

A Day in the Life of the Hudson and Harbor 2019: Fishing *Teacher Version*

Your site: _____ What did you catch or see on Oct 22nd? _____

Students with seine nets, catch-and-release traps, and fishing poles caught fish throughout the estuary on A Day in the Life of the Hudson and Harbor. Here are the results from just a few of the many sites:



Goldfish (left photo) are not native, but were introduced by people releasing their pet fish. They quickly adapt to lose their bright orange color (right fish) to better blend into the muddy/rocky river (left fish). Pipefish (right photo) are closely related to seahorse.

Hudson River Mile	Site	Spottail shiner	Banded killifish	Goldfish	Striped bass	Pipefish	Atlantic silverside	Winter flounder
RM 133	Schodack Island	27	4					
RM 109	Germantown	24	1	1	3			
RM 85	Norrie Point	34	18	5	2			
RM 52	West Point	5			8			
RM 41	Verplanck				9		52	
RM 18	Yonkers				4		8	1
East River	Brooklyn Bridge Park (East)					1	584	1
East River	Brooklyn Bridge (West)				2		8	
Fill in the totals:								

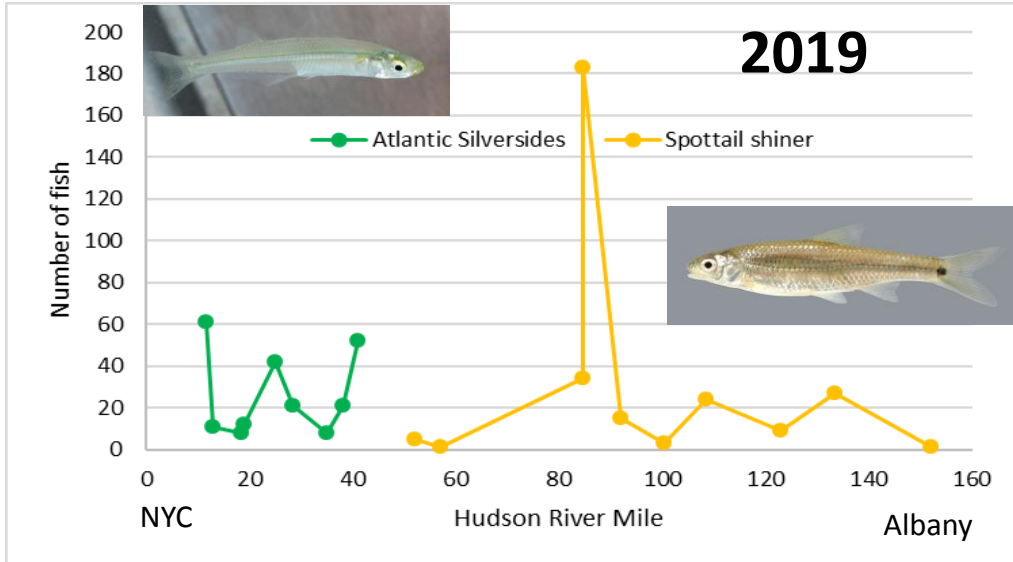


Answer the questions below based on the table above.

- Which species was caught in the most places (on the list) on October 22nd?
- In the Hudson River Estuary, the water near the ocean is salty, while further upriver it is fresh. The leading edge of salty water is called the **salt front**. Atlantic silversides can be found pushing right up to the edge of the salt front. Based on the northernmost site listed here with Atlantic silversides, where would you estimate the location of the salt front on October 22nd?
- Based on the location of the salt front, which of the listed fish species are found mainly in saltwater?
- Which species are found mainly in freshwater?
- Which species is likely to be found throughout the whole estuary, in both fresh and salty water?

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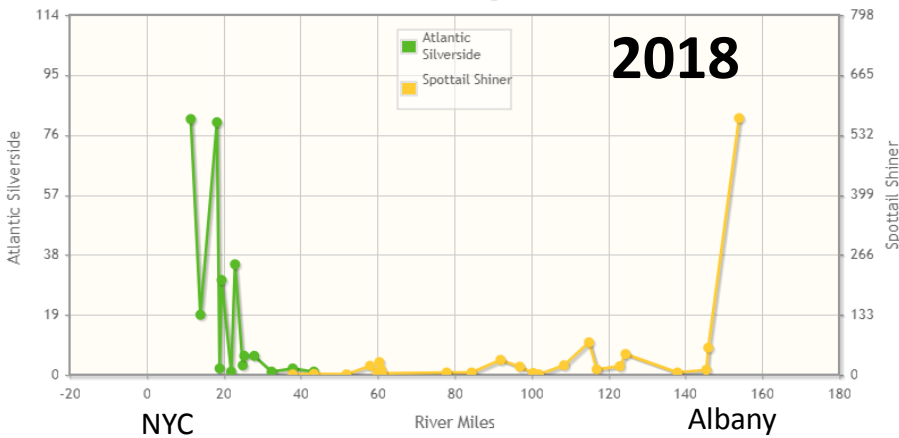
Just as Atlantic silversides are found in salty water up to the salt front, spottail shiners are found in freshwater down to the salt front (100 ppm Cl). You can use where the ranges of those two species of fish meet to predict the location of the salt front.



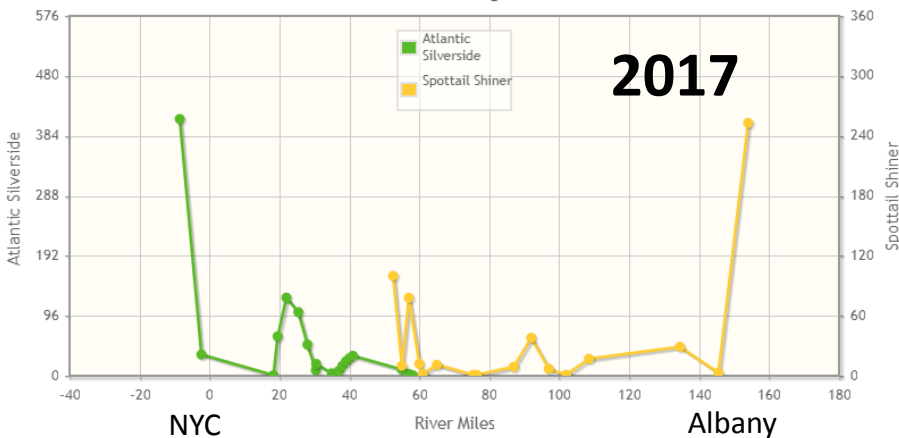
Early data on distributions of Atlantic silversides and spottail shiners from 2019's Day in the Life of the Hudson and Harbor are shown in the graph to the left. What Hudson River Mile (starting at lower Manhattan) do you estimate the salt front was located on October 22nd?

2019 salt front (100 ppm Cl):
River Mile _____

Below are graphs from 2018 and 2017 also showing where Atlantic silversides and spottail shiners were caught. Where do you predict the salt front was in those years?



2018 salt front (100 ppm Cl):
River Mile _____



2017 salt front (100 ppm Cl):
River Mile _____

What could cause the difference in the location of the salt front from year to year?