

Dr. Sidney Gelber, Academic Vice President (2nd from right) congratulates Noyes Fellows Gerard Capriulo, Monica Bricelj, and Kevin Wyman (left to right).

## JESSIE SMITH NOYES FELLOWS FOR 1978-79

MONICA BRICELJ, GERARD M. CAPRIULO, and KEVIN D. WYMAN have been awarded Jessie Smith Noyes Fellowships for 1978-79. Noyes Fellowships provide support for graduate students working on environmental problems of the coastal zone.

Monica Bricelj obtained a B.S. in biology in 1975 from the University of Buenos Aires, Argentina. Before arriving in the U.S. in 1977 on a Fulbright scholarship, Ms. Bricelj worked for Argentina's National Commission of Atomic Energy. Her research includes an examination of the spawning behavior of hard clams in Great South Bay and will help to identify "good" spawning stocks.

Gerard M. Capriulo attended St. John's University and received a B.S. in biology in 1975. Following graduation, he worked at the Osborn Laboratories. He is currently studying the feeding habits and physiology of micro-zooplankton in Great South Bay. These organisms may influence the growth and survival of hard clams in the Bay. A member of the Sigma Xi Society, Mr. Capriulo has received a grant from the Lerner Foundation and is preparing his Ph.D. thesis.

Kevin D. Wyman received a B.S. in oceanography from the University of Washington in 1977. Before entering the Center's Marine Environmental Sciences Program in 1977, Mr. Wyman participated in studies of Arctic plankton ecology, and in baseline studies on the effects of pulp mill effluents in Puget Sound. He will investigate the effects of PCB contamination on estuarine food webs.

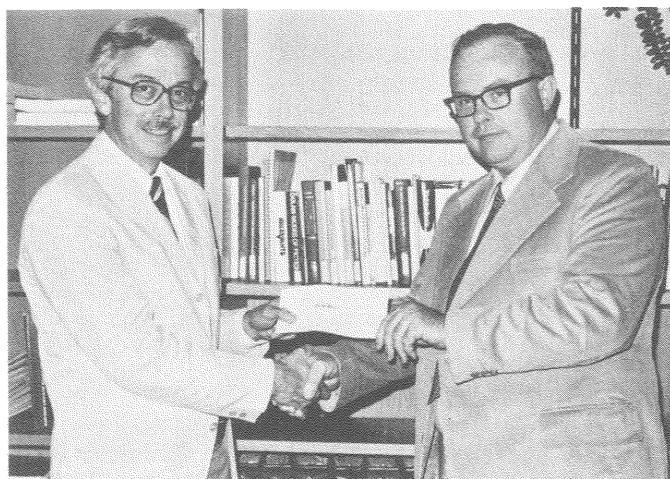
## PROFESSOR O'CONNORS WINS TEACHING AWARD

Professor H. B. O'Connors, Jr. was selected by the Center's graduate students to receive the MSRC Associates Distinguished Teaching Award. Dr. O'Connors received his Ph.D. from Oregon State University and joined MSRC in 1973 as a post-doctoral investigator. He was appointed to the faculty in 1974.

Each year Dr. O'Connors teaches Biological Oceanography, one of MSRC's core courses. The course examines the inter-relationships of the biological communities of the sea, utilizing chemical, geological, and physical processes.

In addition to his teaching, Dr. O'Connors is well-known for his research on effects of low levels of persistent pollutants such as PCBs on community structure. He and his colleague, Professor WURSTER, have demonstrated that PCBs are highly toxic to some, but not all, phytoplankton. However, there are other, more subtle effects. A few parts per billion of PCB reduces growth rates, rates of carbon fixation, and average cell size within the community. Species composition of the phytoplankton assemblage may be altered, with microflagellates becoming the dominant forms.

Preliminary data indicate that this shift in species and cell size distribution may have adverse effects on zooplankton. Many copepods, which are important food for fish, favor the larger phytoplankton. Their feeding efficiency declines as average cell size of the phytoplankton decreases. Low level addition of PCBs to the marine environment may result in diminished production of desirable fish.



Acting President T. A. Pond congratulates Professor Harold B. O'Connors, Jr. on receiving the MSRC Associates Distinguished Teaching Award.

## MSRC ASSOCIATES

We welcome John and Deborah Toll as honorary lifetime members of the Associates, Harry and Janet Carter as new members, and Irving Like as a continuing member.

## AWARDS

Professors CHARLES WURSTER and HAROLD B. O'CONNORS received grants from the New York Department of Environmental Conservation and Sea Grant Institute to continue their study of the behavior and biological effects of PCBs in aquatic and estuarine environments.

Professor MALCOLM J. BOWMAN received a grant from the International Division of the National Science Foundation, U.S.-New Zealand Cooperative Science Program, to spend eight months in New Zealand during 1978-79. Bowman plans to study Cook Strait, a region of strong tidal flow which lies between the two main islands. A native New Zealander, Bowman is spending part of his sabbatical year at the University of Auckland where he will be collaborating with Professor A. C. KIBBLEWHITE.

Professors E. J. CARPENTER (MSRC) and BARBARA L. BENTLEY (Department of Ecology and Evolution) received an NSF grant for their joint project on the ecology of nitrogen fixation by microorganisms on plants in a tropical rain forest. This research follows Dr. Carpenter's study of nitrogen fixation in the euphotic zone of Caribbean and Sargasso Seas.

Professors J. R. SCHUBEL, HENRY J. BOKUNIEWICZ and B. H. BRINKHUIS received an award from the New York Sea Grant Institute and the New York Office of General Services for a study entitled "Combining Sand and Gravel Mining with Dredged Material Disposal: An Assessment."

Professor I. W. DUEDALL has been granted additional support by the Link Foundation for his work on the physical and chemical behavior of sewage sludge in seawater.

Professors BLAIR KINSMAN and J. R. SCHUBEL will undertake a study entitled "The Effects of Sand Mining on Shore Erosion of N.Y. Harbor" with support from the N.Y. Sea Grant Institute and the N.Y. Office of General Services.

Professor J. L. MCHUGH and MSRC graduate student ANDREW MIRCHEL are preparing a report on the economic structure of the Mid-Atlantic scallop industry under a contract with the New England Regional Fisheries Management Council.

J. R. SCHUBEL, ORVILLE W. TERRY, W. M. WISE, and B. H. BRINKHUIS received an award from the U.S. Army Coastal Engineering Research Center for organization and conduct of a training course on "Wetlands Science and Technology." The course will be held at Stony Brook from 11-15 September 1978.

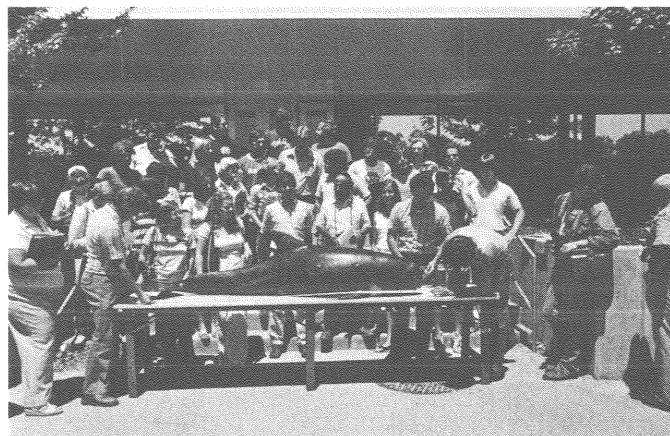
## SOME RECENT PUBLICATIONS

BOWMAN, M. J. and W. E. ESAIAS. 1978. Oceanic Fronts and Coastal Processes--Proc. of MSRC Workshop 25-27 May 1978. Springer-Verlag, Heidelberg.

GROSS, M. G., M. KARWEIT, W. B. CRONIN, and J. R. SCHUBEL. 1978. Suspended sediment discharge of the Susquehanna to northern Chesapeake Bay, 1966-1976. *In Estuaries* 1: 106-110.

MCHUGH, J. L. and J. J. C. GINTER. 1978. Fisheries. MESA New York Bight Atlas Monograph 16. New York Sea Grant Institute, Albany. 129 pp.

WILSON, R. E. and AKIRA OKUBO. 1978. Longitudinal dispersion in a partially mixed estuary. *J. Mar. Res.* 36(3).

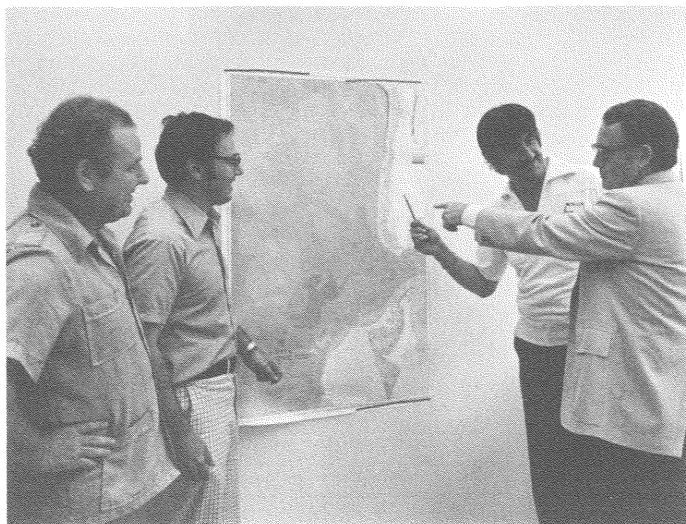


Students gather at MSRC as measurements of gray grampus dolphin are taken prior to autopsy.

## BEACHED DOLPHIN DISSECTED AT MSRC

On 12 July 1978, an autopsy was performed at MSRC on a gray grampus dolphin (*Grampus griseus*) that had been beached on the northern shore of Great South Bay. Dr. Richard Medway and Dr. Jeff Everitt, both of the University of Pennsylvania School of Veterinary Medicine, dissected the animal. Prof. ARTHUR COOLEY, principal instructor of the MSRC-sponsored summer course on the Marine Environment of Long Island (CEB 576), acquired the dolphin after a Bellport High School student discovered it in May and informed Prof. Cooley of its location. Prof. Cooley then notified Dr. James Mead, Director of the Marine Mammal Department of the Smithsonian Institution, who contacted Drs. Medway and Everitt.

The autopsy fulfilled a provision of the Marine Mammal Protection Act which directs that any stranded marine mammal be placed under federal jurisdiction and transported to an appropriate institution for research and study purposes. According to Dr. Medway, such research is extremely useful because "we know very little about the diseases that are present in the wild populations." Dr. Medway also indicated that as a result of an autopsy "we learn more about the biology of the animal as opposed to just burying them." Also important, he said, is the distinction between an individual stranding such as this one and a mass stranding involving a large number of animals, as the causes of these two occurrences may hold different implications. As part of the autopsy, the gray grampus was examined for parasites, pesticide and heavy metal levels, and disease. Those portions of the body that are especially useful for research will be turned over to Dr. Mead.



Professor Raymond Jones, Director of International Programs, discusses Chilean exchange program with MSRC Professors Iver Duedall and Peter Woodhead and Visiting Professor Lisandro Chuecas. Professors Chuecas, Duedall and Woodhead received \$75,000 from the International Sea Grant Program to establish a two-year faculty exchange program with the Department of Marine Biology and Oceanography at the University of Concepción, Chile. This sum will enable faculty members from MSRC to teach short courses at the University of Concepción. Funds are being sought from the Organization of American States to allow Chilean faculty to spend several months at MSRC in order to teach, present seminars, and/or obtain academic degrees.

## PEOPLE AND MEETINGS

JERI SCHOOF, Assistant to the Director, attended the meeting of the American Society of Limnology and Oceanography in Victoria, British Columbia.

Professor DONALD POWERS and graduate student GLYNIS NAU-RITTER attended a New York State Department of Environmental Conservation-sponsored meeting in Albany on 21 June 1978. Representatives of several groups working with NYSDEC on PCB contamination of the Hudson River were present.

GREGORY GREENE, Ph.D. student at MSRC, presented a paper entitled "Growth of the Hard Clam in Great South Bay" at the 70th Conference of National Shellfisheries Association, in New Orleans in June. The paper was based on Mr. Greene's masters thesis.

Professor RAMESH DAYAL presented a paper entitled "Radionuclide Contamination and Redistribution at the 2800 m Atlantic Nuclear Waste Disposal Site" at the Canadian Oceanographic and Meteorological Congress at the University of Western Ontario, London, Ontario in May. He also presented a paper entitled "Clay-Silicic Acid Interaction in Seawater" at the International Clay Conference in England.

Professor EDWARD J. CARPENTER attended a National Oceanic and Atmospheric Administration (NOAA) workshop in Colorado in July to develop research priorities for the marine sciences. Professor Carpenter was on the Executive Committee for the workshop and was assisted by CHERYL BROWER, MSRC graduate student. Professor Carpenter recently testified on the adequacy of marine sampling programs at the proposed Seabrook nuclear power site in New Hampshire.

D. SCOTT BECKER, 1978 MSRC graduate, is employed by the Johns Hopkins University's Chesapeake Bay Institute. He is studying the effects of power plant effluents on benthic communities.

ROBERT E. ADLER, 1978 MSRC graduate, is employed as a Civil Environmental Engineer in the Environmental Analysis Branch of the New England Division of the U.S. Army Corps of Engineers.

Professor HENRY J. BOKUNIEWICZ attended the NOAA workshop to set ocean pollution research priorities in Estes Park, Colorado, from 10-15 July 1978. Dr. Bokuniewicz was a member of the working group on dumping and dredged material.

Professors MALCOLM BOWMAN and WAYNE ESAIAS, and ANDREW HAMILTON, head of MSRC's ocean engineering section, participated in a five-day cruise aboard the R/V SARSIA in the western approaches to the English Channel off the northwest coast of France. The cruise was led by Dr. ROBIN PINGREE of the Institute of Oceanographic Sciences, who is a leading authority on coastal oceanic fronts and their importance to plankton abundance and growth. The visit was funded by the Royal Society of London and the Marine Biological Association of Plymouth, and provided an opportunity to compare the experimental techniques used by Stony Brook and the English scientists.

Professor J. L. McHUGH was an invited speaker on whales and whaling to the sixth grade at the Shoreham-Wading River School in June. He presented an invited paper entitled "Limited Entry: Conservation or Monopoly" at the Conference on Limited Entry into Fisheries in Denver in July. The conference was sponsored by the University of Washington and NOAA. On 26 July 1978 he presented an invited lecture, "History of the Fisheries of the Middle Atlantic Bight Region," at the New York Fisheries Forum held at SUNY, Stony Brook. The meeting was sponsored by the Long Island Association of Commerce and Industry and the N.Y. Sea Grant Institute. Professor McHugh also attended the June and July meetings of the Mid-Atlantic Fishery Management Council and of the Executive Committee of the Council.

Professors J. R. SCHUBEL and PETER WEYL and WILLIAM WISE led a workshop at MSRC to develop a dredged material management plan for the Chesapeake Bay.

Professor AKIRA OKUBO attended the June ASLO meeting in British Columbia and presented a paper by R. DAYAL, A. OKUBO and I. W. DUEDALL, entitled "Sediment Reworking and Mixing Rate in Atlantic Sediments at the Nuclear Waste Disposal Site." He gave an invited seminar at the University of Washington in July on Models for Plankton Patchiness. Dr. Okubo will attend the International Symposium on Mathematical Topics in Biology at Kyoto University, Kyoto Japan, in September to present a paper entitled "Diffusion Problems in Ecology."

## AUGUST GRADUATE

MONTEITH G. HEATON, "Chemical Aspects of Hydraulic Dredging and Open-Water Pipeline Disposal in Estuaries" (Professor Schubel).

## MSRC AND N.Y. SEA GRANT INSTITUTE SPONSOR EDUCATIONAL CRUISE UP HUDSON

In September, MSRC and the New York Sea Grant Institute will sponsor a research and instructional cruise up the Hudson River to Albany on the center's vessel, the R/V ONRUST. Starting from Port Jefferson, Long Island on 17 September, the ONRUST will work her way up the Hudson in six stages--a series of overnight stops at Fort Schuyler (SUNY Maritime College), Tarrytown, Newburg, Kingston, and Coxsackie--and arrive at Albany on the evening of Friday, 22 September. During the weekend stopover in Albany, the ONRUST will be available for demonstration cruises on Saturday and an Open House on Sunday. The return trip will follow the same stages in reverse, leaving Albany on 25 September and arriving at the ONRUST's home port on Friday evening.

All SUNY campuses are invited to have classes (up to 14 plus an instructor) join the cruise for one or more legs. MSRC scientists will be conducting a number of investigations in biological, chemical, geological and physical oceanography throughout the cruise. Field work will include standard temperature-salinity-depth recordings, chlorophyll profiling, plankton tows, sediment sampling and sub-bottom profiling. Participating SUNY class groups will have the opportunity for "hands-on" experience operating over-the-side gear and working with scientific instrumentation in the ship's laboratories. MSRC personnel will also be available to discuss in detail any work in progress and other research programs at the Center.

For the romantic in all of us, the Cruise will echo the spirit of inquiry and discovery of the ship's namesake, the RESTLESS (the English translation of the Dutch word "onrust"), which Captain Adrian Block sailed in 1614 on his exploration of New York's coastal waters. SUNY faculty interested in participating in the cruise with a class should contact F. G. Roberts, MSRC, (516) 246-6546.



Mr. R. L. Gardiner describes Gardiner's Island wildlife sanctuary to instructor Arthur Cooley and students of MSRC's summer course, "The Marine Environment of Long Island."

### STUDENTS EXPLORE GARDINERS ISLAND

By invitation from Mr. Robert Lion Gardiner, the students of the Marine Environment of Long Island (CEB 576) had a unique opportunity on 17 July 1978 to study the wildlife of Gardiner's Island. Transported by Mr. Gardiner in his personal boat and two other crafts, the 38 students spent six hours walking the Island. After leaving the landing, the group passed through Bostwich Forest and observed the gull colony, osprey nests, herms and oystercatchers of Bostwich Meadows.

Gardiner's Island is a beautiful sanctuary where many forms of life exist almost undisturbed by man. The osprey, perhaps the most famous of the Island's wildlife, has had poor reproductive success due to pesticide contamination. The situation now appears to be improving, however, as the yield per nest is presently about one fledgling.

The class observed many of the species and geologic features discussed in class and were grateful to Mr. Gardiner for granting this opportunity.



MSRC bade former SUSB President John S. Toll farewell on 29 June 1978 before he assumed his duties as President of the University of Maryland system. J. R. Schubel (left) presented Dr. Toll with a small token of MSRC's appreciation for his many contributions to the Center.



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