Watercraft Steward Cumulative Report

Dates: May 5-August 14, 2017

Locations: Freeman's Bridge,

Lock 7,

Round Lake

NY

Steward: Elizabeth Sammons

General Observations

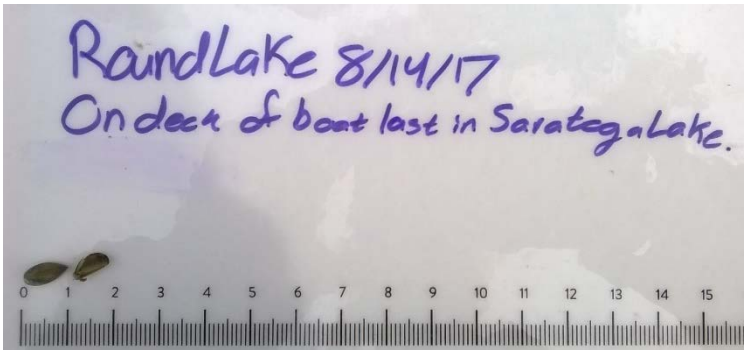
All three locations are unique in the number and awareness the boaters have of aquatic invasive species. Generally speaking, people were receptive of the inspections and many people have encountered stewards before and already know what the inspection entails. I also noticed that many of the boaters who had never seen a launch steward before and had little to no knowledge of AIS, but frequent one of my sites began to take their own steps to prevent the spread of AIS. They also tended to be the boaters who ask the most questions and took outreach material from my table.

I saw more boats and boaters at the Round Lake launch site than Freeman's Bridge or Lock 7. Round Lake is also tends to have more kayaks, whereas the other sites tend to have more motorized boats. However, it should be noted that I have been at the Round Lake launch more than the other two because I switched from Freeman's Bridge to Lock 7. Another thing the data doesn't show is that although Lock 7 tends to get less boats than Round Lake, the Mohawk-Hudson bikeway passes through the launch site, which brings many bikers, walkers and runners. The lock itself also attracts many people, making it an ideal location for education and outreach.

Overall, I found my experiences during this internship very valuable. I met some interesting people and learned a lot from them. From training at Paul Smith's and working closely with aquatic plants, I gained useful plant identification skills. It's hard to complain when I got to spend my summer outside next to the water.

Highlights

Many interesting things have happened over the course of the summer, and I had several intriguing conversations. The most common comment I got from the boaters was that the 'weeds' are worse this year than in the past and (in the case of Round Lake) seems to be growing further out into the lake. I've found it very interesting to listen to people who have been going to the locations for all or most of their lives and have seen the changes in that location. Most of them recount a time before AIS's were a problem and wish that something more could be done for their favorite body of water. Their stories were also informative, for example one boater who has lived on the Mohawk for most of his life told me that he noticed a decline in zebra mussels (*Dreissena polymorpha*). He also claims that the zebra mussels themselves seem to be smaller than they were in the past. I think it would be a good research project to investigate these claims.



Picture 1. Zebra mussels found entering Round Lake 8/14/17

On one occasion, a boater who knew very little about AIS and had recently been in Saratoga Lake had water chestnuts (*Trapa natans*) stuck to the carpet of his trailer. We were able to remove them (about two handfuls) resulting in a win-win situation, I prevented more water chestnut from entering the

lake, and the boater was still able to enjoy a day on the water. As a bonus the boater became more aware of the importance of inspecting and cleaning his boat. Another boater who had been inspected at Saratoga Lake, and cleaned his boat (washed hull and drained bilge) still had two small zebra mussels on the deck of his boat (Picture 1). We both carefully checked the entire boat and all of their fishing equipment, but did not find any more zebra mussels. This was a good lesson for the both of us on how important it is to be thorough and check the boat more than once and look in unexpected places.

Picture 2. Water chestnut at Lock 7 with full bag of chestnut removed from launch area 7/28/17

Lock 7 was a fun location not only because of the bike trail and the lock, but because there is such a large amount of water chestnut growing at the site. It makes a great example when people ask what damage is done by invasives, since it has clearly taken over the little bay the launch is in (Picture 2). It is also helpful to be able to have an endless supply of samples to show people (many find the actual nut very interesting), and they sometimes have zebra mussels attached to them (Picture 3).

Picture 3. Water chestnut with zebra mussels 6/25/17

Data

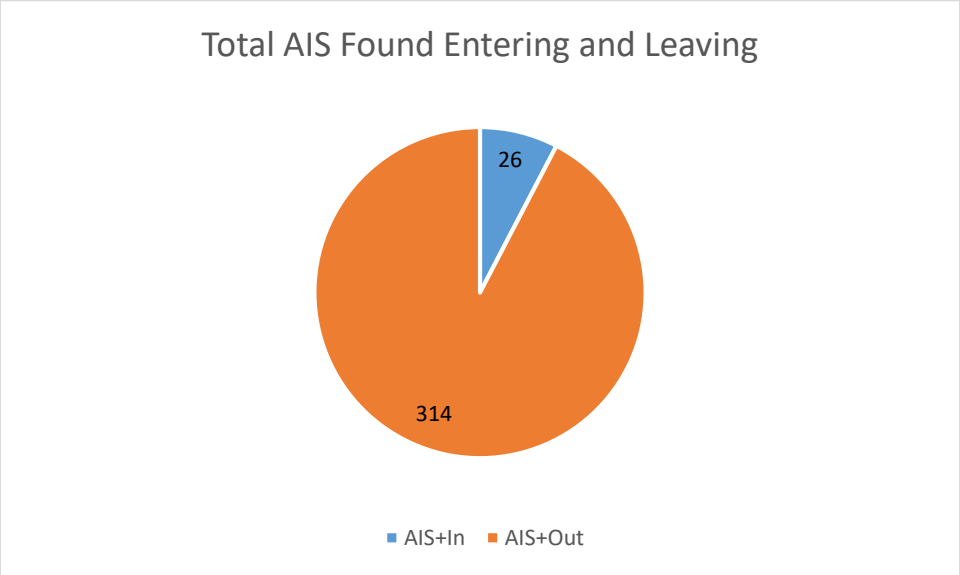
The data has been broken up into two parts, the first is the combined total data for all three locations, and the other is the cumulative data for each respective location. In total, I filled out 1239 surveys of 1785 boats and 2308 boaters. The data shows that the most common boats are kayaks (1007) and motorboats (413). The most common invasive species found was Eurasian watermilfoil (*Myriophyllum spicatum*) (271 plants). Note that this could be skewed by the Round Lake data. This location has a large amount of milfoil at and around the launch itself, so almost every boat the retrieves from there picks up some.

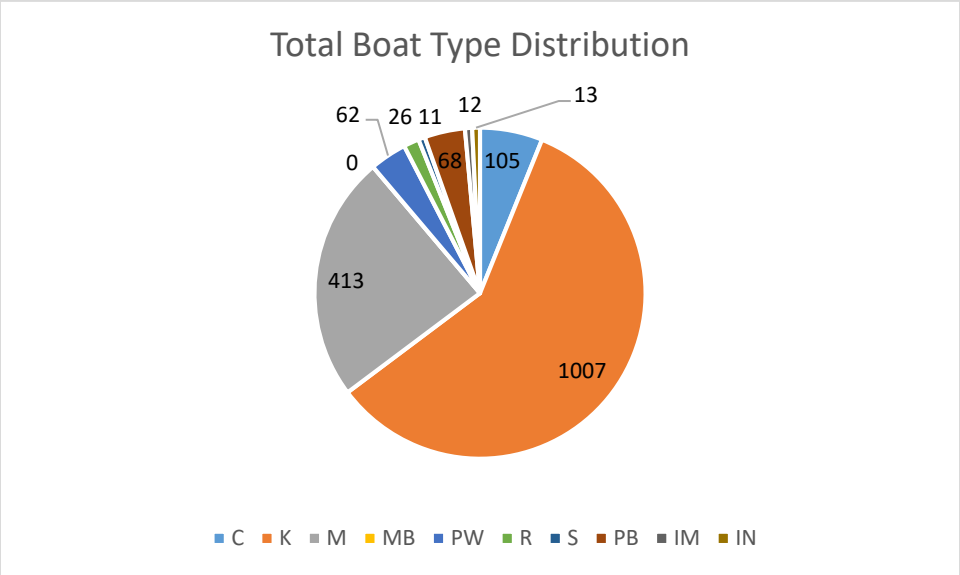
The “other” category for species found includes: algae, coontail (*Ceratophyllum demersum*), duckweed (*Lemma minor*), water buttercup (*Ranunculus tricophyllus*), a small snail (most likely native), invasive brittle naiad (*Najas minor*), and a toad.

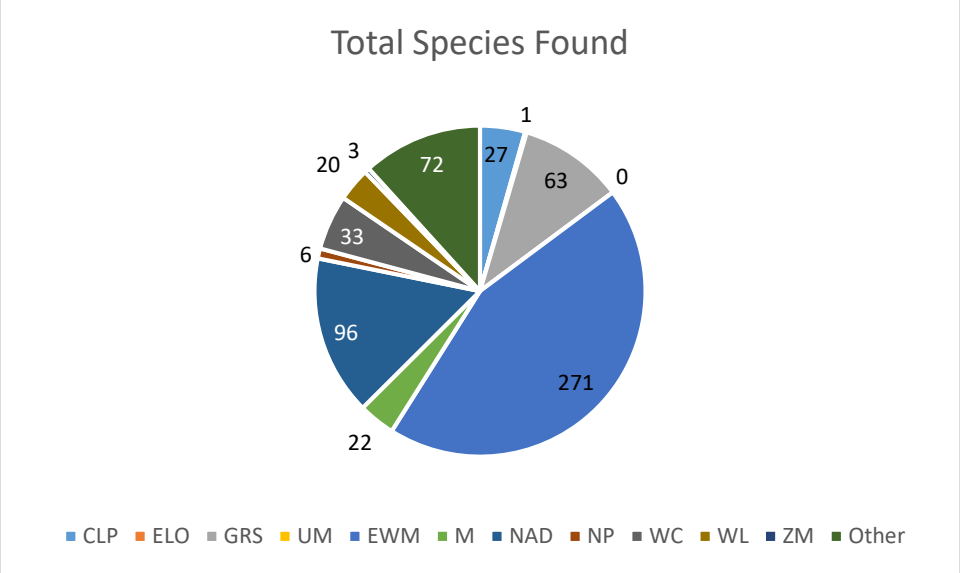
Key (items seen are highlighted)

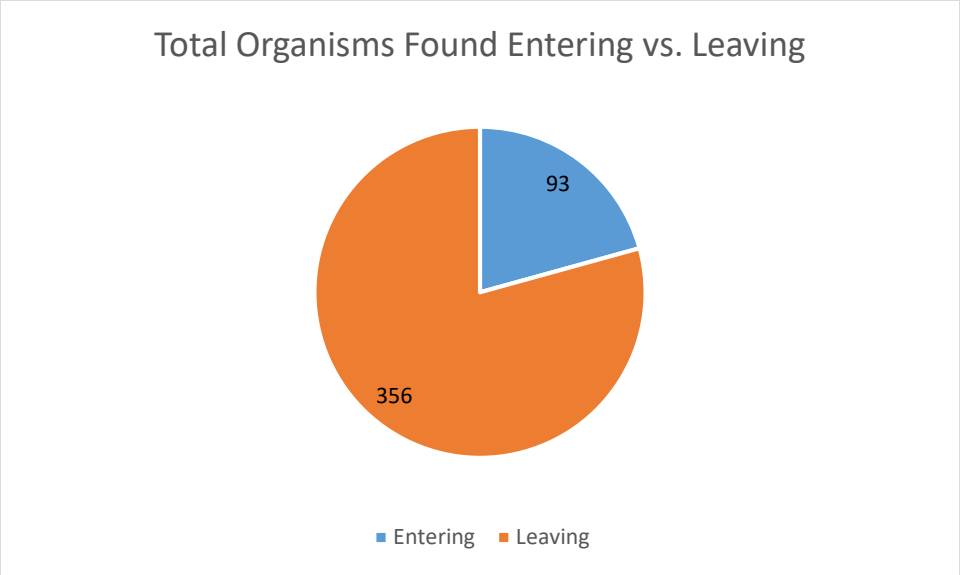
	Boat Type		AIS
C	Canoe	CLP	Curly-leaf Pondweed
K	Kayak	ELO	Elodea *native
M	Motorboat	GRS	Grass *native
MB	Ballasted Motorboat	UM	Unknown Milfoil
PW	Personal Watercraft	EWM	Eurasian Watermilfoil
R	Rowboat	M	Mud
S	Sailboat	NAD	Non-aquatic debris
PB	Stand-up Paddleboard	NP	Native Pondweed
IM	Motorized Inflatable	WC	Water Chestnut
IN	Non-motorized Inflatable	WL	Water Lily *native
		ZM	Zebra Mussel

Part I: Total cumulative data (all locations).




Total Boat Type Distribution
62
26
11
12
13
0
68
105
413
1007
C
K
M
MB
PW
R
S
PB
IM
IN


Total Species Found
1
20
3
72
27
63
0
33
6
96
271
22
CLP
ELO
GRS
UM
EWM
M
NAD
NP
WC
WL
ZM
Other


Total Organisms Found Entering vs. Leaving
93
356
Entering
Leaving

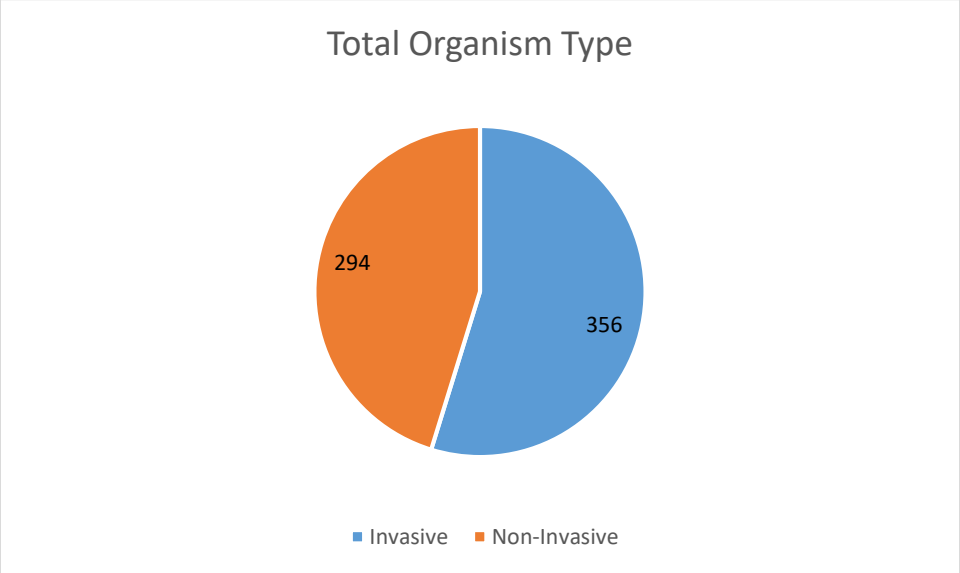

Total Organism Type
294
356
Invasive
Non-Invasive

Table 1. Total cumulative data

Total Surveys completed		**1239**
Boat Type	C	105
	K	1007
	M	413
	MB	0
	PW	62
	R	26
	S	11
	PB	68
	IM	12
	IN	13
	Launching	599
	Retrieving	540
Total Number of People		**2308**
Total Number of Boats		**1785**
Organisms Found	**Entering**	**93**
	Leaving	**356**
Organism Type	CLP	27
	ELO	1
	GRS	63
	UM	0
	EWM	271
	M	22
	NAD	96
	NP	6
	WC	33
	WL	20
	ZM	3
	Other	72
	Total	651
	Invasive	356
	Non-Invasive	294
AIS Found	**AIS+In**	**26**
	AIS+Out	**314**

Part II: Total data for each location

Table 2. Cumulative Round Lake

Total Surveys completed		**994**
Boat Type	C	95
	K	948
	M	257
	MB	0
	PW	12
	R	25
	S	9
	PB	66
	IM	12
	IN	12
	Launching	**464**
	Retrieving	**431**
Total Number of People		**1746**
Total Number of Boats		**1515**
Organisms Found	**Entering**	**69**
	Leaving	**309**
Organism Type	CLP	26
	ELO	1
	GRS	47
	UM	0
	EWM	266
	M	19
	NAD	73
	NP	4
	WC	3
	WL	20
	ZM	1
	Other	60
	Total	557
	Invasive	**318**
	Non-Invasive	**238**

Table 3. Cumulative Lock 7

Total Surveys completed		**137**
Boat Type	C	6
	K	44
	M	76
	MB	0
	PW	33
	R	1
	S	0
	PB	2
	IM	0
	IN	1
	Launching	**78**
	Retrieving	**59**
Total Number of People		**322**
Total Number of Boats		**152**
Organisms Found	**Entering**	**9**
	Leaving	**34**
Organism Type	CLP	0
	ELO	0
	GRS	10
	UM	0
	EWM	2
	M	0
	NAD	11
	NP	0
	WC	27
	WL	0
	ZM	1
	Other	5
	Total	56
	Invasive	**30**
	Non-Invasive	**26**

Table 4. Cumulative Freeman's Bridge

Total Surveys completed		**108**
Boat Type	C	4
	K	15
	M	80
	MB	0
	PW	17
	R	0
	S	2
	PB	0
	IM	0
	IN	0
	Launching	**57**
	Retrieving	**50**
Total Number of People		**240**
Total Number of Boats		**118**
Organisms Found	**Entering**	**15**
	Leaving	**13**
Organism Type	CLP	1
	ELO	0
	GRS	6
	UM	0
	EWM	3
	M	3
	NAD	12
	NP	2
	WC	3
	WL	0
	ZM	1
	Other	7
	Total	38
	Invasive	**8**
	Non-Invasive	**30**