

Sep 27, 2022

Spofford Lake Association
 c/o Valerie Starbuck
starbuckjv@gmail.com

Re: 2022 Vegetation Survey Report for Spofford Lake, Chesterfield, NH

An annual vegetation survey of the Spofford Lake littoral zone was conducted on September 9, 2022 by project manager, Emily Vulgamore and aquatic biologist, Kristen Veinoette. The SLA has annually contracted the survey as a proactive effort against the establishment of invasive species within the lake, especially variable milfoil (*Myriophyllum heterophyllum*), Eurasian watermilfoil (*Myriophyllum spicatum*), and fanwort (*Cabomba caroliniana*), due to their presence in nearby New Hampshire waterbodies. Aquatic plant growth within the littoral zone was located and identified, with specific attention given towards the presence of any noxious, exotic aquatic plant species.

The start of the survey was cool and foggy, but quickly cleared into a sunny, partly cloudy day. The entire littoral area of the lake was systematically toured for changes in aquatic vegetation and any new growth. A similar route has been followed since 2012, where visual plant identification was performed with the use of polarized lenses and further aided by a high-resolution Lowrance depth finder or underwater camera, where necessary. Plant specimens were collected, as necessary, with a throw-rake to confirm species identification.

At the time of the survey, composition and distribution of vegetation was consistent with previously documented assemblages (Table 1).

Table 1: Aquatic Vegetation Species Present

Common Name	Scientific Name
Watershield	<i>Brasenia schreberi</i>
Spikerush	<i>Eleocharis</i> sp. likely <i>E. acicularis</i>
Waterweed	<i>Elodea</i> spp.
Pipewort	<i>Eriocaulon aquaticum</i>
Quillwort	<i>Isoetes</i> sp.
Bladderwort	<i>Utricularia</i> spp.
Slender naiad	<i>Najas flexilis</i>
Large-leaf Pondweed	<i>Potamogeton amplifolius</i>

Variable-leaf Pondweed	<i>Potamogeton gramineus</i>
Ribbon-leaf Pondweed	<i>Potamogeton epihydrus</i>
Clasping-leaf pondweed	<i>Potamogeton perfoliatus</i>
Robbin's Pondweed	<i>Potamogeton robbinsii</i>
Spiral-fruited Pondweed	<i>Potamogeton spirillus</i>
Floating bur-reed	<i>Sparganium fluctuans</i>
Tapegrass	<i>Vallisneria sp. likely V. Americana</i>
Stonewort	<i>Nitella spp.</i>

As with previous years, pipewort was the dominant species within the shallower, sandy areas (<8ft water), with scattered areas of slender naiad, quillwort, and spikerush. With increase of depth and organic material accumulation, Robbin's pondweed became dominant, along with patches of large-leaf pondweed, variable-leaf pondweed, and waterweed. The littoral zone appeared to end at a maximum depth of 15-20 feet, where trace amounts of Robbin's pondweed, stonewort, and slender naiad were documented. These are common deep-water species that are great habitat for the deep, cold water fish species.

Large-leaf pondweed and variable-leaf pondweed were typically observed in isolated moderate density patches that were widespread throughout the littoral area. Patches of tapegrass were noted directly near to the boat launch, as well as within the North Shore Road cove (Partridge Brook inlet).

Similar to 2021, the area near the boat launch and the Partridge Brook Inlet held many of the species listed in Table 1. To the left of the launch supported more Robbin's pondweed and large-leaf pondweed growth from organic deposition over rocky and sandy sediment.

Based on the 2022 survey, the aquatic plant assemblage in Spofford Lake appears unchanged relative to previous survey years. No exotic aquatic species were observed during the survey – undoubtedly due to the commitment of SLA and their volunteers.

SOLitude commends SLA for maintaining a Weed Watcher program, and highly recommends that SLA continue its ongoing efforts to prevent introduction of any non-native aquatic plant species. We also recommend that SLA continue to have the lake professionally surveyed annually or biannually to confirm observations from the volunteers and monitors. Proactive monitoring throughout the growing season and identification of questionable species are key to initiating a first response.

If you have any questions or would like to discuss anything further, please feel free to contact us.