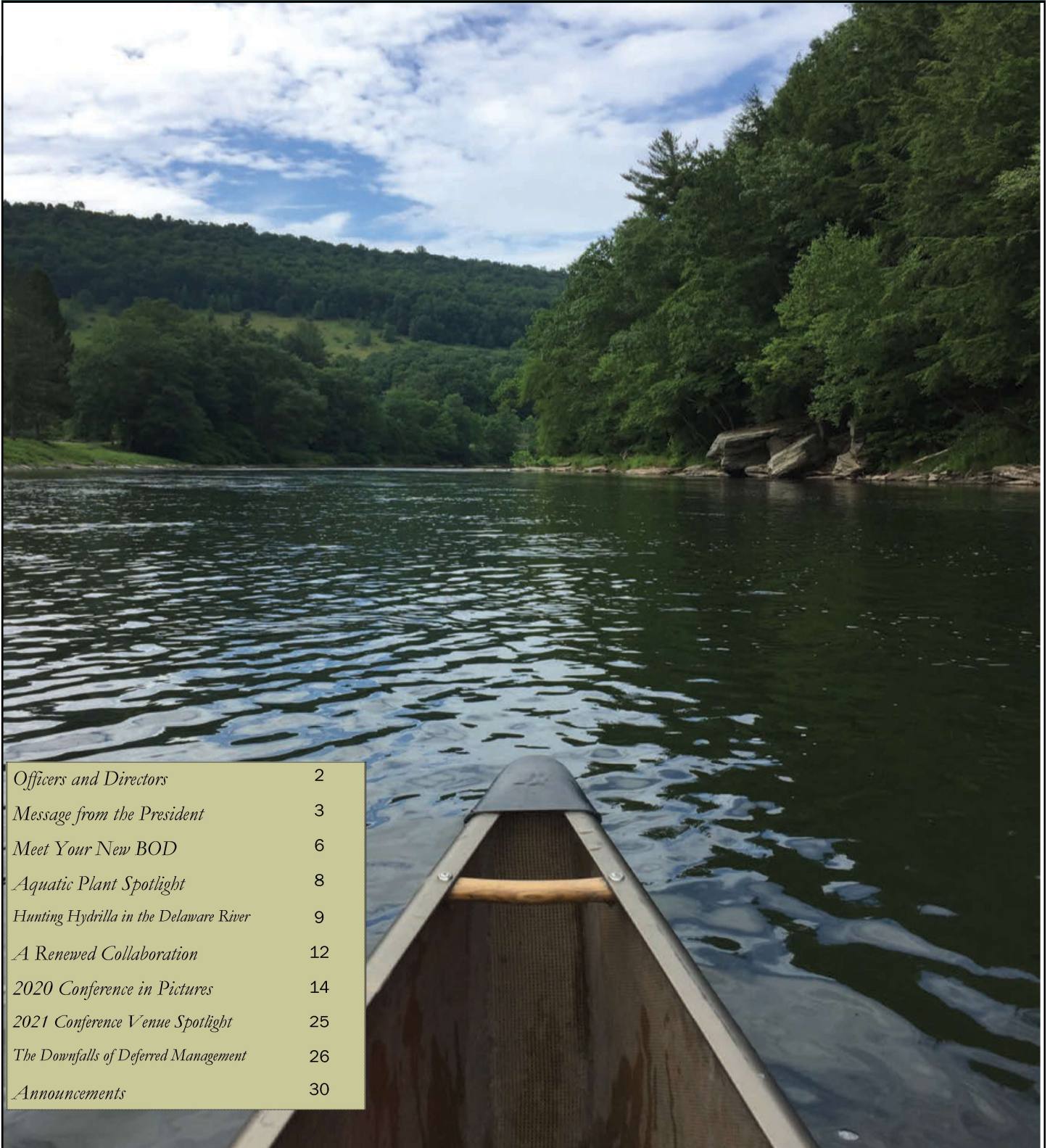


NOR'EASTER

A Newsletter of the Northeast Aquatic Plant Management Society

Volume 19, No. 1



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HUNTING HYDRILLA IN THE DELAWARE RIVER (NEW YORK)

Steven Pearson, New York State Department of Environmental Conservation

Across New York State, infestations of the aquatic invasive plant *Hydrilla verticillata* (hydrilla) are being managed with extensive monitoring and chemical control. Hydrilla is one of New York State's highest priority aquatic invasive species and reports of this species are taken very seriously by the New York State Department of Environmental Conservation (NYSDEC). In the late spring and early summer of 2019, we received numerous reports of hydrilla from the Delaware River around Hancock. These reports seemed credible and were supported by a dried plant fragment collected by the USFWS and a photo of a plant with whorled leaves with serrations. NYSDEC mobilized two members of our Aquatic Invasive Species Team to survey reported locations.

Initially we planned an ambitious field trip that would have us survey ~ 30 river-miles in two days: between Deposit and Hancock on the West branch of the Delaware River, between Fish's Eddy and Hancock on the East Branch, and between Callicoon and Narrowsburg on the main stem of the Delaware River. In a perfect world this could have been done in the allotted time, but we do not live in a perfect world.

The drive from Albany to Hancock was mostly uneventful other than the deafening whirl of the canoe straps in Cathy's ears. We later discovered that one should always leave a twist or two in the straps to prevent hearing loss. After parking one vehicle at the takeout in Hancock we drove the second vehicle to Deposit and launched on the West Branch of the Delaware River. Our survey technique was meandering with the flowing current while using visual searches, rake tosses of dense vegetative beds and suspicious plants, hand grabs of plants, and collection of floating fragments. This resulted in anchoring, wading and the occasional frantic paddle up stream (in between viewing bald eagles and many mergansers). The West Branch of the river is a series of pools and riffles that makes for some excellent trout fishing as evidenced by the many anglers casting fly-rods along its full length and the schools of fish we saw beneath us as we surveyed the aquatic plants. Along this survey transect we found some dense beds of *Elodea canadensis* and *E. nuttallii* which easily could have been mistaken for the hydrilla that had been reported. Other native species we found included pondweeds and *Ranunculus* in flower! On the invasive species front we documented *Potamogeton crispus* (curly-leaf pondweed) throughout the entire length of the survey. The 10 river-mile survey took us to mid-afternoon and thunderstorms were threatening the rest of the day.

On day two, we got off to an early start. As we headed to the takeout from our motel, we saw an animal slowly moving in front of us. It was a porcupine sauntering across the



Elodea spp. from the Delaware River with variable leaf count per whorl. This plant had 2, 3 and 4 leaves per whorl. (Photo Courtesy of NYSDEC).

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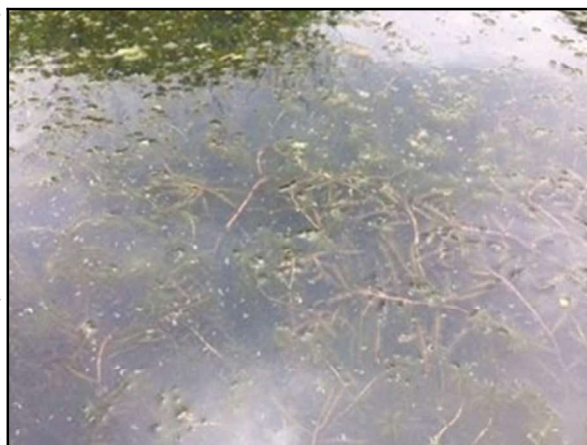
“Hydrilla is one of New York State’s highest priority aquatic invasive species and reports of this species are taken very seriously by the NYSDEC.”

To the Right: A dense bed of Elodea spp. in the Delaware River. (Photo Courtesy of NYSDEC).

Below: A map depicting the two survey areas of the Delaware River in 2019. (Map Courtesy of NYSDEC).

HUNTING HYDRILLA IN THE DELAWARE RIVER (CONTINUED)

road! After recovering from our shock, we drove to the most upstream report of hydrilla near Corbett which is over 20 river miles from Hancock, and surveyed by rake toss from the shoreline where we discovered a dense bed of elodea. We continued driving downstream towards Fish’s Eddy stopping at access points along the way to perform additional shore-based surveys which yielded no hydrilla.

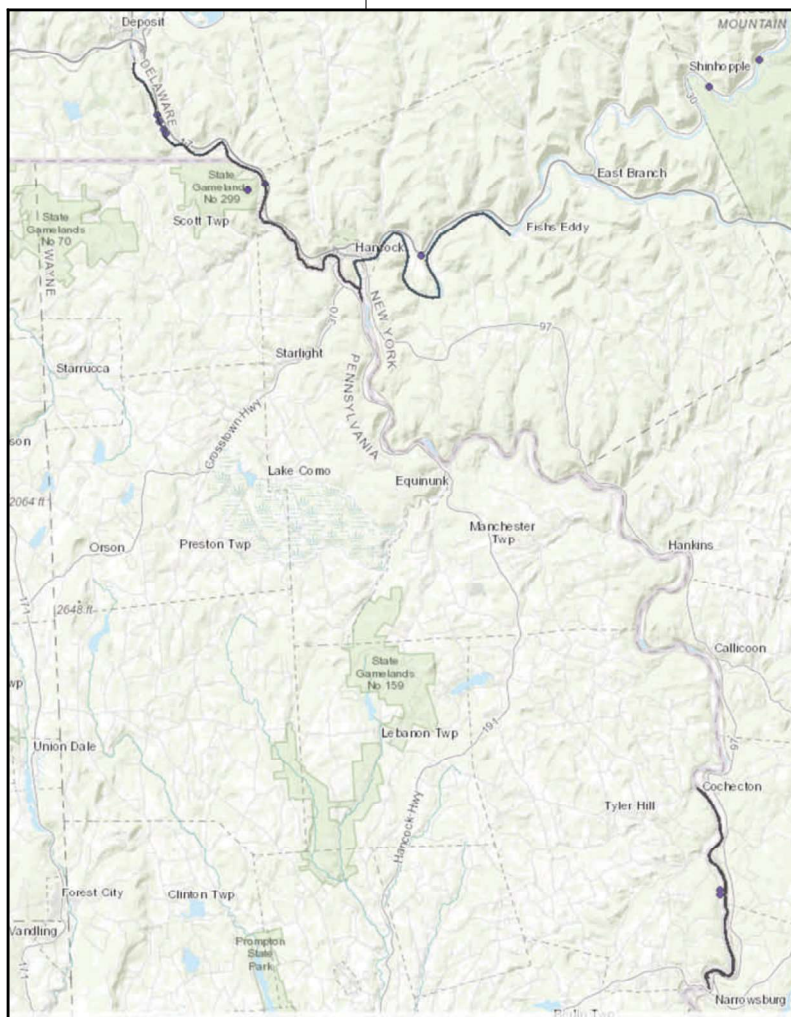


When we launched the canoe at Fish’s Eddy and travelled downstream along the East Branch, we found the river here was slower moving, deeper, and had fewer riffles. We had hopes of completing the third section of river that afternoon; however, we found a plant that we could not positively identify as *Elodea*. and was unlike any hydrilla we had seen before. The leaves numbered from two to six per

whorl. We were stumped. We intensively surveyed the area we were in, as well as up and down stream. We spent about 1.5 hours in this area surveying and inspecting our rake tosses. We could not confirm that this plant was hydrilla, but were not certain it was elodea either. We took samples and the waypoint and then continued our way downstream. We did not find any other beds like that one, but we continued to find elodea with 2-4 leaves per whorl.

As we approached Hancock, we began to hear a loud noise and it soon became apparent that we were about to navigate some unnamed rapids. We made it through, with elevated heart rates and upright, even though water had come over the bow. We finished the survey passing through Hancock to the confluence with the West Branch. Unable to complete the last survey, we returned to Albany with the possible hydrilla specimen for further ID.

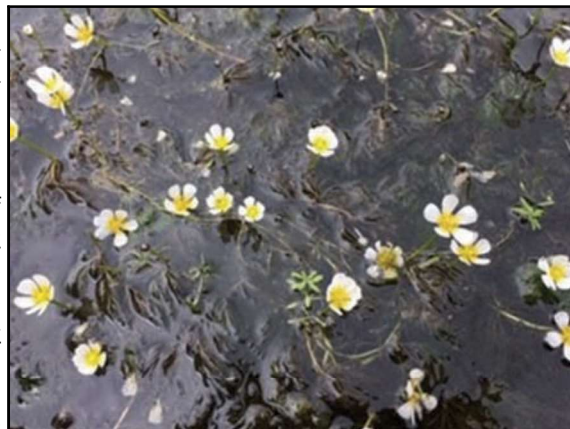
Back in Albany, we shared the confusing plant specimen with Steve Young, the NY State Botanist. Steve worked through plant guides using visible features and under the microscope for less obvious features and identified the species as *Elodea canadensis*. On that first trip we learned that *Elodea* species can be quite variable in form and leaf number.



HUNTING HYDRILLA IN THE DELAWARE RIVER (CONTINUED)

“We learned two lessons during our field adventures: Elodea is extremely variable with serrated leaf margins that are not visible to the naked eye and don’t leave home without your Krazy Glue®!”

We returned to complete the last survey along the main stem of the Delaware River between Callicoon and Narrowsburg because one of the most credible reports of hydrilla from the USFWS was from this section of river, near Milanville, PA and just downstream of Skinners Falls. The weather was again threatening, so we shortened the survey length and put in at Cohecton instead of Callicoon. We had found that part of the road to the Callicoon access had washed out and our trusty sedans did not have enough clearance to get there. The river was similar to the West Branch with riffles and pools, but shallower, causing occasional lost time as we had to walk/drag the canoe from time to time. Given our last experience with rapids we opted to portage around Skinners Falls and surveyed the pools along the edge of the falls. As we approached the reported hydrilla location downstream of Skinners Falls we surveyed between both banks more intensively and found little aquatic vegetation in this area and no hydrilla.



As we reached the takeout in Narrowsburg the thunderstorms and heavy rain approached. Over the 26 miles of river surveyed, we had not discovered any signs of hydrilla and at the specific locations where we had reports, we had only found elodea. All that was left to do was make it back to Albany. By the time the vehicle was loaded up, we were soaked. Somehow the windshield wiper had gotten stuck in a

canoe strap and when we started the car it snapped right off. Luckily, we were able to collect all the pieces, buy some Krazy Glue®, and glue them back together. On the way back we drove through torrential rains in the Catskills and the wiper repair held! We learned two lessons during our field adventures: Elodea is extremely variable with serrated leaf margins that are not visible to the naked eye and don’t leave home without your Krazy Glue!



Above, Right: A dense bed of *Ranunculus* spp. in flower. (Photo Courtesy of NYSDEC).

To the Left: A NYSDEC survey vessel located just above Skinner's Falls (Photo Courtesy of NYSDEC).