From Snails to Whales: Scientific Investigations on Boston Harbor.

With 50 miles of protected water, four sheltered bays, seven river systems, dozens of islands and a nine-foot average tide, Boston Harbor is one of the most diverse urban ecosystems in America.

In this class we will examine the flora and fauna of the Boston Harbor and Massachusetts Bay ecosystems - on the beach, at the shore, in the Harbor Islands, and on the cleaner waters of Boston Harbor and Mass Bay.

Students will:

- Keep a daily journal of their experiences,
- Record and analyze the data we gather,
- Learn how to use tide charts, species maps and field guides to aid their investigations,
- Prepare a well-researched paper on one of the topics we cover together.

The core of the course readings consists of two texts and three field guides. Students are expected to have read the texts and become familiar with the field guides before the class begins.

Park, Robert L.
*Voodoo Science: The Road from Foolishness to Fraud*
Oxford University Press, 2000

Leslie, Clare Walker & Roth, Charles,
*Nature Journaling: Learning to Observe and Connect with the World Around You,*

*Boston Harbor Seaside Educator’s Guide,*
New England Aquarium, Boston, 2000

*Beachcombers Guide to the North Atlantic,*
Mass. Audubon Society, Lincoln, MA, 1993
The instructor will also transmit a digital tide table and chart of Boston Harbor - as well as supplemental course materials - to each student in the spring.

The class will be taught by Save the Harbor / Save the Bay’s BayWatch Director Bruce Berman, an acknowledged expert on the restoration of Boston Harbor and its flora and fauna.

Day 1: Introduction to the scientific method

Our initial meeting will take place aboard the MV “Verandah” on Boston Harbor. Be prepared to discuss Robert L. Park’s book “Voodoo Science”

Day 2. Introduction to the biology, geology, geography and history of Boston Harbor.

1/2 day in class discussion, followed by 1/2 day on the MV “Verandah” for an orientation tour of the Harbor and the Harbor Islands.


Compare and contrast the thriving tern colony on the East Boston waterfront with the tern colonies in the Harbor Islands.


Students will compare and contrast life at the water’s edge in the developed and industrial inner harbor with life in the more pristine habitat of the Harbor Islands.


Students will catch a striped bass, record its condition and measurements, examine its stomach contents and assess the health (and flavor!) of Boston Harbor’s most popular finfish.

Day 6: “Life On The Other Side Of The Big Pond.”

An introduction to the Stellwagen Bank Marine Mammal Sanctuary.

Students will take a trip to see the regions largest inhabitants in situ at Stellwagon Bank, and learn to identify individual Humpback, Minke and Pilot Whales.

Day 7 Review and Wrap-up
We will share our findings and journals, and begin to work on our final projects together.