

Town website newsletter-Would you put this in the Lake Adk section? Thank you, Lenore

Lenore and Jack Reber <myquats@gmail.com>

Wed 10/7/2020 11:26 AM

To: Julie Clawson <iltclerk@hotmail.com>

2020 Lake Adirondack Plant Survey

8/13/20

Glenn Sullivan (Solitude Lake Management), Lenny Croote (Hamilton Cty SWCD) Water clarity - 3 meters

Sampling methodology

Sampling methods followed the methodology outlined in the 2010 Aquatic Plant Survey Report authored by Scott Kishbaugh (SK) of the NYSDEC, with some modifications. At each sample plot (1-4), one rake toss was thrown. At each transect (Plots 5-12), one rake toss was thrown close to the shore, and one rake toss was thrown further out. Two rake tosses at each site was not deemed necessary since the lake bottom was clearly visible, and the general lack of vegetation obvious.

Plants were counted if they displayed signs of color or vigor, and could be identified to Genus at least. This differs slightly from the 2017 sampling effort, where submersed plants were counted if a reasonable assumption could be made at their identity. (SK, email comm.) Multiple sites contained remnant pieces of an unidentified pondweed species, but these fragments were too small and colorless and could not be identified. Floating plants were generally not collected by rake toss but were estimated visually. Shoreline emergent plants were not tabulated, as all sites had sufficient shoreline emergent vegetation.










Sampling results are detailed on the next page. Spatterdock (Nuphar) was the only plant found with any frequency. Many areas of the shoreline supported spatterdock colonies, generally in good condition. These were most prevalent in the rear portion of the lake's eastern cove, and could be considered common, and bordering on nuisance in this area. The only other plant found at greater than Trace density in any sample area was water moss (Fontinalis). All other plants were essentially single plants. Plant densities are represented in the table as follows:



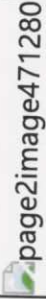


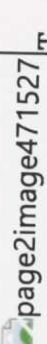



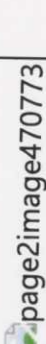

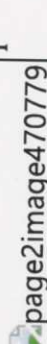

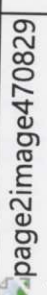
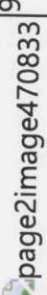
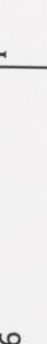
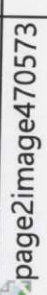

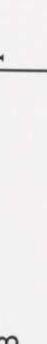
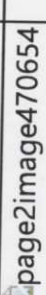


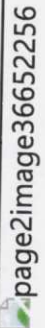
Densities - T (trace) - single to fingerful of plants S (sparse) - handful

M (moderate) - rakeful

D (dense) - difficult to bring into boat O (Observed only)

Sampling results

Plot	Type	Nuphar sp., Spatterdock Yellow water lily	Nymphaea sp., White water lily	Utricularia vulgaris, Common bladderwort	Fontinalis sp., Water moss	Total Plant Density
1	Point	O		 40  24	 92	S
2	Point	O		 56  40	 08	M
3	Point			 84  92	 68	----

4	Point			 12	 72	 64	
				 56			
5	Transect 0			T		S	
6	Transect	T		 92	 04	T	
				 20			
				 48			
7	Transect 0	T		 32	 76	T	
				 08	 52		
				 92			
8	Transect 0				S	S	
				 44			
9	Transect	T		 28	 96	T	
				 44			
10	Transect T	T		 28	 88	T	
11	Transect	T				T	
				 08	 36	T	
12	Transect	T		 92			
							

Species notes:

Spatterdock (Nuphar sp.) yellow water lily. These plants were most abundant in the lake, and were found in patches along many areas of the shoreline, and throughout the back side of the eastern cove of the lake. They were present in an estimated 10- 15% of the overall lake, typically in sparse density, meaning that multiple plants often occurred together, but they did not pose an impediment to navigation even at their greatest density in the eastern cove. Most plants appeared healthy, while grazing impacts could be seen on some leaves.

White Water Lily (Nymphaea sp.) White water lily was only found on rake tosses as single, relatively young plants.

Water moss (Fontinalis) – Water moss was found along the southwest shoreline of the lake at point 8. This transects were deeper than those found along the north and east shoreline. Although not observed, it is expected that water moss did occur in other unsurveyed areas of the southern cove of the lake in waters greater than 1 meter.

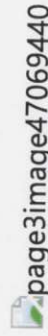
Common bladderwort (Utricularia vulgaris) – Only a single common bladderwort plant was found, this in the easternmost cove.

Comments

From 2005 – 2010, from 18-26 plants species were recorded during the annual plant survey, 26 being found in 2010. These surveys routinely found multiple species of submersed pondweeds (*Potamogeton*), which were absent from the 2020 survey. The 2018 survey results show a reduction of at least 50% in species richness from 2010, and there was a further reduction in 2020. Any observer familiar with Lake Adirondack can attest to the overall lack of aquatic plant abundance, particularly in shallow areas where the bottom is easily visible.

The perception that plant coverage is beginning to rebound from the last grass carp stocking is not supported by the results of the survey. Instead this reflects the appearance of yellow water lilies, particularly in the east cove of the lake, which are undesirable forage for grass carp. When viewed from the lake or shoreline, water lilies appear abundant in this cove, even to the point of nuisance. While the complete lack of submersed plants needs to be reversed, attention to the prevalence of lilies in the east cove of the lake can't be dismissed.

The goal of the 2018 & 2019 grass carp harvests was to reduce the grass carp population in the lake by approximately 20% (GS). The harvests successfully removed 30+ fish. Based on the lack of existing plant biomass, particularly



submersed aquatic plants, the grass carp population continues to forage on lake plants. Weed Advisory Committee records document a permit authorizing the stocking of a maximum of 1500 grass carp in summer, 2012. Assuming this was the last carp stocking, the youngest carp in the lake should be 8 years old. Carp can regularly live for 10-12 years.

It is expected that plant coverage in 2021 will continue to be minimal, and less than desirable for general lake health and support of a well-balanced fish community. Further efforts should be considered to thin the lake's grass carp population.

The following are some additional comments regarding the lake's condition and environment.

East cove waterlilies

Yellow water lilies continue to increase in the easternmost cove of the lake. At this point, they don't actually impede boat movement, but they do give the appearance of substantial coverage of the water surface. In general, water lilies benefit a lake through shading of the water column and providing fish habitat. At some point their density begins to outweigh these benefits, and management is justified. Water lilies in the east cove appear to be reaching that point. Since grass carp have not effectively managed these plants, an alternative solution may be warranted. A Jensen Weed Mower (www.lakemower.com) provides a cost-effective and simple potential solution. This is a sickle bar attachment mounted on a post and operated by an electric mower. It easily attaches to the front of a small aluminum boat. The unit has no collection capability, but instead just cuts off aquatic plants at whatever height the sickle bar is set at. This may be a good solution for thinning the east cove water lily population if desired.

Shoreline

Shoreline plants were not recorded as part of the survey. This is not to suggest that they lack importance in the aquatic ecosystem. Actually, shoreline plants provide valuable habitat, erosion control and nutrient management from runoff. Most of the Lake Adirondack shoreline supports a healthy density and diversity of shoreline emergent plants, which should be encouraged. However, on the north shoreline, two adjacent home shorelines have replaced natural vegetation with stone rip rap. It is unclear if this is permitted by NYSDEC, but nevertheless it should be strongly discouraged. Rip rap provides excellent erosion protection in wave-buffered shorelines of larger waterbodies. Lake Adirondack's size and shape don't typically create waves that require hardened shorelines. Instead, hardened shorelines in shallow waterbodies tend to increase sediment disturbance by rebounding waves. Softer erosion protection should be considered, such as native shoreline plants (Burreed, Pickerelweed), or a combination of coir logs and plants.


Purple loosestrife

Purple loosestrife is a wetland invasive plant capable of developing large colonies and crowding out native plant diversity. Purple loosestrife plants have been present

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in the bog area for many years, and have been periodically managed by volunteers. An increase in purple loosestrife was noticed during this season's plant survey. Small clusters of plants were seen in the bog area, as well as along other sections of the shoreline. If possible, these plants should be cut, bagged and disposed of as soon as possible to prevent seed distribution.

Respectfully submitted, Glenn P. Sullivan, CLM

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