

2011 New York Sea Grant Aquatic Invasive Species Education Series

Native or Invasive?

Part III: Aquatic Plants

By New York Sea Grant Resource Educator Greg Chapman

This article is the last in a three-part series exploring the impacts of aquatic invasive species on the Lake Ontario ecosystem. Part I introduced the impact of invasive species; Part I introduced the impact of invasive species on the local ecosystem; Part II focused on native and invasive fishes.

Within the eastern Lake Ontario region, aquatic plants provide valuable food, habitat, and shelter for birds, fish, and insects. Invasive aquatic plants can cause problems when they outcompete native plants, and cover over areas, reducing the amount of open surface water available for natives to grow.

Many invasive species can quickly spread over large areas, reducing diversity and diminishing habitat for other organisms. Lilies and water chestnut provide an example of how native and invasive species compete with one another, and how this can alter the aquatic environment.

Many aquatic plants have round leaves that float upon the water; often these round leaves are commonly referred to as “lily pads.” Native plants with lily pads include the familiar white water lily (*Nymphaea odorata*), which has large many-petaled white flowers. A similar plant known as spatterdock or yellow pond lily (*Nuphar lutea*) has bulbous yellow flowers that rise above the water. Both provide habitat and shelter for amphibians and fish, and the insects they eat.

One invader is the water chestnut (*Trapa natans*), with small triangular toothed leaves growing together in a circular form known as a “rosette.” Its small, white, four-petaled flowers grow into black, four-pointed “nutlets” commonly encountered when they wash up along the shore. If stepped on, they can cause painful injury.

Water chestnut can form dense mats, interfering with boating, fishing and swimming. Local groups hold water chestnut “pulls” to reduce their spread. It is critical that these pulls take place before the seeds are released. The seeds may remain viable for up to 12 years.

Invasive submerged plants, such as Eurasian watermilfoil (*Myriophyllum spicatum*), can grow out of control, forming dense mats that interfere with recreation and have lesser value as habitat or food. Eurasian milfoil’s leaves are feather-like. Leaves are arranged in circular whorls where three to six leaves attach to the main stem at the same node. This plant does not retain its shape when pulled from the water.

Less recognizable are native submerged plants, often only seen tangled around a fishing lure or boat propeller, or felt when swimming. Native submerged plants, such as coon’s tail (*Ceratophyllum demersum*), are important food for waterfowl and are used by fish for shelter. Coon’s tail has numerous branched, bristle-like leaves radiating from a main stem. These bristles are densest near the tip of the plant, and the plant retains its shape when pulled from the water.

Growing along the water's edge and in shallower slow waters are a diverse groups of shrubs and plants that are important for wildlife include our native cattails. (There is also an invasive hybrid cattail found in the Lake Ontario region.) For example, the broadleaf cattail (*Typha latifolia*) provides habitat for muskrats, waterfowl and breeding fish. In some areas native cattails have been replaced by invasive species, including common reed (*Phragmites australis*), a tall grass-like plant with feathery seed heads, and purple loosestrife (*Lythrum salicaria*) with its bright purple spikes with numerous flowers. Both species are considered problematic due to the density of their growth, and because they do not provide the wildlife benefits of the plants they replace.

New York Sea Grant's Aquatic Invasive Species Web site: www.nyseagrant.org/ais and the NY Invasive Species Clearinghouse Web site: <http://nyis.info> provide more information about aquatic invasive plants and animals impacting the eastern Lake Ontario region.

If you spot what you think may be an invasive species, please contact St. Lawrence Eastern Lake Ontario (SLELO) Partnership for Regional Invasive Species Management (PRISM) Coordinator Rob Williams at 315-387-3600 x25, or at rwilliams@tnc.org.

New York Sea Grant is celebrating its 40th anniversary of "Bringing Science to the Shore" this year. Learn more at www.nyseagrant.org.