

A Faunal and Floral List of Organisms found in the Bronx River Estuary

A. Plankton Populations of the Estuarine Section of the Bronx River

Shoreline: Plankton samples were taken from the shallow waters of the Bronx River at Lafayette Avenue (40°49.040'N:73°52.801'W) on the 3rd, 17th, and 24th of May and on the 3rd of June 2002. Approximately 0.886 m³ of water was sampled during each collecting period using handheld plankton nets (mesh size 125 microns).

Shallow water plankton showed the presence of the following types of organisms.

Copepods

- Calanoid
- Harparticoid
- Cyclopoid

Rotifers

Nematodes

Diatoms

- Navicula
- Coscinodiscus
- Melosira
- Thalassiothrix
- Rhabdonema

Dinoflagellates

- Ceratium

Polychaete larvae

Hydromedusa

Tunicate tadpole stage

Ostracods

B. Organisms Collected (Observed) from Bronx River Estuary

Vertebrate Organisms:

1. Fish

Winter Flounder	<i>Pseudopleuronectes americanus</i>
Butterfish	<i>Peprilus triacanthus</i>
Bay Anchovy	<i>Anchoa mitchilli</i>
Naked goby	<i>Gobiosoma bosci</i>
Seaboard goby	<i>Gobiosoma ginsburgi</i>
Ling	<i>Urophycis cuss</i>
Spotted Hake	<i>Urophycis regia</i>
Gizzard Shad	<i>Dorosoma cepedianum</i>
Striped Bass	<i>Morone saxatilis</i>
Weakfish	<i>Cynoscion regalis</i>
Pipefish	<i>Syngnathus sp.</i>

Mummichog	<i>Fundulus heteroclitus</i>
Atlantic Silversides	<i>Menidia menidia</i>
Bluefish	<i>Pomatomus saltatrix</i>
Menhaden	<i>Brevoortia tyrannus</i>
Cunner	<i>Tautoglabrus adspersus</i>

2. Birds (Observed) in the Bronx River Estuary

Swallows
Cormorants
Gulls (Laughing, Herring and Bonaparte)
Plovers
Canada Geese
Mallard Ducks
Swans
Egrets
Night Heron
Blue Heron
Glossy Ibis
Kingfisher
Sandpiper

3. Invertebrate Organisms:

a. Porifera

Red Beard Sponge *Microciona prolifera*

b. Cnidaria

Striped Sea Anemone *Haliplanella luciae*
Hydrozoan Colonies *Campanularia sp.*

c. Ctenophores

Leidy's Comb Jelly *Mnemiopsis leidyi*
Beroe's Comb Jelly *Beroe sp.*
Sea Gooseberry *Pleurobrachia pileus*

d. Mollusks

Gastropods
Tortoiseshell Limpet *Acmaea testudinalis*
Lady Slippershell *Crepidula fornicata*
Periwinkles *Littorina littorea*
Oyster Drill *Urosalpinx sp.*

Bivalves

Ribbed Mussel	<i>Modiolus demissus</i>
Surf Clam	<i>Spisula solidissima</i>
Quahog	<i>Mercinaria mercinaria</i>
Soft Shelled Clam	<i>Mya arenaria</i>
Common Oyster	<i>Crassostrea virginica</i>
Blue Mussel	<i>Mytilus edulis</i>

e. Annelids

Sand Worm	<i>Nereis sp.</i>
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f. Arthropods**Chelicereates**

Horseshoe Crab	<i>Limulus polyphemus</i>
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Crustaceans

Blue Claw Crab	<i>Callinectes sapidus</i>
Rock Crab	<i>Cancer irroratus</i>
Green Crab	<i>Cancer maenus</i>
Pacific Grapsid Shore Crab	<i>Hemigrapsus sanguineus</i>
Spider Crab	<i>Libinia sp.</i>
Hermit Crab	<i>Pagurus sp.</i>
	Mud Crab
Barnacle	<i>Chthamalus sp.</i>
Sand Shrimp	<i>Crangon septemspinosum</i>
Shore Shrimp	<i>Palaemonetes sp.</i>
Gammarid Amphipods	
Fiddler Crab	<i>Uca sp.</i>

h. Algae and Shoreline Vegetation:

Sea Lettuce	<i>Ulva lactuca</i>
Agardh's Red Weed	<i>Agardhiella sp.</i>
Hollow Green Weeds	<i>Enteromorpha sp.</i>
Rock Weed	<i>Fucus sp.</i>
Eel grass	<i>Spartina sp.</i>
Reeds	<i>Phragmites sp.</i>

Station Location
Lafayette Avenue (East Bank)

FISH:

Fundulus heteroclitus (Mummichog)
Menidia menidia (Atlantic Silverside)
Pomatomus saltatrix (Bluefish; Snapper)
Brevoortia tyrannus (Mossbunker; Menhaden)

INVERTEBRATES:

Mollusks:

Modiolus demissus (Ribbed Mussel)
Crepidula sp. (Lady Slipper)
Urosalpinx sp. (Oyster Drills)
Littorina littorea (Periwinkle Snail)

Crustaceans:

Limulus polyphemus (Horseshoe Crab)
Carcinus maenas (Green Crab)
Callinectes sapidus (Blue Claw Crab)
Uca sp. (Fiddler Crab)
Chthamalus (Barnacle)
Gammarid Amphipods

Annelids:

Nereis sp. (Sandworm)

Nemertean:

Ribbon Worm

Ctenophora:

Pleurobranchia pileus (Sea Gooseberry)
Mnemeopsis leidy (Leidy's Comb Jelly)

Cnidarians:

Haliplanella luciae (Striped Sea Anemone)

VEGETATION:

Chlorophyta:

Ulva (Sea Lettuce)
Enteromorpha

Anthophyta:

Spartina
Phragmites

Station Location
Lafayette Avenue (West Bank)

FISH:

Fundulus heteroclitus (Mummichog)
Menidia menidia (Atlantic Silverside)
Anchoa mitchelli (Bay Anchovy)
Morone Saxatilis (Striped Bass)

INVERTEBRATES:

Mollusks:

Mytilus edulis (Blue Mussel)
Littorina littorea (Periwinkle Snail)

Crustaceans:

Callinectes sapidus (Blue Claw Crab)
Chthamalus (Barnacle)
Palaemonetes sp. (Shore Shrimp)
Crangon septemspinosa (Sand Shrimp)

Annelids:

Nereis sp. (Sandworm)

Ctenophora:

Pleurobranchia pileus (Sea Gooseberry)
Mnemeopsis leidy (Leidy's Comb Jelly)

VEGETATION:

Chlorophyta:

Ulva (Sea Lettuce)
Enteromorpha

Station Location
Lafayette Avenue (Mid-Channel)

FISH:

Fundulus heteroclitus (Mummichog)
Menidia menidia (Atlantic Silverside)
Pomatomus saltatrix (Bluefish; Snapper)
Brevoortia tyrannus (Mossbunker; Menhaden)
Tautoglabrus adspersus (Cunner)
Pseudopleuronectes americanus (Winter Flounder)

INVERTEBRATES:

Mollusks:

Littorina littorea (Periwinkle Snail)

Crustaceans:

Callinectes sapidus (Blue Claw Crab)

Ctenophora:

Pleurobranchia pileus (Sea Gooseberry)
Mnemeopsis leidy (Leidy's Comb Jelly)

Zooplankton

Calanoid Copepods
Crab Zoea
Crab Megalops
Palaemonetes Zoea
Mysids
Eggs

Station Location
Clason Point

FISH:

Fundulus heteroclitus (Mummichog)
Menidia menidia (Atlantic Silverside)
Pomatomus saltatrix (Bluefish; Snapper)
Brevoortia tyrannus (Mossbunker; Menhaden)
Pseudopleuronectes americanus (Winter Flounder)

INVERTEBRATES:

Mollusks:

Littorina littorea (Periwinkle Snail)

Crustaceans:

Carcinus maenas (Green Crab)
Callinectes sapidus (Blue Claw Crab)
Hemigrapsus sanguineus (Pacific Grapsid Shore Crab)
Gammarid Amphipods
Palaemonetes sp. (Shore Shrimp)
Crangon septemspinosa (Sand Shrimp)

Ctenophora:

Pleurobranchia pileus (Sea Gooseberry)
Mnemeopsis leidyi (Leidy's Comb Jelly)

VEGETATION:

Chlorophyta:

Ulva (Sea Lettuce)
Enteromorpha

Phaeophyta:

Fucus

Physical Parameters

A) LAFAYETTE AVENUE SITES:

Salinity ranged from 10 to 20 parts per thousand (ppt), with the high and low salinity values corresponding to the flooding and ebbing tides respectively. Specific gravity ranged from 1.009 to 1.015. Temperature ranged from 19.5 to 27.5°C.

The Eastern shore has a number of healthy *Spartina* stands which provides protective cover for the fish and invertebrate fauna using this river. This shore houses a massive colony of fiddler crabs and sea anemones. The bottom topography consists of mud.

The Western shore consists of hard packed sediment and boulders. The shore shoals gradually. Pilings are present which provide protective habits for shrimp, crabs, and fish. These pilings also provide a solid substrate for mussels and barnacles to attach to.

B) CLASON POINT SITE:

Salinity ranged from 25 to 27 ppt. Specific gravity ranged from 1.018 to 1.021. Temperature ranged from 20 to 25.5°C.

This site is located on the East side of the mouth of the river. It represents an area with a large amount of sport fishing activities. The site consists of a rock jetty which runs parallel to the shore and creates "back water" areas. The back water side consists of a boulder shore with a shallow muddy bottom, while the open water side has a boulder shore which drops off precipitously.