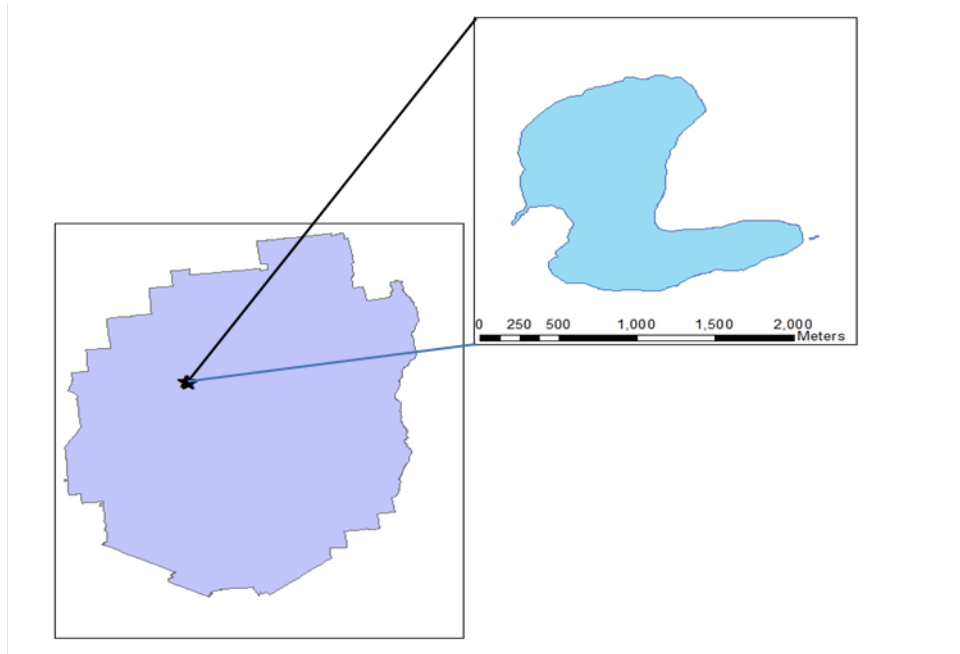


Horseshoe Lake Aquatic Plant Survey 2013



Map 1: Location of Horseshoe Lake within the Adirondack Park.

Horseshoe Lake is located in the Town of Piercefield, St. Lawrence County, New York (Map 1). This 426 acre lake was accessed through the use of a canoe access point located adjacent to Route 421.

An aquatic plant survey was conducted at Horseshoe Lake on 13 June 2013. Aquatic plants were relatively abundant in this water body, with 9 aquatic plant beds comprising 18.1 acres of this 426 acre lake (Map 2). The invasive aquatic plant, variable-leaf milfoil, was found in Horseshoe Lake. Variable-leaf milfoil was present in 6 of the 9 plant beds covering about 17 acres, and in abundances ranging from rare (<5%) to common (26-50%) (Table 1). The most common species in Horseshoe Lake were Common Bladderwort (*Utricularia vulgaris*), Spatterdock (*Nuphar variegata*), White waterlily (*Nymphaea odorata*), and Large-leaf pondweed (*Potamogeton amplifolius*) (Table 1).

Of the 54 rake tosses deployed throughout the littoral zone of the lake, 23 had plants recovered (Map 3). Purple Bladderwort (*Utricularia purpurea*) and Slender Watermilfoil (*Myriophyllum tenellum*) were species brought up on the rakes that were not detected during the surface survey of the lake (Table 2).

Table 1: Abundance and area of aquatic plant beds in Horseshoe Lake. Refer to Map 2 for bed locations. Abundance key: 1=RARE (<5%), 2=OCCASIONAL(6-15%), 3=PRESENT(16-25%), 4=COMMON(26-50%), 5=ABUNDANT(>50%). Species codes are defined below.

Bed #	BRSC	POAM	POEP	NYOD	SPSP	NUVA	UTVA	MYHE	SAGR	PONA	POOA	ERSP	LODO	ELSP	MYVE	Acres
1	3	3		1	1	2			1							1.39
2	4	3	1	2	1	2	2	1	2			3	2	1		6.84
3								4							1	0.08
4				3		1	1	1		2						0.34
5	4	3		3	1	1	1	1	2	2						5.52
6		3		1	1	2	1	3			2					2.86
7					1	2										0.23
8					1	3	1									0.68
9		1		1		1										0.14

<u>Code</u>	<u>Common name (scientific name)</u>
BRSC	Water Shield (<i>Brasenia schreberi</i>)
POAM	Large-leaf pondweed (<i>Potamogeton amplifolius</i>)
POEP	Ribbon-leaf Pondweed (<i>Potamogeton epihydrus</i>)
NYOD	White waterlily (<i>Nymphaea odorata</i>)
SPSP	Bur-reed (<i>Sparganium spp.</i>)
NUVA	Spatterdock (<i>Nuphar variegata</i>)
UTVA	Common Bladderwort (<i>Utricularia vulgaris</i>)
MYHE	Variable-leafed Watermilfoil (<i>Myriophyllum heterophyllum</i>)
SAGR	Grassy Arrowhead (<i>Sagittaria spp.</i>)
PONA	Floating Pondweed (<i>Potamogeton natans</i>)
POOA	Oakes' Pondweed (<i>Potamogeton oakesianus</i>)
ERSP	Pipewort (<i>Eriocaulon spp.</i>)
LODO	Water Lobelia (<i>Lobelia dortmanna</i>)
ELSP	Hairgrass (<i>Eleocharis spp.</i>)
MYVE	Whorl-leaf Watermilfoil (<i>Myriophyllum verticillatum</i>)

Table 2: Species present on the rake, abundance, and depth at each of the rake toss locations at Horseshoe Lake. Refer to Map 3 for rake toss locations. Abundance key: 1=RARE(<5%), 2=OCCAISIONAL(6-15%), 3=PRESENT(16-25%), 4=COMMON(26-50%), 5=ABUNDANT(>50%).

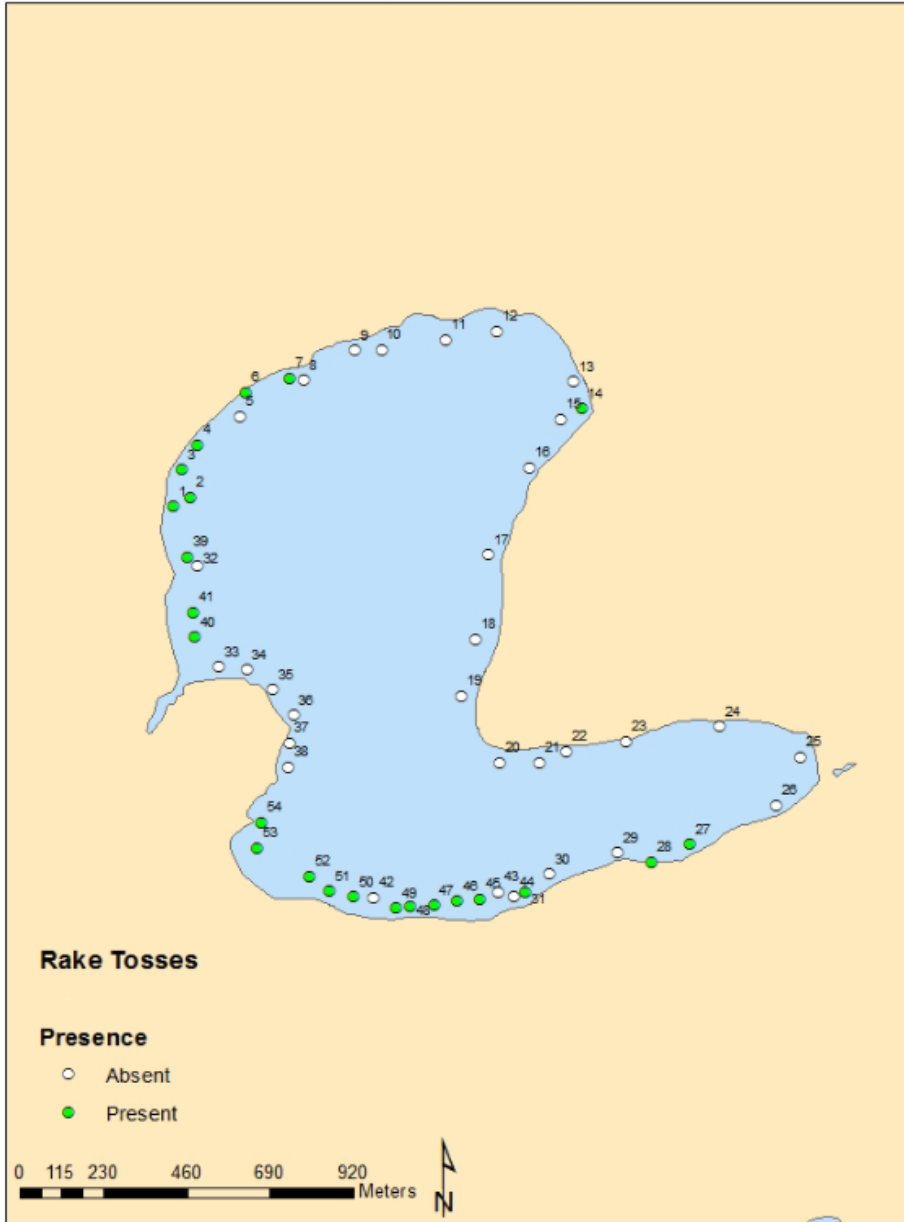
Rake Toss #	White waterlily (<i>Nymphaea ordata</i>)	Common Bladderwort (<i>Utricularia vulgaris</i>)	Variable-leafed Watermilfoil (<i>Myriophyllum heterophyllum</i>)	Grassy Arrowhead (<i>Sagittaria spp.</i>)	Slender Watermilfoil (<i>Myriophyllum tenellum</i>)	Hairgrass (<i>Eleocharis spp.</i>)	Whorl-leaf Watermilfoil (<i>Myriophyllum verticillatum</i>)	Purple Bladderwort (<i>Utricularia purpurea</i>)	Depth (ft)
1		2							5
2		2							11
3			3						5
4		3							6
6		3							5
7			4						9
14				1					4
27		1							5
28				1					3
31		1							6
39	1							2	7
40		2					1		9
41		4	1						7
45		1			1			1	5
46		1							5
47						1			5
48						1			8
49		1				1			6
50		4							6
51		2							5
52		3							5
53		1						1	6
54		1						1	5

Horseshoe Lake



Map 2: Locations of the aquatic plant beds detected in Horseshoe Lake during the surface survey on 13 June 2013. Data for plants beds can be found on Table 1.

Horseshoe Lake



Map 3: Rake toss locations on Horseshoe Lake on 13 June 2013. Open circles represent locations where no plants were detected, closed circles represent locations where plants were encountered on the rake. Data for rakes tosses can be found on Table 2.