

Day in the Life of the Hudson River 10/14/21

**Tivoli South Bay
RIVER MILE: 98**

Salt Front: ~ 49

Ann Olsson, Bard College & Deborah Beam, Red Hook High School (11th & 12th IB Biology)

43 students & 10 adults

Latitude & Longitude – Latitude 42.01743 N & Longitude – 73.91723 W

Location: Tivoli South Bay at Sawkill Creek

Area: Sawkill creek outlet at South Tivoli Bay of the Hudson River next to Hudsonia Research Station.

Surrounding Land Use: 25% Urban/Residential; 75% Forested

Sampling Site: Forested, grassy, parking lot, covered in vegetation, riprap (large rocks)

Shoreline: 20% Muddy; 80% Rocky

Water Depth: 103 cm; calm

Plants in area: No plants in the area

River Bottom description: muddy and rocky

*NR = Not read/recorded

<i>ITEM</i>	<i>Time</i>	<i>Reading</i>		<i>Comments</i>
Physical				
<i>Air Temperature</i>	12:00 PM	24 ° C	75° F	
<i>Wind Speed:</i>	11:00 AM	<i>Anemometer</i> 0	<i>Beaufort</i> 0	<i>Direction</i>
<i>Weather today</i>	11:00 AM	51-75% cloud cover	No rain	
<i>Weather the past 3 days:</i>	Foggy, cloudy and some sun. No rain			
<i>Tides-</i>	<i>Time</i>	<i>Rising, Falling, Unchanged</i>	<i>Height (cm)</i>	
	9:00 AM 11:30 AM 12:30 PM	Rising Falling Falling	78 cm 50 cm 35 cm	
<i>Current-</i>	<i>Time</i>	<i>Cm/sec</i>	<i>Knots</i>	<i>North/South</i> <i>Ebb/Flood/Slack</i>
	NR	NR	NR	NR
<i>Water Temperature-</i>	10:14 AM 10:35 AM 10:45 AM	19.6° C 16.1° C 16.0° C	61.7° F	
<i>Turbidity- long site tube</i>	10:30 AM	107 cm		
<i>Turbidity- Turbidimeter</i>	10:14 AM 10:50 AM 11:26 AM	5.5 NTU 3.49 NTU 10.7 NTU	Averages of 3 per sample time	
Chemical				
<i>Salinity- Low Range Quantabs</i>	10:15 AM	30 ppm Cl-	0.54 ppm TS	
<i>Standardized Salinity-</i>	NR	NR		
<i>DO – meter/probe</i>	<i>Time</i>	<i>Temp</i>	<i>ppm DO</i>	<i>% Saturation</i>
<i>Main area</i>	10:35 AM	16.1° C	10.53	110%
<i>N. Sawkill</i>	10:45 AM	16.5° C	9.8	95%
<i>S. Sawkill</i>	10:45 AM	16.0° C	10.7	120%
<i>pH – Test Strips</i>	10:30 AM	7.4	11:30 AM YSI	8.59
<i>Nitrates- test strips</i>	10:30 AM	0 ppm		
<i>Phosphates- test strips</i>	10:30 AM	0 ppm		
<i>Alkalinity- Test strips</i>	10:30 AM	80 ppm 120 ppm		

Biological					
Fish – seine 4 pulls	Number	Name	Length of longest	Length of smallest	
	4 1 1 2	Banded Killifish Pumpkinseed Sunfish Bluegill Sunfish American Eel (in kick net)	NR	NR	
Fish Totals	TOTAL: 8	Diversity: 4	<i>*also noted one dead carp 40 cm</i>		
Macroinvertebrates	Number	Name	Length of longest	Length of smallest	
Data from 1 group of 4	5 1 2 12 8 5 1 5	Amphipods/scuds Damselfly nymph Dragonfly nymph Mayfly nymph Stonefly nymph Caddisfly larva Riffle Beetle Midge	NR	NR	
Macroinvertebrate Totals	TOTAL: 39	Diversity: 8			
JOURNAL OBSERVATIONS					
Fall leaf smell in the air. Dry. Bird watching: Mallards, Canadian Geese, Chickadees, egrets, goldfinch, semi-palmated plover, swan, seagulls, bluejays, hawk, great blue heron and heard woodpekers					
Sediment Core - NR					
Length	H2S smell	Oxid Top	Oil	Grain Size	Other Features
Boats					
	Time	Name	Color	North/Southbound	Light/Loaded
Commercial	12:12 PM	Barge	white/black	Northbound	Loaded
Residential					