

Seahorses and More at Seine the Bay Day!

What's swimming in Raritan Bay and Sandy Hook Bay? It turns out quite a bit.

On a beautiful Saturday, June 4, from 10am to 3:30pm, members of the all-volunteer Bayshore Regional Watershed Council conducted the sixth annual late spring "Seine the Bay Day." The goal was to discover what fish, crabs and other aquatic creatures live along the edge of Raritan Bay and Sandy Hook Bay, the southern shore of New York Harbor.

Surveys were conducted at four locations: Cliffwood Beach in Aberdeen Township, Conaskonck Point in Union Beach, near the mouth of Pews Creek in Port Monmouth, and near the mouth of Many Mind Creek in Atlantic Highlands.

As in years past, a 50-foot-long seine net, a horizontal nylon net with buoys on top and weights on the bottom, was dragged through shallow waters and pulled towards the shore. All aquatic creatures were identified, cataloged, and returned to the estuary.

By seining the shore, watershed members were able to show how local waters are an important nursery. Many of the critters found included young-of-year (YOY) fish - juvenile fish that have hatched out of eggs this past spring. Schools of young herring were found in abundance at Cliffwood Beach, Port Monmouth, and Atlantic Highlands. The herring hatched out of eggs in freshwater portions of the estuary several weeks ago, and are now swimming towards saltier waters with the start of warm weather.

Over 20 juvenile winter flounder, a flatfish, were also found at Atlantic Highlands. They averaged in size between two to three inches long. Their high density near the mouth of Many Mind Creek suggests the sandy shoreline is a nursery. As populations of winter flounder continue to decline in the Northeast, it's important to detect these areas.

Other signs of new life included pregnant silversides or spearing, and clusters of snail eggs at all four sites. Exposed Horseshoe crabs were also found in wet sand at Cliffwood Beach.

The most unique discovery of the day, however, was hauling in an adult seahorse at Port Monmouth. Yes, they really do exist in Sandy Hook Bay. The Northern lined seahorse is our native species. They often can be found clinging to sea grasses, pilings, or other floating objects in shallow waters foraging for tiny shellfish. Sadly, due to the loss of many sea grass beds, seahorse populations are lower around Sandy Hook Bay than in decades past.

In addition to seining, volunteers surveyed the water for salinity, turbidity, and water temperature. Salinity readings were about 23 parts per thousand and water

temperature averaged in the low to mid 70s F. Turbidity tests showed the water to be quite murky, especially at Atlantic Highlands, where volunteers could not even see their toes in less than one foot of water.

No doubt, seining is a great way to gain an insight into the health of the near-shore environment where many people swim and enjoy the water. It provides a snap shot at what dwells along the edge of Sandy Hook Bay and Raritan Bay.

Joe Reynolds is co-chair of the Bayshore Regional Watershed Council and a local naturalist. For a full list of fish found at each site, please visit the Bayshore Regional Watershed Council's website at www.restoreraritanbay.org

Results are below:

Seine the Bay Day

Raritan Bay & Sandy Hook Bay

Saturday, June 2, 2016

10:00am to 3:30pm

Weather: Partly Sunny, light winds, air temperatures in the upper 70s.

10:00am to 11:00am

Incoming tide

Cliffwood Beach, Aberdeen Township

Mouth of Whale Creek

Water temperature = 71 F

Salinity = 21ppt

Turbidity = 1 foot +/-

1,000 Mud Snails

100+/- Spearing or Atlantic Silversides, including pregnant females

50+ juvenile herring (species undetermined)

Lots of snail eggs attached to sea lettuce

dozens of soft-shell clams exposed at low tide

Horseshoe Crab eggs exposed at low tide

12 + Horseshoe crabs

1 male killifish

1 juvenile Yellow Perch

11:30am to 12:30pm

Incoming tide

Conaskonk Point, Union Beach

Water temperature = 71 F

Salinity = 21ppt

Turbidity = 1.5 foot +/-
Lots of Snail eggs attached to sea lettuce
300+ Spearing or Atlantic Silversides including pregnant females
100+ Hermit Crabs
100+ Mud snails
50+ Comb jellies
30+ Shore shrimp
3 adult lady crabs
1 Pipefish
1 Red Beard Sponge

1:00pm to 2:00pm

Low tide
Port Monmouth, Middletown Township
Near the mouth of Pews Creek

Water temperature = 75 F
Salinity = 24ppt
Turbidity = 2.5 feet +/-

Lots of snail eggs attached to sea lettuce
500+ juvenile herring (species undetermined)
100+ Spearing or Atlantic Silversides including pregnant females
100+ Comb jellies
50+ Bay Anchovies
20+ Salps
25+ Hermit Crabs
20+ Shore shrimp
1 adult Northern Lined Seahorse
1 juvenile Winter Flounder

2:30pm to 3:30pm

Atlantic Highlands
Near the mouth of Many Mind Creek

Water temperature = 75 F
Salinity = 24ppt
Turbidity = zero

Lots of snail eggs attached to sea lettuce
300+ juvenile herring (species undetermined)
100+ Bay Anchovies
25+ Shore Shrimp
20 juvenile winter flounder
4 Lady Crabs
1 Pipefish

1 juvenile Blue-claw crab
1 isopod

(Juvenile Atlantic Needlefish)

(Juvenile Windowpane Flatfish)

Common catches included hundreds of spearing or Atlantic silversides, Killifish, young herring, young flounder, young Drum fish, and young crabs. Great finds were a young Needlenose fish in Cliffwood Beach, a young soft-shell Lady Crab at Union Beach, and a young Tautog at Atlantic Highlands. A crowd pleaser was a young Lookdown fish, a tropical sea creature that got caught up in the Gulf Stream and found its way in New York Harbor.

An uncommon find were salinity readings. Salinity is a measure of the amount of dissolved salts in the water. It is usually expressed in parts per thousand (ppt). In the past during Seine the Bay Day events, salinity readings at sites were in the low 20s ppt. Now due to several drier months, the bay has become unusually saltier with readings on the low to mid 30s ppt, which is more typical of salinity readings in the ocean.

(Juvenile Bluefish or snapper)

(Juvenile Tautog)

The weather was partly sunny to start with cloudy conditions towards the end of the event with air temperature readings in the low 80s. Winds were light out of the southeast 5 to 10 mph. The new moon was on Sunday, September 13, so we were experiencing spring tide cycles.

Thanks and special appreciation goes to Jen Zarcone from Allenhurst, Debbie Mans from Essex County, Tom Grabowski from Keyport, Frank Huza from Aberdeen, , Dan & Casey from Keansburg, Jess & Fran from Hazlet, Joe Martin and family from Oceanport, Cindy Zipf from Rumson, Tony Copper from Holmdel, and Joe & Robin Sheridan and family from Keyport. Thanks to everyone for all your wonderful help and time.

10am - Aberdeen Township/Cliffwood Beach
Outgoing tide. Water temperature 76 degrees F.
Visibility was clear at nearly 3 feet.
Salinity = 35 ppt

Over 1,000 Sparring or Atlantic Silversides
20+ Salps
10+ Baby Soft-shell clams
2 Comb Jellies
1 juvenile Atlantic Needlefish (13 inches long)
1 juvenile Menhaden
4 Mullet

(Juvenile Soft-shell clam)

11:30am - Union Beach/Conaskonck Point
Outgoing tide. Water temperature 78 degrees F.

Visibility was clear at around 3 feet.
Salinity = 31 ppt

200+ Atlantic Silversides or Spearing
3 Hermit Crabs
2 Lady Crabs (one male softshell)
3 juvenile Kingfish
2 Black Drums
1 juvenile Windowpane Flatfish
1 Killifish
1 Grass Shrimp
1 juvenile Lookdown (tropical fish)

Lady Crab

1:00pm: Middletown Township/Port Monmouth - Pews Creek
Outgoing tide. Water temperature 78 degrees F.
Visibility was partially turbid at 2 feet.
Salinity = 35 ppt

1,000+ Salps
50+ Atlantic Silversides or Spearing
10 juvenile Black-tipped Mud Crabs
2 Black Drums
1 Hermit Crab
1 juvenile Bluefish or Snapper

Juvenile Winter Flounder

2:30pm: Atlantic Highlands/Mouth of Many Mind Creek
Low tide. Water temperature 78 degrees F.
Visibility turbid at 1 foot.
Salinity = 32 ppt

300+ Atlantic Silversides or Spearing
10 Killifish
6 Lady Crabs
5 Black-tipped Mud Crabs
4 juvenile Bluefish or Snappers
2 Hermit Crabs
1 juvenile Tautog
1 juvenile Winter Flounder
1 juvenile Black Drum
1 juvenile Kingfish