Community-Based Restoration in an Urban Setting: Using “EcoVolunteers” to Help Restore Oysters in New York City

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Abstract

Oysters were once abundant in the Hudson-Raritan Estuary, surrounding NYC, until over-harvesting, pollution, and disease decimated the population. In the past decade, oyster restoration has come to the forefront of community-based restoration projects in NYC, with “oyster gardens” and shell recycling programs allowing child and adult volunteers to become involved with large-scale restorations. In the south Bronx, NY/NJ Baykeeper and our partners have established an “eco-volunteerism” program at our 1-acre restored reef, which allows for adult volunteers to get into the water and observe the reef as never before. This is a one-of-a-kind project in NYC, and has been very successful. Volunteers have built and monitored the reef, and are connected with all areas of the restoration activities. The success of this project has led to the permanent establishment of the “eco-volunteerism” program, and expansion to other sites.

EcoVolunteers in New York City

While there are many opportunities for volunteers to get involved with ecological restoration within NYC, there are few centered around our vast waterways.

In 2012, NY/NJ Baykeeper established their Eco-volunteer program at Soundview Park, Bronx NY. This program gives adult volunteers an opportunity to get in the water, observe an oyster reef, and participate in scientific monitoring.

Future Steps

As the current scientific project is winding down, we are identifying new projects to involve our EcoVolunteers in.

At the Soundview oyster reef, gabions filled with shell and spat-on-shell were recently placed in a 10’x10’ square, which was then filled in with 2-year-old oysters from a local hatchery (NY Harbor School, Brooklyn NY). The survivorship and health of these oysters will continue to be monitored in 2015.

Additional training sessions will be offered in 2015, allowing EcoVolunteers to gain skills necessary for monitoring and data analysis. In addition, more weekend volunteer dates are being planned as this was our most successful date in 2014. Future sites are being scouted in NY and NJ to build another reef site with EcoVolunteers.

Partners

Construction and maintenance of a large-scale oyster restoration project requires the work of a large group of dedicated people. NY/NJ Baykeeper would not have been able to do this project without the help of many!

The Hudson River Foundation, NYC Parks, New Jersey City University, The College of Staten Island, University of New Hampshire, Florida Atlantic University, The Urban Assembly New York Harbor School (Aquaculture facility), ORRP partners, and most importantly all of the dedicated volunteers who have come to the site, rain or shine, early or late, and played in the mud with us.

Oysters in the Hudson-Raritan Estuary

Oysters were an integral part of the ecosystem of the lower HRE until years of overharvesting, pollution, and habitat loss caused this filter-feeding bivalve to become ‘functionally extinct’ in the area. Over the past decade, oysters have been targeted for restoration due to their ability to provide shoreline stabilization and habitat for many other organisms. Via their filtration activities, oysters are able to remove particles from the water column via filtration, and deposit them onto the benthos (benthic-pelagic coupling). Native ‘pocket populations’ still exist in NYC, and this lead to the beginning of restoration work in Soundview Park, Bronx NY in 2004 (NYC Parks).

Native oysters are able to survive along the shorelines at Soundview Park, indicating that conditions would support a restoration project.

In 2014, 75 volunteers put in over 225 hours at the reef from May-October. Volunteers assisted with scientific monitoring of the reef, helped to construct a new design using Gabion cages, and helped to clean up the adjacent shoreline.

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NY/NJ Baykeeper

Oyster Reef

Future Steps

NYC Parks

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