FIELD GUIDE

For Common Invasive & Native Species Found in the SLELO PRISM Region

SUMMER 2016

ST. LAWRENCE EASTERN LAKE ONTARIO PARTNERSHIP FOR REGIONAL INVASIVE SPECIES MANAGEMENT

Prepared by:
Megan Pistolese
Education & Outreach Coordinator
SLELO PRISM

Rob Williams
Invasive Species Program Coordinator
SLELO PRISM

Ben Hansknecht & Ashley Gingeleski
2016 SLELO PRISM Early Detection Team

Peer Review by:
Mat Levine
Field Representative

Safety

1. Always work in pairs, use the buddy system.
2. Always have a first aid kit nearby.
3. Wear your life jacket!
4. Bring a means of communications with you, ie. Cell phone or two-way radios.
5. Place emergency contact numbers into your phones address book.
6. Use PPE (Personal Protective Equipment), ie., gloves, safety glasses, skin covering, hearing protection, etc.
7. Inform your supervisor and field partner if you carry any personal medical devices such as an epi-pen for bee stings or medications you carry.
8. Drink plenty of water on hot days.
9. Pace yourself.
10. Personal conduct, conduct your field work appropriately for the field locations and conditions.

Plant Identification Resources

Aquatic & Terrestrial

- www.sleloinvasives.org
- https://gobotany.newenglandwild.org/
- www.bugwood.org

When in doubt….

- Take close-up, CLEAR photos of the plant and its parts, stem, leaves, flowers, etc.
- Take a “step-back” photo showing the population from various distances.
- Collect a Sample (if possible) bag it and bring it back to the office for a positive ID
- If it is an aquatic specimen use a zip-lock back with water or a jar to put the specimen in.

Table of Contents

Watch List Species
Target Management Species

Identification Guide for Native Species and Invasive Look-A-Likes: 60-111

Native Species
Invasive Look-A-Like

Submerged Organisms: 60-93

Floating Organisms:94-101

Emergent Organisms:103-111

References: 112-114

Watch List "Prevention" Species

Species that are not currently confirmed to be present in the SLELO PRISM region but could still spread into our PRISM; preventive management strategies are the first line of defense for watch list species. This list is subject to change.

Porcelain berry (*Ampelopsis brevipedunculata*)

Foliage:

Arrangement: Leaves are alternate along stem

Shape: simple heart shaped with coarse teeth along margins. Leaves vary from slightly to deeply lobed.

Photo Credit: Karan A Rawlins, University of Georgia, bugwood.org

Flowers:

Description: Greenish to white inconspicuous flowers develop in small clusters

Bloom time: summer months June-August

https://c2.staticflickr.com/6/5349/9452129826_f027ee8f78_b.jpg

Fruit:

Description: Small berries that range in color from yellow to purple to blue and have a porcelain-like appearance.

Photo Credit: Leslie J. Mehrhoff, University of Connecticut, bugwood.org

Vines:

Description: A deciduous, woody vine that climbs to heights of more than 20 ft. (6.1 m). These branched tendril-bearing, woody vines have lenticels and white piths that are continuous across the nodes. Bark is ridged and furrowed.

http://vnps.org/wp-content/uploads/2014/08/blog-1.jpg

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of Connecticut, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of Connecticut, bugwood.org

Photo Credit: James H. Miller, USDA Forest Service, bugwood.org

http://www.discoverlife.org/IM/I_LJM/0154/320/Ampelopsis_brevipedunculata,I_LJM15473.jpg

Photo Credit: Leslie J. Mehrhoff, University of Connecticut, bugwood.org

http://home.btconnect.com/ros.flemming/climbers/slides/Ampelopsis%20brevipedunculata%20v.%20maximo%20viczii.jpg

Mile-a-Minute Vine (*Persicaria perfoliata*)

Foliage:

Arrangement: Leaves grow alternately along stem.

Shape: Leaves are triangular and have long petioles with thin blades.

Color: Green

Size: 4-7 cm long and 5-9 cm wide.

Photo Credit: Kenneth R. Law, USDA AOHIS PPQ, bugwood.org

Stems:

Description: Stems are woody at the base and change from light green to red with age and are armed with recurved barbs.

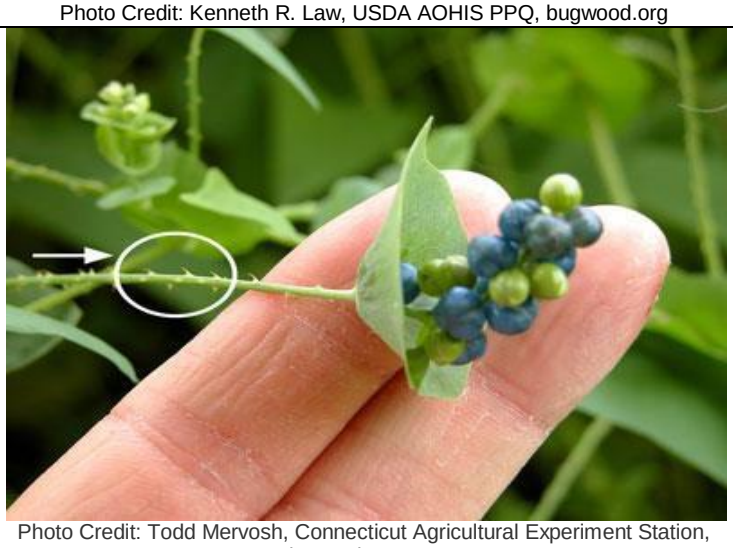


Photo Credit: Todd Mervosh, Connecticut Agricultural Experiment Station, inspection.gc.ca

Fruit:

Description: Fruit is round and grows in cone shaped clusters from petioles on top of leaves.

Size: Individual fruit are about 1.55 mm across.

Color: Fruit range from light green to red when maturing and are blue and fleshy when mature.

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

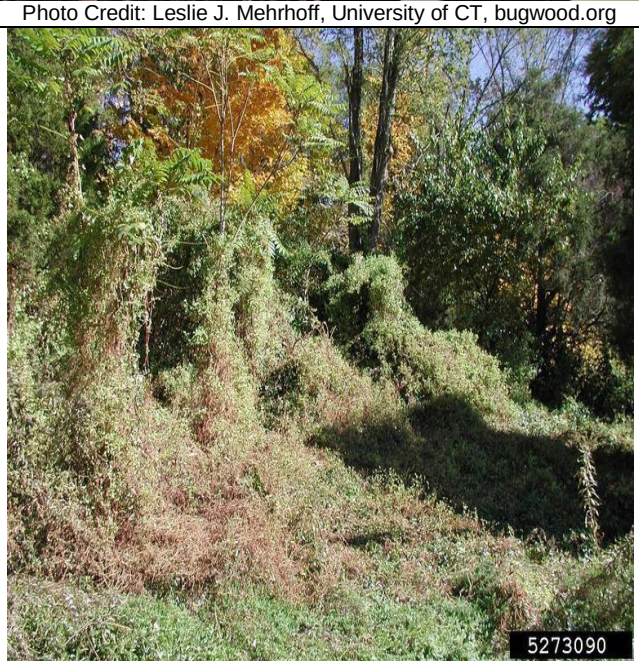


Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org


Photo Credit: Todd Mervosh, Connecticut Agricultural Experiment Station, inspection.gc.ca

Kudzu (*Pueraria lobata*)

Foliage:

Arrangement: Leaves are arranged alternately along stem.

Shape: Leaves are 3 lobed, with hairy margins.

Size: Leaflets are 3-4 inches long

Color: Green

Photo Credit: James H. Miller, USDA Forest Service, bugwood.org

Stems:

Description: Stems are hairy and grow as a vine easily.

Color: Light green

Height: Vines can grow between 30-100 feet a year.

Photo Credit: James H. Miller, USDA Forest Service, bugwood.org

Flowers:

Description: Flowers are showy and grow in ½ inch hanging clusters on plant vines.

Color: Flowers are typically red, purple or magenta and occasionally pink or white. Flowers have a strong grape-like aroma.

Bloom Time: Flowering occurs in late summer, followed by the production of brown, hairy flattened seed pods that contain 3-10 seeds. Flowers don't occur until 3rd year, flowers and seeds only form on vertical climbing vines

Photo Credit: Forest and Kim Starr, Starr Environmental, bugwood.org; James H. Miller, USDA

More Photos on Reverse Side

Photo Credit: Kerry Britton, USDA Forest Service, bugwood.org


Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org


Photo Credit: http://nyis.info/index.php?action=invasive_detail&id=60


Photo Credit: James H. Miller & Ted Bodner, Southern Weed Science Society, bugwood.org


Photo Credit: Chris Evans, Illinois Wildlife Action Plan, bugwood.org


Photo Credit Bob Richmond, home.earthlink.net

Hydrilla (*Hydrilla verticillata*)

Leaves:

Shape: Leaves are pointed often **serrated and arranged around the stem in whorls of 4-10.**

Size: 2-4 mm wide, 6-20 mm long

Color: Green

Leaves are **visibly serrated** to the naked eye + more than 4 leaves per whorls and tubers = hydrilla. Must have all three to make a positive I.D.

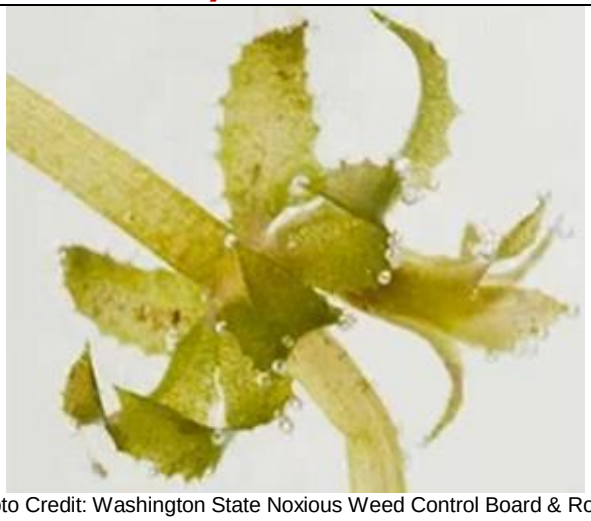


Photo Credit: Washington State Noxious Weed Control Board & Robert Videki, Doronicum kft. Bugwood.org

Stems:

Description: Stems are long and branch horizontally at water surface forming dense mats.

Height: Stems grow up to 25 feet in length.

Photo Credit: Robert Videki, Doronicum kft. Bugwood.org

Tubers:

Description: Pea-like structures buried in sediment.
Size: .2-.4 inches long.

Color: White to yellowish in color.

Turions

(stem tubers) are bud-like structures which can drop off the plant and successfully survive freezing or drought. Tubers from the rhizomes are another way these plants reproduce and increase their invasive potential.

Photo Credit: Robert Videki, Doronicum kft. Bugwood.org

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

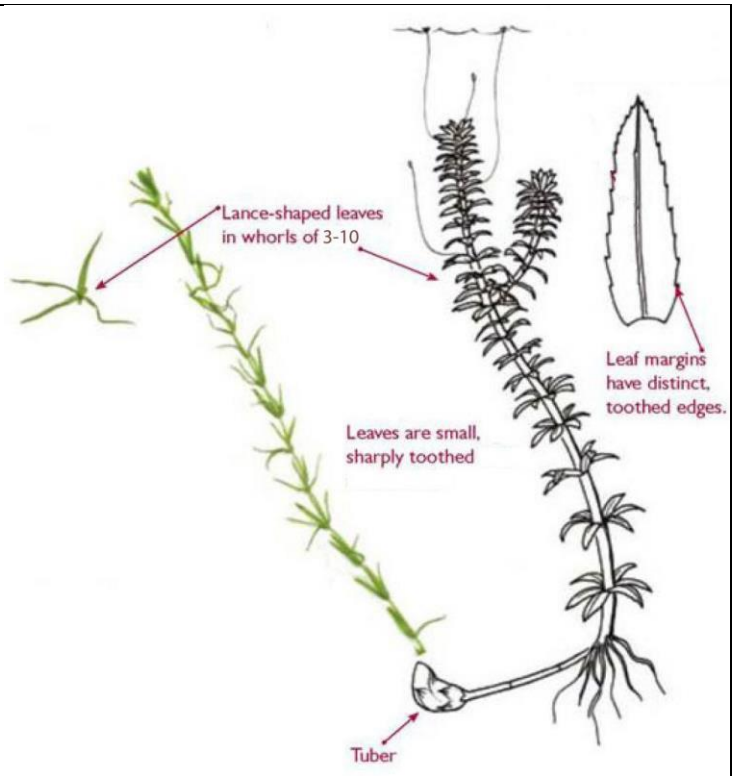


Photo Credit: Cayuga Lake Watershed Network, nyis.info

Photo Credit: Robert Videki, Doronicum kft. Bugwood.org

Photo Credit: David J. Moorhead, University of Georgia, bugwood.org

Photo Credit: Chris Evans, River to River CWMA,bugwood.org

Photo Credit: Tim Murphy, University of Georgia, bugwood.org

Water Soldier (*Stratiotes aloides*)

Foliage:

Shape: Leaves are sword shaped with serrated margins. Leaves from a floating rosette that is similar to an aloe plant or the top of a pineapple.

Color: Bright Green.

Size: Leaves are 40 cm long

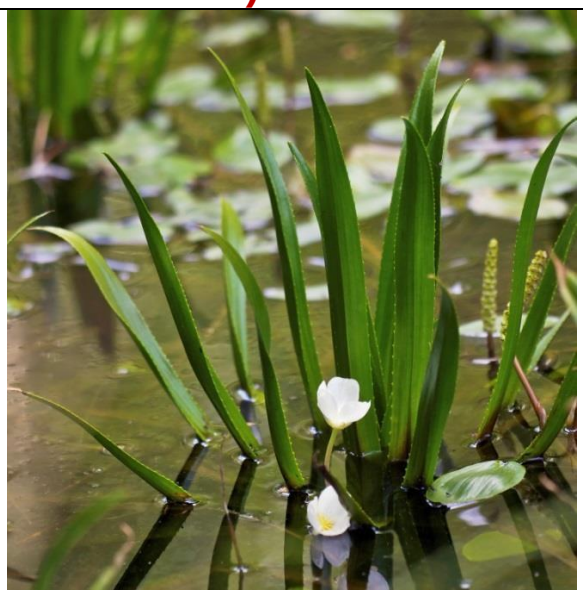


Photo Credit: en.wikipedia.org

Flowers:

Description: If present, flowers have 3 white to pinkish petals with a yellow center.

Photo Credit: *Jakob Katzenberger, Dietmar Zacharias*, pollinationecology.org

Fruit:

Description: Fruit is1-3.5 cm long and fleshy in texture and can contain up to 24 seeds.

Photo Credit: Steve Hurst, ARS Systematic Botany & Mycology Lab, http://plants.usda.gov/

More Photos on Reverse Side

Photo Credit: Alice Galante, liliumaquae.com

Photo Credit: J & Konrad, www.flickr.com

Photo Credit: Jiri Novak, http://www.biolib.cz/

Photo Credit: Jiri Novak, http://www.biolib.cz/

Photo Credit: Jiri Novak, http://www.biolib.cz/

Photo Credit: Jiri Novak, http://www.biolib.cz/

Fanwort *(Cabomba caroliniana)*

Foliage:

Description: Submerged leaves are opposite, fan-shaped, shaped like the letter Y - (snakes tongue). 2 in wide and **attached to a distinct petiole that branch off the main stem**. Floating leaves are entire and linear elliptic in shape.

Stems: grown up to 6.5 feet long

Size: Submerged leaves range from 1-3.5 cm wide x 1.5-5.5 cm long; Floating leaves (when present) are less than a ½ inch and are narrow.

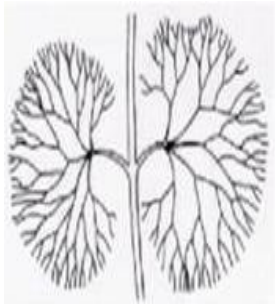


Photo Credit: Graves Lovell, Alabama Dpt. Of Conservation and Natural Resources, bugwood.org

Flowers:

Description: Flowers are solitary and have 5 petals ranging from white to pale yellow in color with a yellow center; some may have a pink or purplish tinge. Flowers emerge on stalks from the tips of the stem.

Size: 2cm across

Fruit:

Is leathery, indehiscent, with a 3-seeded follicle.

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Stems:

Description: Stems of fanwort are actually extensions of the fragile, horizontal rhizomes. Stems are branched, covered with or reddish-brown hairs.

Size: Mature plants can reach 10 meters in length

https://www.flickr.com/photos/ophis/6039008775

More Photos on Reverse Side

https://www.flickr.com/photos/ophis/6039008775

https://www.flickr.com/photos/ophis/6039008775

Fanwort Fruit

https://www.flickr.com/photos/ophis/6039008775

https://www.flickr.com/photos/ophis/6039008775

https://www.flickr.com/photos/ophis/6039008775

https://www.flickr.com/photos/ophis/6039008775

Buttercup (*Ranunculus*): (Native)

- Leaves are **alternately arranged** and attached by a distinct petiole along the stem.

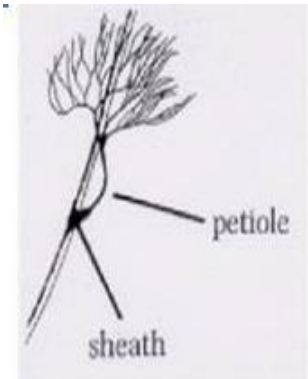


Photo Credit: Donald Cameron, gobotany.newenglandwild.org

Water Marigold (*Megaladonta*): Native:

- Submersed leaves are finely divided, branched, and opposite but appear whorled o the stem; and are **lacking a petiole**

Bladderwort (*Utricularia*) (Native)

- Leaves are finely divided in a branching pattern along the main stem of the plant. Small Bladders occur along the branchesof the leaves. **Leaves don't look like a fan.**

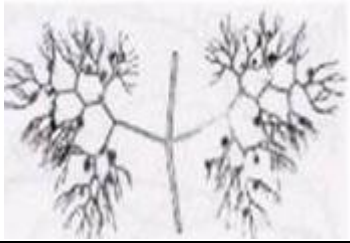


Photo Credit: Barry Rice, gobotany.newenglandwild.org

Watch Species
Water Hyacinth (*Eichhornia crassipes)*

Foliage:

Description: Leaves are oval to elliptical, and thick with a waxy texture and enlarged spongy petioles.

Size: 6 inches wide

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Flowers:

Description: The very showy blue-purple flowers are born on upright spikes. Each flower has six petals with the uppermost having a yellow patch

Photo Credit: Wilfredo Robles, Mississippi State University, bugwood.org

Seeds:

Description: Seeds are small and light brown in color with ribbed texture.

Size: 1mm in length

Seeds can germinate in a few days or remain dormant for 15-20 years. They usually sink and remain dormant until periods of stress (droughts). Upon re-flooding, the seeds often germinate and renew the growth cycle.

Photo Credit: Steve Hurst, USDA NRCS PLANTS Database, bugwood.org

More Photos on Reverse Side

Photo Credit: Chris Evans, Illinois Wildlife Action Plan, bugwood.org

Photo Credit: Karen Brown, University of FL, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Forest & Kim Starr, Starr Environmental, bugwood.org


http://stewardsofwater.com/blog/water-hyacinth-invades-modestos-tuolumne-river/


Photo Credit Steve Coppersmith, wildflowers.jdcc.edu

Watch Species
Didymo (*Didymosphenia geminata*)

Description:

Didymo is a microscopic diatom (type of algae) that has a slimy greenish brown carpet like appearance. When present it covers river, stream and lake bottoms.

Photo Credit: seloinvasives.org

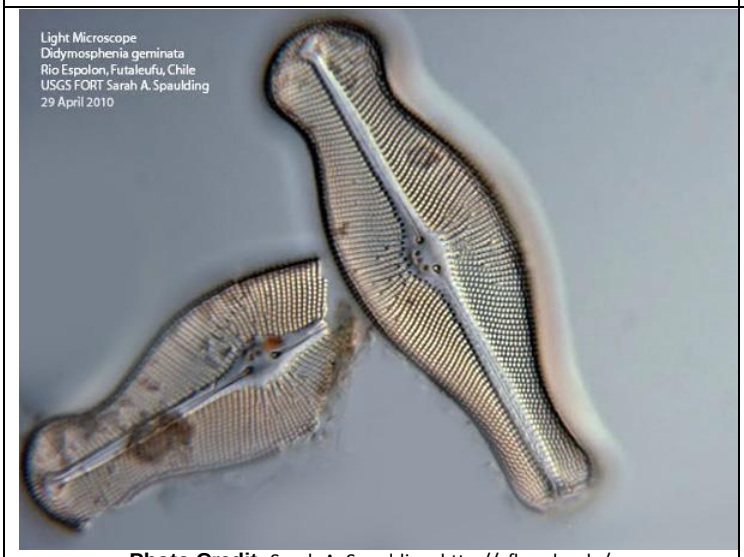


Photo Credit: Sarah A. Spaulding, http://cfb.unh.edu/

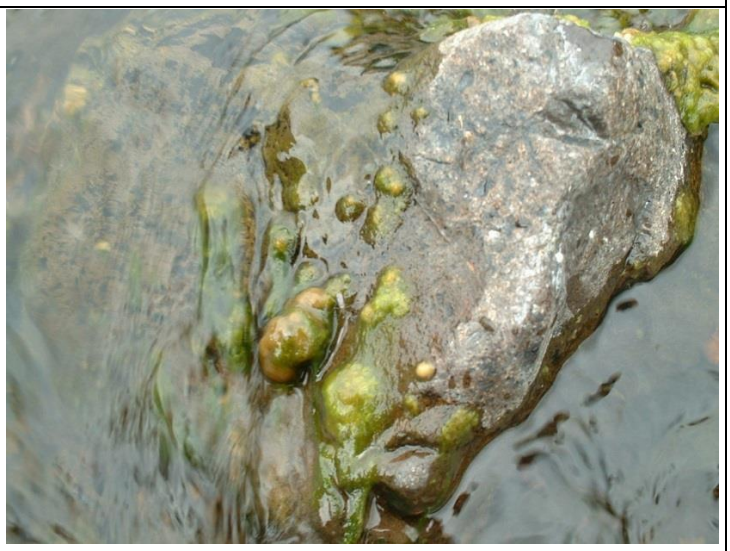


Photo Credit: *R. Coquet, http://craticula.ncl.ac.uk/*

Photo Credit: Jan Ellen Ferrigan, http://janellenferrigan.com/

Photo Credit: Murdock and Dunha, http://www.nps.gov/

Watch Species
Asian Carp (*Ctenopharyngodon spp.)*

Bighead Carp

Description: Has a large, scale-less head, a large upturned mouth with no barbels, and eyes located very low on the head. Adults usually have a mottled silver-gray coloration

Size: Adults can grow up to 5 feet in length and weigh up to 88lbs.

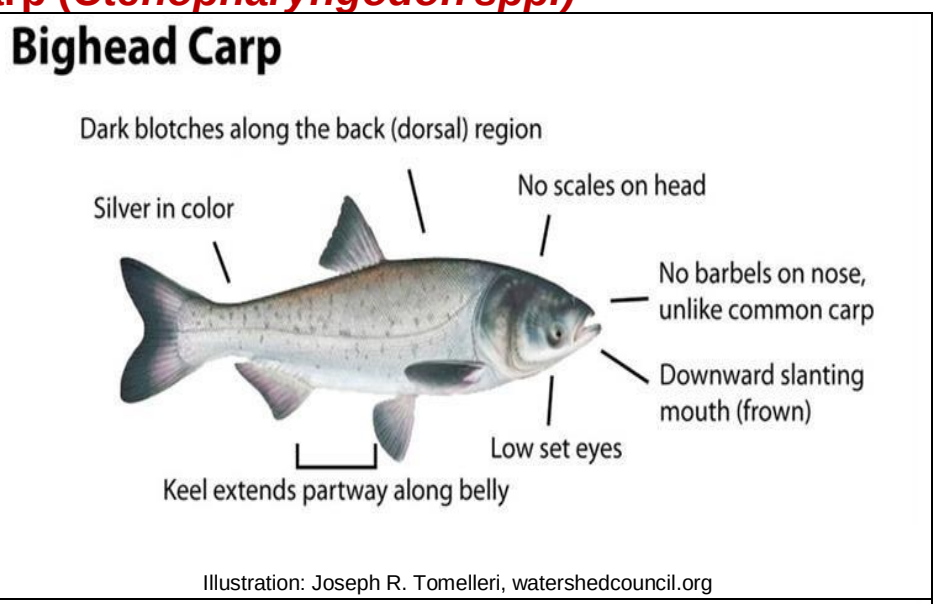


Illustration: Joseph R. Tomelleri, watershedcouncil.org

Silver Carp

Description: Has a scale-less head with large upturned mouth and no barbels, eyes are forward and sit below the mouth and project down. Body is olive green but sometimes bronze to red on the sides.

Size: Adults can grow up to 3.3 feet long and weigh up to 60 lbs.

***Silver carp jump out of water when startled.**

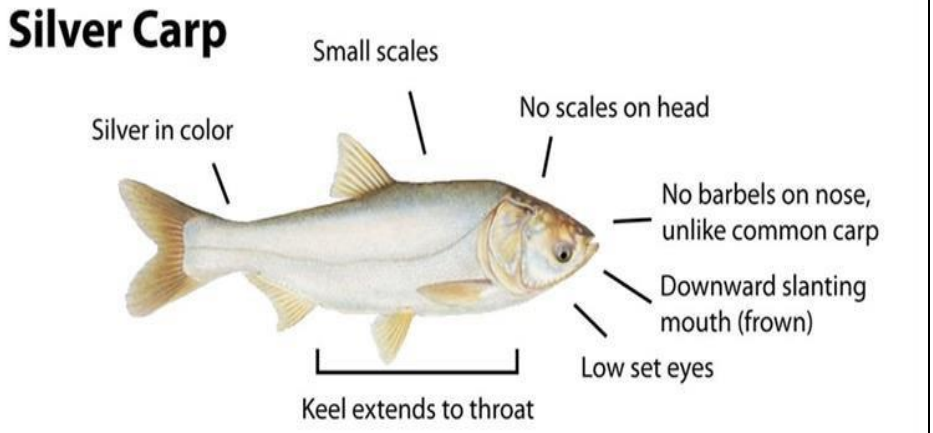


Illustration: Joseph R. Tomelleri, watershedcouncil.org

Grass Carp

Description: Has a broad, blunt head with a slight downturn mouth without barbels; eyes sit even with their mouth and the body has olive colored shading with brownish-yellow sides and a white belly.

Size: Adults can grow up to 5.2 feet in length and up to 80 lbs.

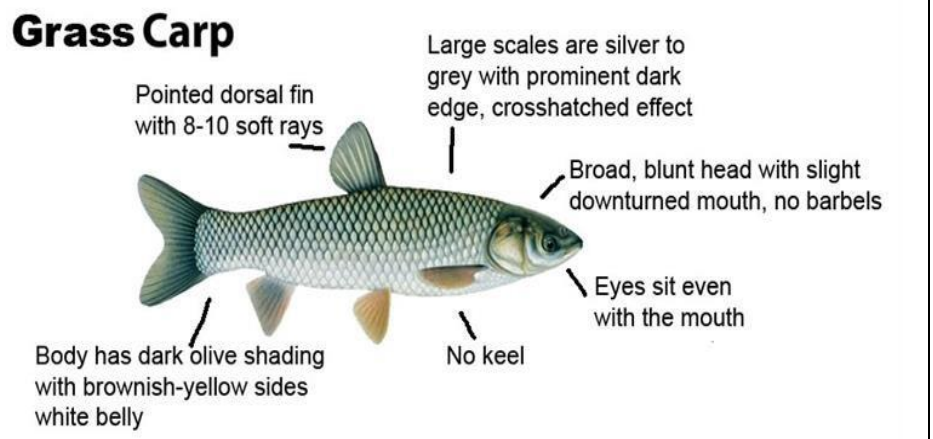


Illustration: Joseph R. Tomelleri, watershedcouncil.org

More Photos on Reverse Side

Black Carp

Description: Has a broad blunt head with a slight downturned mouth without barbels; body is a blackish-brown color with olive colored shading and a white belly.

Size: Adults can grow over 6 feet in length and weigh up to 150 lbs.

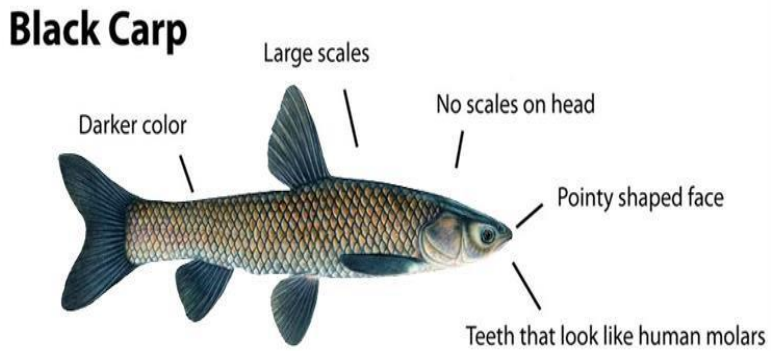


Illustration: Joseph R. Tomelleri, watershedcouncil.org

Bighead Carp

http://wxow.images.worldnow.com/images/14487358_BG1.jpg

Black Carp

http://exoticfishingthai.blogspot.com/2013_11_01_archive.html

Grass Carp

Photo Credit: Eric Engbretson, US Fish & Wildlife Service, bugwood.org

Photo Credit: USDA APHIS PPQ-Oxford, NC, bugwood.org

Silver Carp

Photo Credit: Department of Fisheries and Allied Aquacultures, Auburn University, Alabama, http://nas.er.usgs.gov/

Photo Credit: Nerissa Michales, Illinois Natural History Survey, http://illinoistimes.com/

Watch Species
Rusty Crayfish (*Orconectes rusticus*)

Body:

Description: Rusty crayfish have brown bodies with distinctive **rusty reddish spots on each side of their carapace (appears as though you picked it up with paint on your fingers)**

Tips of front claws may be black.

Size: Adults can grow up to 6 inches including claws.

Claws:

Description: Rusty crayfish have larger claws than native crayfish species; claws are smooth with grayish-green to reddish-brown in color and have an oval gap when closed and a "S" shaped movable claw. Black tips.

Photo Credit: Doug Watkinson, Fisheries and Oceans Canada (DFO), invadingspecies.com

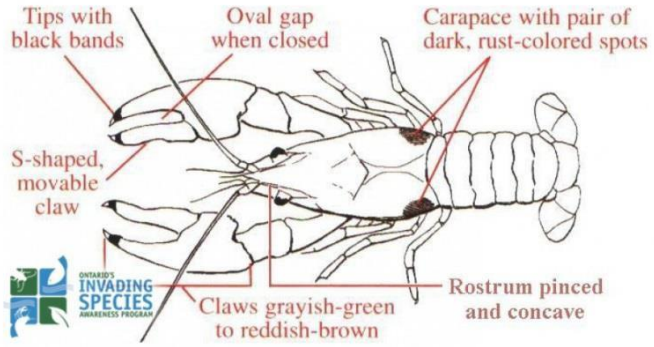


illustration by Great Lakes Sea Grant Network & US Fish & Wildlife Servic, invadingspecies.com

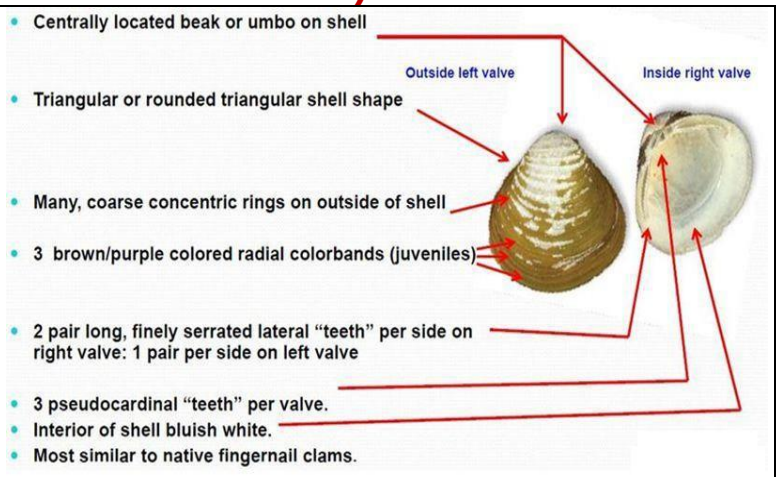
Photo Credit: Doug Watkinson, Fisheries and Oceans Canada (DFO), invadingspecies.com

Watch Species
Asian Calm (*Corbicula fluminea*)

Shell:

Description: Shells are thick and triangular with a yellowish to blackish-brown color. Shells have distinctive radial lines and brown/purple colored radial bands on their underside.

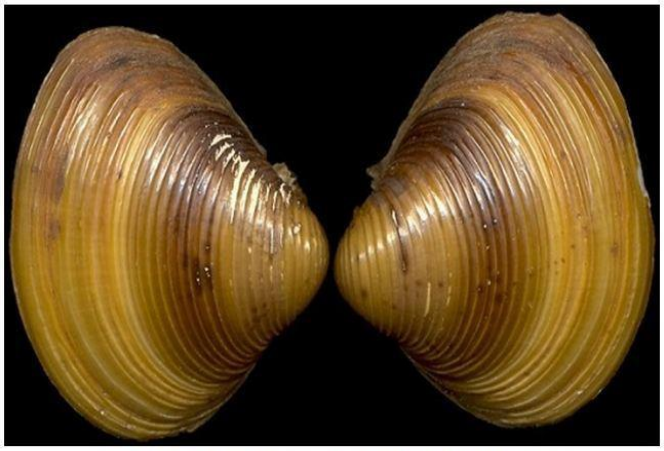
Size: 1-2 inches



Basic Identification characteristics for Asian clams. Graphic: Center for Biodiversity and Conservation

Photo Credit: Shawn Liston, Audubon of Florida, bugwood.org

Photo Credit: US Geological Survey Archive,bugwood.org



Corbicula fluminea, open, showing both valves.
Photo: Jacksonville Shell Club @ www.jaxshells.org

Asian clams. Photo: Crown Copyright 2009 - GB Non-Native Species Secretariat

Watch Species
New Zealand Mud Snail (*Potamopyrgus antipodarum*)

Shell:

Description: New Zealand mud snails have elongated shells that have 5-6 right handed whorls.

Color: Light to dark brown.

Size: Average size is 4-6 mm; some may reach 12 mm in their native range.

Photo Credit: Mike Gangloff, bugwood.org

Photo Credit: Mohammed El Damir, bugwood.org

cumuseum.colorado.edu

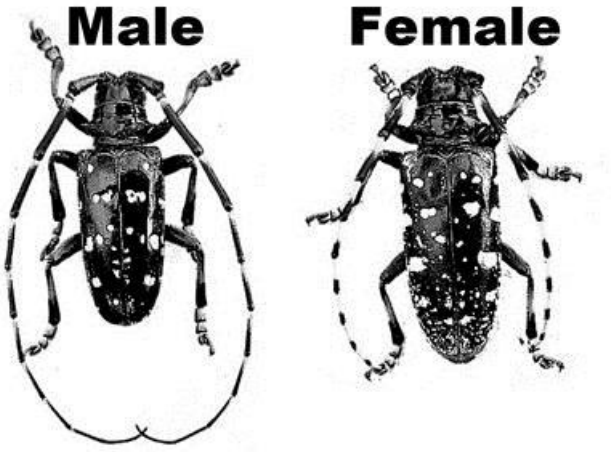

landcareresearch.co.nz


Photo Credit: Welter Schultes, Francisco, animalbase.uni-goettingen.de

Watch Species
Asian Longhorned Beetle (*Anoplophora glabripennis*)

Key ID Features of Adult Body:

- Adults are shiny black with irregular white spots
- Adult beetles are .75 to 1.5 inches long with long antennae that are twice as long as the body.
- Antennae have alternating black and white bands.
- Feet and antennae have a bluish tinge



http://www.bethelalb.com/Get_To_Know_Our_Beetle.htm

Key ID Features of Larvae:

- Larvae are white and have segmented bodies with brown mouth parts.
- Larvae can grow to be 2.4 inches long.
- They burrow beneath the bark and are rarely seen.

http://www.bethelalb.com/Get_To_Know_Our_Beetle.htm

Symptoms of Infestation:

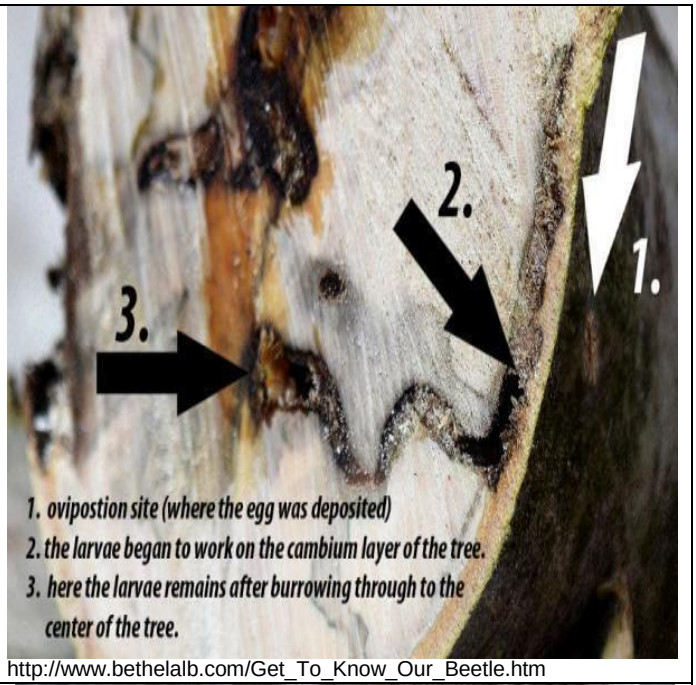
- Presence of "frass" or sawdust around the base of infested trees.
- Bowl-shaped holes in the bark about ½ inches in diameter may have an orange appearance and be oozing sap.
- Infected trees (hard wood species) will lose their leaf color and leaves will eventually fall off beginning at the crown.

Note: Exit holes may sometimes be confused with maple syrup tap holes. If many holes appear chest high on a maple tree, likely to be tap holes.

http://www.publicgardens.org/files/imagecache/product_full/images/brochure/12835-ALB_symptoms_final_logos%20linear_web.jpg

More Photos on Reverse Side

http://www.bethelalb.com/Get_To_Know_Our_Beetle.htm



http://www.bethelalb.com/Get_To_Know_Our_Beetle.htm

Photo Credit: Kenneth R. Law, USDA APHIS PPQ, bugwood.org

Photo Credit: Kenneth R. Law, USDA APHIS PPQ, bugwood.org

http://www.bethelalb.com/Get_To_Know_Our_Beetle.htm

http://jipm.oxfordjournals.org/content/6/1/4

Watch Species
Hemlock Woolly Adelgid (*Adelges tsugae*)

Key ID Features of Adult Body:

- Not visible with naked eye
- Small aphid-like body 2mm in size
- Black oval shaped soft bodies
- Adults can be winged or wingless (nymphs)

Photo Credit: Michael Montgomery, USDA Forest Service, bugwood.org

Key ID Features of Larvae:

- Eggs are very small (.25 mm long by .15 mm wide)
- Brownish-orange in color
- Eggs are laid in white woolly masses of wax
- Eggs hatch from April-June

Photo Credit: Shimat Joseph, University of Georgia, bugwood.org

Symptoms of Infestation:

- Presence of white woolly masses on tree branches at the base of needles
- Premature needle drop, twig dieback and defoliation
- Discoloration of needles, often with a grayish colored cast


Photo Credit: Blueridgekitties, flicker.com


http://www.northeastlandscape.com/

More Photos on Reverse Side

http://nyis.info/index.php?action=invasive_detail&id=24

http://nyis.info/index.php?action=invasive_detail&id=24

http://nyis.info/index.php?action=invasive_detail&id=24

http://nyis.info/index.php?action=invasive_detail&id=24

Hemlock Woolly Adelgid Look-alikes That May Confuse Untrained Observers

Watch Species
Feral Swine (*Sus Scrofa*)

Description:

Appearance: Resembles a domestic pig with wide varieties of coloration

Color: Some have spots, stripes, belting, or are solid brown in color.

Tusks: May grow up to 5 inches in length

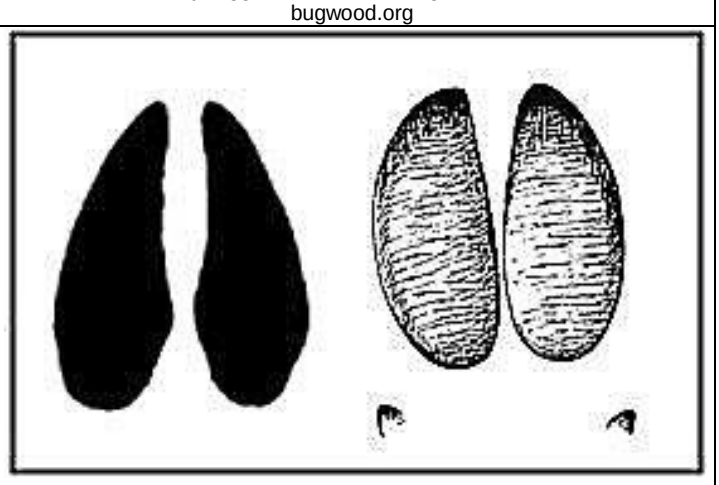
Size: Adults may range from 110-130 pounds, but some can weigh up to 400 pounds under the right conditions.

http://thepantanalsafari.blogspot.com/2014/02/invasive-species-threat-feral-pig.html

http://thepantanalsafari.blogspot.com/2014/02/invasive-species-threat-feral-pig.html

Photo Credit: Billy Higginbotham, Texas AgriLife Extension Service, bugwood.org

Photo Credit: Billy Higginbotham, Texas AgriLife Extension Service, bugwood.org



Deer Tracks on Left, Feral Swine On Right

Photo Credit: Internet Center for Wildlife Damage Management, icwdm.org

Target Management Species

Species that are already confirmed to be in the SLELO PRISM region and are managed depending on feasibility; this list is tentative and subject to change.

TARGET SPECIES
Black & Pale Swallowort (*Cynanchum spp.)*

Leaves:

Arrangement: opposite

Shape: oval to wedge-shaped with pointed tips

Size: 2.5-4.5 inches long & 2-2.27 inches wide

Color: glossy medium to dark green with a warm yellowish tone in summer

Photo Credit: Rob Boutledge, Sault College, bugwood.org.

Flowers:

Shape: 5 petals that form a star

Color: purple **(black swallow wort)** to pink **(pale swallow wort)**

Bloom time: May- mid July

Stem:

Light green and smooth reaching heights of up to 3 – 6 feet.

Photo Credit: Rob Boutledge, Sault College, bugwood.org.

Fruit:

Shape: Smooth slender pointed pods that resemble miniature milkweed pods.

Color: Light green

Location: grow in pairs alternately along stem nodes

Photo Credit: John M. Randall, The Nature Conservancy, Bugwood.org

More Photos on Reverse Side

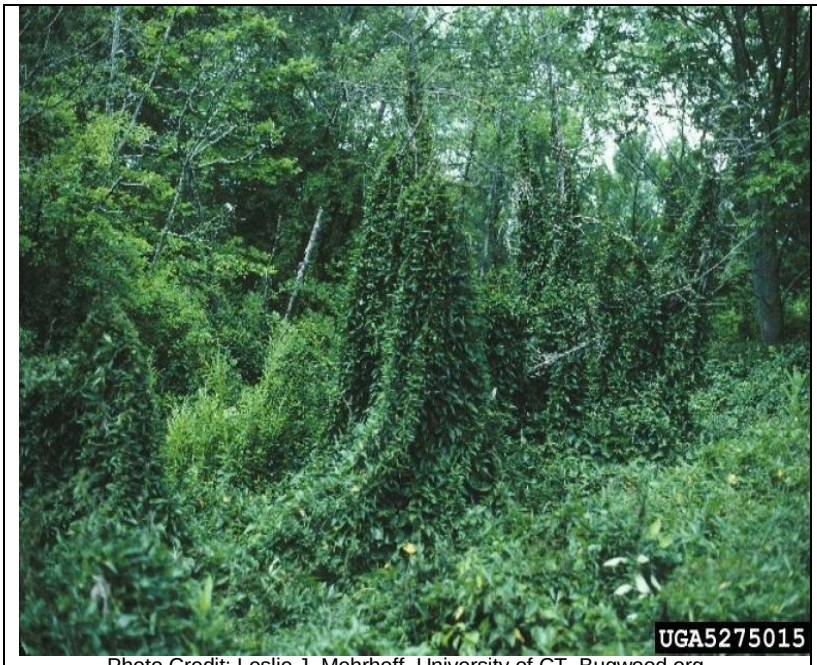


Photo Credit: Leslie J. Mehrhoff, University of CT. Bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT. Bugwood.org

Photo Credit: John M. Randall, The Nature Conservancy, Bugwood.org

Photo Credit: Bruce Ackley, the Ohio State University, Bugwood.org


Photo Credit: Leslie J. Mehrhoff, University of CT. Bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT. Bugwood.org

Giant Hogweed (*Heracleum mantegazzianum*)

Leaves:

Shape: Palmately compound (leaflets radiate from a single point) with three deeply incised leaflets.

Size: enormous; can grow up to 5 ft. in length. (only basal leaves are produced the first year)

Photo Credit: Donna R. Ellis, University of Connecticut, Bugwood.org

Flowers:

Description: 50-150 small white blooms that form a loose umbel at the top of the stem.

Bloom Time: Late June - August

Fruit:

Flat oval dry fruit, .375 inches long, broadly rounded bases and broad marginal ridges.

Photo Credit: Terry English, USDA APHIS PPQ, Bugwood.org

Stem:

Color: Light green with purple blotches and course white hairs (must have all three characteristics).

Height: Can reach heights up to 15-20 ft.

Stems contain toxic sap that causes burns on skin!

Photo Credit: Leslie J Mehrhoff, University of CT, Bugwood.org

More Photos on Reverse Side

Photo Credit: USDA APHIS PPQ, bugwood.org

Photo Credit: Leslie J. Mehrhoff,University of CT, bugwood.org

Photo Credit: Thomas B. Denholm, NJ Dept. of Agriculture, Bugwood.org

Photo Credit: Jan Samanek, State Phytosanitary Adm., Bugwood.org

Photo Credit: USDA APHIS PPQ-Oxford, NC, Bugwood.org

Photo Credit: Thomas B. Denholm, NJ Dept. of Agriculture, Bugwood.org

Glossy Buckthorn (*Frangula alnus*)

Foliage:

Arrangement: alternate and sometimes opposite.
Color: Dark green glossy leaves

Shape: Ovate and simple with prominent venation; 1½ to 3 inches long and 1 to 1½ inches wide, tapered at the base, the tip rounded or with an abrupt point, toothless and often wavy around the edge.

Photo Credit: James H. Miller, USDA Forest Service, bugwood.org

Flowers:
Flowers are inconspicuous, pale greenish-yellow to yellow in color with 5 petals that occur in clusters in the leaf axis.
Flowering occurs from May through September.

Fruit:

Description: Fruit is fleshy and ripens from red to a dark purple or black color.

You can see ripe fruit beginning about July through September.


Photo Credit: Rob Routledge, Sault College, bugwood.org; : Leslie J Mehrhoff, University of CT, bugwood.org

Bark:

dusky to dark gray, splotched to various degrees by lighter patches of aged, sometimes warty lenticels (pores), the cambium (layer of tissue just under the bark) is a greenish yellow, the center heartwood reddish orange

Photo Credit: William Fountain, University of Kentucky, bugwood.org

More Photos on Reverse Side

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org


Photo Credit: http://cisma-suasco.org/

Photo Credit: Steve Hurst, USDA NRCS PLANTS database, bugwood.org

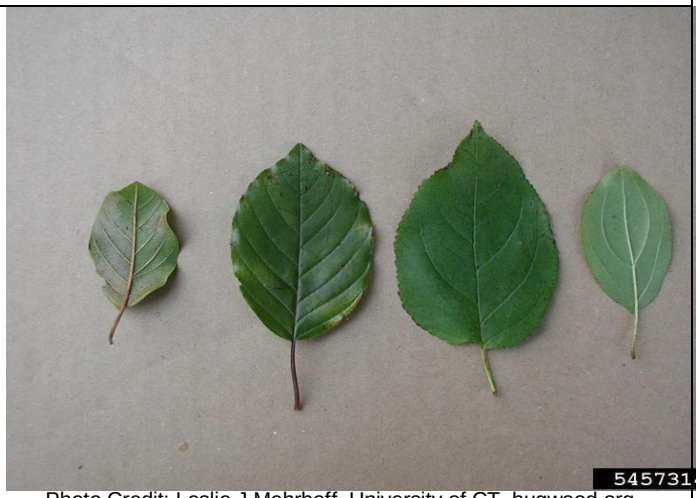


Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

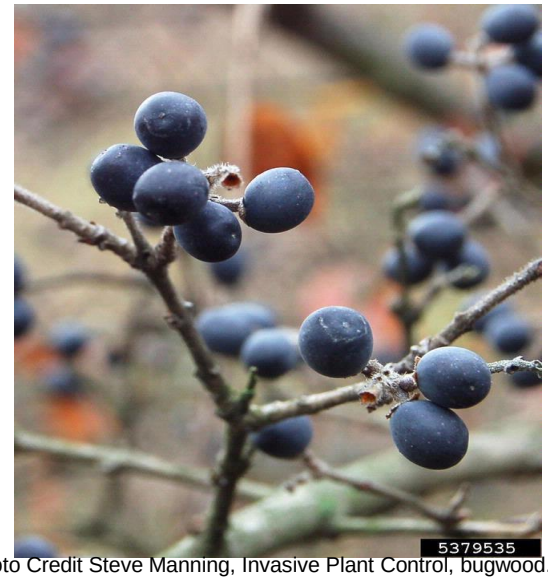


Photo Credit Steve Manning, Invasive Plant Control, bugwood.org

Photo Credit www.minnesotawildflowers.info

Japanese Knotweed (*Fallopia japonica*)

Leaves:

Arrangement: alternating around stem

Shape: Broadly oval to somewhat triangular or heart-shaped, pointed at tip with distinctive veins.

Color: Light green

Photo Credit: Jan Samanek, State Phytosanitary Administration, bugwood.org

Branches (canes):

Description: Reddish brown in color; smooth, stout, swollen where the leaf meets the stem. Membranous sheath surrounds joints of the stem.

Japanese Knotweed can reach heights ranging from 10-15 ft.

Photo Credit: WWP/MRBurne, cisma-suasco.org

Flowers & Fruits:

Description: Small, greenish-white flowers in branched sprays in late summer, followed by small winged fruits in fall.

Photo Credit: Leslie J. Mehrhoff, University of Ct, bugwood.org

More Photos on Reverse Side

Photo Credit: Tom Heutte, USDA Forest Service, bugwood.org

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

Photo Credit: Jan Samanek, Stake Phytosanitary Administration, bugwood.org

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

Photo Credit: Jan Samanek, Stake Phytosanitary Administration, bugwood.org

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

Common Reed (*Phragmites australis spp.*)

Leaves:

Arrangement: alternately dispersed along plant stem:

Appearance: Dark green broad, pointed leaves arise from thick, vertical stalks

Size: 6-23.6 inches long, .4-2.4 inches wide; Grow to heights of 15 ft. or more.

Leaf Sheath/ Stem:

Located at lower portion of the stem and wrapped tightly throughout the growing season persisting into future seasons.

Stems are slightly ridged with a rougher texture than native common reed; <u>invasive common reed has few to no fungal spots</u> (demonstrated on reverse side).

Photo Credit: gobotany.newenglandwild.org

Flowers/Plume/Seeds:

Appearance: form large bushy purple to golden brown plumes.

Plume Size: grow to 1-2 ft. in length and drape to one side.

Bloom time: Late July-August

Seeds are grayish colored and covered with silky hairs.

Photo Credit: plants.usda.gov

Photo Credit: gobotany.newenglandwild.org

More Photos on Reverse Side

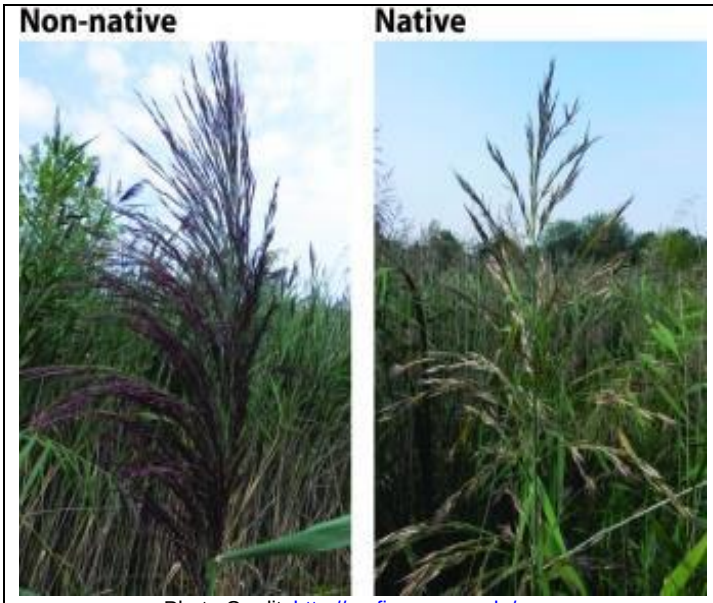


Photo Credit: http://mnfi.anr.msu.edu/

Photo Credit: gobotany.newenglandwild.org

Photo Credit: Rob Williams, SLELO Prism Coordinator

Photo Credit: Bernd Blossey, Cornell University, bugwood.org

Photo Credit: Rob Williams, SLELO Prism Coordinator

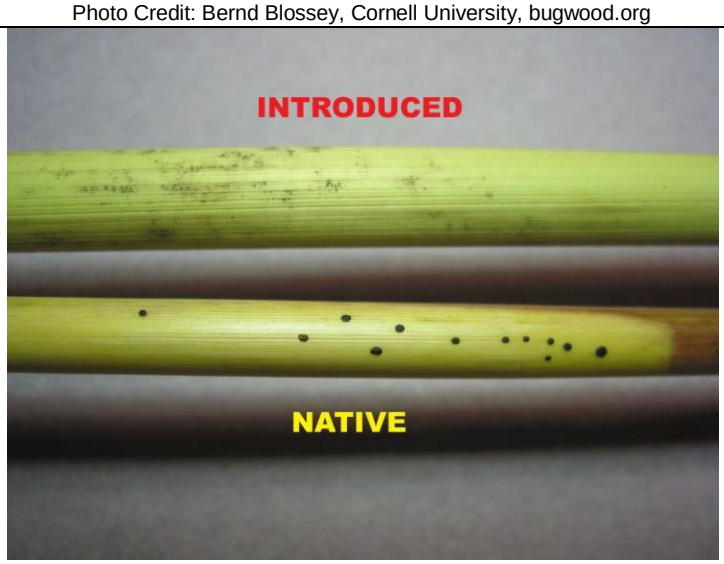


Photo Credit: http://www.nps.gov/plants/alien/fact/img/phau1-stemspots.jpg

Japanese Stilt grass (*Microstegium vimineum*)

Leaves:

Arrangement: alternate along a branched stalk
Appearance: thin, pale green, lance shaped leaves**, with a stripe of silver down the mid vein.**

Size: about 1-3 inches in length

Photo Credit: James H. Miller & Ted Bodner, Southern Weed Science Society, bugwood.org

Stems:

Description: leafy segmented stems with small white hairs; grows upward reaching heights of up to 3 feet; easy to pull up


Photo Credit: Les Mehrhoff, discoverlife.org

Flowers/Fruit:

Description: Flowers are delicate and develop in the axils of the leaves or at top of stems.
Bloom Time: September

Fruit: Is produced from late September through early October.


Photo Credit: Bobby Hattaway, discoverlife.org

More Photos on Reverse Side

Photo Credit: Rebekah D. Wallace, University of Georgia, Bugwood.org

Photo Credit: James H. Miller & Ted Bodner, Southern Weed Science Society, bugwood.org

Photo Credit: Chris Evans, River To River CWMA, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: James H. Miller & Ted Bodner, Southern Weed Science Society, bugwood.org

Photo Credit: Steve Hurst, USDA NRCS PLANTS Database, bugwood.org

Leafy Spurge (*Euphorbia esula*)

Leaves:

Arrangement: Grows alternately often in a spiral around stem.

Shape: Narrow and waxy with a smooth edge
.
Color: Bluish-green until late summer when leaves turn a reddish-orange color.

Size: 1-4 inches in length

Photo Credit: extension.umass.org & William M. Ciesla, Forest Health Management International, bugwood.org

Flowers:

Description: Lack both petals and sepals. Flowers develop in clusters at the top of the plant.

Color: Yellowish-green

Bloom Time: Mid-June

Photo Credit: Steve Dewey, Utah State University, bugwood.org

Fruit/Seed:

Description: Fruit are three lobed capsules that explode when mature, propelling brown mottled ovoid seeds up to 15 ft. from parent plant.

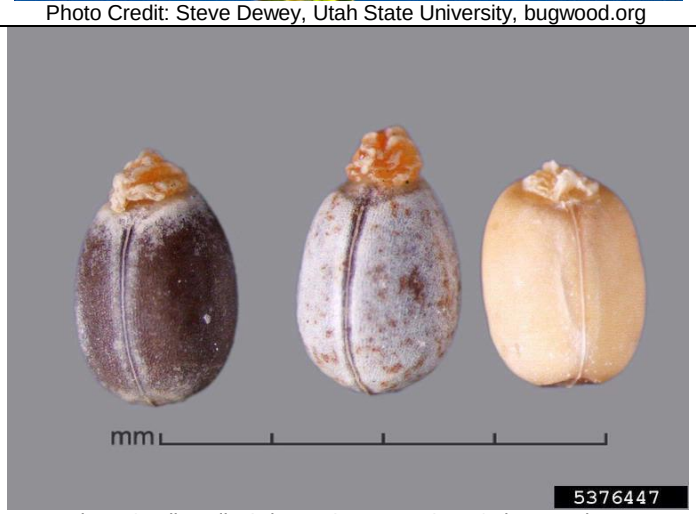


Photo Credit: Julia Scher, USDA APHIS PPQ, bugwood.org

More Photos on Reverse Side

Photo Credit: extension.umass.edu

Photo Credit: Bruce Ackley, Ohio State University, bugwood.org

Photo Credit: Steve Dewey, Utah State University, bugwood.org

Photo Credit: Steve Dewey, Utah State University, bugwood.org

Photo Credit: Chris Evans, Illinois Wildlife Action Plan, bugwood.org

Photo Credit: L.L. Berry, bugwood.org

Wild Chervil (*Anthriscus silvestris*)

Leaves:

Description: Shiny and dark green in color, finely divided (Fern like) with sharply pointed segments that are somewhat hairy.

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

Flowers:

Description: Small and white growing in 3 inch wide umbels (flower heads originating from one point).

Bloom Time: April – May

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

Seeds:

Size: .2 inches in length

Color: Shiny and black

Shape: elongated oval shape developed in pairs with small antenna-like structures on top.

Roots

Roots are thick and tuberous and can extend over 6 ft. into soil.

Photo Credit: http://seasonsinthevalley.blogspot.com/

Photo Credit: Leslie J Mehrhoff, University of CT, bugwood.org

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

http://www.nwcb.wa.gov/admin%5CWeedImages%5Cwildchervil7.jpg

Photo Credit Elizabeth J. Czarapata, http://www.piercecountyweedboard.org/images/pierce/widlchervil/wildChervil_2.jpg

Purple Loosestrife *(Lythrum salicaria)*

Leaves:

Arrangement: Opposite but sometimes alternate or bunched in whorls.

Shape: smooth and slender; lanced without petioles.

Photo Credit: Rob Boutledge, Sault college, Bugwood.org

Flowers:

Petals: showy, individual flowers have 5-6 pink to purple petals that are .5 -.75 inches across. Petals surround small yellow centers and are closely attached to the stem.

Bloom Time: Flowers bloom from the bottom of the flower spike to the top from early July through September.

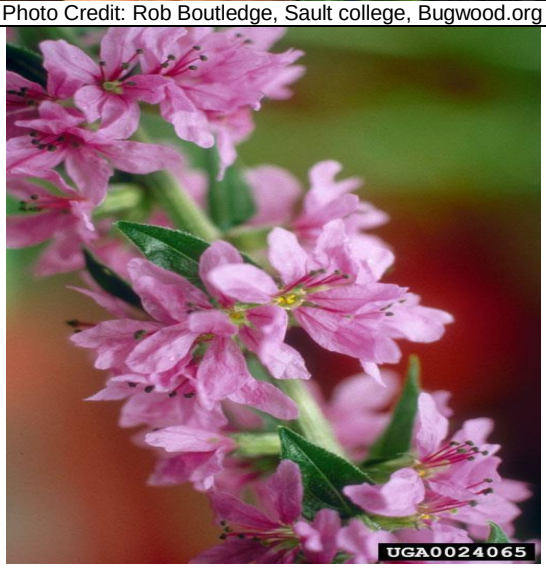


Photo Credit: Norman E. Rees, USDA Agricultural Research Service, Bugwood.org

Stems:

Description: 1-50 stems per plant that grow upright, stiff and four sided. Often branching giving the plant a bushy appearance.

Color: Green with a purple hue

Photo credit: G.D. Bebeau friendsofthewildflowergarden. Org

More Photos on Reverse Side

Photo Credit: John D. Bryd. Mississippi State University, Bugwood.org

Photo Credit: Linda Haugen, USDA Forest Service, Bugwood.org

Photo Credit: David Cappaert, Michigan State University Bugwood.org

Photo Credit: Steve Dewey, Utah State University, Bugwood.org

Photo Credit: Gary L. Piper, Washington State University, Bugwood.org

Photo Credit: Britt Slattery, US Fish & Wildlife Service, Bugwood.org

European Water Chestnut (*Trapa natans*)

Foliage:

Arrangement: Rosettes of leaves on the surface of the water are alternate. Submerged leaves are either opposite or alternately arranged around the stem.

Shape: Triangular, strongly toothed and connected to the stem by an inflated petiole. Submerged leaves are feathery shaped.

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Flowers:

Description: four small inconspicuous white petals with a light yellow center.

Bloom Time: July to first frost.

Photo Credit: http://www.invadingspecies.com/wp-content/gallery/european-water-chestnut/ofah_006.jpg

Fruit:

Shape/Size: Nut like fruit with four half inch long sharp barbed spines.

Color: Viable seeds are green and are connected to plant; unviable seeds are black or dark brown and are often found floating in the water or stuck in substrate.

*Seeds ripen about a month after flowers appear and remain viable for up to 12 years. Each seed can produce 1-15 rosettes and each rosette can produce as many as 20 seeds.

Photo Credits: http://media.nj.com/watershed_impact/photo/waterchestnut-seedpodjpg-024ca8c1fa9ae0ed_large.jpg

http://www.massnature.com/Plants/Herbs/waterchestnut3.jpg

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org


Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Leslie J. Mehrhoff, University of CT, www.forestryimages.org


Trapa, showing floating leaves (top), submerged leaves (bottom left) and nut (right) (after: CTRIVCOORD)

Photo Credit: http://www.starnewsdaily.com/media/starnewsdaily/images/1ce77976fc56064cdfa5c83b284ba296.jpg

Eurasian Water Milfoil (*Myriophyllum spicatum*)

Foliage:

Description: Leaves are bright green, finely dissected and whorled around the stem in pairs of four leaves with more than 12 feathery leaflets on each leaf.

Terminal leader: Tip of plant is a reddish brown color. This is a distinctive trait compared to native milfoil species.

Photo Credit: sleloinvasives.org

Flowers:

Description: tiny, inconspicuous pinkish red flowers located in the axils of flower bracts. Either with 4 petals or without petals all together. Flower spikes arise 2-4 inches above water surface.

Fruit:

Description: Four-jointed nut-like body

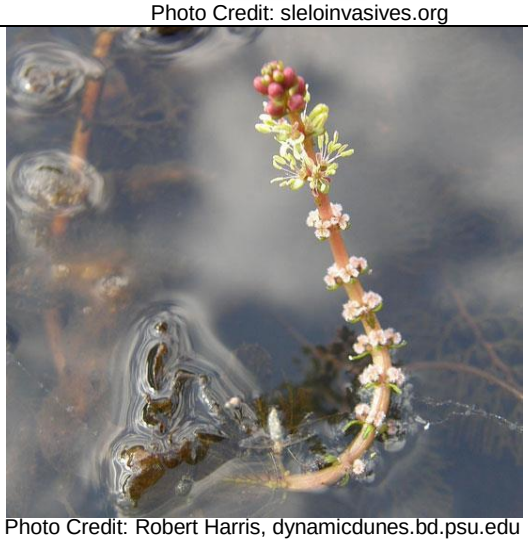


Photo Credit: Robert Harris, dynamicdunes.bd.psu.edu

Stem:

Description: Slender, thickened below the flower, doubles in width further down the stem, becomes leafless near the base, and branches repeatedly at water surface.

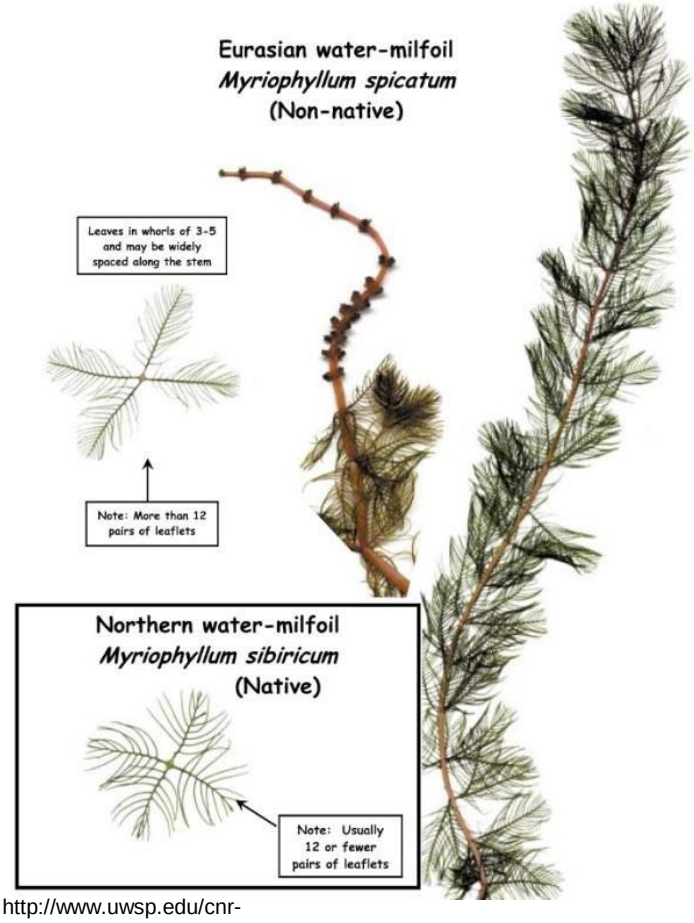
Length: 3-10 feet long but can reach lengths of 33 feet.

Photo Credit: Graves Lovell, Alabama Department of Conservation and Natural Resources, bugwood.org

More Photos on Reverse Side

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: Graves Lovell, Alabama Department of Conservation and Natural Resources, bugwood.org



http://www.uwsp.edu/cnr-ap/UWEXLakes/Documents/programs/CBCW/publications/EWM_scan.pdf

Photo Credit: Graves Lovell, Alabama Department of Conservation and Natural Resources, bugwood.org

Photo Credit: Barry Rice, sarracenia.com, bugwood.org

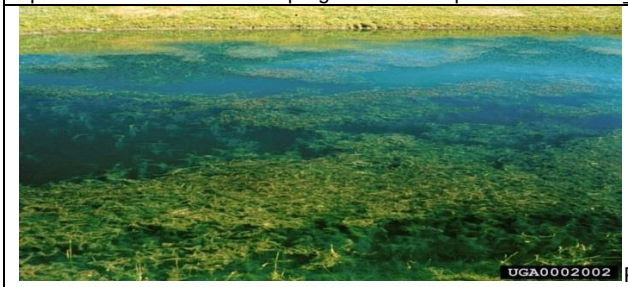


Photo Credit: Robert L. Johnson, bugwood.org

Photo Credit: Steve Hurst, USDA NRCS PLANTS Database, bugwood.org

TARGET SPECIES
European frog-bit (*Hydrocharis morsus-ranae*)

Foliage :

Description: Leaves are green, thick, heart shaped, with smooth edges and spongy, purplish red undersides.

Size: 1-2 inches wide, usually less than 1 inch.

https://plants.ifas.ufl.edu/wp-content/uploads/images/limspo/limspo06.jpg

Flowers:

Description: Small white showy flowers with three petals and yellow centers.

Fruit:

Description: Seeds are approximately .04 in (1mm) long


http://wiseacre-gardens.com/wordpress/european-frog-bit/

Roots:

Description: long and unbranched, dangles from undersides of each rosette of leaves.

Size: 3-8 inches long


Photo Credit: Robert Johnson, Cornell University, cayugacounty.us

More Photos on Reverse Side

http://wiseacre-gardens.com/wordpress/european-frog-bit/

http://www.cayugacounty.us/portals/0/wqma/weedswatchout/Images/eurofrogbit.jpg

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit Jane Herbert, watershedcouncil.org

Photo Credit: Leslie J. Mehrhoff, University of CT, bugwood.org

Photo Credit: John Crellin, gobotany.newenglandwild.org

TARGET SPECIES
Bloody Red Shrimp (*Hemimysis anomala*)

Description:

Size: Mature bloody red shrimp reach 6-13mm in length; females are slightly larger than males.

Color: Ivory-yellow in color or translucent, but have red pigmentation on their dorsal and posterior section.

Photo Credit: S. Pothoven, Great Lakes Environmental Research Labratory

Distinguishing Features:

Bloody red shrimp can be distinguished from other mysid species, such as the opossum shrimp, by comparing the posterior section (telson) which in bloody red shrimp has a long spine at both corners compared to the forked telson of opossum shrimp.

Photo Credit: Colin Van Overdijk, invadingspecies.com

Photo Credit: S. Pothoven, Great Lakes Environmental Research Laboratory

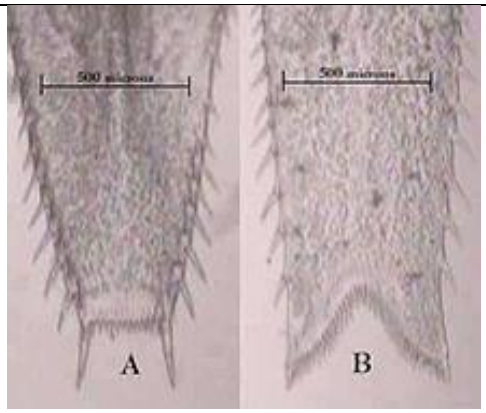


Photo Credit: watershedcouncil.org

Photo Credit: NOAA, GLERL

TARGET SPECIES
Emerald Ash Borer (*Agrilus planipennis*)

Description:

Color: Bright, metallic emerald green color with variable amounts of brassy, coppery or reddish reflections especially on the wings. Dorsal surface is bright coppery red and can be seen when wings are open **(this is a distinguishing feature as EAB are the only *Agrilus* species in North America that have bright metallic red abdomens)**

Size: ½ long to 1/8 inch wide.

EAB may be present from late May – early September; but are most common in June-July.

http://datcpservices.wisconsin.gov/eab/images/eabhome.jpg

Larvae:

Description: Creamy white in color with definitively segmented bodies

Size: 1-1.25 inches

Eggs:

Are brown and 1 mm in size

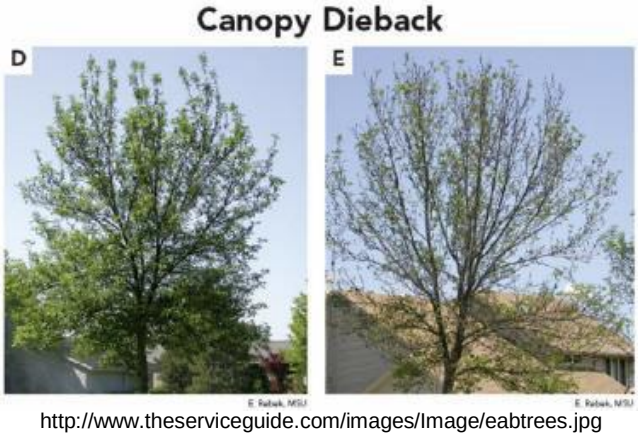
Photo Credit: David Cappaert, Michigan State University, bugwood.org

Signs of Infestation:

- 0.1-0.2 inch D shaped exit holes in ash tree bark
- Canopy dieback
- Epicormics sprouts (sprouts at base of tree)
- Woodpecker damage
- Bark cracks
- Yellowing and browning of leaves

http://www2.ca.uky.edu/caps/eab_epicormic.asp

Photo Credit: David R. McKay, USDA APHIS PPQ, bugwood.org



http://www.theserviceguide.com/images/Image/eabtrees.jpg

More Photos on Reverse Side

Photo Credit: Eric R. Day, Virginia Polytechnic Institute and Sate University

Photo Credit: Kenneth R. Law, USDA APHIA PPQ

Photo Credit: Leah Bauer, USDA Forest Service Northern Research Station

Photo Credit: David Cappaert, Michigan State University, bugwood.org

Photo credit: Total Landscape Care, ww.totallandscapecare.com/detect-beetles/

Photo Credit: David Cappaert, Michigan State University, bugwood.org

Common Aquatic Native Species, and Some Invasive Look-A-Likes Found in SLELO:

(Submerged Organisms)

Ceratophyllum demersum

(Coontail)

Submerged aquatic plant

NATIVE

Cabomba caroliniana

(Fanwort)

Submerged aquatic plant

INVASIVE

WATCH-LIST SPECIES

Utricularia vulgaris

(Greater bladderwort)

Submerged aquatic plant

NATIVE

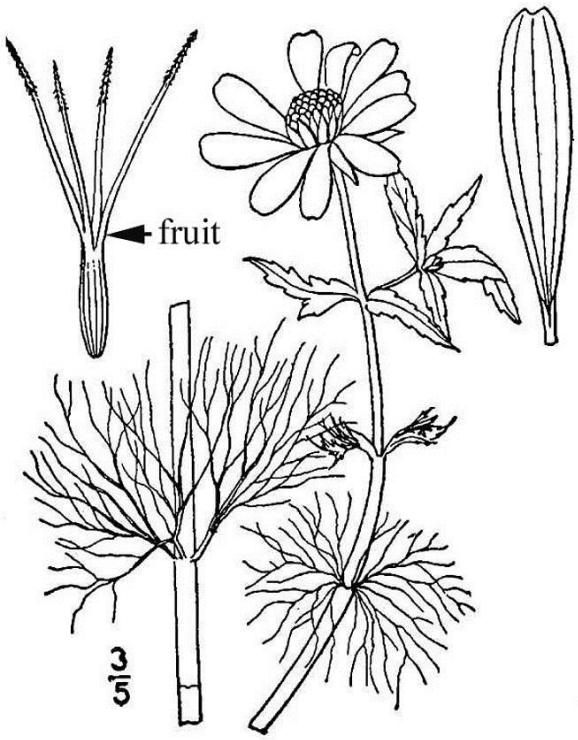
Ranunculus aquatilis

(White water buttercup)

Submerged aquatic plant

NATIVE

- Leaves are alternate



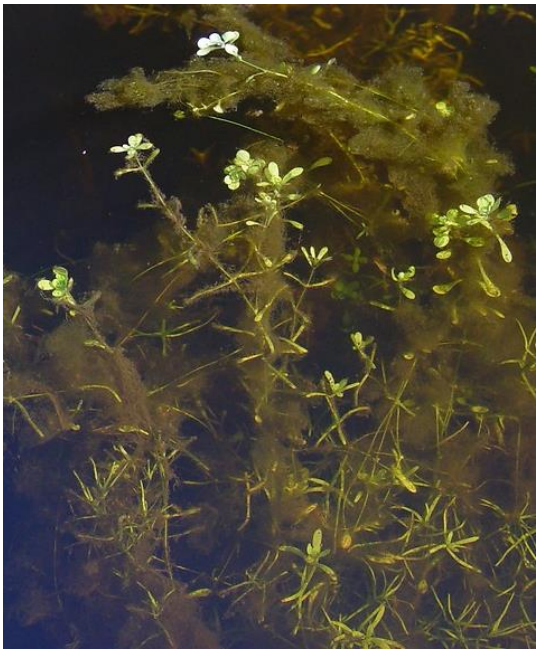
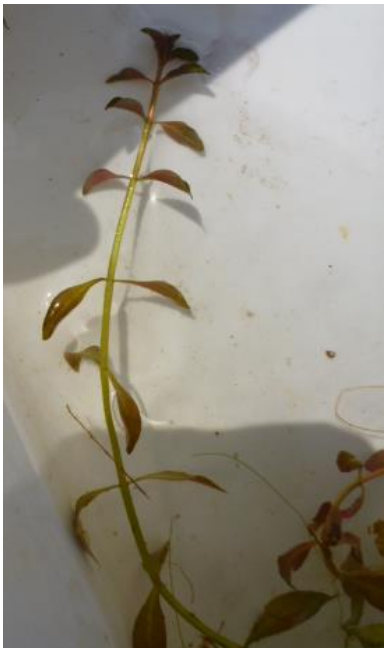
Bidens beckii

Water marigold

Submerged

NATIVE

- Has opposite leaves that appear whorled around stem. **No petiole** on submerged leaves/stem.

Callitriche palustris

Vernal water-starwort

Submerged/Floating

NATIVE


Chara spp.

(Stonewort)

Submerged aquatic algae

NATIVE

Fontinalis spp.
(Aquatic mosses)
Submerged aquatic moss
NATIVE

Najas minor

Brittle naiad

Visible pointed and serrated leaves. Leaves may appear to be opposite, in whorls, or in clumps.

INVASIVE

Najas flexilis

Slender naiad

Submerged

Opposite leaves with two leaves per node.

Leaf blades are 2-6 mm long.

NATIVE



Najas guadalupensis

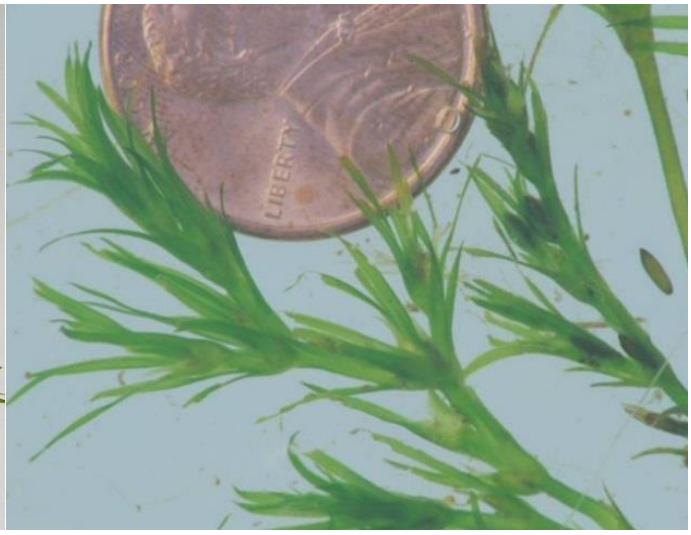
Southern naiad

Submerged

Opposite leaves with 2 leaves per node.

Leaf blades are 3-33 mm long.

NATIVE



Najas gracillima

Thread-like naiad

Submerged

Opposite leaves with 2 leaves per node. Leaf blades are 6-28 mm long

NATIVE

Elodea canadensis

(Elodea)

Submerged aquatic plant

NATIVE

Egeria densa

(Brazilian waterweed)

Submerged aquatic plant

INVASIVE

Hydrilla verticillata

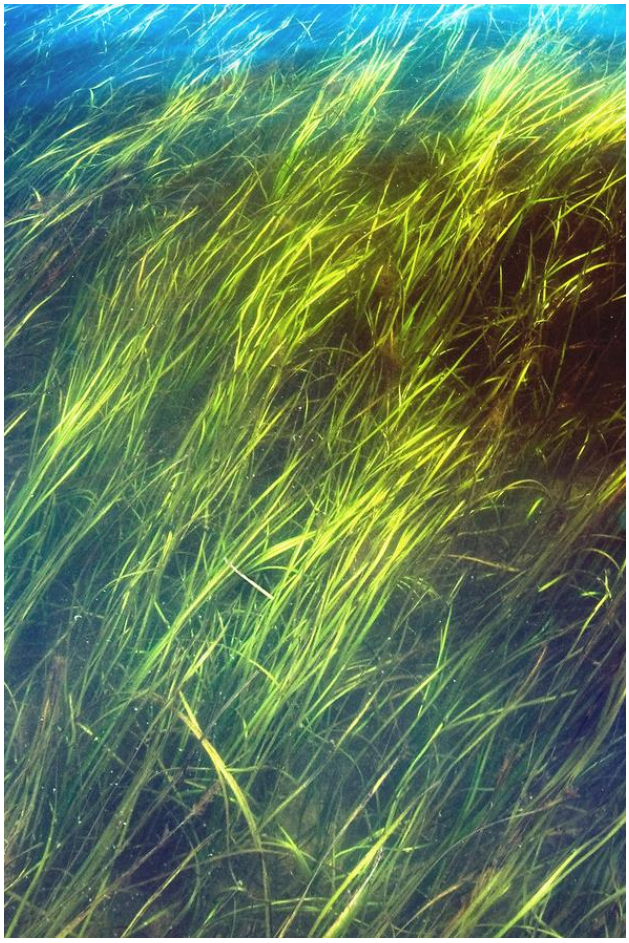
Hydrilla

Submerged

Leaves of 4-10 whorled around stem + visible serrations +tubers=**hydrilla**

INVASIVE

WATCH-LIST SPECIES

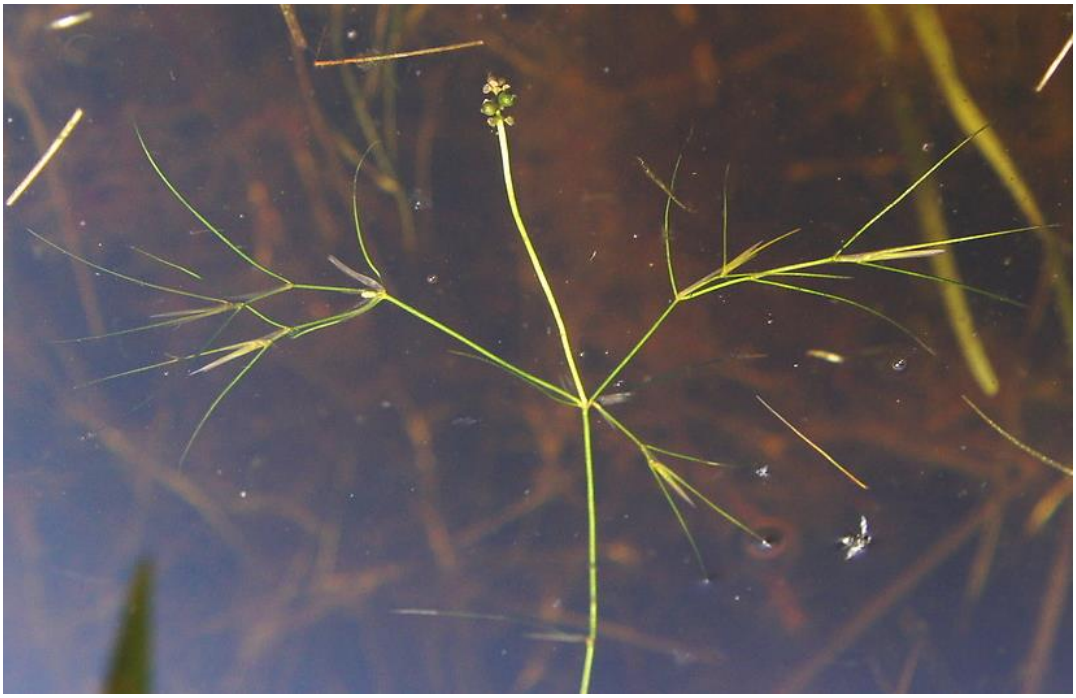


Zostera marina

(Eel grass)

Submerged aquatic plant

NATIVE

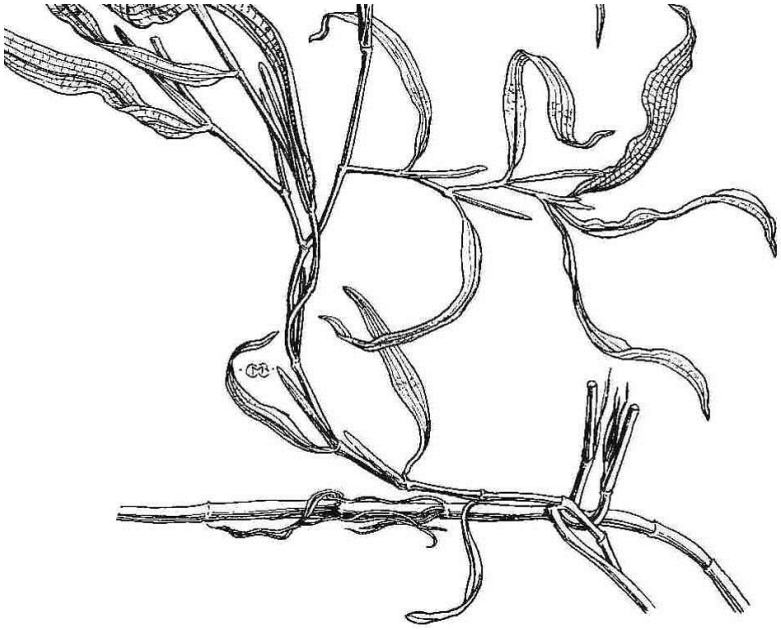


Potamogeton pusillus

(Slender pondweed)

Submerged aquatic plant

NATIVE

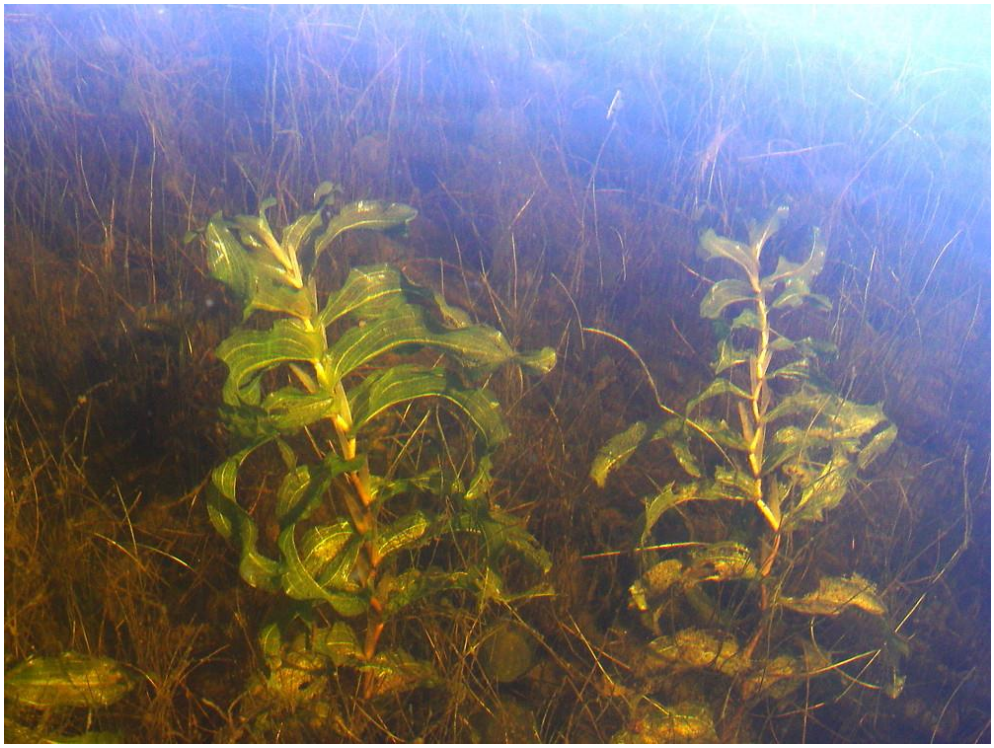


Potamogeton amplifolius

Broadleaf pondweed

Submerged

NATIVE



Potamogeton praelongus

White-stemmed pondweed

Submerged

NATIVE

Potamogeton perfoliatus

(Clasping-leaf pondweed)

Submerged aquatic plant

NATIVE

Potamogeton crispus

(Curly-leaf pondweed)

Submerged aquatic plant

INVASIVE

Potamogeton spirillus

(Northern snail-seed pondweed)

Submerged/floating aquatic plant

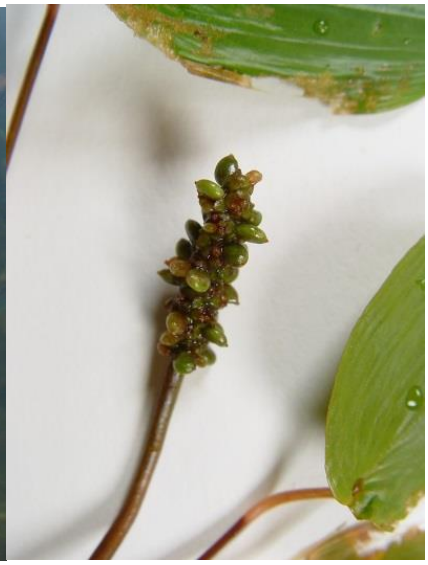
NATIVE

Potamogeton nodosus

(Long-leaved pondweed)

Submerged/floating aquatic plant

NATIVE

Potamogeton natans

Floating pondweed

Some emergent leaves, some submerged. Alternate leaves with one leaf per node. Leaf blade is elliptic and ovate.

NATIVE



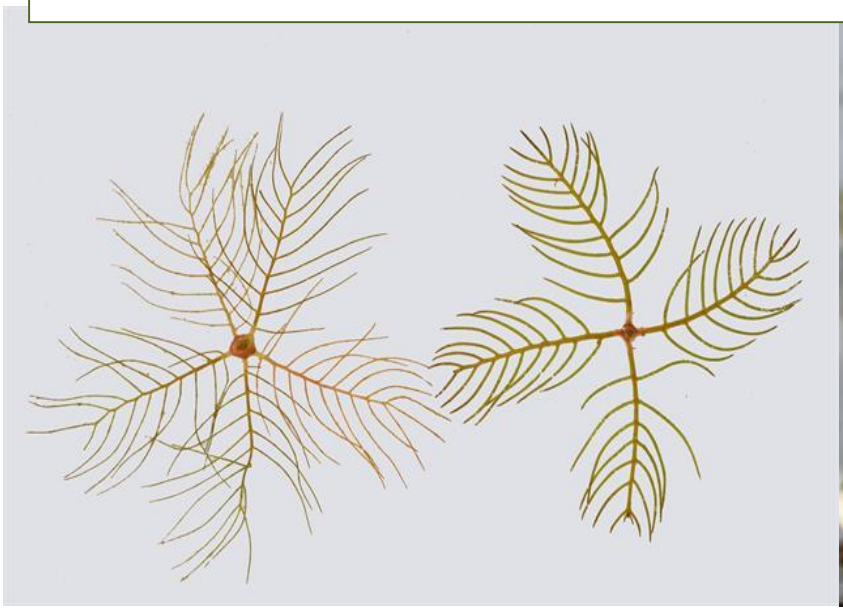
Myriophyllum alterniflorum

Alternate-flowered water-milfoil

Submerged

Whorled leaves, average of **3-5 leaves per whorl, and 3-7 leaflet pairs per leaf.**

NATIVE



Myriophyllum sibricum

Northern water-milfoil

Submerged

Stiff, whorled leaves, **4-5 leaves per whorl, 5-14 leaflet pairs per leaf**.

NATIVE

Myriophyllum verticillatum

Whorled water-milfoil

Submerged

Whorled leaves, **4-5 leaves per whorl, 5-14 leaflet pairs** per leaf.

NATIVE

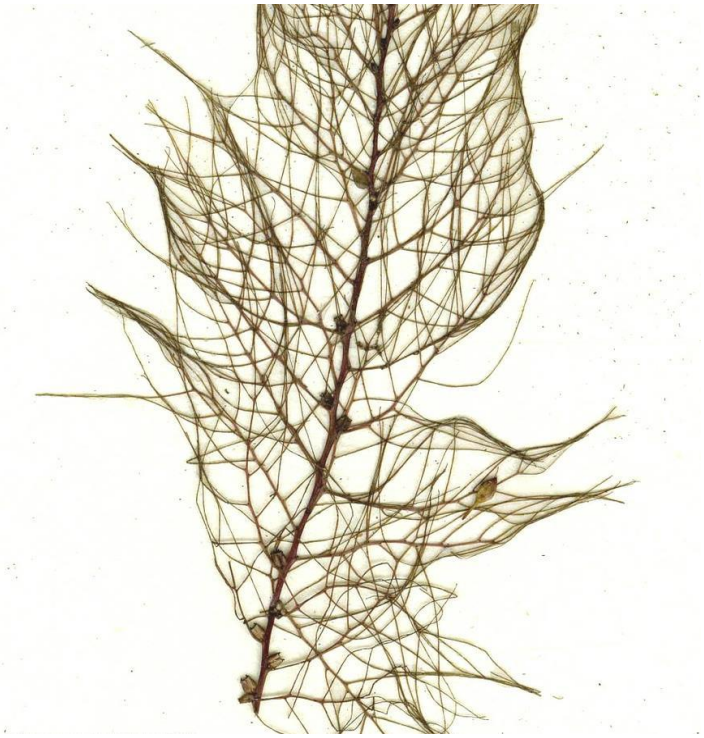
Myriophyllum farwellii

Farwell's water-milfoil

Submerged

Leaves **radially scattered** and whorled, **3-5 leaves per whorl, 5-12 leaflets per leaf**.

NATIVE



Myriophyllum humile

Low water-milfoil

Submerged

Leaves radially scattered, 5-12 leaves per leaflet.

NATIVE

Myriophyllum aquaticum

Parrot feather

Submerged

Whorled. 4-6 leaves with 5-14 leaflets. Tiny white flowers.

INVASIVE

Myriophyllum heterophyllum X Myriophyllum laxum

Variable water-milfoil hybrid

Submerged

Whorled. **4-6 leaves and 5-14 leaflets**. Bracts and flowers arranged both alternately and whorled. Bracts can be pinnately lobed to elongated and full.

INVASIVE



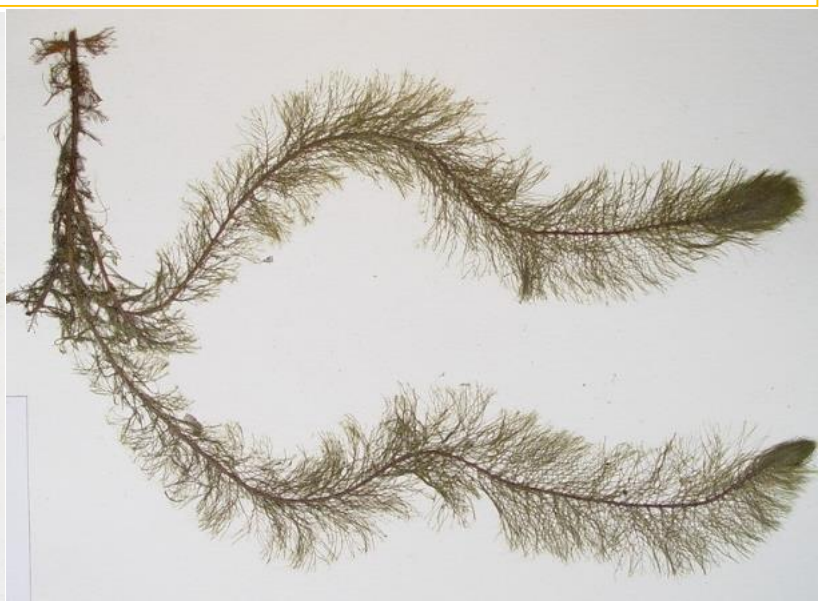
Myriophyllum heterophyllum

Variable-leaved water-milfoil

Submerged

Whorled. **4-6 leaves and 5-14 leaflets**. Flowers and bracts in whorls. Bracts are serrated and larger than flowers. **Red stems common**.

INVASIVE




Myriphyllum spicatum

(Eurasian Water -Milfoil)

Whorled. **3-6 leaves with more than 12 leaflets.** Plant has red tip. Flowers and bracts are in whorls, and flowers are larger than bracts.

INVASIVE


Common Aquatic Native Species, and Some Invasive Look-A-Likes Found in SLELO:

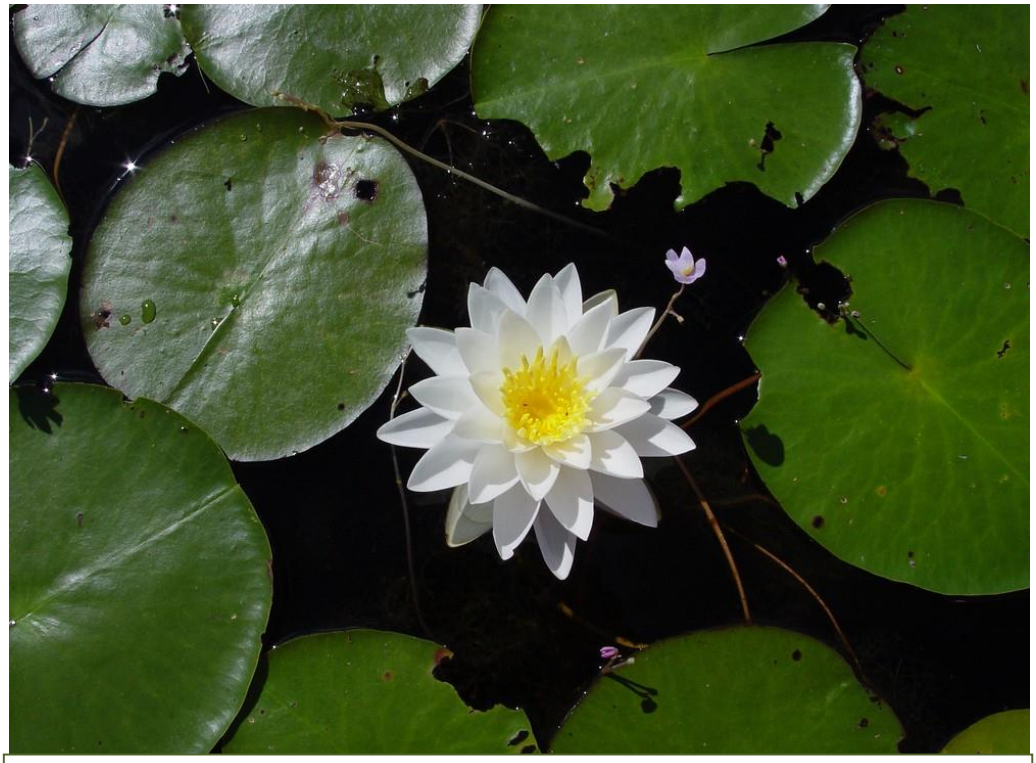
(Floating Organisms)

Brasenia schreberi

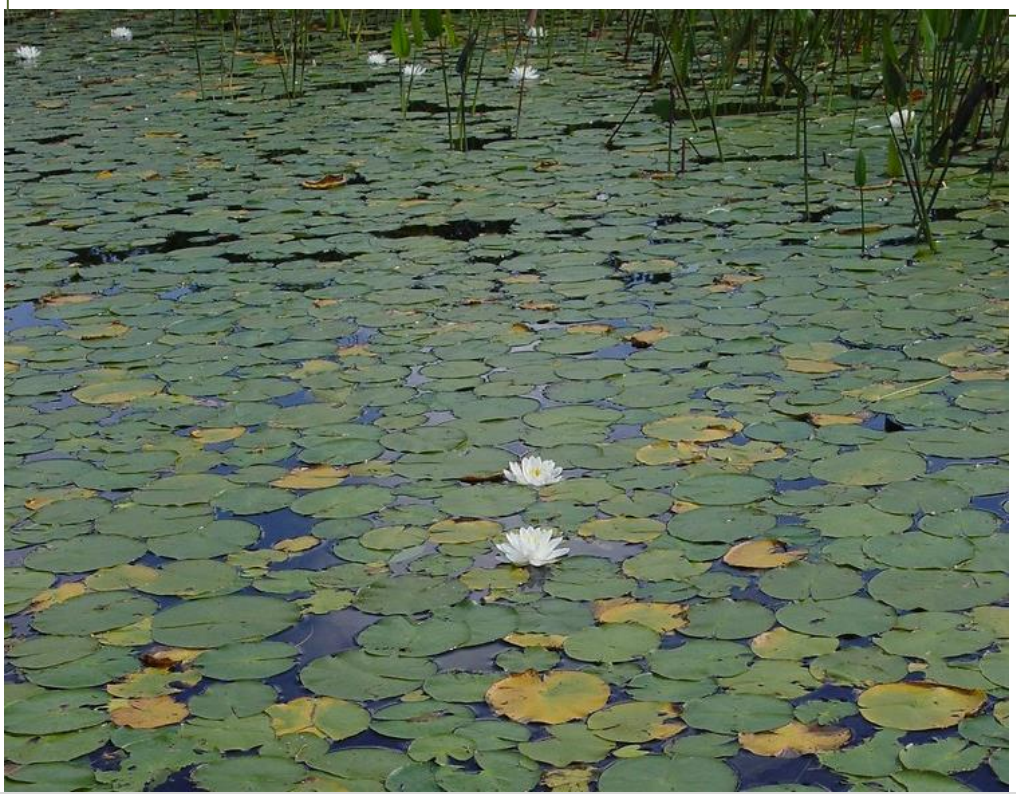
(Water-shield)

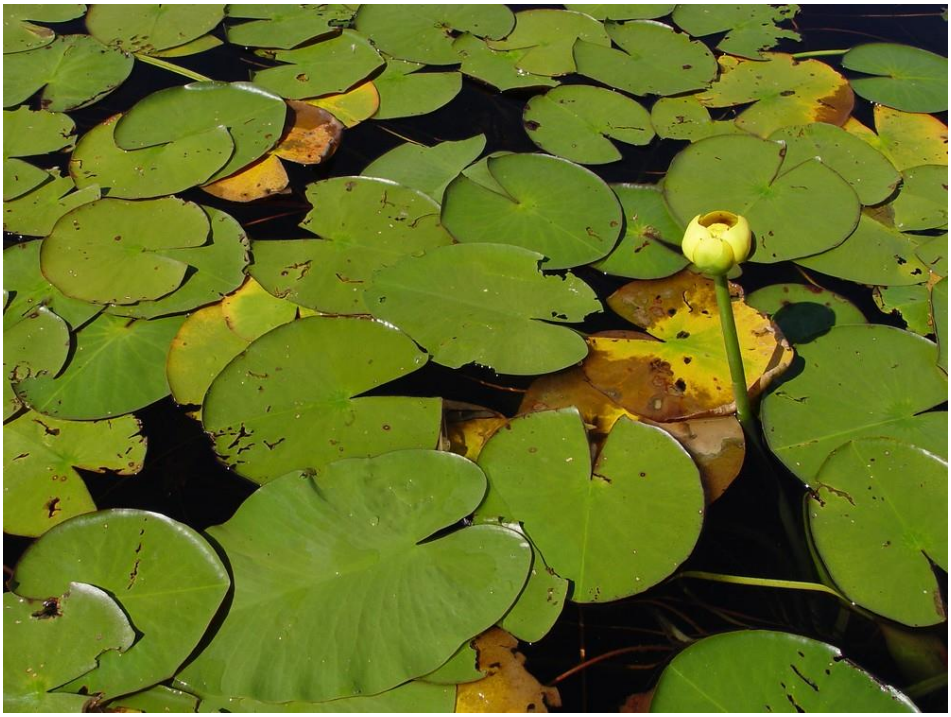
Floating aquatic plant

NATIVE



Nymphaea odorata
(Fragrant waterlily)
Floating aquatic plant
NATIVE



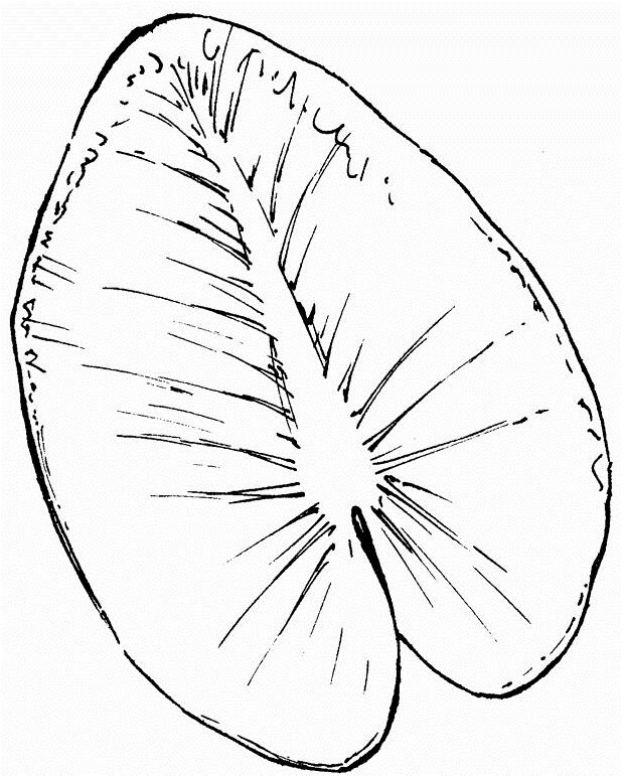


Nuphar variegate

Yellow pond-lily

Emergent

NATIVE

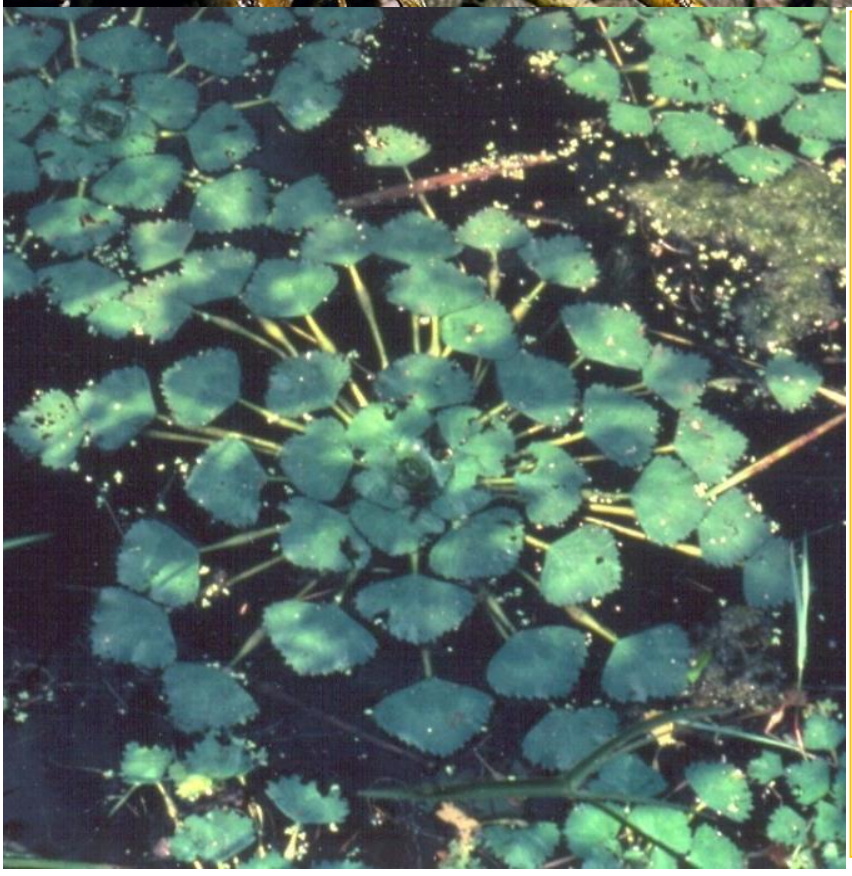


Hydrocharis morsus-ranae

(European frog-bit)

Floating aquatic plant

INVASIVE



Trapa natans

(Water-chestnut)

Floating aquatic plant

INVASIVE

***Spirogyra, Mougeotia, Zygnema, Cladophora, Hydrodictyon spp*.**

(Filamentous green algae)

Submerged/floating aquatic algae

NATIVE

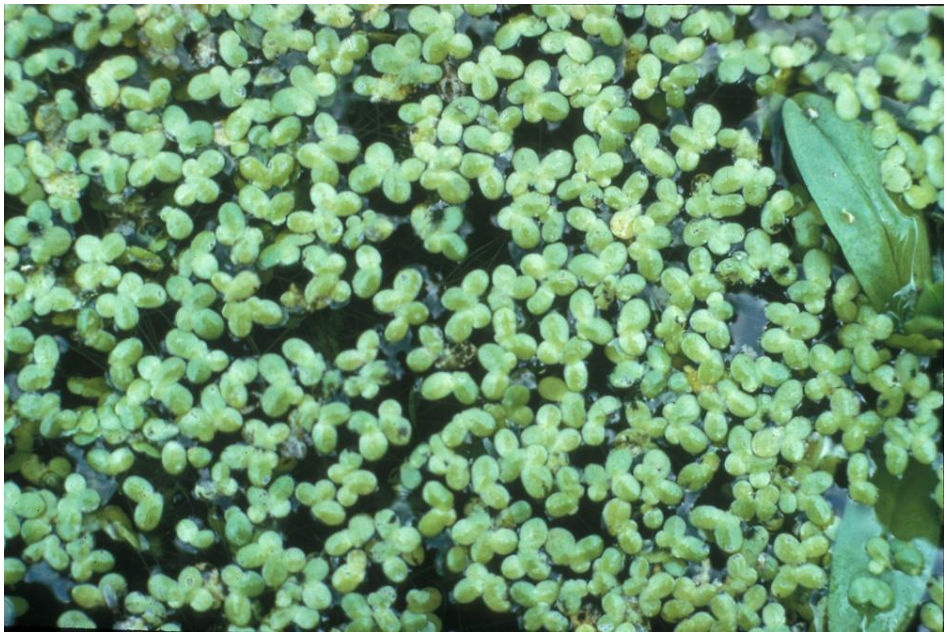
Didymosphenia geminate

(Didymo)

Emergent or submerged. Feels like wet wool. Yellow-brown to white in color

INVASIVE

WATCH-LIST SPECIES



Lemna minor

(Common duckweed)

Emergent

NATIVE

Common Aquatic Native Species, and Some Invasive Look-A-Likes Found in SLELO:

(Emergent Organisms)

Eichhornia crassipes

(Common water-hyacinth)

Emergent/floating aquatic plant

INVASIVE

WATCH-LIST SPECIES

Saggitaria latifolia

Arrowhead

Emergent

NATIVE

Lythrum salicaria

(Purple loosestrife)

Emergent aquatic plant

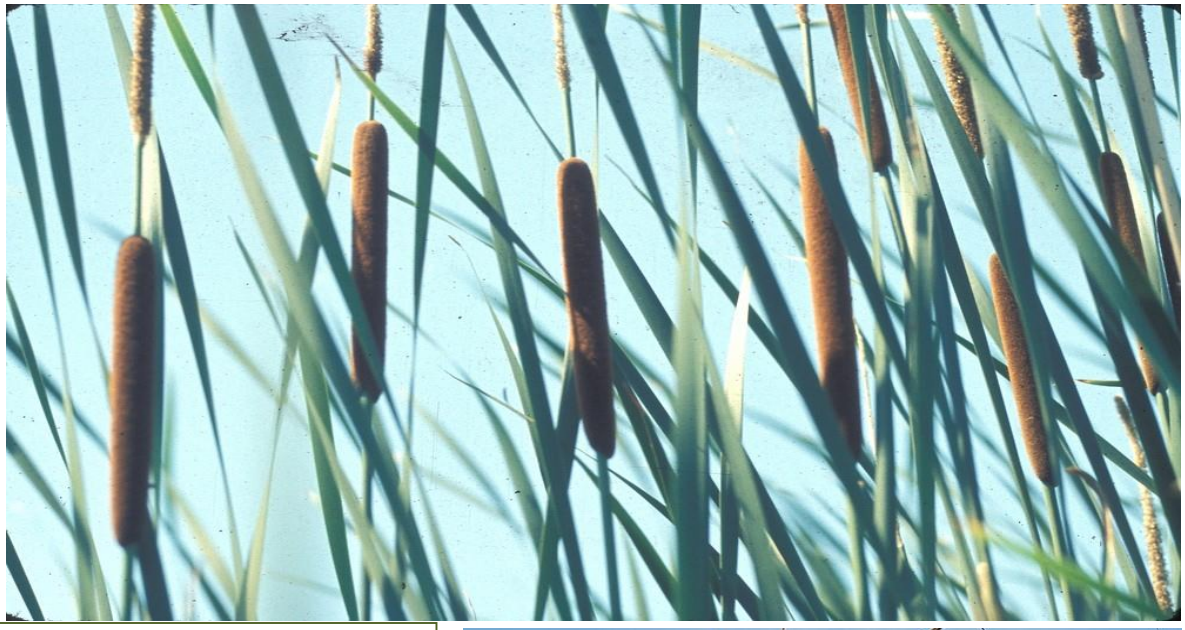
INVASIVE

Iris pseudacorus

(Yellow iris)

Emergent aquatic plant

INVASIVE



Typha latifolia

Typha angustifolia

(Cattails)

Emergent aquatic plant

NATIVE

Leaf sheath is located at the lower part of the stem and typically is wrapped tightly around the culm (stem).

Phragmites australis

(Phragmites)

Emergent aquatic/ terrestrial plant

INVASIVE

Invasive *Phragmites* have purple plumes w3hen going to seed.

Phragmites americanus

(American reed)

Emergent aquatic plant

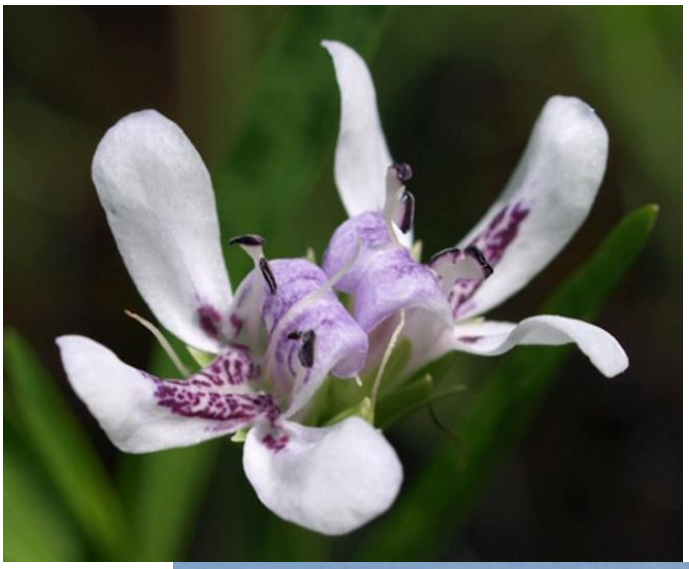
NATIVE

Justica americana

(American water-willow)

Emergent aquatic plant

NATIVE



References

A

Alternate-flowered water-milfoil

http://www.mass.gov/eea/docs/dfg/nhesp/species-and-conservation/nhfacts/myriophyllum-alterniflorum.pdf

American reed

https://gobotany.newenglandwild.org/species/phragmites/americanus/

American water-willow

https://gobotany.newenglandwild.org/species/justicia/americana/

Aquatic mosses

http://plants.usda.gov/core/profile?symbol=FOAN2

B

Brazilian waterweed

https://gobotany.newenglandwild.org/species/egeria/densa/

Brittle naiad

https://gobotany.newenglandwild.org/species/najas/minor/

Broadleaf pondweed

https://gobotany.newenglandwild.org/species/potamogeton/amplifolius/

C

Cattails

https://gobotany.newenglandwild.org/species/typha/angustifolia/

https://gobotany.newenglandwild.org/species/typha/latifolia/

Clasping-leaf pondweed

https://gobotany.newenglandwild.org/species/potamogeton/perfoliatus/

Common arrowhead

https://gobotany.newenglandwild.org/species/sagittaria/latifolia/

Common duckweed

https://gobotany.newenglandwild.org/species/lemna/minor/?pile=thalloid-aquatic

Common water-hyacinth

https://gobotany.newenglandwild.org/species/eichhornia/crassipes/

Coontail

https://gobotany.newenglandwild.org/species/ceratophyllum/demersum/

Curly-leaf pondweed

https://gobotany.newenglandwild.org/species/potamogeton/crispus/

D

Didymo

http://www.iucngisd.org/gisd/species.php?sc=775

E

Eel grass

https://gobotany.newenglandwild.org/species/zostera/marina/

Elodea

https://gobotany.newenglandwild.org/species/elodea/canadensis/

Eurasian water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/spicatum/

European frog-bit

https://gobotany.newenglandwild.org/species/hydrocharis/morsus-ranae/

F

Fanwort

https://gobotany.newenglandwild.org/species/cabomba/caroliniana/

Farwell's water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/farwellii/

Filamentous green algae

http://www.townofchapelhill.org/home/showdocument?id=28866

Floating pondweed

https://gobotany.newenglandwild.org/species/potamogeton/natans/

Fragrant waterlily

https://gobotany.newenglandwild.org/species/nymphaea/odorata/

G

Greater bladderwort

https://gobotany.newenglandwild.org/species/utricularia/vulgaris/

H

Hydrilla

https://gobotany.newenglandwild.org/species/hydrilla/verticillata/

I

J

K

L

Long-leaved pondweed

https://gobotany.newenglandwild.org/species/potamogeton/nodosus/

Low water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/humile/

M

N

Northern snail-seed pondweed

https://gobotany.newenglandwild.org/species/potamogeton/spirillus/

Northern water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/sibiricum/

O

P

Parrot feather

https://gobotany.newenglandwild.org/species/myriophyllum/aquaticum/

Phragmites

https://gobotany.newenglandwild.org/species/phragmites/australis/

Purple loosestrife

https://gobotany.newenglandwild.org/species/lythrum/salicaria/

Q

R

S

Slender naiad

https://gobotany.newenglandwild.org/species/najas/flexilis/

Slender pondweed

https://gobotany.newenglandwild.org/species/potamogeton/pusillus/

Southern naiad

https://gobotany.newenglandwild.org/species/najas/guadalupensis/

Stonewort

http://www.ecy.wa.gov/programs/wq/plants/plantid2/descriptions/cha.html

T

Thread-like naiad

https://gobotany.newenglandwild.org/species/najas/gracillima/

U

V

Variable-leaved water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/heterophyllum/

Variable water-milfoil hybrid

http://www.mainevlmp.org/mciap/herbarium/HybridWatermilfoil.php

Vernal water-starwort

https://gobotany.newenglandwild.org/species/callitriche/palustris/?pile=non-thalloid-aquatic

W

Water-shield

https://gobotany.newenglandwild.org/species/brasenia/schreberi/

Water chestnut

https://gobotany.newenglandwild.org/species/trapa/natans/

Water marigold

https://gobotany.newenglandwild.org/species/bidens/beckii/

White-stemmed pondweed

https://gobotany.newenglandwild.org/species/potamogeton/praelongus/

White water buttercup

https://gobotany.newenglandwild.org/species/ranunculus/aquatilis/

Whorled water-milfoil

https://gobotany.newenglandwild.org/species/myriophyllum/verticillatum/

X

Y

Yellow iris

https://gobotany.newenglandwild.org/species/iris/pseudacorus/

Yellow pond-lily

https://gobotany.newenglandwild.org/species/nuphar/variegata/?pile=non-thalloid-aquatic

Z