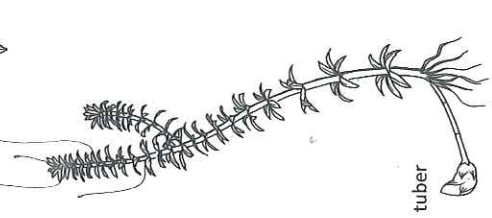
1) Lance- or blade-shaped leaves (1-3 cm long) arranged along stems in whorls of three or more leaves

Cut stem (with a sharp knife or scissors) in several locations and carefully count the number of leaves per whorl. If you find one or more whorls consisting of MORE THAN THREE LEAVES

SUSPECT BRAZILIAN ELODEA OR HYDRILLA



Brazilian Elodea
(1/3 life-size)



Hydrilla
(1/3 life-size)

If ALL whorls consist of three leaves only, rule these two invaders out.

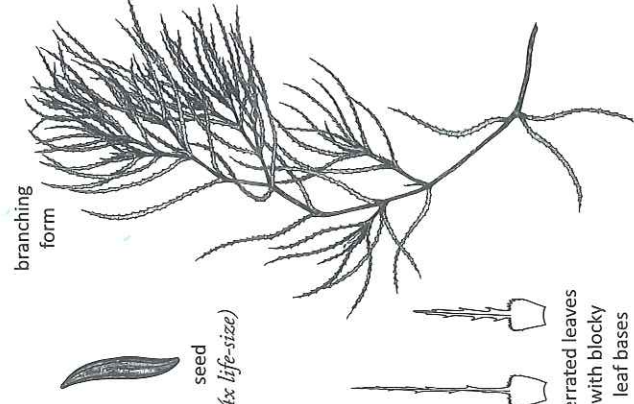


2) Slender, pointed, blade-shaped leaves (1-3 cm long) arranged variably along stem, often forming clusters at tip

Examine several leaves using magnification, or naked eye. If you see serrations along leaf edge

SUSPECT EUROPEAN NAIAD

branching form



European Naiad
(1/3 life-size)

If plant is not as described above, rule this invader out.

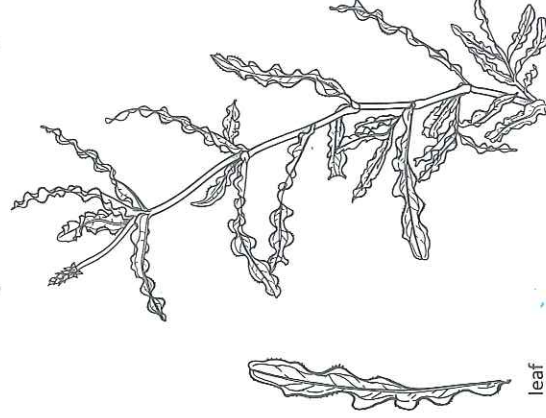


3) Strap-shaped leaves (2-8 cm long; 5-12 mm wide) are alternately arranged along the stem; plant has SUBMERSED LEAVES ONLY (no distinctly different floating leaves)

If leaves are distinctly wavy, like lasagna noodles, with fine serrations along the outer edges

SUSPECT CURLY LEAF PONDWEED

(magnification may be necessary to see the serrations)



Curly Leaf Pondweed
(1/6 life-size)

If plant is not as described above, rule this invader out.