



Maine Center For Invasive Aquatic Plants

If you find a "suspected invasive" plant please mark the location with a weighted buoy and carefully collect a sample for species confirmation. Place the specimen in a zip-lock bag 1/3 full of water and store in a cool place. **Do not attempt to remove the entire plant!** Alert the Maine Center for Invasive Aquatic Plants immediately, at 207-783-7733 or vlmp@mainevlmp.org. You will be provided with important shipping instructions.

Q U I C K K E Y

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



*(because sometimes knowing what it isn't
is more important than knowing what it is!)*

PLANT TYPE CATEGORIES FOR RULING OUT INVADERS

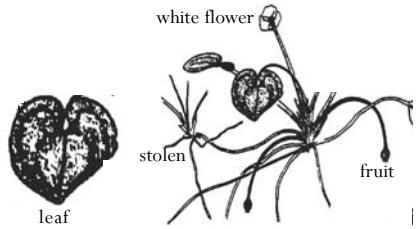
All eleven invaders have characteristics that place them in one of the following five categories. If the plant in question does not fit into at least one of these, you may rule out all eleven invaders!

1		2		3		4		5	
Floating leaf plants		Submersed plants with whorls of small lance-shaped leaves (leaves approx 1" or less)		Submersed plants with pairs or clusters of small narrow leaves		Submersed plants with long flat alternately-arranged leaves		Submersed plants with finely divided leaves	

1. FLOATING LEAF PLANTS

a) Is the plant attached to the sediment by a stem?

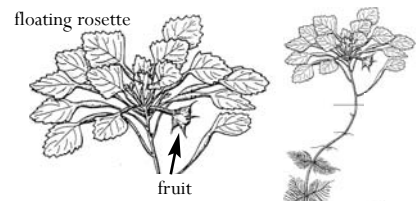
- ◆ If yes, rule out **European Frogbit**; go to (b)
- ◆ If no, are the leaves heart shaped, and growing in a clump, often connected to nearby plants with stem-like runners (stolons)?
 - ◆ **IF YES, SUSPECT EUROPEAN FROGBIT**
 - ◆ If no, rule out **European Frogbit**; go to (b)



European Frogbit

b) Does the floating part of the plant consist of a rosette of conspicuously toothed triangular shaped leaves?

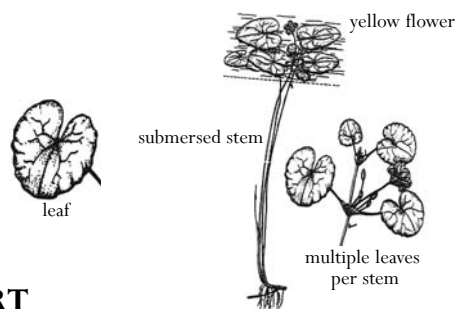
- ◆ **IF YES, SUSPECT WATER CHESTNUT**
- ◆ If no, rule out **Water Chestnut**; go to (c)



Water Chestnut

c) Is the leaf heart shaped, and notched almost to the center?

- ◆ If no, rule out **Yellow Floating Heart**
- ◆ If yes, is the leaf margin wavy or rippled, with multiple leaves per stem?
 - ◆ If no, rule out **Yellow Floating Heart**
 - ◆ **IF YES, SUSPECT YELLOW FLOATING HEART**

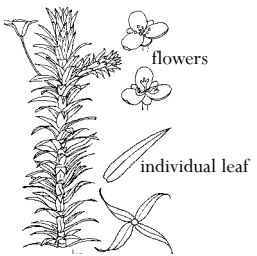


Yellow Floating Heart

2. SUBMERSED PLANTS WITH WHORLS OF SMALL LANCE-SHAPED LEAVES (APPROX 1" OR LESS)

a) Snip the stems several times at intervals along the stem. Count the number of leaves per whorl. Are there consistently three leaves per whorl?

- ◆ If yes, rule out **Brazilian Elodea and Hydrilla**
- ◆ If no, are there generally four leaves or more per whorl, and are the leaves finely but conspicuously toothed? (Can you see the serrations without magnification?)
 - ◆ **IF NO, SUSPECT BRAZILIAN ELODEA**
 - ◆ **IF YES, SUSPECT HYDRILLA**



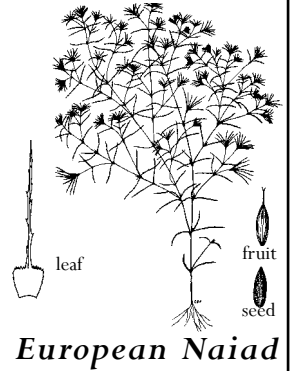
Brazilian Elodea



Hydrilla

3. SUBMERSED PLANTS WITH PAIRS OR CLUSTERS OF SMALL NARROW LEAVES

- a) Are the leaves finely but conspicuously serrated or “toothed”?
(Can you see the serrations easily with, and sometimes without, a hand lens?)
- ◆ If no, rule out **European Naiad**
 - ◆ If yes, pull a leaf away from the stem. Are the leaf bases serrated and bulging out in a blocky way (as opposed to gently flaring out)?
 - ◆ **IF YES, SUSPECT EUROPEAN NAIAD**



European Naiad

4. SUBMERSED PLANTS WITH LONG FLAT ALTERNATELY-ARRANGED LEAVES

- a) Is there more than one leaf type associated with this plant?
- ◆ If yes, rule out **CURLY LEAF PONDWEED**
 - ◆ If no, are the leaves finely but conspicuously serrated and distinctly wavy (like a lasagna noodle) in appearance?
 - ◆ If no, rule out **Curly Leaf Pondweed**
 - ◆ **IF YES, SUSPECT CURLY LEAF PONDWEED**



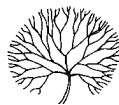
Curly Leaf Pondweed

5. SUBMERSED PLANTS WITH FINELY DIVIDED LEAVES

Forked



Branched



Feathered

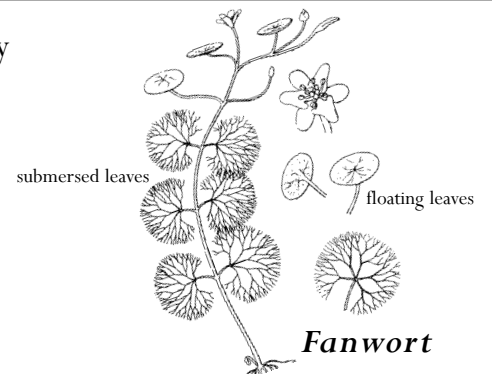


- a) Are the leaves fork or branch divided (as opposed to feather divided?)

- ◆ If yes, rule out all three invasive milfoils on Maine’s watch list: **Eurasian Watermilfoil**, **Variable Watermilfoil** and **Parrot Feather**; go to (b)

- b) Are the branched leaves oppositely arranged and held to the stem by long slender leaf stems?

- ◆ If no, rule out **Fanwort**
- ◆ **IF YES, SUSPECT FANWORT**

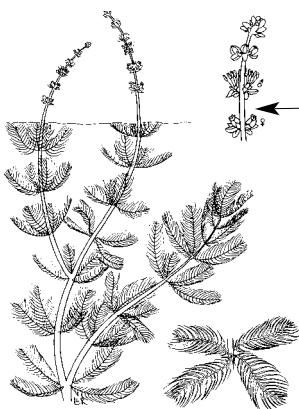


Fanwort

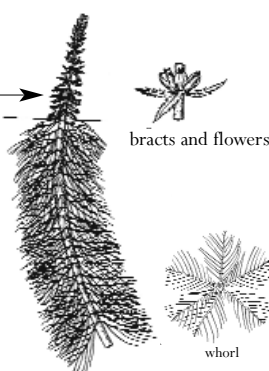
- c) Are the leaves feather divided?

- ◆ **IF YES, SUSPECT ONE OF THE THREE INVASIVE MILFOILS ON THE WATCH LIST: EURASIAN WATERMILFOIL, VARIABLE WATERMILFOIL and PARROT FEATHER.**

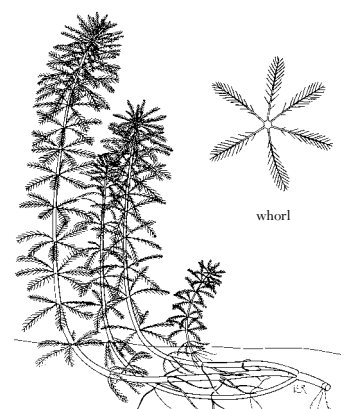
But remember, there are five native milfoil species as well as some feather divided non-milfoils.



Eurasian Watermilfoil



Variable Watermilfoil



Parrot Feather