

## WHY JOURNAL? WHAT DOES IT ADD TO A FIELD EXPERIENCE?

What can we learn from journaling? If we record all our data as numbers on a data sheet why do we need to do journaling as well? The development of observational skills is a key component in fieldwork, and is a basic building block in the successful use of the scientific method. Observations that are noted in the field are often good supplements to data, and can be used to further understand and examine collected results.



Take a look at a sample recording sheet and the accompanying journaling sheet. Let's see what we can learn from the journaling that would help us to better understand the numerical data recorded on our sheet. (*Annotations are listed in red italicized text in parentheses.*)

### JOURNALING SHEET - RM 32 – Ossining

- The waters are calm on the Hudson, several Canadian geese swim at the water's edge. (*The calmness described suggests that there is little to no wind, the oxygen levels would not be affected by churning of water and weather related introductions. The observation of Canadian geese noted on the data recording sheet is a new bit of information.*)
- The rocks on which I sit are large and those at the edge with the water lapping around them are covered in green, slippery algae. (*We learn that the water is up to the rocks – there was no water depth noted here or on the data recording sheet, but this observation does tell us there at least during some part of the tidal cycle there is some depth to the water. It also tells us the rocks are often wet since they are growing algae. This could suggest several things: a) at low tide the water might still reach, or be close to, these rocks, so they don't get a chance to dry out much during a 24 hour period; b) during high tide the water climbs high on these rocks and due to their positioning they don't dry out well during low tide; c) the rocks face away from the sun for a large portion of the day OR d) the rocks are stacked closely together so there is limited air movement between them so if they get wet they tend to stay wet allowing algae to grow.*)
- The tide is moving in very slowly, creeping up the beach.
- The weather is calm and cool with scattering clouds and a mild breeze - getting warmer
- At the water's edge are small piles of water plants, shards of driftwood and a few fallen leaves. (*Small piles of water plants at the shore, suggests we are at the end of the growing season for the plants and they are uprooting and washing ashore OR that there has been a significant storm in the last few days that caused them to uproot. The data sheet does not note such a storm so we would lean towards end of the growing season.*)

*Collections on the shore can mean that there is SAV (submerged aquatic vegetation) growing in this area, and/or it could mean that this area is somewhat protected and therefore washed up plant materials will collect here. The fact that there are shards of driftwood also washed in with the plants suggests this. To determine if plants actually grow in this area would mean checking the area earlier in the growing season.)*

- The geese are minding their own business, sometimes going in and out of the water; some are eating the waterplants washed up on the beach. *(We learn that the geese take advantage of the SAVs for food material, which could explain why they are swimming at the water's edge.)*
- The boats nearby are bobbing gently in the water *(The term 'bobbing gently' describes the calm condition of the water. The recording sheet did note the water was calm so this description provides a visualization of how calm the water is.)*
- On a sadder note among the rocks are bits of trash among the cracks (this place needs cleaning) *(Human impact on our waterfront)*
- \* What I find interesting are these grey spiny seed pods scattered around the rocks *(It would be nice to have a sketch or a more descriptive explanation to go with these words in order to identify these pods.)*
- Nearby is a vacant playground
- In the background, at the other side of the river are the tree-covered mountains
- The beach itself is crescent shaped. *(There is a sketch included in the recorded data that shows a gentle U shape for the beach. This notation confirms that the beach is crescent shaped which would explain why SAVs and driftwood might collect on shore rather than being carried away in the main channel of the river. Depending on the size, the crescent shape could also impact the current readings, as the current might be separated from that in the main channel.)*
- The fish here are striped bass, small grey fish with horizontal stripes, hence their classification name. most of the fish are about 3 inches long *(There were no fish on the tally sheet at all. This tells us they did see some fish. Striped Bass are found throughout the estuary so it doesn't tell us anything about the salinity of the area. The size of the fish does let us know that these are young of the year fish, and are using the estuary as a nursery to establish themselves before heading out of the Hudson River.)*
- The sediment is fine to coarse grained with a few thumbnail sized pebbles. *(The description of the sediment suggests this is a sandy area. Thumbnail sized pebbles in the sediment, combined with coarse grain, suggesting the sediment has an ongoing exchange with the Hudson tides and currents. Fine grain sediments tend to stay in suspension longer and settle out in slow moving areas – this is not what this writer is describing.)*
- The air has a crisp aroma. *(Season - this is not a humid summer day)*

**Snapshot Day 10/2/07 Data**  
**(Salt Front RM 78.2)**  
**RIVER MILE 32**

**Valerie Holmes & Bridget Kenny, Ossining HS Environmental Club**  
**9<sup>th</sup>-12<sup>th</sup> grade – 40 students**  
**41°09.288'N - 73°52.159'W**

**Location:** Crescent shaped beachfront in Ossining

**Area:** Beachfront area - paved sidewalk, rock wall lining the river, grass.

**Surrounding Land Use:** 20% beach; 20% industrial/commercial; 5 % forested; 55% paved sidewalk, rock wall lining the river, grass.

**Sampling Site:** bulkhead lines the shoreline – rock wall, beach, riprap

**Plants in area:** Arrow arum 10%; Bur-reed 30%; 50% Japanese knotweed; 10% unidentified plant – alternate leaves, opposite petiole, pinnate

**Water depth:**

River Bottom –sandy bottom

<b>ITEM</b>	<b>Time</b>	<b>Reading 1</b>	<b>Reading 2</b>	<b>Comments</b>
<b>Physical</b>				
Air Temperature	11:55 AM	72° F 22° C		
	12:35 PM	74° F		
Wind Speed	4-6	NNE		
Cloud Cover	Partly cloudy			
Weather today	Clear and warm			
Weather last 3 days	Cool, windy, partly cloudy – high 72-78 degrees F Rain at night 2 days ago			
<b>Water Temperature</b>	12:03PM	71° F 23 ° C		
	12:10 PM	70.8° F 21.5 ° C	Average of 3	
	12:33 PM	76° F 24 ° C		
<b>Water</b>	calm			
<b>Turbidity</b>	10 JTU			
<b>Chlorophyll</b>	12:18 PM	0.1		
<b>Chemical</b>				
DO ( drop count)	12:00 PM	4.0 mg/L	21 ° C	45%
pH (indicator sol.)	12:14 PM	7.5 8.0		7.66

		7.5		
Nitrate	12:33 PM	0.0 ppm 0.0 ppm 0.0 ppm		
Phosphate	12:16 PM	2.0 ppm 1.0 ppm 1.0 ppm		1.33 ppm average
Salinity	12:03 PM	7%		<i>hydrometer</i>
	12:34 PM	9%		
	1:04 PM	8%		
<b>Fish Catch</b>	<b>Number Caught</b>	<b>Species</b>		
<b>Tides</b>	12:01 PM	25.4 cm	Rising	
	12:31 PM	40.64 cm	Rising	
	1:05 PM	60.96 cm	Rising	
	1:35 PM	71.12 cm	Rising	
<b>Currents</b>	12:01 PM	Ebb	The water is buggin'!	<b>Note:</b> When we measured the tide levels it was increasing in height...BUT when we did the orange test they were all moving downriver (ebb) – we were confused by our results
	12:31 PM	Ebb		
	1:05 PM	Ebb		
	1:35 PM	Ebb		
<b>Shipping</b>	None noted			
<b>Core Description</b>	<b>Length</b>	<b>Abundant</b>	<b>Common</b>	<b>Rare</b>
	15 cm no layers no smell	Mostly Sand - gravel, pebbles	mud shells	Clay Wood brick