



## Chautauqua Current No. 8

Chautauqua Lake & Watershed Management Alliance, Inc.  
June 20, 2022



Invasive water chestnut plants are pictured in a canoe in Celoron after being pulled by volunteers from the Chadakoin River.

### **Search and Destroy**

*By Jay Young*

*Chautauqua Lake & Watershed Management Alliance*

There are a lot of different tools in the toolbox available to us when it comes to maintaining the health and usability of Chautauqua Lake. Even if we look at one specific issue —like invasive species—there are many different ways to approach each challenge. Understanding the different scales of the issues we face is an important first step. Problems of different scales require different solutions—you wouldn't want to try and fill a bathtub with an eye-dropper. Some invasive plant species have been in the lake for decades and are widespread and well-established. Others have only cropped up in small clusters here or there. Others still have not been seen here at all, and we hope to keep it that way. The species in those last two categories—those that have only been seen in small numbers or not at all—are the focus of many programs run throughout the year by different organizations. The primary goals of these groups are the monitoring, prevention, early detection and targeted removal of these plants.

With some differences, the invasive species we are talking about all present a similar set of problems. These plants (or animals or algae) evolved in their own native environments before being introduced to new areas outside of their native range. As a result, they have certain natural advantages and often a lack of natural checks (perhaps predators) that allow them to out-compete native species and negatively

impact new areas. Invasive species also tend to have advantages in how they reproduce, which allow them to spread rapidly and establish footholds that can be hard to break.

These species can all be placed at certain points along what is called an invasion curve, which we discussed in a previous *Chautauqua Current*. Species that are on the low end of the curve may not be present in an area, but lurking nearby. This is where prevention-based measures like watercraft stewards can be effective. Other species may be slightly higher on the curve, having been spotted in select areas after recent infestation. Early detection and rapid response actions are often effective at this stage in an invasion. As we move up and up the curve, species become better established and harder to remove completely. The costs and effort associated with management also increase as we move upwards. At this stage in the invasion curve, near the top, annual management actions are often deployed to minimize the negative impacts of these plants. Where a certain species sits on this curve is going to determine the methods that are better-suited to management. For example, two such species on the higher end of the curve in our lake are Eurasian watermilfoil and curly-leaf pondweed. These plants have become well-established over years and years, and are now targeted by annual management programs to help keep them in check. These two offer us a challenge that exists on a larger scale, while several other species sit lower on the curve and require a more subtle approach.

If we work our way to the bottom of the invasion curve, we are looking at species that have not yet been seen in the lake at all, but are still a concern. Hydrilla is an invasive plant that has caused problems in waterways throughout the Northeast, such as the Connecticut River, and has been spotted in Western New York. In this case, screening boat traffic using watercraft steward programs is an important way to prevent future problems. In 2022, the Chautauqua Lake Association is stationing stewards at public launches on the lake and elsewhere in Chautauqua County via its Watercraft Steward Program. Stewards meet with boaters entering the lake, check for any signs of invasive species, discuss prevention protocols, and catalogue important information. Watercraft stewards often make a point of telling boaters to clean, drain, and dry watercraft, as this is one of the best ways to prevent aquatic invasive species from spreading. The scale and cost of this type of work is much smaller than what would be needed for areas that have established populations of hydrilla.

Species slightly higher on the curve, those that have been recorded in the lake or its watershed in small amounts, are the focus of programs such as the Chautauqua Watershed Conservancy's Aquatic Invasive Species Early Detection Volunteer Taskforce. Water chestnut (different than the kind you eat) is a great example here. This plant can reproduce by releasing sharp nutlets which spread easily through flowing currents and waterfowl and can rapidly expand the plant's range. Early detection and removal programs have targeted water chestnut in the area since 2012, which involve volunteers searching for plants and removing them by hand. Joining CWC in these ventures have been the Roger Tory Peterson Institute as well as the Audubon Community Nature Center and the Western New York Partnership for Regional Invasive Species Management (PRISM). The invasive plant species brittle naiad, as well as the invasive algae species starry stonewort, have also been observed in the lake and are the focus of similar management programs. Again, addressing these species lower down in the curve with steward programs and rapid detection and management can save us a great deal of money, and ecological disruption, in the long run. There are similar examples that can be found on dry land as well, such as the invasive tree of heaven, which is also a target of CWC efforts along the Chadakoin River.

As you might expect, there are a lot of different organizations at the state and local levels working on the issue of invasive species—whether plants or animals. At the higher levels, you have the New York

State Invasive Species Council, which coordinates many of the programs needed to catalogue and respond to infestations. Detections are tracked statewide using the online iMapInvasives website, which allows volunteers to submit observations of invasive species. Each region's PRISM aids with local monitoring and prevention programs across specific areas of the state. Other organizations like the Alliance and our members aim to prioritize available funding and resources in order to manage species at both the larger and smaller scales. If you would like to report an invasive sighting, you can do so at [www.imapinvasives.org/](http://www.imapinvasives.org/). For more information on CWC's programs and volunteer opportunities, please contact Twan Leenders at [Twan@chautauquawatershed.org](mailto:Twan@chautauquawatershed.org).