

Invasive Aquatic Plants In Connecticut



Gregory J. Bugbee and Summer E. Stebbins
Office of Aquatic Invasive Species
Department of Environmental Science & Forestry
The Connecticut Agricultural Experiment Station
New Haven, CT

Invasive Aquatic Plants

- **Ecosystem Impacts**
 - Displace native species
 - Alter native ecosystems
- **Economic Impacts**
 - Reduce recreation
 - Lower property values and tax revenue
 - Interfere with navigation
 - Economic damages and management costs of \$3 billion per year

Native Aquatic Plants Are Important

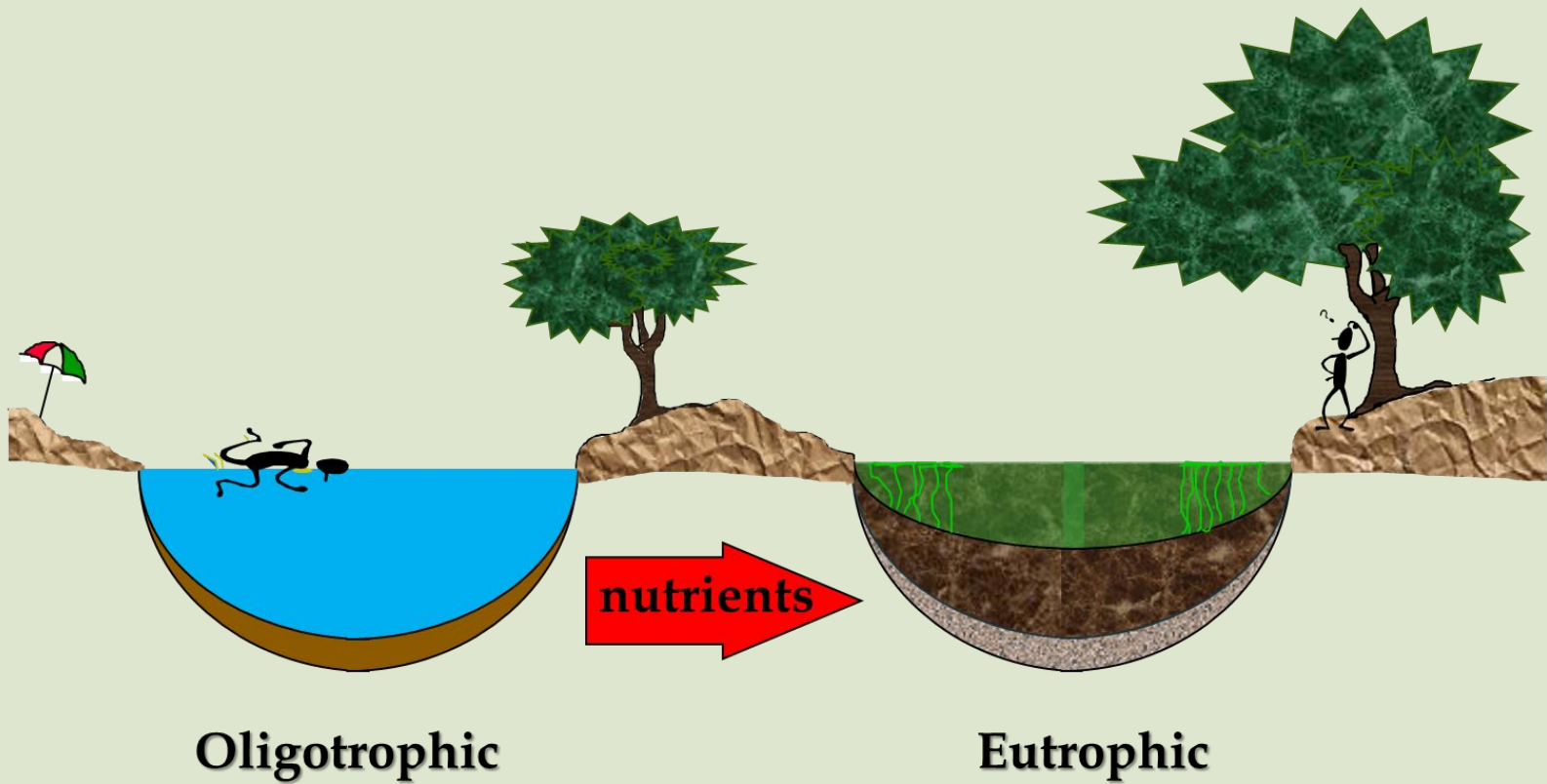
- Food and habitat for wildlife
- Stabilize sediments
- Improve water clarity
- Remove nutrients - reduce algal blooms
- Help resist invasion

- 20-40% coverage of the littoral zone is optimal



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Eutrophication



PHOSPHORUS LIMITS ALGAE NOT AQUATIC PLANTS

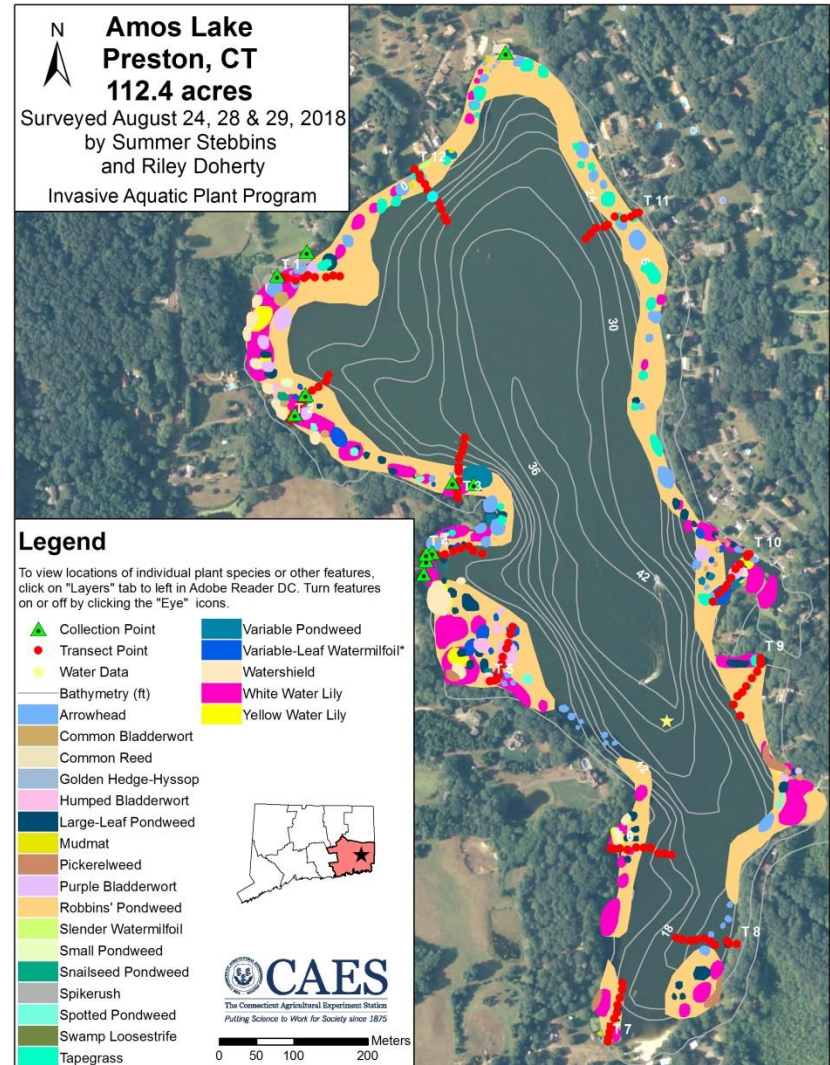
Science, 11/28/2008

*"... the single
most powerful
image in
the history of
limnology."*

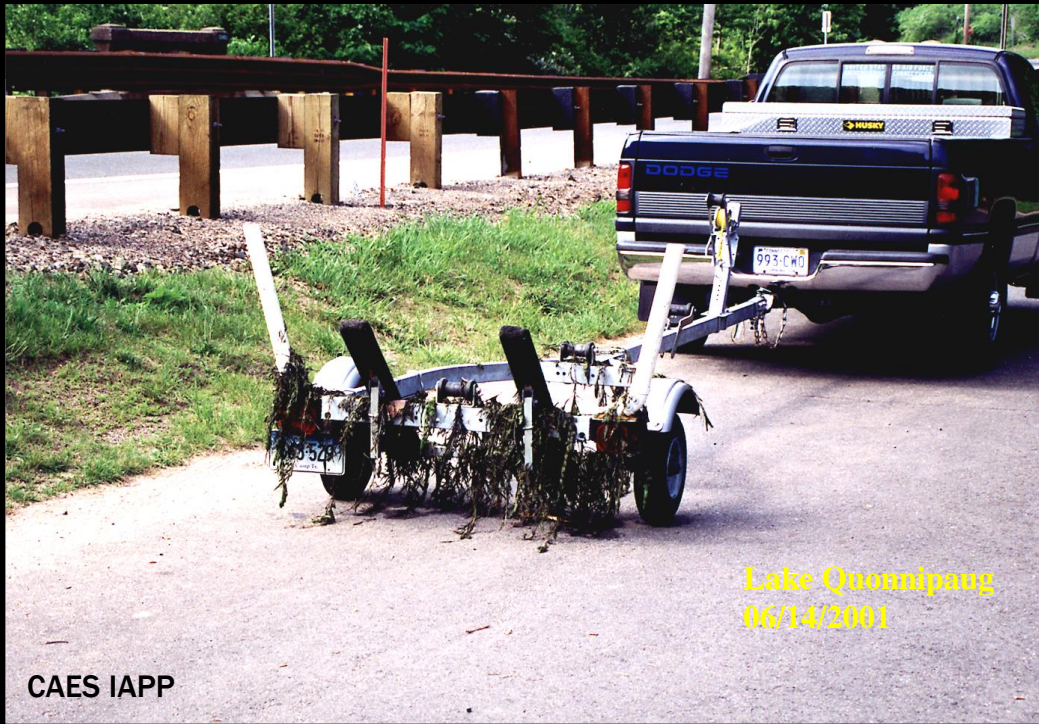
—JAMES ELSER

Vegetation Surveys

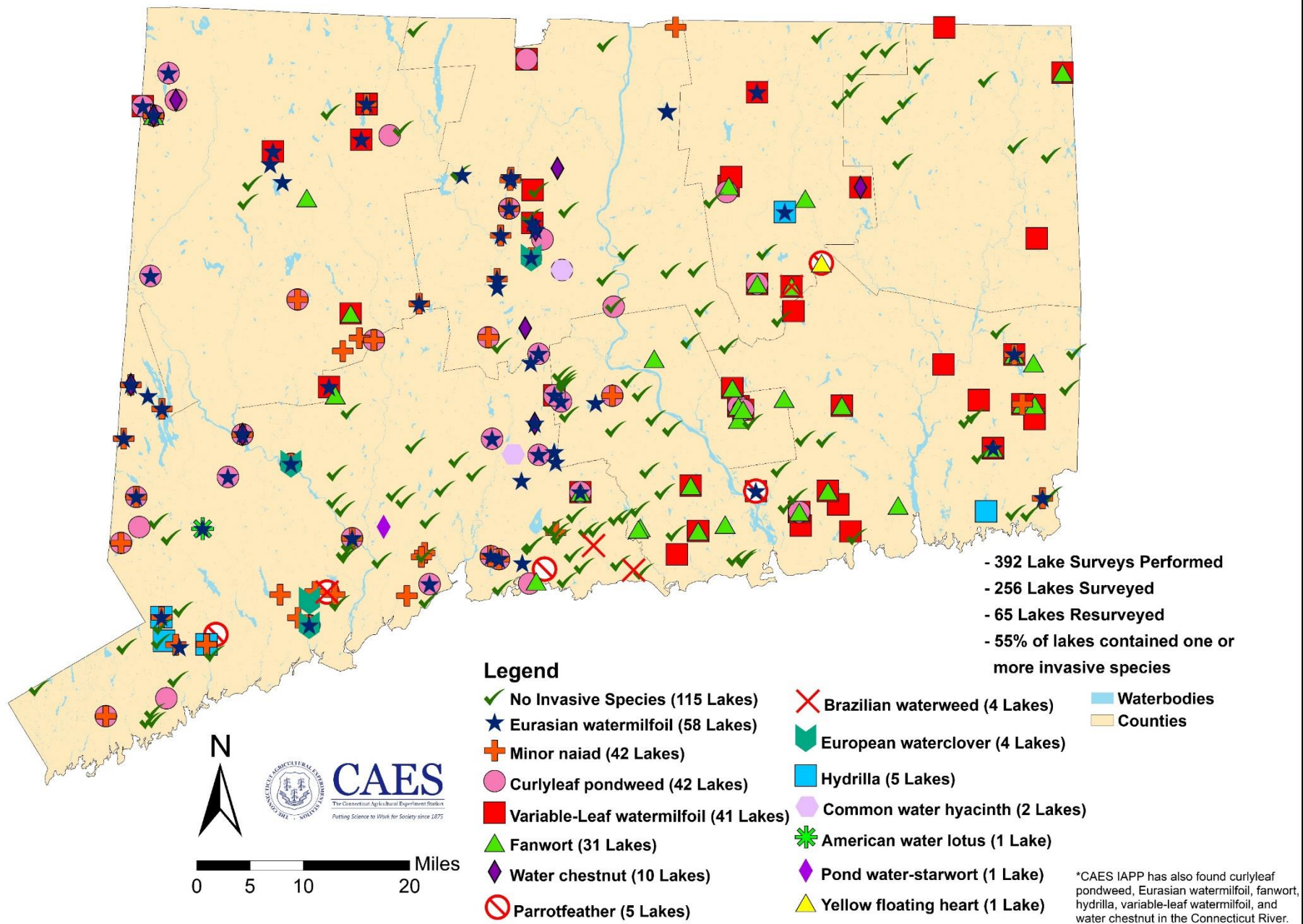
portal.ct.gov/caes-iapp



Introduction and Dispersal



Locations of Invasive Plants Found by CAES IAPP 2004-2021



INVASIVE AQUATIC PLANT GUIDE

Connecticut's Invasive Aquatic Plant, Clam, and Mussel Identification Guide

3rd Edition

Gregory J. Bugbee, Martha E. Barton,
Jordan A. Gibbons, and Summer E. Stebbins

The Connecticut Agricultural Experiment Station
Department of Environmental Sciences
P.O. Box 1106
New Haven, CT 06504



<https://portal.ct.gov/-/media/CAES/Invasive-Aquatic-Plant-Program/Publications/Plant-Identification/B1056.pdf>

Fanwort

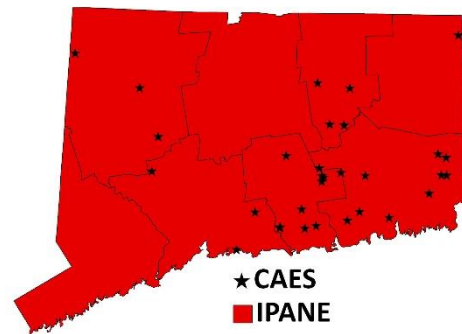
Cabomba caroliniana



A. Smagula



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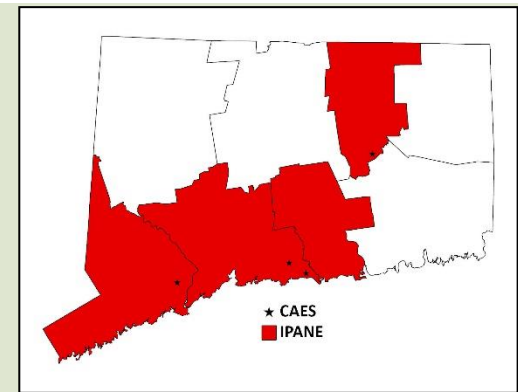
Opposite leaves



Long petioles

Brazilian Waterweed

Egeria densa



**Fence Rock Lake
Guilford - 2009**

16.9 Acres

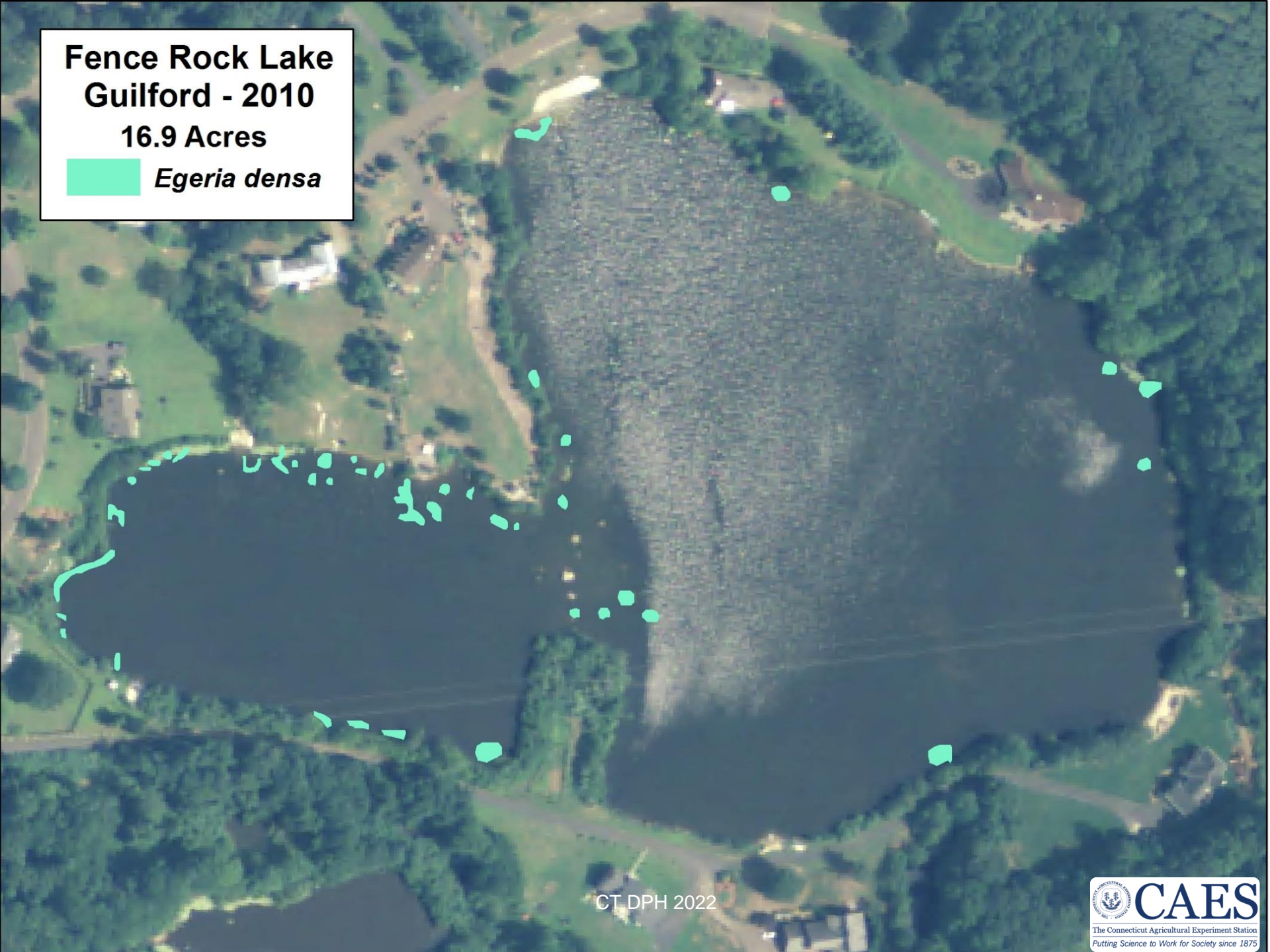
 *Egeria densa*



**Fence Rock Lake
Guilford - 2010**

16.9 Acres

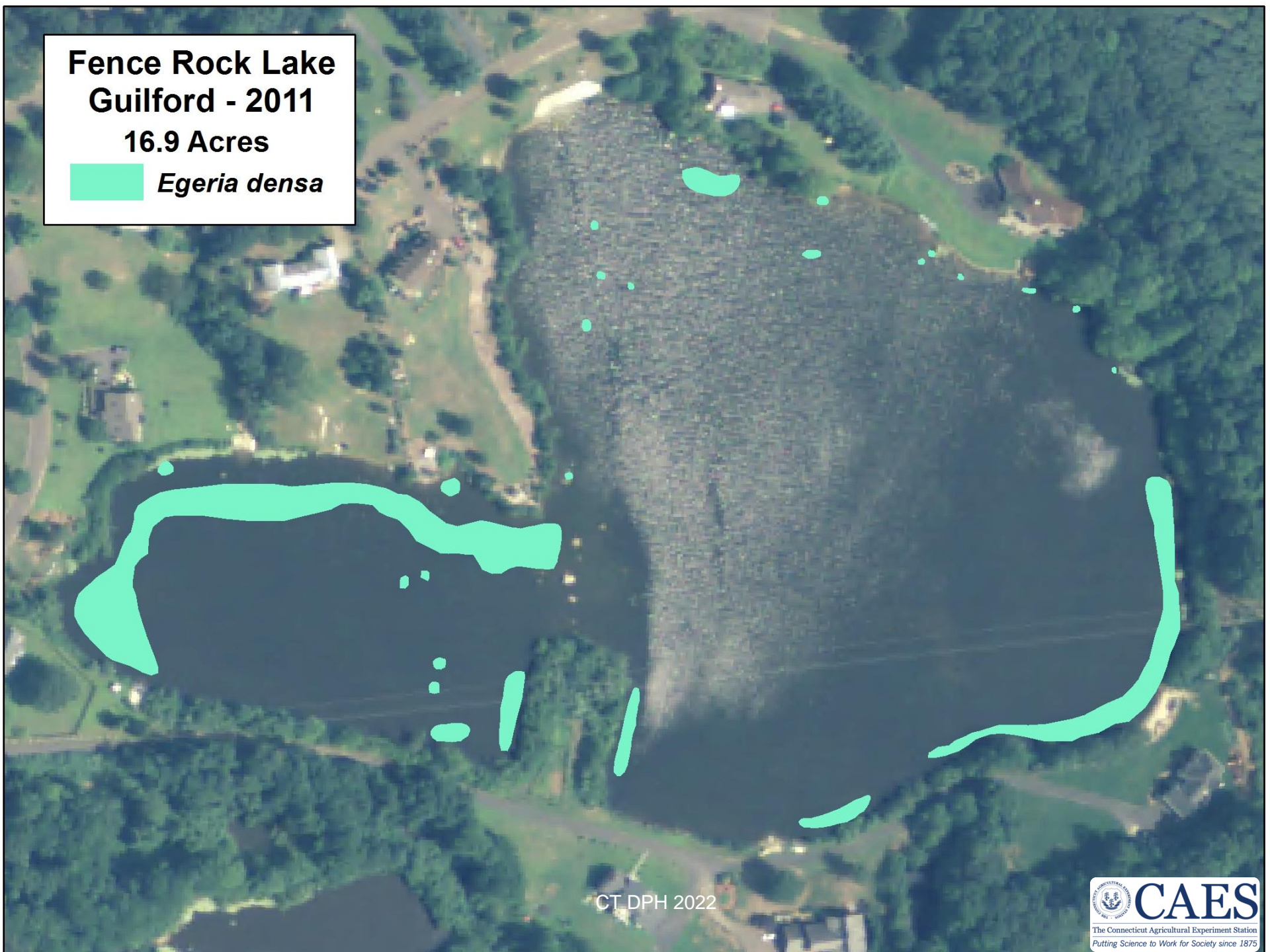
 *Egeria densa*



**Fence Rock Lake
Guilford - 2011**

16.9 Acres

 ***Egeria densa***



Fence Rock Lake Guilford - 2012

16.9 Acres

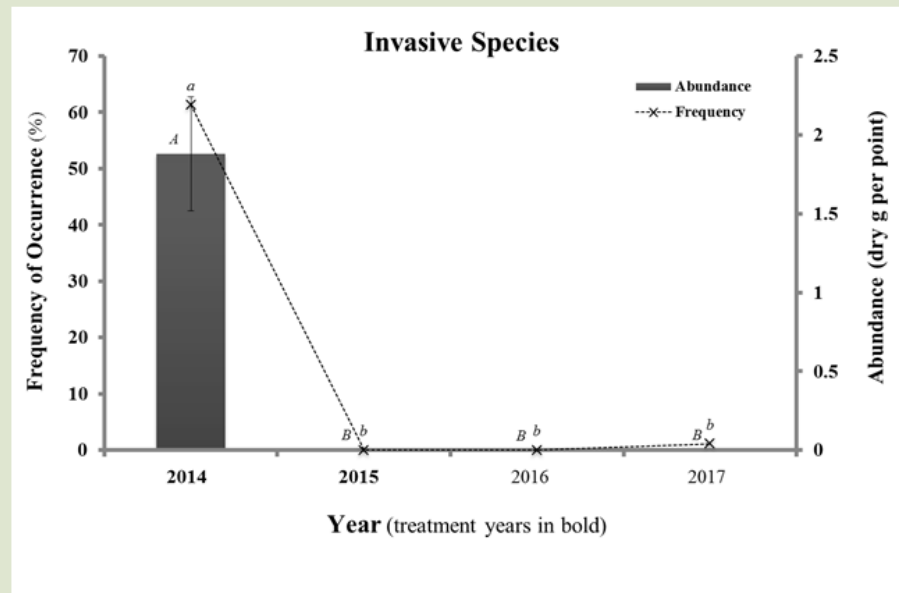
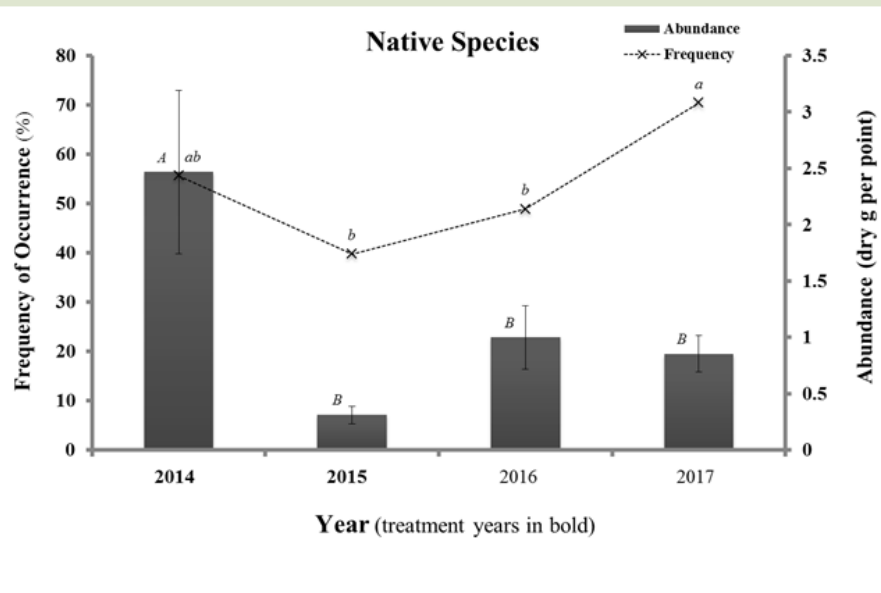
 *Egeria densa*



**Fence Rock Lake
Guilford - 2013**

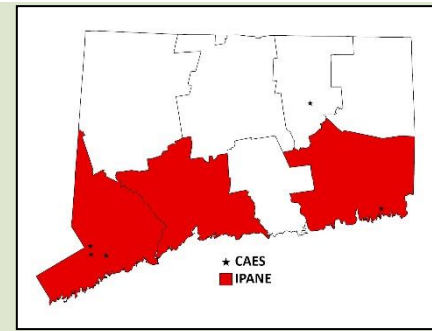
16.9 Acres

 *Egeria densa*



Hydrilla

Hydrilla verticillata



Laurie Callahan



Turions



Hydrilla turions
Photo by W.T. Haller
2003 Center for Aquatic and Invasive Plants

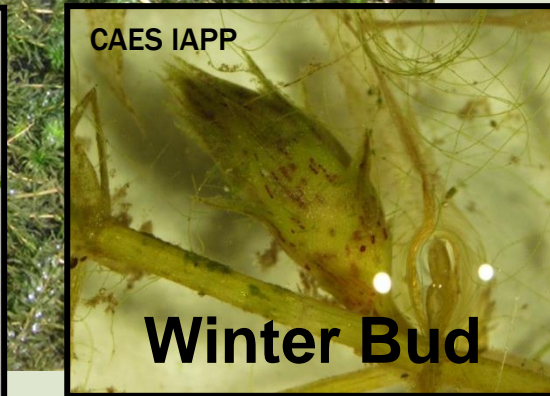
Photo by W.T. Haller

Five leaves to a whorl



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Winter Bud

Tubers

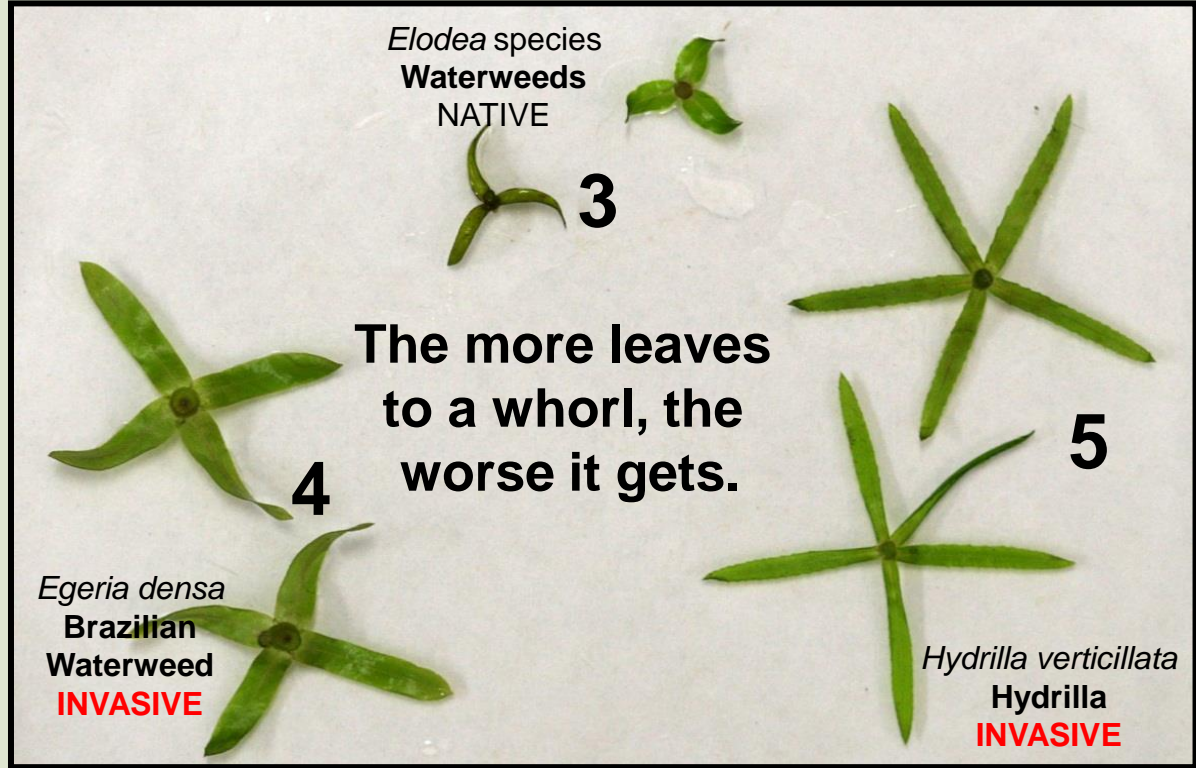
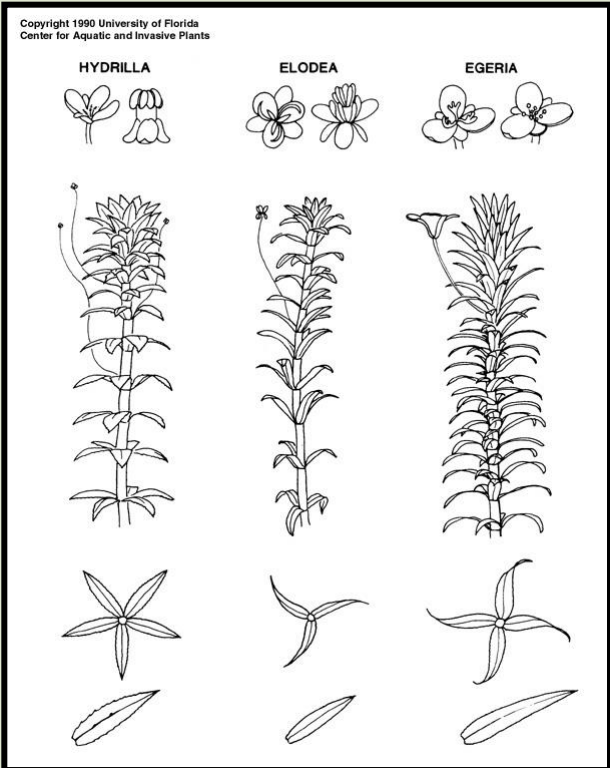
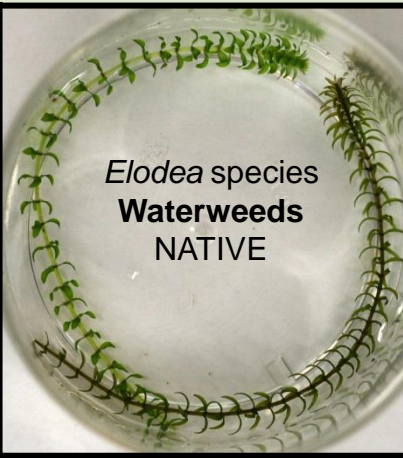


Hydrilla tubers
Photo by Alison Fox

Mattabesset River

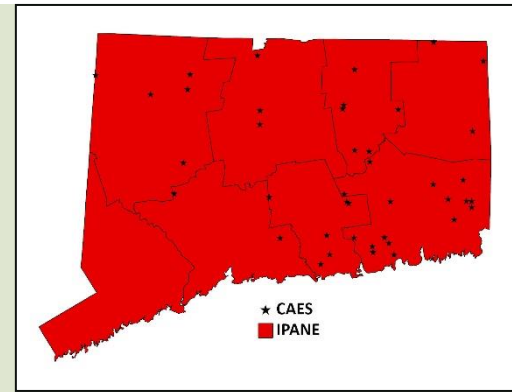


COMMONLY CONFUSED SPECIES



Variable Watermilfoil

Myriophyllum heterophyllum



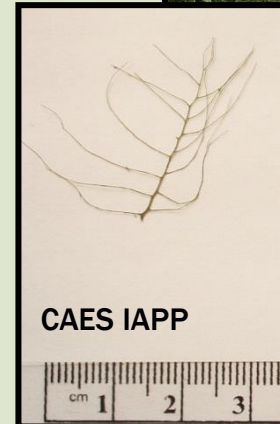
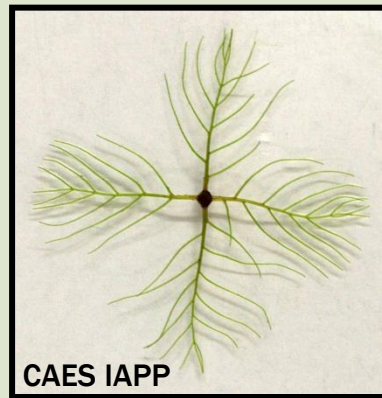
Leaves collapse
out of water



Leaves < 1 inch apart

≤ 11 pairs of leaflets

Triangular leaf

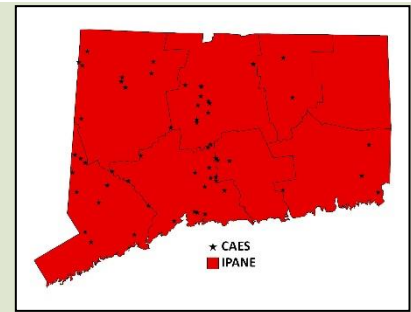




Variable watermilfoil
(Myriophyllum heterophyllum)

Eurasian Watermilfoil

Myriophyllum spicatum

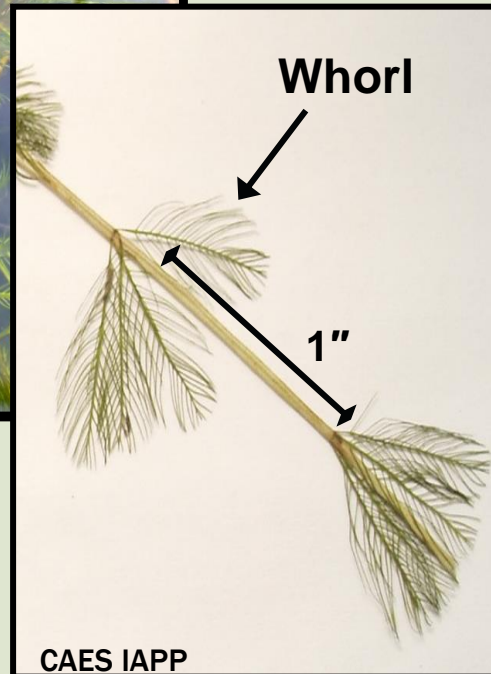


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Leaves 1 inch apart

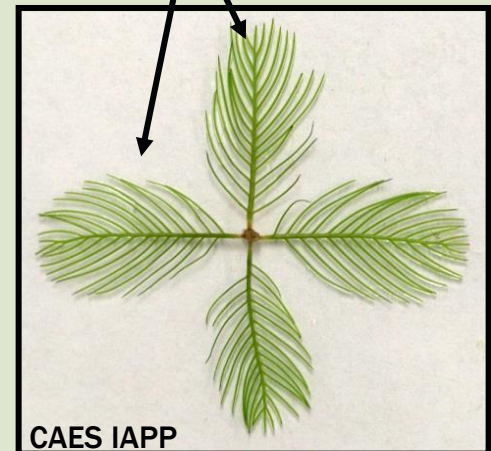
≥ 12 pairs of leaflets per leaf

Rectangular leaf



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Rectangular leaves



CAES IAPP



Eurasian watermilfoil
(*Myriophyllum spicatum*)

M. spicatum

Thin spike

M. heterophyllum

Thick spike

Leaves 1 inch apart

Leaves < 1 inch apart

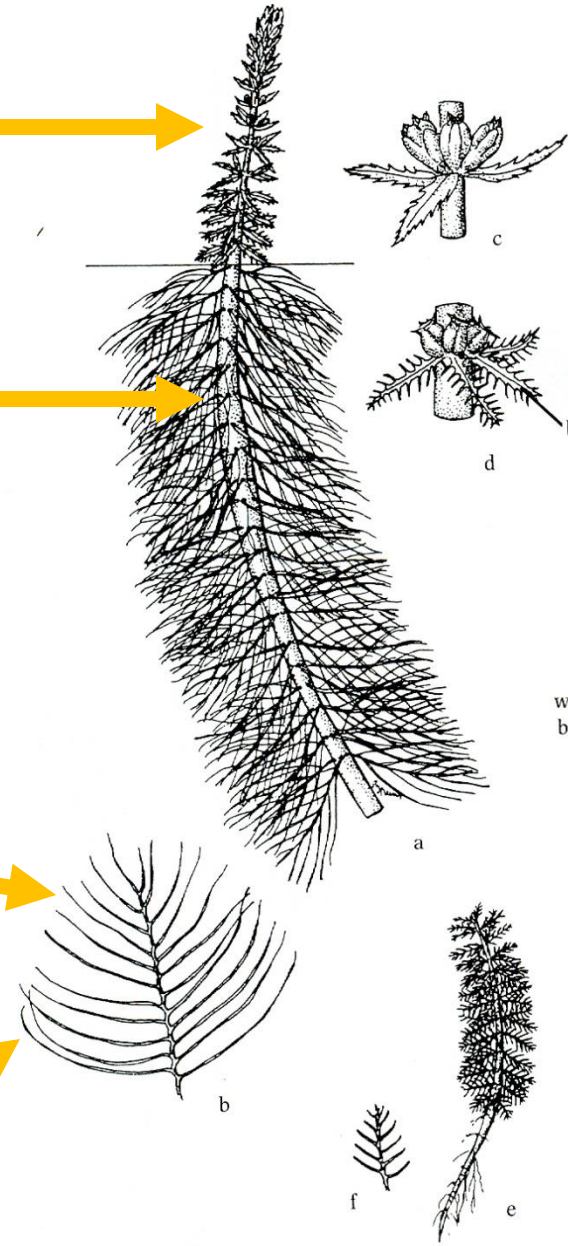
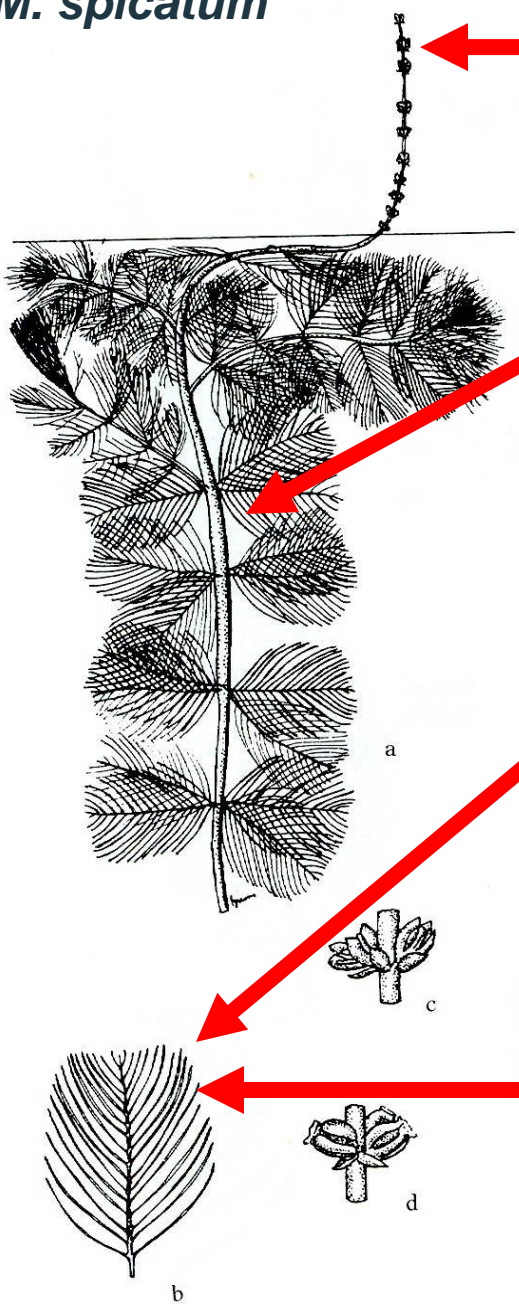
≥ 12 pairs of leaflets per leaf

≤ 11 pairs of leaflets

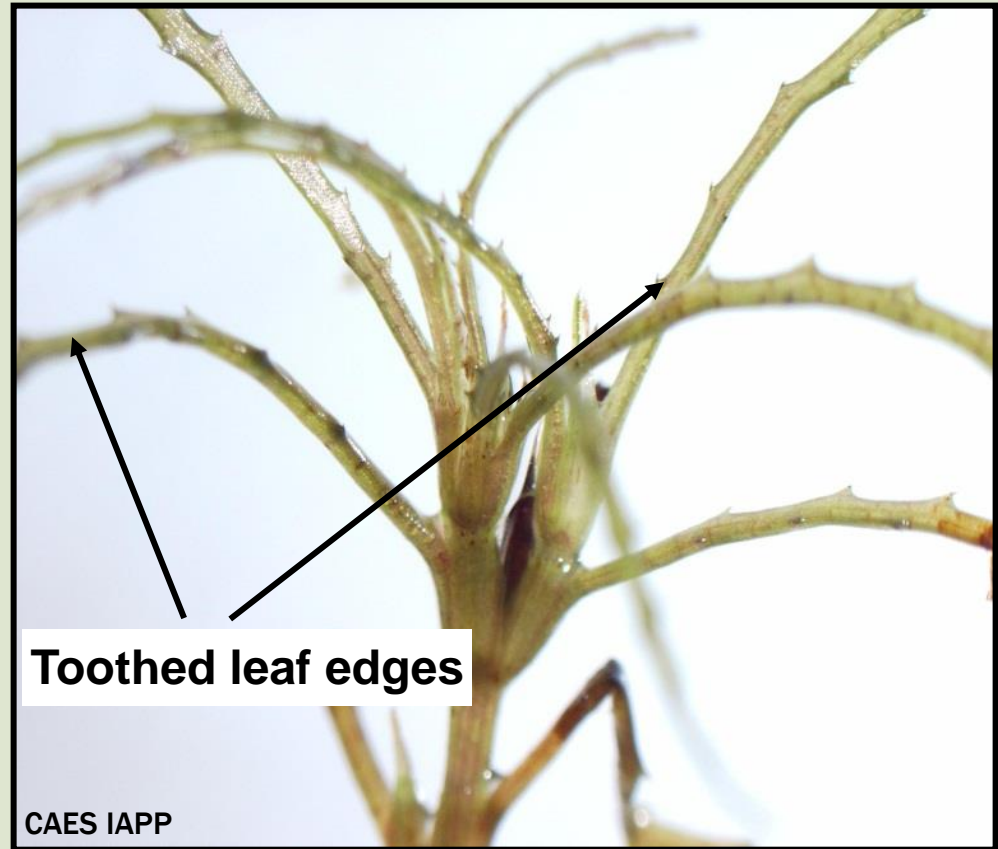
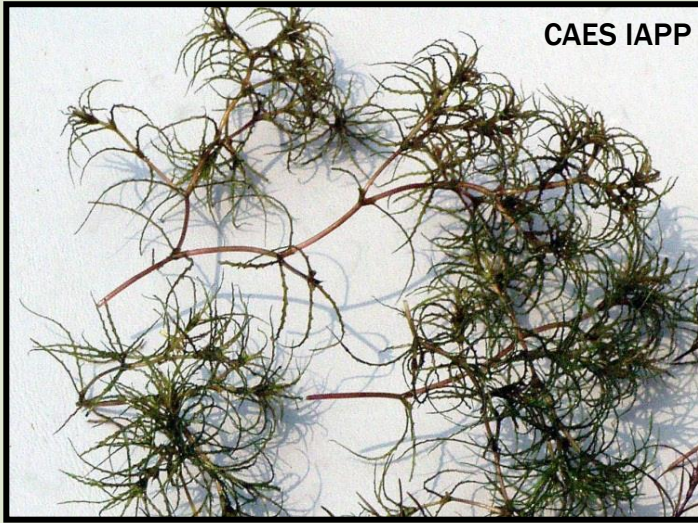
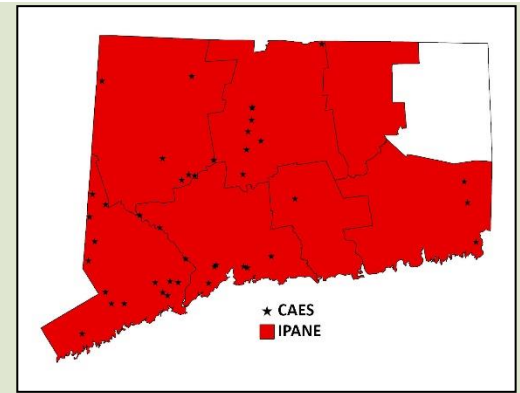
Rectangular leaf

Triangular leaf

(Crow and Hellquist 2000)



Minor naiad *Najas minor*

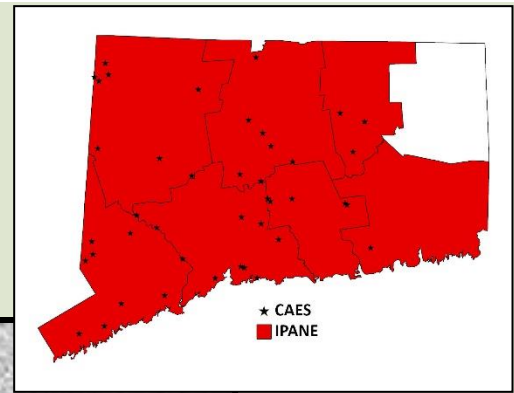


Najas minor
(Minor naiad)



Curlyleaf Pondweed

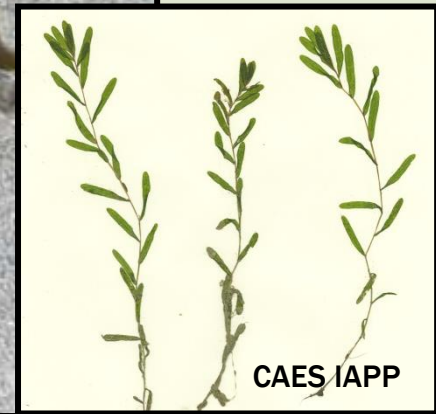
Potamogeton crispus



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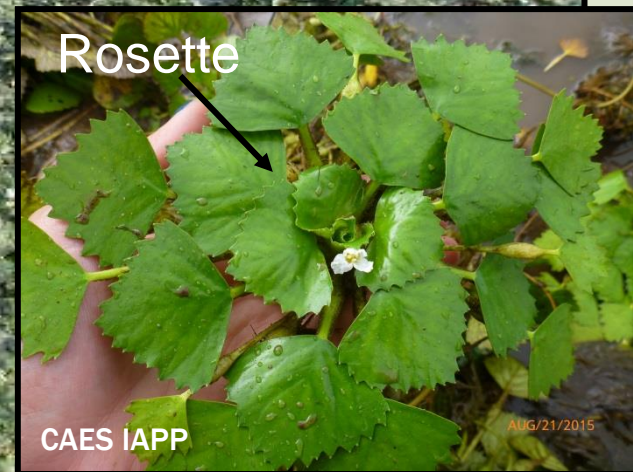
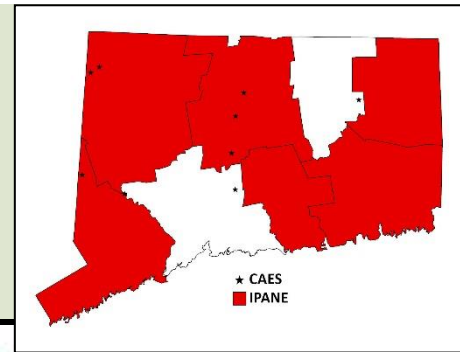
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IPANE



Water Chestnut

Trapa natans



IPANE

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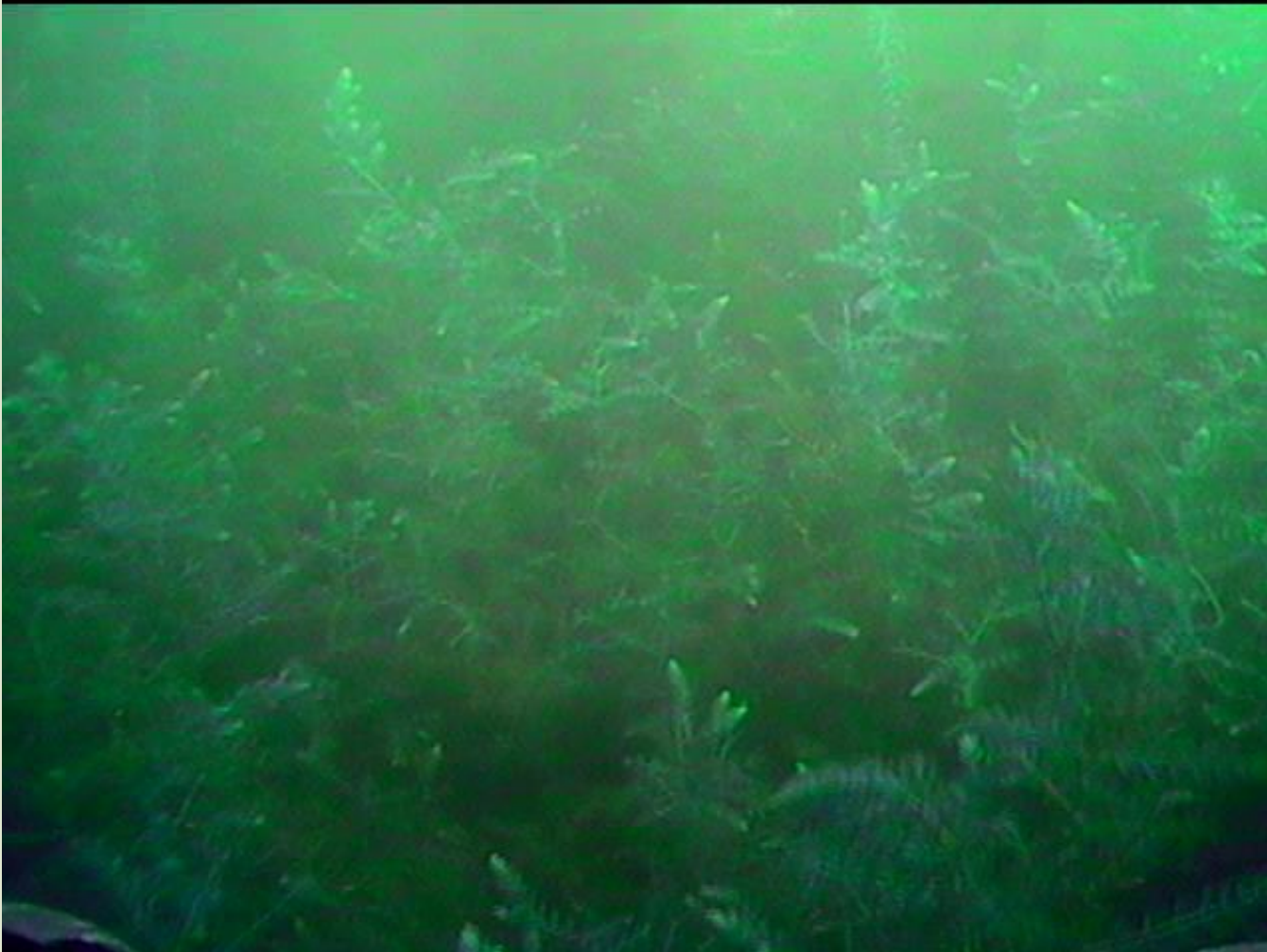
AUG/21/2015

Nutrient Reduction



Brazilian Waterweed Comingled With Native Species

To control or not to control ?



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Harvesting



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Benthic Barriers



Drawdown

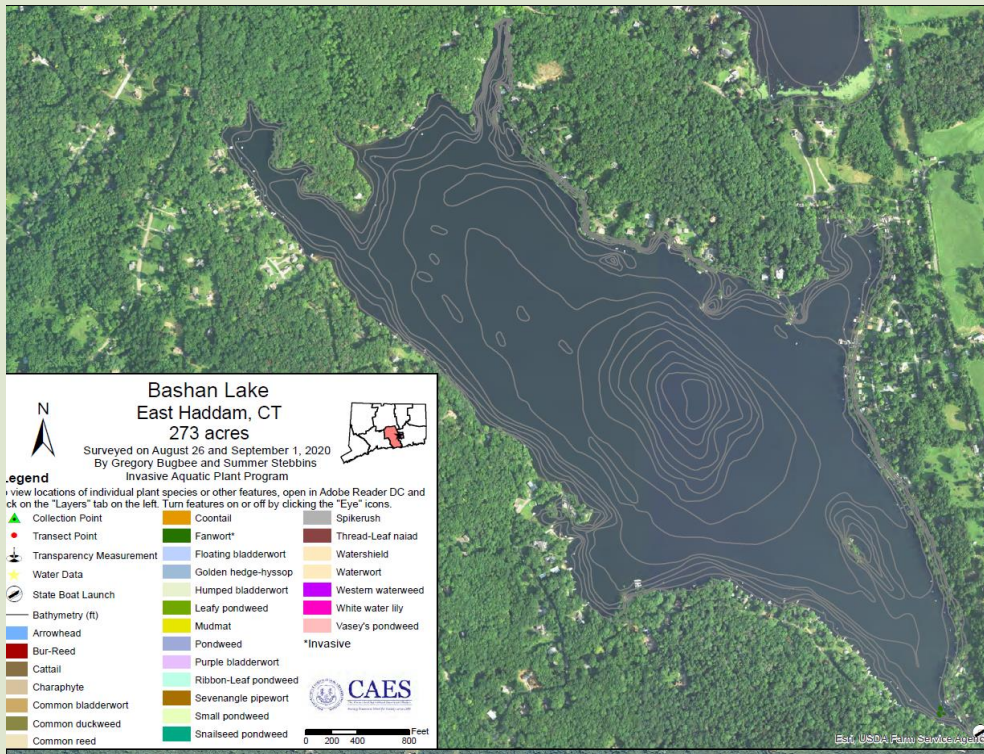


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HERBICIDES



Biological Control

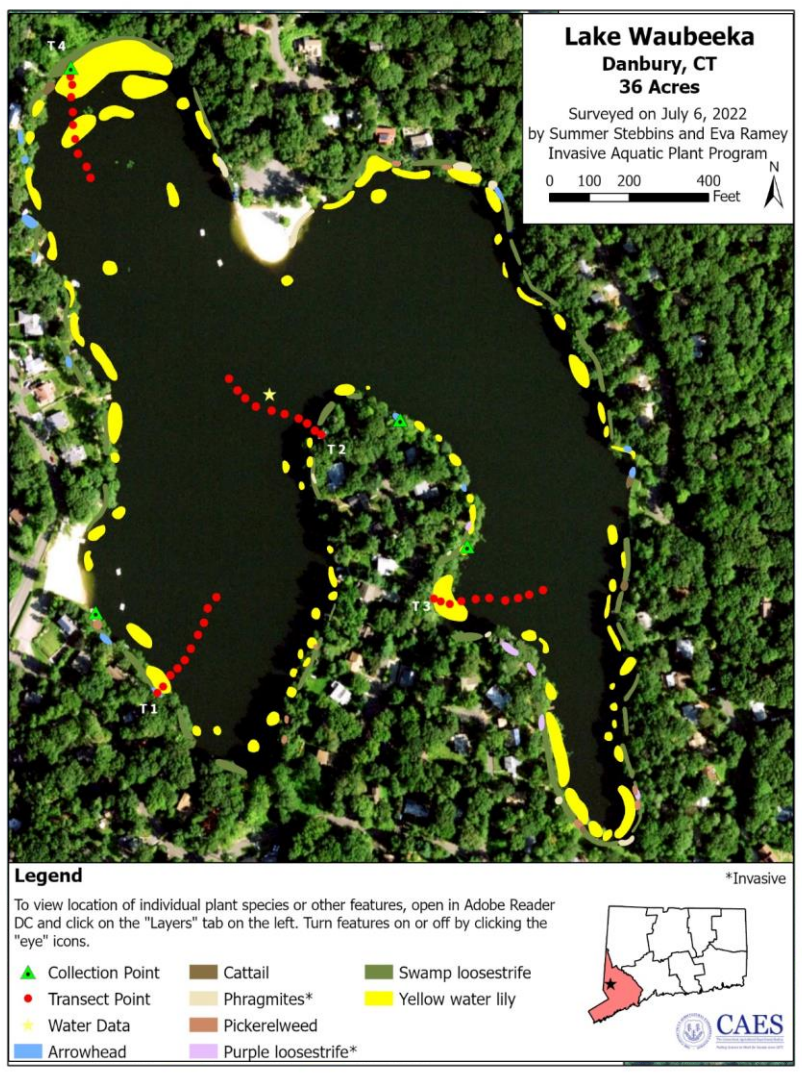


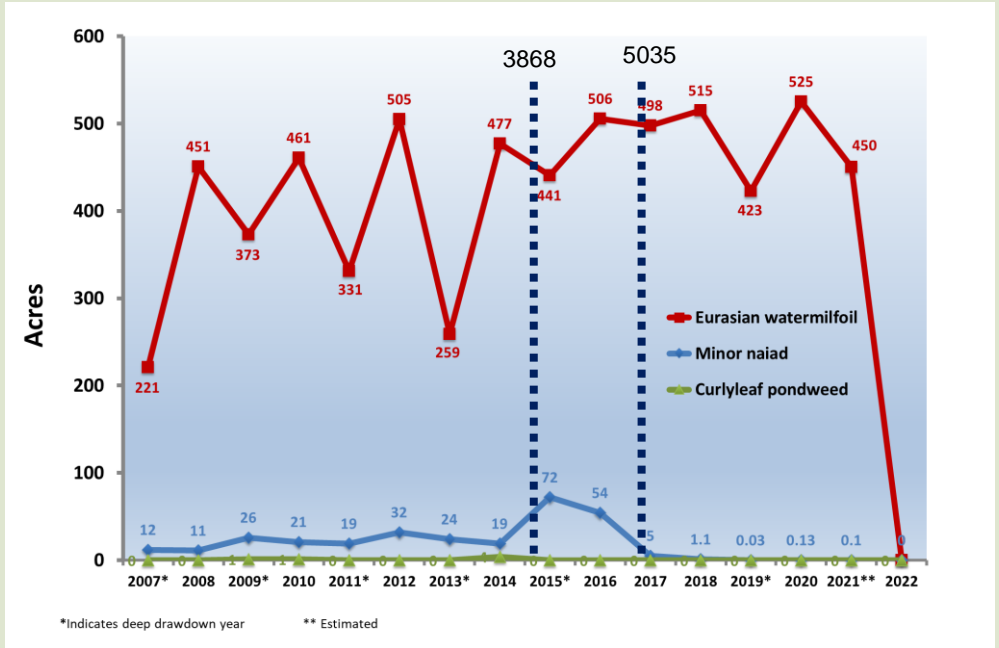
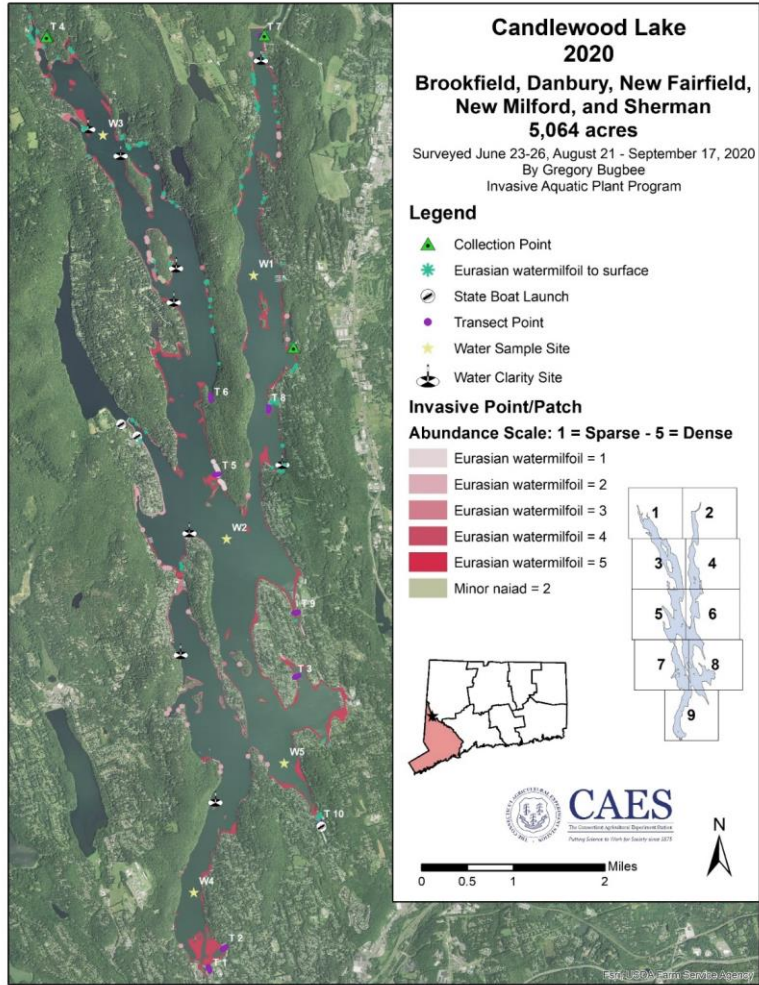
Grass Carp
Ctenopharyngodon idella



Milfoil weevil, *Euhrychiopsis lecontei*

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QUESTIONS?

Greg Bugbee

gregory.bugbee@ct.gov

(203) 974-8512

Summer Stebbins

summer.stebbins@ct.gov

(203) 974-8545

The Connecticut Agricultural Experiment Station

Office of Aquatic Invasive Species

123 Huntington St.

New Haven, CT 06511

portal.ct.gov/caes-iapp