



Putting Together the Puzzle of Urban Marine Education

By Linda J. Camp, Media Specialist

And Richard B. Raymond, Regional Marine Extension Specialist

The scene is a pleasant one—a group of youngsters at the beach who are listening eagerly while their teacher talks about the aquatic animal they have just found on the sand. It is a typical picture of a marine science class in action, almost anywhere in the country.

But in New York state, that scene might also include a backdrop of skyscrapers and the Staten Island ferry, because some of the most vigorous marine education programs for youth are happening, not on secluded beaches, but in one of the biggest population centers in the world—New York City.

For the past three years, the New York Sea Grant Advisory Service has centered the greater share of its youth programs in metropolitan New York. While many might question the sanity of trying to do anything in such a maze, providing marine science and related programs for youth in the City is a logical and essential component of New York's Advisory Service activities. New York City is, in fact, one of the most important marine environments in the state. Not only has it long been a major center of world shipping and trade, but it also owes its development to the sea.

In addition, New York is home to nearly a million school-aged children, many from minority groups, whose awareness of and values about their coastal resources are just be-



ginning to be formed. By focusing on this setting, New York Sea Grant has been able to reach more youths at a time when they are most receptive to new ideas than possible in many other areas of the state.

As might be imagined, working in a highly urbanized area carries with it all sorts of problems not common to other locations. An obvious one is simply the great number of people. Where do you start when you want to reach such a large youth audience?

For Sea Grant Youth Specialist, Rick Raymond, whose responsibility is youth education in New York City, the answer was to look for people who could collect the audiences for him, such as teachers and youth leaders. Consequently, he has spent much of his time developing and conducting workshops for youth educators on such topics as selection and preparation of fish for eating, setting up a salt water aquarium, Japanese fish printing, and using waterfront field trips as an educational tool. All of the topics have focused on helping youths develop basic educational skills.

The advantages of this multiplier approach have already become evident. During the summer of 1975, a seashore fieldtrip program was conducted for 23 leaders from 17 agencies. These leaders, in turn, were able to conduct field trips for some



New York Sea Grant's youth activities have been primarily aimed at New York City's one million school-aged children, particularly those from minority groups.



Sea Grant Youth Specialist, Rick Raymond demonstrates some techniques for preparing fish at a workshop for youth educators.

900 young people.

Another tough obstacle has been the difficulty in designing "on site" activities. Because of the density of people, buildings, and traffic, transporting people, even short distances, is often a major ordeal, so workshop sites cannot be centralized and many field trip sites throughout the city must be identified. But after many months of puzzling out the situation, Raymond has come up with a neat solution—instead of bringing teachers to workshops and kids to resources, he wants to bring the resources to them.

If funding is approved, beginning this fall, a marine education mobile unit will be prowling the streets of New York, carrying in it all kinds of educational materials on the topics of nutrition, marine-related careers, and the marine environment of the City. These will be aimed at students in grades 4-9. The van will be staffed by a City teacher and an aid who will spend one week at each school in various locations throughout the city doing teacher training and marine activities with the students. Though the mobile unit can't fill in all of the gaps, Raymond feels that it will be a big step toward getting complete resources throughout the city, and particularly to those educators who have been financially unable to run marine education programs in the past.

But even with the van, there will still continue to be a general lack of resources

around which to build a diverse marine education program in the City. Raymond notes that there are numerous publications and even teaching units available relating to the seashore and marine life, but hardly any about other facets of the waterfront. This void is especially underscored by the fact that in New York City area there are only 18 miles of beaches compared to 578 miles of non-beach coastline. Events vital to the social and economic well-being of the country occur on the non-beach shoreline, yet this whole dimension of the waterfront is vastly under-represented in educational programs.

The answer to this dilemma is to find people who can devise new curricula. One problem here which Raymond identified was that marine educators were working independently to develop their own materials. He encouraged them to band together to share existing materials and identify new sources of assistance. They have indeed done this by forming the New York State Marine Education Association (NYSMEA) and members of this group will be holding their second annual conference in October.

NYSMEA is also providing its members with regional inservice education workshops addressed to special problems of marine education in each geographic area, a newsletter that describes current activities of members, new curriculum, books etc. for furthering marine education, and is building a depository of

marine education materials at Kingsborough Community College. Though most NYSMEA members currently are from Long Island, Raymond hopes that the organization will continue to draw new members from other parts of the state.

Perhaps the most difficult part of working in an urban environment has been identifying the real needs and establishing work priorities. New York City is so complex that the problems of one particular area often vary greatly from those of adjacent areas. To help alleviate this burden, Raymond has established an advisory committee whose members are: Cathryn Pessino, Vincent Gattullo, Ruth Lowenberg, Warren Yasso, Gerald Nolan, Joseph Ledner, Sam Holmes, Karen Hensel, Eugenia Flatow, and Maxwell Cohen. Their input has helped to identify areas in the City needing marine education and suggest ways to meet these needs, such as the mobile unit approach.

Those interested in more information about New York Sea Grant's youth activities in New York City should contact Rick Raymond at the Youth Development Office listed on the back page.

The Ithaca Advisory Service Office is currently distributing a new publication produced by the University of Rhode Island Grant Program entitled, "Marine Related Occupations, A Primer for High School Students." It is listed this month in "I Want More."



New York's Urban Waterfront: Opportunities for Renewal

By Mitchell L. Moss
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New York City's 578 miles of waterfront encompasses a diverse group of water bodies: rivers, straits, canals, bays, creeks, and portions of the Atlantic Ocean, as well as the Long Island Sound. The activities that occur on this waterfront are even more varied. Power plants, that supply a major share of the City's energy, are located on the East River. Airports, that link the city to the rest of the world are on the Queens shoreline, while the city's marine cargo facilities are dispersed on the Brooklyn, Manhattan, and Staten Island waterfronts.

Nonetheless, extensive portions of the New York City waterfront are underutilized and in various stages of decline. For example, there are 36 city-owned piers on the West Side, eight of which are currently vacant. Although passenger activity has been stimulated with the development of a new passenger ship terminal, there are no active cargo piers on the West Side and only two active cargo piers on the East River.

Developments in marine transportation technology and in urban land use patterns have been largely responsible for this change in the level of port activity. Containerized shipping, which allows goods to be shipped directly from a manufacturing plant to port without the traditional time-consuming packing and unpacking process, is one of these technological changes. The economic

benefits of containerization are impressive, however, it does impose high space requirements—an estimated 30-50 acres of backup space—on the land adjacent to the port. Such large amounts of space are expensive to acquire at traditional port sites, like the West Side of Manhattan, which are located next to the central business district. Consequently, modern container facilities have been developed at new sites where large tracts of land are available, such as Port Elizabeth in New Jersey and Howland Hook in Staten Island.

It is possible, however, to view the decline of shipping and related industrial activity in a positive light. Such lower levels of use have created large amounts of underutilized urban space which has the potential for improving the economy and environment of New York. The attraction of the waterfront is enhanced by the fact that it is one of the few locations that provides a natural physical phenomenon to balance the intensity of the urban environment.

One example of an innovative and imaginative re-use of the urban waterfront is at Fulton Ferry in Brooklyn. There a floating restaurant and public park are being built on the former site of a parking lot.

In 1975, the New York Sea Grant Institute funded a two-year study of the New York City waterfront to examine the ways in which the urban waterfront



(left) Fulton Ferry in Brooklyn is one example of an innovative re-use of the urban waterfront. There a floating restaurant and park are being built on the former site of a parking lot

(center) Developments in marine transportation technology, such as the containerized shipping facility shown here, have had a dramatic impact on port activity.

(right) Underused areas offer great potential for city people. Ellis Island, shown here, was recently reopened for the bicentennial celebration.

can serve as a social, economic, and physical resource for the large numbers of people who live and work in New York City. The objectives of the project are:

- 1) to identify redevelopment sites on the New York City waterfront;
- 2) to analyze alternative policies and programs for waterfront renewal, and
- 3) to explore methods of public and private cooperation in the redevelopment of the waterfront.

During the first year, an inventory of redevelopment projects currently planned or under construction in the five boroughs of the city was undertaken. This included such projects as Battery Park City, a residential and commercial project being built on 100 acres of landfill at the southern tip of Manhattan on the site of former piers; Roosevelt Island, a new town being built on a 147-acre island located in the East River; and Waterside, an apartment complex built on decks which extend into the East River.

The inventory has helped to provide a systematic description of the changes occurring in the city's coastal zone and the alternative approaches to planning and development.

In addition, data has been gathered and organized to determine the amount of municipally-owned shoreline, its location, present use, and economic

revenue to the city from leased properties. Researchers on this project have compiled a description and analysis of the organizational arrangements for the planning and management of the city coastal zone.

Though the project is only midway through, preliminary findings have clearly underscored the need for three things:

- a systematic information system for management of the publicly owned waterfront;
- a design for systematic leasing policies for the municipally owned shoreline, and
- incorporating the waterfront as a high priority item on the agenda of the city's government.

During the second year, the researchers will present specific recommendations for establishing information and leasing systems. In the interim, the project has already helped to call attention to the waterfront as a serious issue of public policy and has thus raised the level of concern and consciousness among citizens and public officials.

For more detailed information on redevelopment of the urban waterfront, write for "The Urban Port: A Hidden Resource for the City and the Coastal Zone" and The Urban Waterfront: Opportunities for Renewal" by Mitchell L. Moss. Both are listed this month in "I Want More."

Ithaca Hosts Oswego Group

Ithaca may not be on the Great Lakes, but some of its recent waterfront renovations have aroused the interest of a few Oswego folks.

On July 31, fifteen Oswego community leaders spent a full day looking at some of Ithaca's redevelopment projects. The city of Oswego has a large portion of its downtown section on or adjacent to waterfront property on Lake Ontario. Plans are currently being devised for the redevelopment of this area, including construction of a marina and renovation of historic buildings, and so Oswego officials have been anxious to learn about innovative projects in other cities of similar size and make up. Ithaca, which is located near Cayuga Lake, was of particular interest because of its recent projects involving its waterfront, as well as its restored historic buildings and pedestrian mall.

Throughout the day, the Oswego group had the opportunity to look at a newly constructed State marina and park, a restaurant built to accommodate customers coming by boat from Cayuga Lake as well as by land, and a school which has been turned into a shopping mall, in addition to the above-mentioned pedestrian mall and restored buildings. Mayor Edward Conley of Ithaca and Ithaca City Planner were among those who escorted the Oswego group around and explained details of the projects.

The Oswego contingent included Oswego Mayor John Fitzgibbons; Donald French, Manager of Operations for the Port of Oswego Authority; Anthony Leotta, Engineer for the City of Oswego; Dr. Paul Heiser, Chairman of the Oswego City Planning Board; Russel Tarby of the *Palladium Times*; Judith Manasseri, Oswego Common Council member; Arthur O'Neil, Executive Assistant to the Mayor; James Glavin, a landscape architect; James Guinta, Executive



(top) l. to r. Sea Grant Specialist Sandy Schuman, Mayor Edward Conley of Ithaca, Mayor John Fitzgibbons of Oswego and Ithaca City Planner, Matthys Van Cort discuss some of the features of Ithaca's pedestrian mall (bottom) Oswego group lunches at Ithaca's Old Port Harbor Restaurant, which was designed to handle customers arriving by boat as well as by land.

Director of the Greater Oswego Chamber of Commerce; Ray Jung, a downtown merchant and Chairman of the Community Development Act Citizens' Committee; Richard Goldstein, a downtown retailer; Ruth Sals-

bury, Save Our Shores; Dick Reinert, a downtown retailer; and Gil Whitman of the Oswego City Planning Board. The tour was coordinated by Sandy Schuman of the Oswego Sea Grant Advisory Service Office.

Eroding Beach Caught in Government's Sticky Web

The complexity of intergovernmental relations may prove to be one of the most serious limiting factors in attempts to manage coastal zone environmental resources, says Joseph Heikoff in his new book, "Politics of Shore Erosion: Westhampton Beach."

Heikoff, a faculty member at SUNY Albany's Graduate School of Public Affairs, uses a specific, detailed example to show how attempts at solving a shore erosion problem can turn into a major struggle between state and local interests. The issue—still unresolved—is whether or not to extend the groin field at Westhampton Beach, an eroding barrier beach off Long Island's south shore.

In his book, Heikoff not only introduces readers to coastal zone management problems and governmental structures for managing coastal resources, he also explains how barrier islands affect coastal geomorphologic processes and describes the role of the individual citizen and of groups influencing public decisions.

This hardcover book may be ordered at the cost of \$15.00, from:
Ann Arbor Science Publishers, Inc.
P.O. Box 1425
Ann Arbor, Michigan 48106

New Grants Awarded

Marine scientists at the State University of New York at Stony Brook have received funding for two different health related projects dealing with the New York Bight.

Edward and Martha Baylor have been awarded \$25,000 plus match for ten months to answer the question, "Does the Surf Transfer Viruses to the Atmosphere?" The information will be of use

to public health officials. This project is funded by the federal Marine EcoSystems Analysis program (MESA) and the national Office of Sea Grant with matching support from SUNY/Stony Brook.

The second grant, which will exceed \$216,000, was awarded for a two-year project on the effects of water-borne pollutants. Dr. Charles F. Wurster, Associate Professor of Environmental Sciences, will head the project and will be assisted by Harold B. O'Connor and

Edward J. Carpenter among others. This team will study chiefly chlorinated hydrocarbon pesticides, which accumulate in the living tissues of plankton, fish, shellfish, and seabirds and reduce their reproductive processes or kill them. The effect of polychlorinated biphenyls (PCBs) will be a high priority of study.

Funders of the second project includes the Rockefeller Foundation as well as MESA, Office of Sea Grant, and SUNY/Stony Brook.

I WANT MORE

Further details to help solve several coastal problems are available. Each month we try to list several publications of possible interest to you; please check off those you would like and return to the Sea Grant Advisory Office nearest you. Addresses are listed on the back page. All except S11 are publications of the New York Sea Grant Institute.

Single copies of the following publications are free.

- _____S10 New York Sea Grant Institute Annual Report, November 1974–October 1975, Part 3: Focus on Coastal Planning. July 1976. 8 pp.
- _____S11 Marine Memorandum #41: Marine-Related Occupations, A Primer for High School Students. Edited by Prentice K. Stout & Sara S. Callaghan. University of Rhode Island Marine Advisory Service. April 1976. 17 pp.

There is a charge for the following publications. Make checks payable to Cornell University.

- _____O13 The Urban Port: A Hidden Resource for the City and the Coastal Zone. By Mitchell L. Moss. Reprinted from *Coastal Zone Management Journal*, II-3 (1976). 23 pp. \$.50
- _____O14 The Urban Waterfront: Opportunities for Renewal. By Mitchell L. Moss. Reprinted from *National Civic Review*, May 1976. 4 pp. \$.50
- _____O15 Visual Quality and the Coastal Zone: Proceedings of the May 1975 Conference. Edited by D. B. Harper and J. D. Warback. 305 pp. \$4.00
- _____O16 Visual Quality of the Coastal Zone; Working Paper #1: Visual Quality in Land Use Control. By Margaret A. Ross. Spring 1976. 21 pp. \$.50
- _____O17 Visual Quality of the Coastal Zone; Working Paper #2: Evaluating Visual Quality of the Coastline, Some Significant Issues. Spring 1976. 22 pp. \$.50
- _____O18 Visual Quality of the Coastal Zone; Working Paper #3: Landscape Evaluation, A Review of Current Techniques and Methodologies. By Richard Viohl Jr. Spring 1976. 21 pp. \$.50
- _____O19 Visual Quality of the Coastal Zone; Working Paper #4: Coastal Landforms and Scenic Analysis, A Review of the Literature. With a Preliminary Examination of New York's Shoreline. By John Felleman. Spring 1976. 49 pp. \$.50

UPDATE

According to Sea Grant Specialist, Peter Sanko, draft land use regulations for New York State tidal wetlands, which were issued by the New York State Department of Environmental Conservation late this spring, have triggered surprisingly little public response. The proposed law gives a comprehensive list of permissible uses for various kinds of tidal wetlands and adjacent lands.

But public hearings on the draft legislation, held throughout the Long Island and New York City region during the summer, were very lightly attended by the public. The only organized opposition was a group of marine contractors.

A fifth session of the United Nations Law of the Sea Conference was just beginning as "Coastlines" went to press

and is scheduled through September 17, 1976.

The conference has been holding sessions for several years, trying to produce an international treaty establishing both national and international rights for use of the seas.

The fourth session, which ended May 8, produced general acceptance of the 12-mile territorial limit and of the 200-mile economic zone in which coastal countries are to have exclusive rights to natural resources.

The tenth annual National Fishermen's Exposition will be held this year on October 27-30 in the city where the event originated—Boston. This year's exposition will include over 200 displays of fishing vessels and designs, nets and other gear, as well as four days of seminars and workshops, meetings of

fishery associations and social events. Persons wishing more information should contact:

David P. Jackson
National Fisherman Expositions
21 Elm Street
Camden, Maine 04843

Sea Grant Specialist, Roger Allbee left the New York Advisory Service in mid-August to resume residence in his native state of Vermont. Allbee, who has been with the New York Sea Grant program for the past four years, worked out of the Brockport Advisory Service office developing educational programs on coastal erosion and coastal zone management. Allbee's achievements in coastal zone management resulted in his winning a special award from the New York State Cooperative Extension Service this past October.

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COASTLINES, published bi-monthly, is available free of charge on written request to the editor.



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