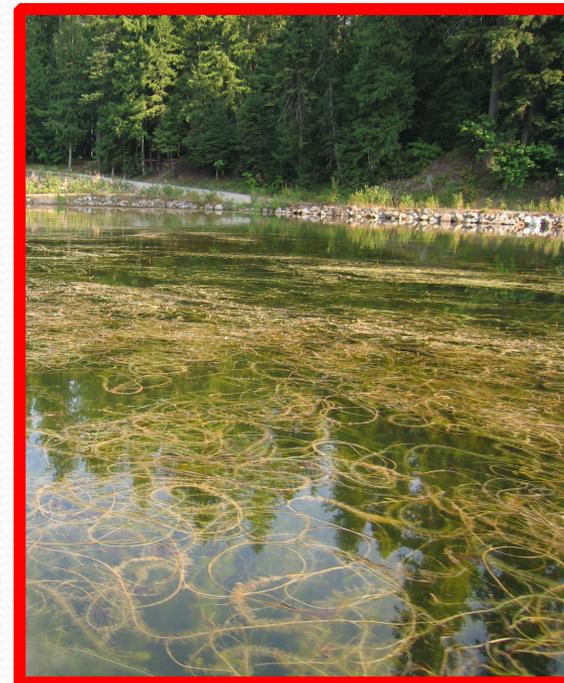


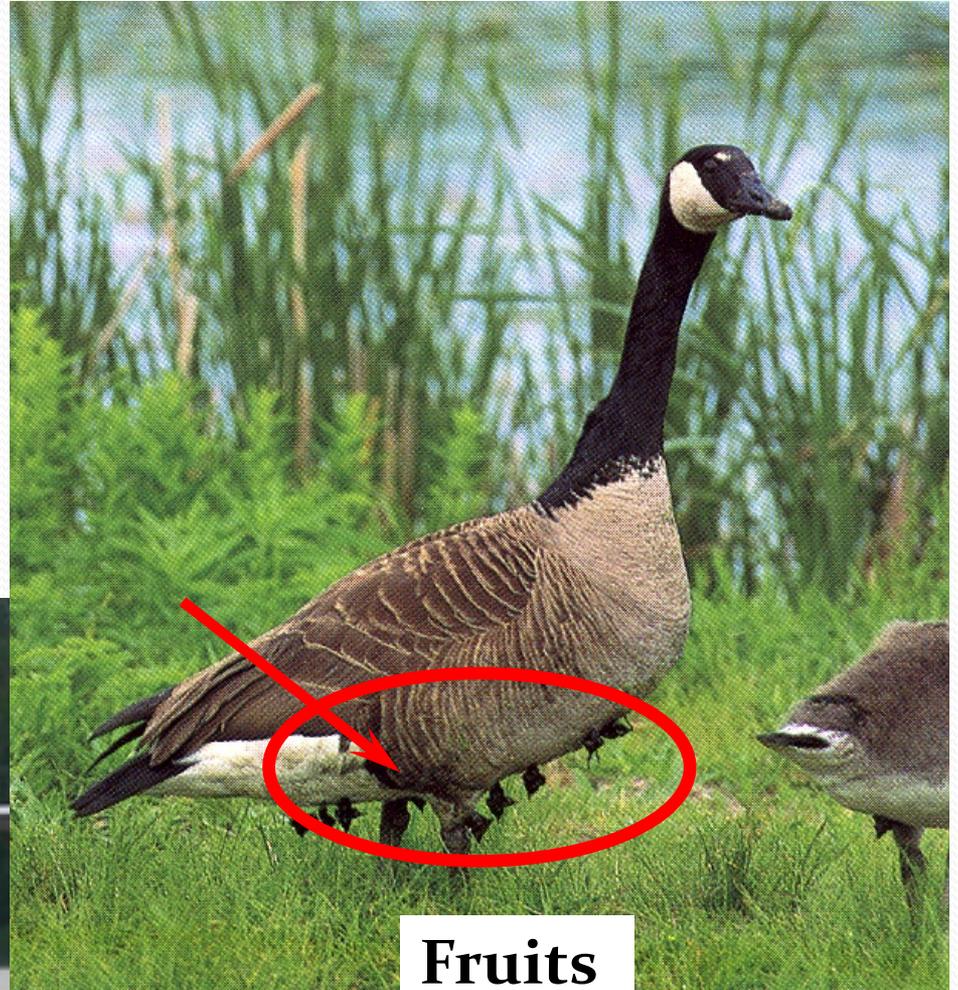
Protect our Lake 784 acres

Therese Thompson

Identification of **Invasive** & **Native** Aquatic & Shoreline Plants



Transport



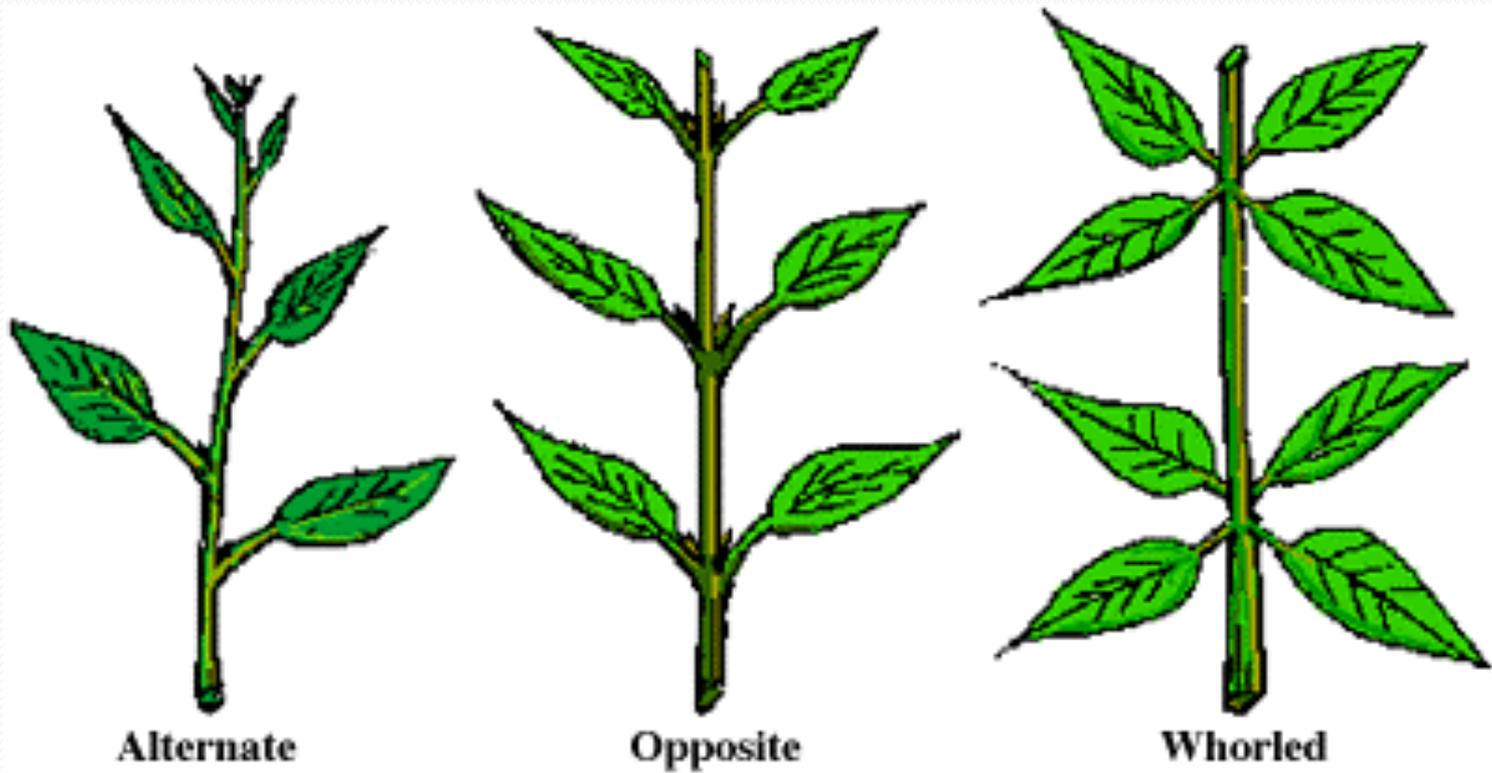
Fruits



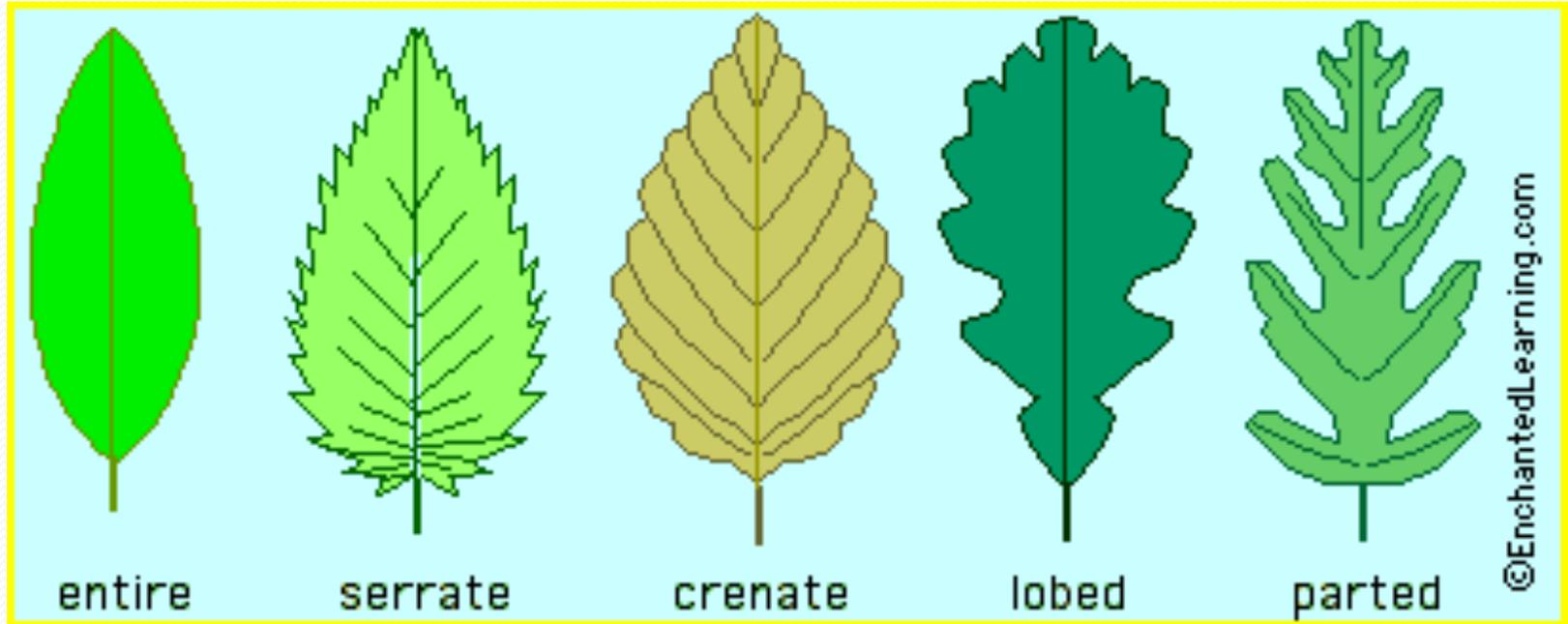
Floating *vs.* Submerged **LEAF**



Leaf Arrangement

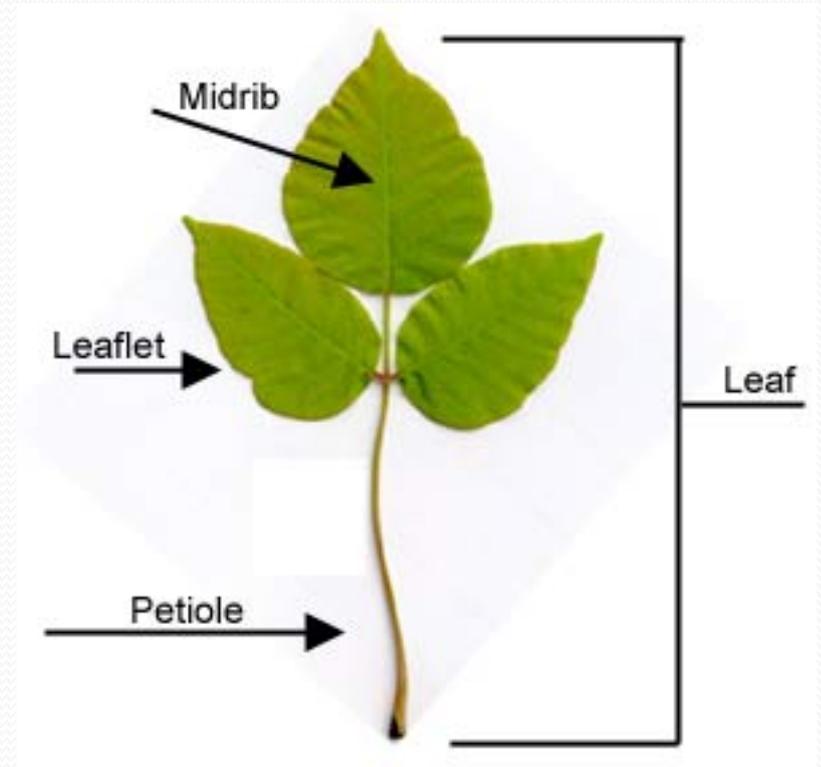
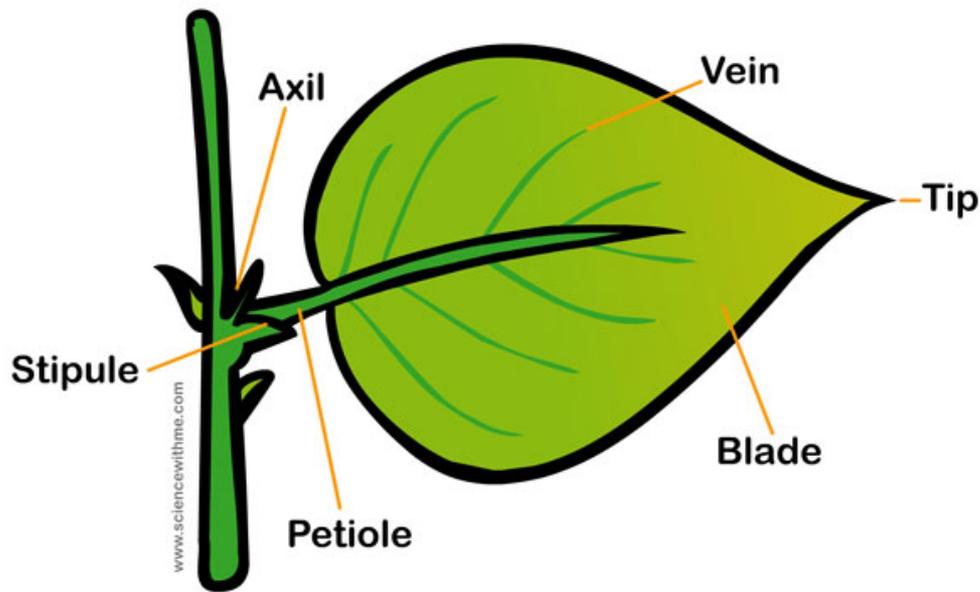


Leaf Margin

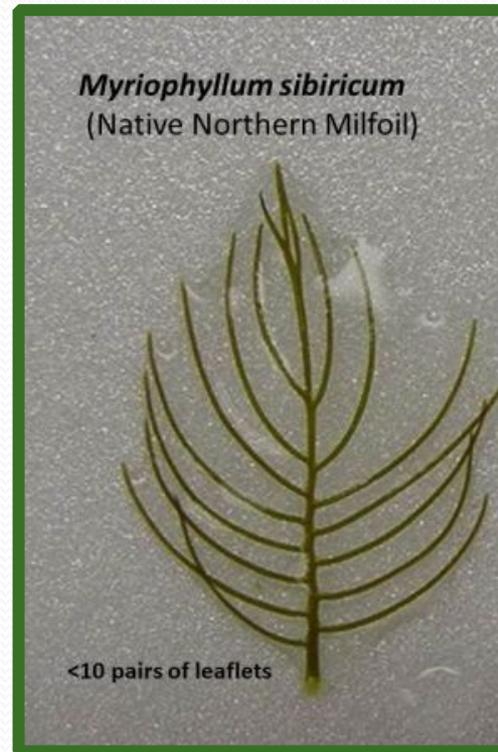


Parts of a Leaf

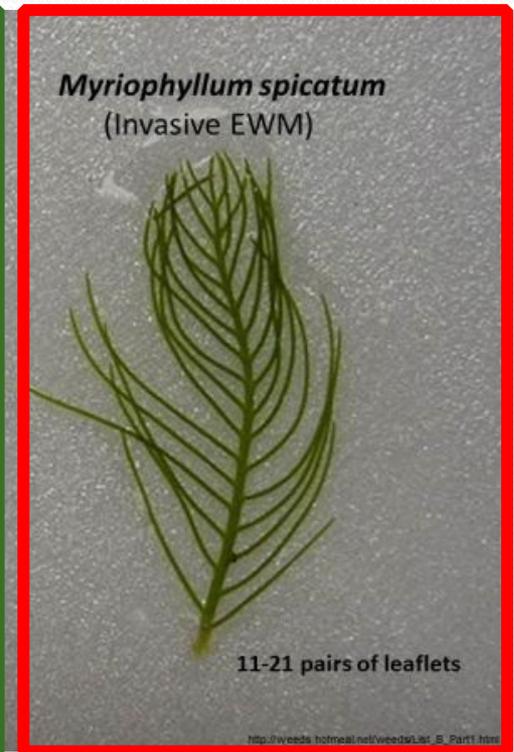
Stem



Leaf vs. **Leaflets**

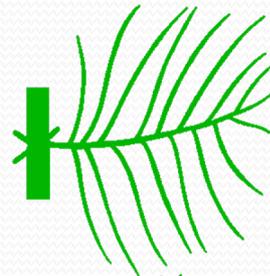


Native



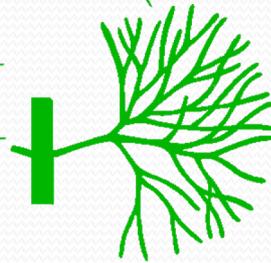
Invasive

native



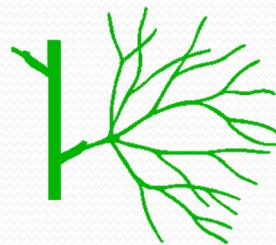
native

rare native



invasive

rare native



native

Look-Alike Submerged Plants with Feathery Leaves

Natives

Invasive



Coontail
Ceratophyllum
Native



Bladderwort
Utricularia
Native



Waterweed
Elodea
Native



Fanwort
Cabomba caroliniana
EXOTIC!



Eurasian milfoil
Myriophyllum spicatum
EXOTIC!



Variable milfoil
Myriophyllum heterophyllum
EXOTIC!



Native milfoil
Myriophyllum humile
Native

Floating round
leaves **opposite**
Petiole at center of
underside of leaf

Fanwort

Submerged
leaves **opposite**
& held at stem
by long slender
leaf petiole

water line

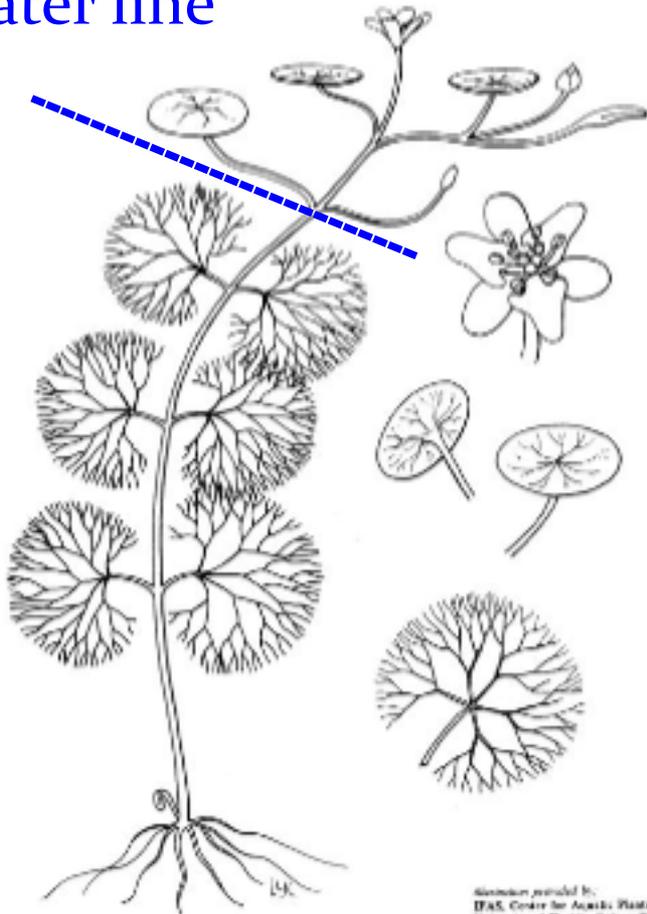
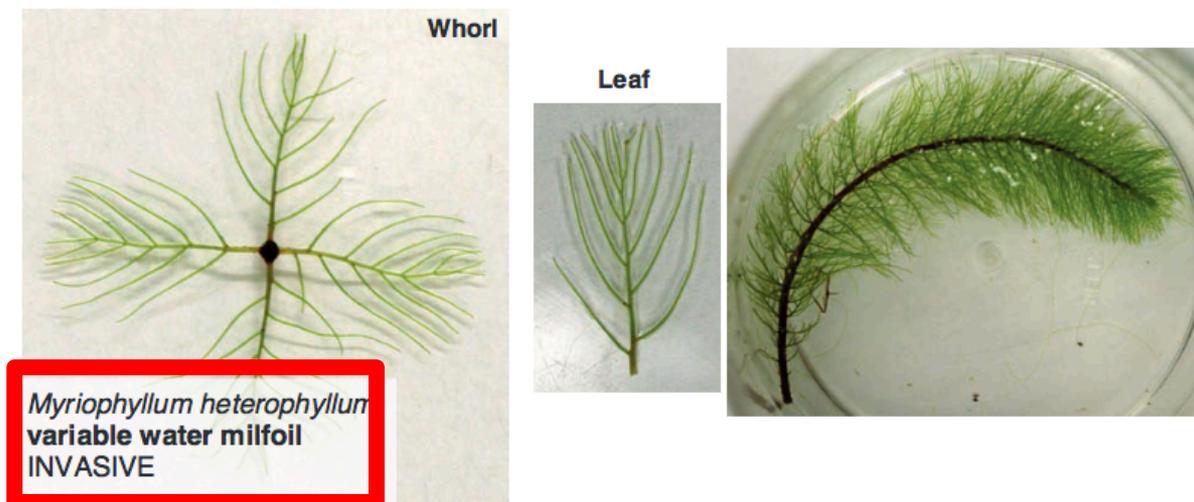
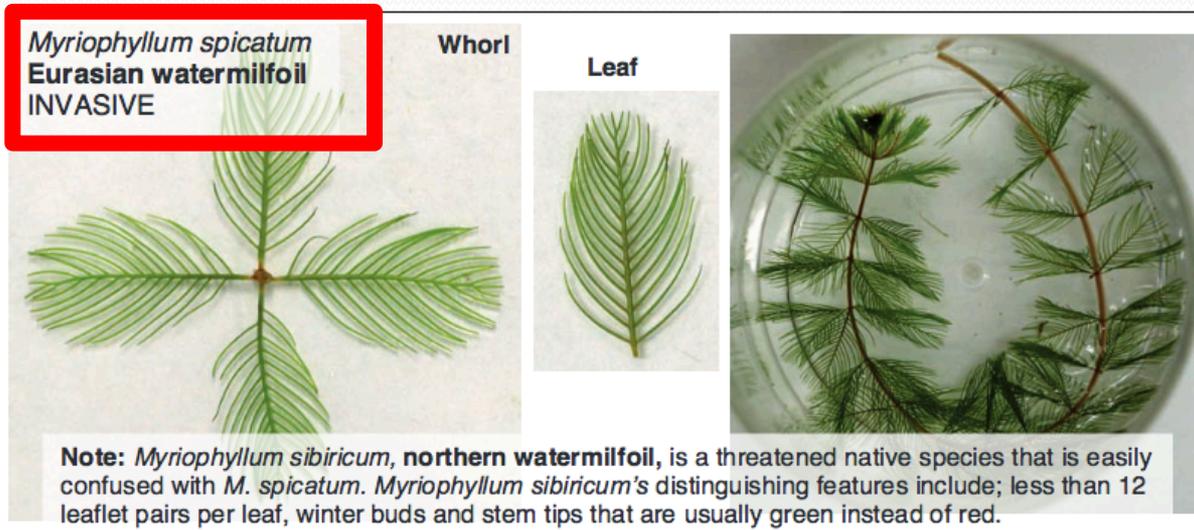


Illustration provided by:
IFAS, Center for Aquatic Plants
University of Florida, Gainesville, FL



Eurasian vs. Variable Milfoil

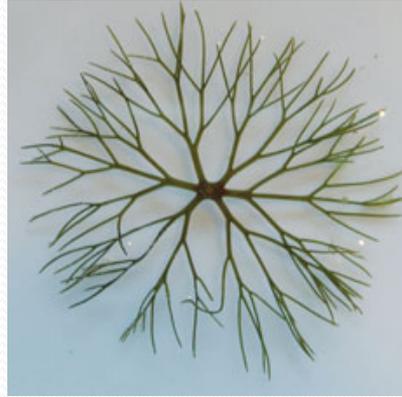
Submerged
leaves whorled off
stem
almost no
leaf petiole



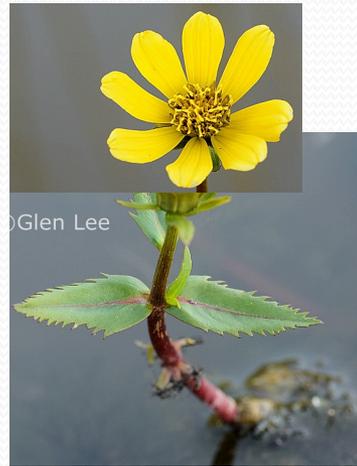
Coontail / Hornwort



Water Marigold



Bladderwort



Submerged leaves

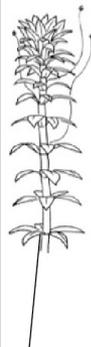


**Serrated Leaf Margin
Hydrilla**

INVASIVE



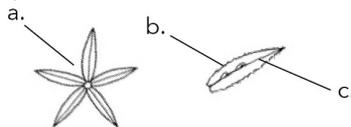
Michael J. Grodowitz, U.S. Army Engineer Research and Development Center



HYDRILLA

Hydrilla verticillata
INVASIVE

- a. whorls of **more than** 3 leaves
- b. leaves often have **visibly toothed** edge
- c. leaf vein often has **small visible spines**



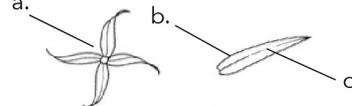
Christian Fischer, www.commons.wikimedia.org



BRAZILIAN ELODEA

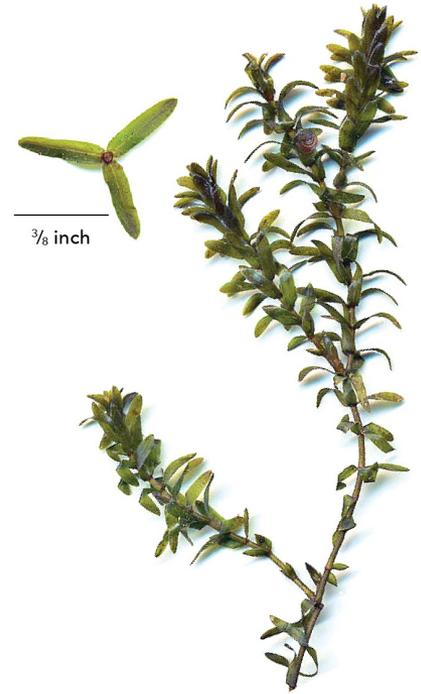
Egeria densa
INVASIVE

- a. whorls of **more than** 3 leaves
- b. leaves do **not** have visibly toothed edge
- c. leaf vein is **smooth** underneath



Illustrations: Center for Aquatic and Invasive Plants, University of Florida

NATIVE



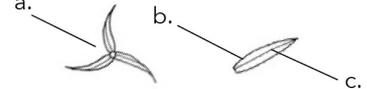
Paul Skawinski, Aquatic Plants of the Upper Midwest



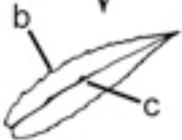
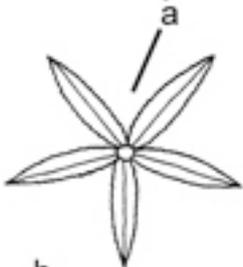
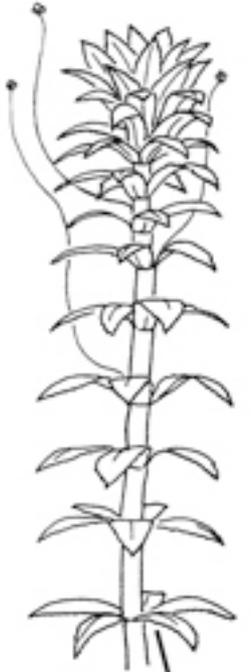
AMERICAN ELODEA

Elodea canadensis
NATIVE

- a. whorls of **exactly** 3 leaves
- b. leaves do **not** have visibly toothed edge
- c. leaf vein is **smooth** underneath



HYDRILLA

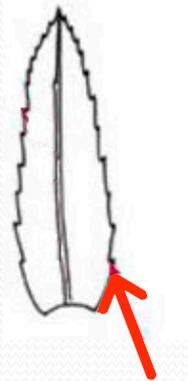


Elodea canadensis

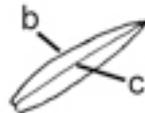
has whorls of **3**
smooth-edged leaves

Brazilian Elodea

whorls of **4 to 10** leaves
serrated leaf margins



ELODEA



Swamp morning-glory

Water Spinach



Waterweed

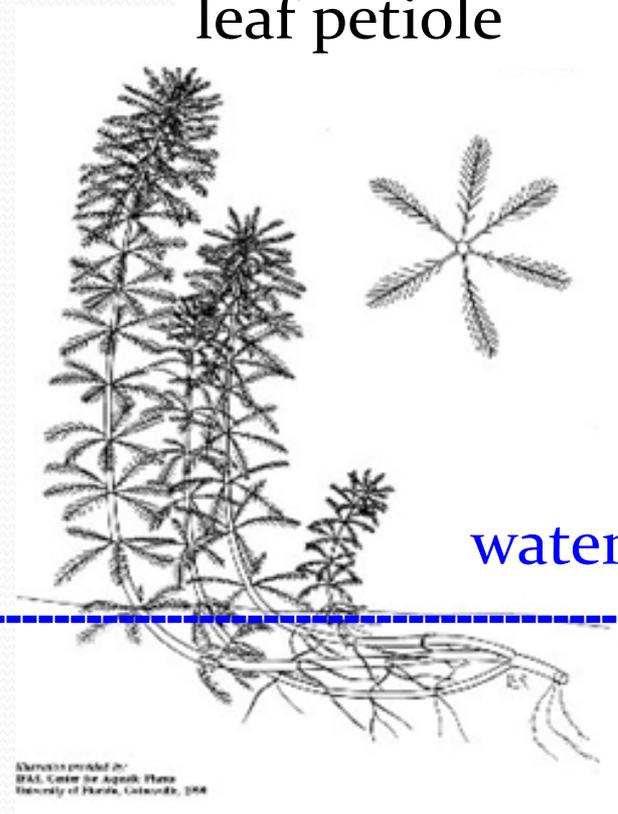


Parrot Feather

Brazilian watermilfoil



Leaves **whorled** off
stem
almost no
leaf petiole



water line

Quillwort



Robbins Pondweed

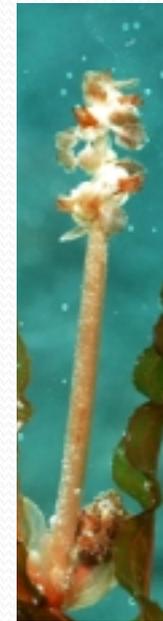


Curly-leaf Pondweed

water line



Only **1** leaf type
Submerged leaves
wavy
lasagna noodle-like

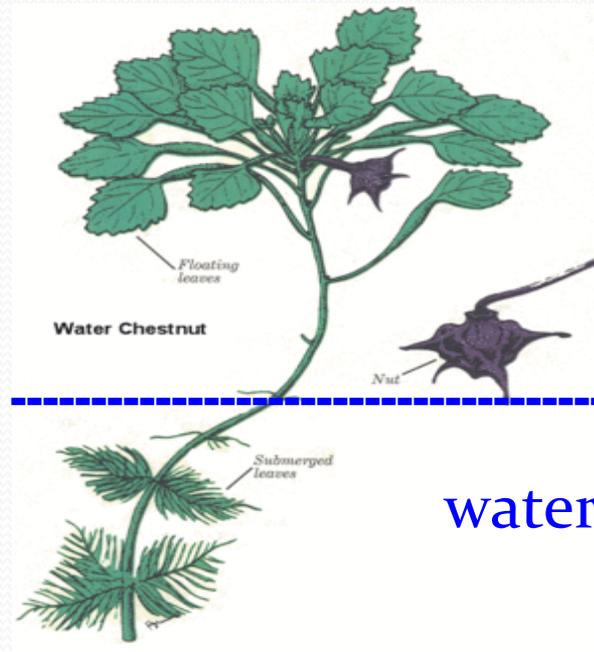


Flowers
above water

Water Chestnut



Floating leaves:
in a rosette with
toothed margin,
triangular shaped leaves



water line



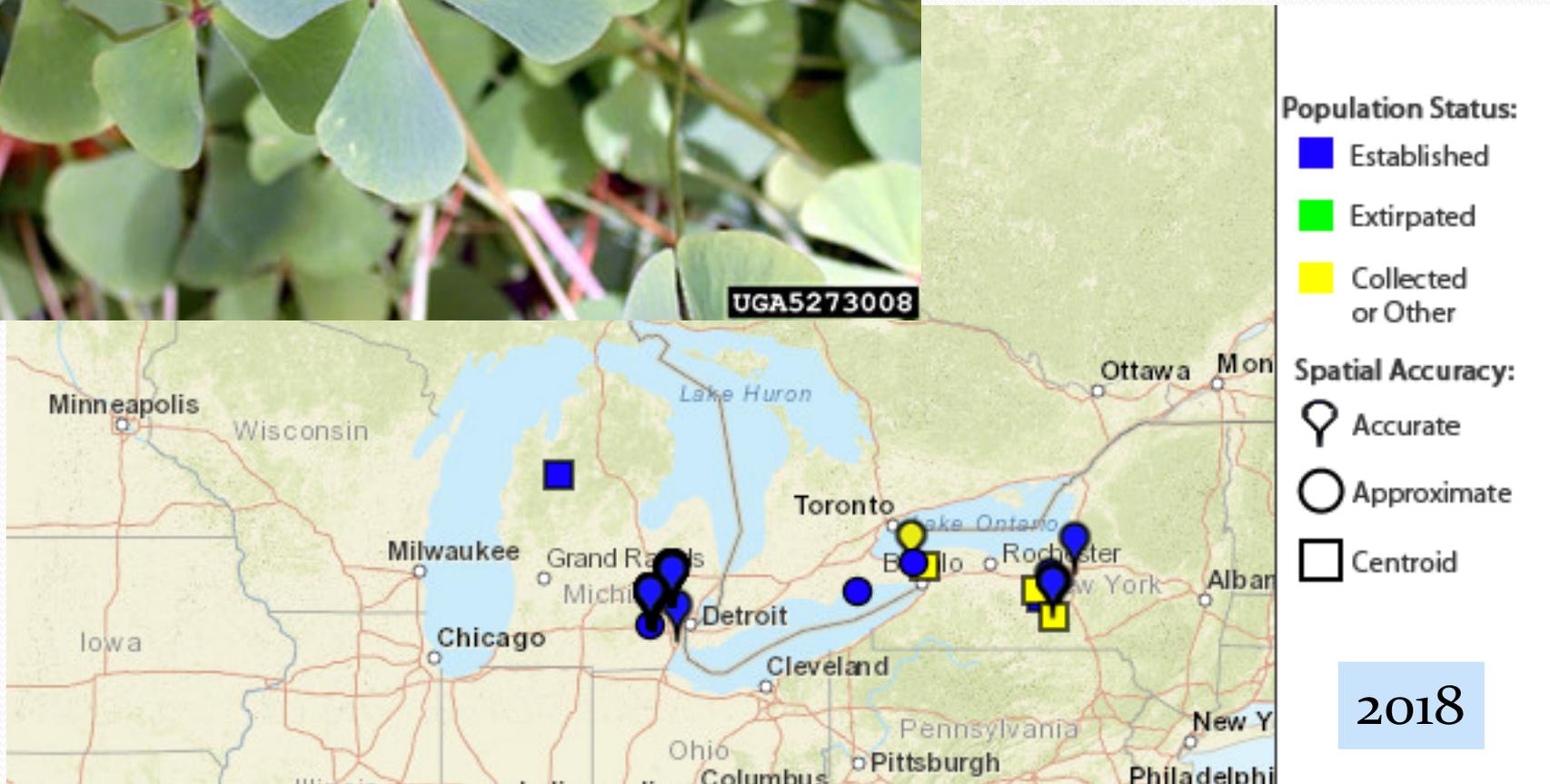
Fruits



Submerged leaves:
feather-like



European Water Clover



Floating leaves

European Frog-bit



White Water Lily



Floating Heart



purple
undersides
of leaf

Yellow Floating Heart



Floating leaves

Yellow Water Lily



Pondweed



Water Knotweed



Water Shield



purple
undersides
of leaf



Tape Grass / Wild Celery

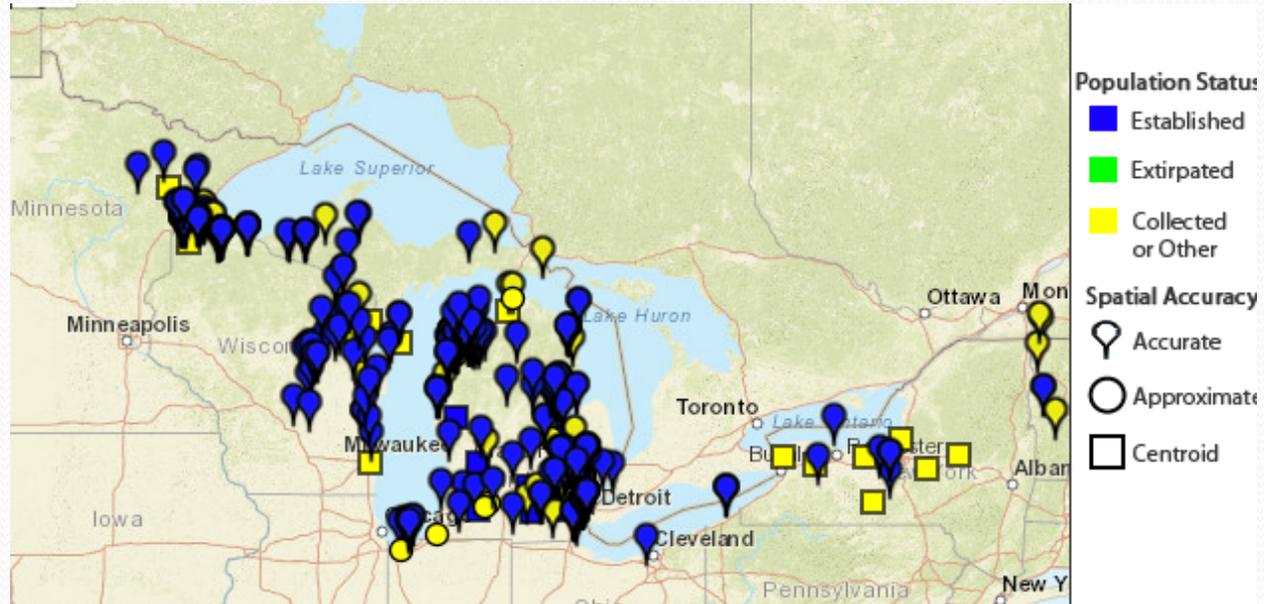


tiny white flowers spiral to the surface



flat leaf with parallel veins in center

Yellow Iris



European common reed *Phragmites*

Invasive

Native



Character	Non-native	Native
Stem color	dull tan	shiny reddish
Leaf persistence	persists	fall off easily
Leaf color	bluish green	green
Ligule length	0.1-0.4 mm	0.4-1.0 mm
Lower glume length	2.6-4.2 mm	4-7 mm
Density	dense stands	scattered stems
Growing Season	longer	shorter

Invasive

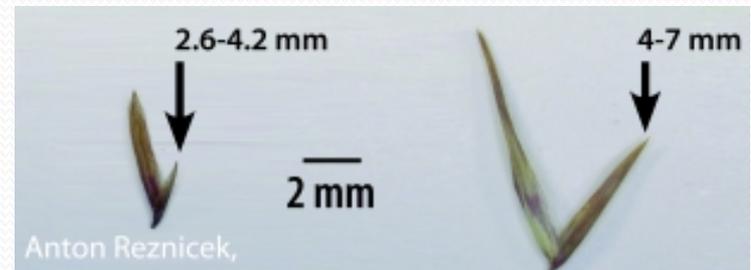
Native



Ligule

Invasive

Native

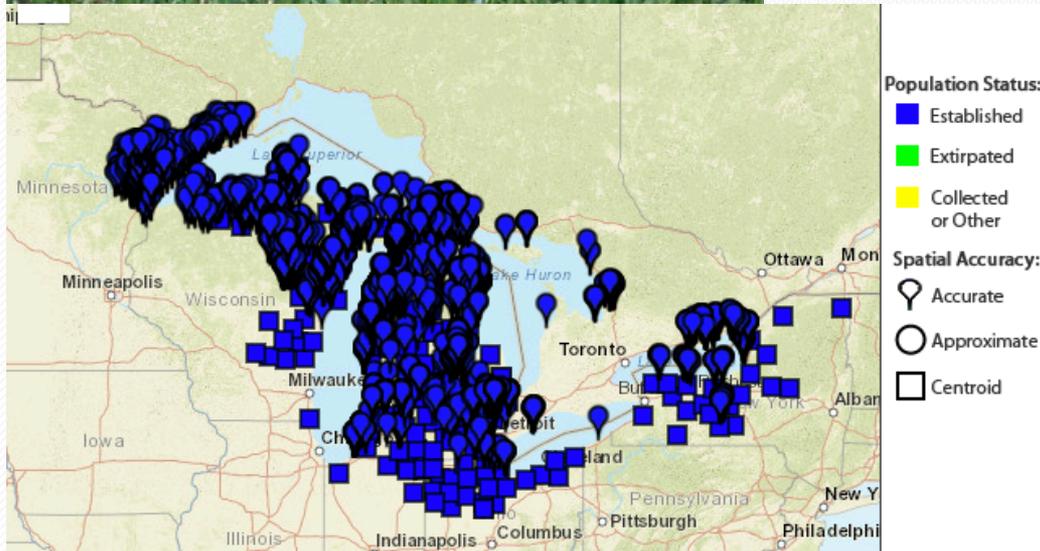


Glume

Anton Reznicek,
University of Michigan

Anton Reznicek,

Reed Canarygrass



Purple Loosestrife

flowers mid June, square stem



plant



flower



has mostly one **Opposite** leaf off the stem

Showy Tick-trefoil



flowers
mid summer
round stem

leaves come off the stem in groups of three
and are **Alternate** off the stem



flower

Arrowhead



Pickernelweed



Buttonbush



shrub

Bur-Reed



Pipewort



Cattail



fruit



long straight leaves

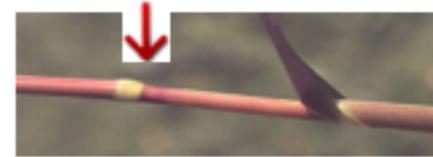
Cross section of stems



Grass



have joints



Sedge



have edges



Rush



are round

Sedge

3-way Sedge



Spike Rush



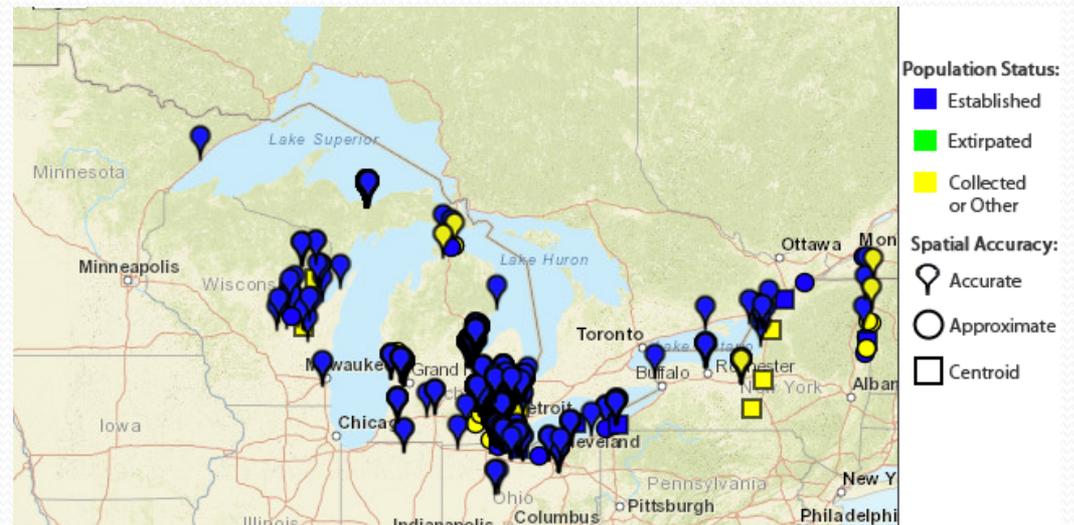
Bulrush



Spike Rush

Bulrush

Flowering-rush





Thank You Weed Watchers

Help us to
protect
this wonderful
Lake !