

Dr. Sidney Gelber, Academic Vice President, (second from right) congratulates Noyes Fellows Dominick Ninivaggi, David Hirschberg, and Wayne Penello.

#### JESSIE SMITH NOYES FELLOWSHIPS 1977-78

Three Noyes Fellowships were established last year by the Jessie Smith Noyes Foundation through the University's Stony Brook Foundation. The Fellowships are awarded on a competitive basis to advanced students working on important environmental problems of the coastal zone as part of their Master's or Ph.D. thesis research in one of several programs sponsored by Stony Brook's Marine Sciences Research Center.

DAVID HIRSCHBERG received his B.S. degree in 1974 from Stony Brook, where he studied in the Department of Earth and Space Sciences. Following graduation, he became a research technician in the laboratory of Dr. Oliver A. Schaeffer, his undergraduate advisor. Mr. Hirschberg first came to the Marine Sciences Research Center in June 1975 as a technical specialist in sediment geochemistry. He was accepted into the Marine Environmental Sciences Program in June 1976.

DOMINICK NINIVAGGI graduated magna cum laude from Southampton College with a B.S. degree in biology in 1975. He worked in the Oceanographic Sciences Division at Brookhaven National Laboratory before coming to Stony Brook and has participated in research cruises ranging from Cape Cod to the southern Caribbean Sea. Mr. Ninivaggi is studying whether changes in the composition of the algae, caused by

pollution, have affected the feeding ability of tiny crustaceans which normally feed on the algae and, in turn, are themselves food for fish.

WAYNE FRANK PENELLO is a candidate for a Master of Science Degree. He entered the Center's Marine Environmental Sciences Program in 1976 and received a graduate teaching assistantship. The 23-year-old graduate student received a B.S. degree in Marine Biological Sciences in 1976 from Southampton College. Prior to coming to Stony Brook he worked at Brookhaven National Laboratory as a research collaborator on a project attempting to isolate human pathogenic viruses from sources of fresh water on Long Island. This was his second association with the Lab. He served as a visiting research assistant in the Lab's Department of Applied Science between January and September 1975. In that capacity, he researched the isolation of marine bacteriophage from the coastal waters south of Long Island.

#### CHILEAN OCEANOGRAPHER TO SPEND A YEAR AT MSRC

The Council for International Exchange of Scholars has awarded Professor Lisandro Chuecas of the University of Concepcion, Chile, a Fulbright-Hayes Scholarship to spend one year at SUNY as a Visiting Scholar. Dr. Chuecas will have his office in the MSRC and will offer two courses during the 1977-78 academic year: *Marine Resources in Chile*, a graduate course emphasizing available coastal resources, the management and development of these resources, public attitudes and policies toward the marine environment, marine pollution in Chile, and Chile and the Law of the Sea; *Science in Chile*, using oceanography as a focus, explores public and private sector policies toward science, the scientific role of the university, the funding of oceanography in Chile, oceanographic processes in Chilean coastal waters, the fjord system, and the impact of glaciers.

While at MSRC Dr. Chuecas will also work with Dr. IVER DUEDALL on the oceanography of fjords.

Dr. Chuecas received his Ph.D. in Chemical and Physical Oceanography at the University of Liverpool, Liverpool, England.

## PEOPLE AND MEETINGS

Professor RAMESH DAYAL presented a paper entitled "Control of Interstitial Silica in Marine Sediments by Biogenic Silica and Clay Minerals" by R. Dayal and R. Wilke at the Annual Clay Conference in Kingston, Jamaica, August 14-18, 1977.

Professor B. H. BRINKHUIS presented a paper on "Physiological Ecology of Temperate Salt-Marsh Macroalgae" at the IXth International Seaweed Symposium Santa Barbara, CA. on August 20-27, 1977. He also served on the IDOE panel to review the international Seagrass Ecosystem Studies Program.

Professor J. L. McHUGH presented an invited lecture on fishery management under extended jurisdiction at the annual meeting of the International Marine Archives, Nantucket, Massachusetts, August 17, 1977. He will present an invited paper at the North Carolina Governor's Conference on Fishery Management Under Extended Jurisdiction, October 11-12, in Raleigh, North Carolina.

Professor EDWARD J. CARPENTER participated in a research cruise to the eastern Caribbean Sea. The project, undertaken jointly with Scripps, Bigelow Laboratory for Ocean Science, Harvard University, and the University of New Hampshire, was to study nitrogen cycling in the euphotic zone of the Tropical Ocean. It is hoped that these nutrient studies will lay the groundwork for investigations in Long Island Sound and Great South Bay.

Professor J. R. SCHUBEL attended the Advisory Council meeting of the University National Oceanographic Laboratory System at the Moss Landing Marine Laboratory (Calif.) in August 1977.

## RECENT AWARDS

Professor J. R. SCHUBEL received awards from the U.S. Geological Survey for research on the suspended sediment in the Potomac estuary and from the Nassau-Suffolk Regional Planning Board for research on the distribution of sediments in Great South Bay. WILLIAM WISE and CLIFFORD JONES are associate investigators.

Professor CHARLES WURSTER received a grant from NOAA to support the second year of his study on the effects of organochlorine compounds on plankton and secondary production, a project jointly funded by the Rockefeller Foundation.

Professor AKIRA OKUBO will continue his participation in the METREX (Multi-disciplinary Eastern Tropical Experiment) project on a grant from the University of Washington. Dr. Okubo is developing a mathematical model for reaction/diffusion of anoxic space in the eastern Pacific Ocean.

## SOME RECENT PUBLICATIONS

BAYLOR, E. R., V. PETERS, and M. B. BAYLOR. 1977. Water-to-Air Transfer of Virus. *Science* 197:763-764.

BIGGS, D. C. 1977. Respiration and ammonium excretion by open ocean gelatinous zooplankton. *Limnol. Oceanogr.* 22:108-117.

BOWMAN, M. J. 1976. Tidal locks across the east River. Pages 28-43 in M. Wiley, ed. *Estuarine Processes*, Vol. 1, *Uses, Stresses, and Adaptation to the Estuary*. Academic Press, N.Y.

BOWMAN, M. J. 1977. Nutrient distributions and transport in Long Island Sound. *Estuarine and Coastal Marine Science* 5:531-548.

BRINKHUIS, B. H. 1977. Comparisons of salt-marsh fucoïd production estimated from three different indices. *Journal of Phycology* 13(4).

CARPENTER, E. J., G. R. HARBISON, L. P. MADIN, N. R. SWANBERG, D. C. BIGGS, E. M. HILBERT, V. L. McALISTER J. J. McCARTHY. 1977. *Rhizosolenia* mats. *Limnol. Oceanogr.* 22:739-741.

CHIANG, H. C. and A. OKUBO. 1977. Quantitative analysis and mathematical model of horizontal orientation of midges, *Anarete pritchardi* Kim, in a swarm (Diptera: Cecidomyiidae). Pages 27-30 in *Insect Ecology*. Agricultural Experiment Station, University of Minnesota, Technical Bulletin 319.

DENMAN, K., A. OKUBO, and T. PLATT. 1977. The chlorophyll fluctuation spectrum in the sea. *Limnol. Oceanogr.* 22:1033-1038.

DUEDALL, I. W. 1977. Seawater: an explanation of differential isothermal compressibility measurements in terms of hydration and ion-water interactions. *Progress in Oceanography* 7: 91-133.

EISEL, M. T. 1977. Shoreline survey: Great Peconic, Little Peconic, Gardiners, and Napeague Bays. MSRC Special Report 5.

HAJE, R. L. 1976. The effects of the New York State Tidal Wetlands Act Moratorium Phase. MSRC Special Report 4.

HARBISON, G. R., D. C. BIGGS, and L. P. MADIN. 1977. The associations of Amphipoda Hyperiidea with gelatinous zooplankton--II. Associations with Cnidaria, Ctenophora and Radiolaria. *Deep-Sea Res.* 24:465-488.

KINSMAN, B., J. R. SCHUBEL, M. J. BOWMAN, H. H. CARTER, A. OKUBO, D. W. PRITCHARD,

and R. E. WILSON. 1977. Transport processes in estuaries: recommendations for research. MSRC Special Report 6.

McHUGH, J. L. 1976. Estuarine fisheries: are they doomed? Pages 15-27 in M. Wiley, ed. *Estuarine Processes*, Vol. 1, *Uses, Stresses, and Adaptation to the Estuary*. Academic Press, N.Y.

McHUGH, J. L. 1977. Limiting factors affecting commercial fisheries in the Middle Atlantic estuarine area. Pages 149-169 in *Estuarine Pollution Control and Assessment, Proceedings of a Conference*, Vol. 1. U.S. Environmental Protection Agency, Office of Water Planning and Standards, Washington, D.C.

McHUGH, J. L. 1977. Fisheries and fishery resources of New York Bight. U.S. Dept. of Commerce, NOAA Tech. Rep. NMFS Circular 401. v + 50 p.

POWERS, C. D., R. G. ROWLAND, and C. F. WURSTER. 1976. Dialysis membrane chambers as a device for evaluating impacts of pollutants on plankton under natural conditions. *Water Research* 10: 991-994.

POWERS, C. D., R. G. ROWLAND, and C. F. WURSTER. 1977. Dieldrin-induced destruction of marine algal cells with concomitant decrease in size of survivors and their progeny. *Environmental Pollution* 12:17-25.

SCHUBEL, J. R. 1976. Zoning--A rational approach to estuarine rehabilitation and management. Pages 57-65 in M. Wiley, ed. *Estuarine Processes*, Vol. 1, *Uses, Stresses, and Adaptation to the Estuary*. Academic Press, N.Y.

SCHUBEL, J. R., C. F. SMITH, and T. S. Y. KOO. 1977. Thermal effects of power plant entrainment on survival of larval fishes: A laboratory assessment. *Chesapeake Sci.* 18:290-298.

WILSON, R. E. 1977. A model of dynamics in the lower Potomac River estuary. *Chesapeake Sci.* 18:177-187.

#### NEW PROJECTS

##### *The Impact of Eelgrass on Heavy Metal Mobilization*

Managers of the marine environment are becoming more interested in stabilization of dredge-spoil sediments by planting rooted vegetation as an alternative to diking and other physical means of spoil stabilization. Utilization of plants to stabilize spoil materials and prevent their erosion is attractive because areas disturbed by spoiling activities may be restored. Also, new and productive wetlands could be constructed to attract a variety of birds and other animals.

Stabilization of dredge spoil sediments by transplanting or seeding vegetation to tidal areas above mean low water is becoming commonplace in the United States and elsewhere. Recently, stabilization techniques for subtidal sediments have been evaluated using species of seagrass, such as eelgrass. However, the potential impact of rooted vegetation on the mobilization of metals and other contaminants from sediments has only been studied in grasses planted above mean low water. No studies have been conducted with seagrasses that are wholly submergent.

Professor BOUDEWIJN H. BRINKHUIS is engaged in a research program funded by the New York Sea Grant Program and the Nassau-Suffolk Bi-County Planning Board to determine whether eelgrass is capable of mobilizing (releasing) heavy metals from dredge spoil sediments. With cooperation from Professor A. C. Churchill of Adelphi University, several plots of eelgrass have been transplanted to spoil sediments in Great South Bay, N.Y. The sediments, water in the sediments, and plants grown on the contaminated spoils are being sampled periodically to determine the flux of metals between the sediment environment and the plants rooted in it. Radioactive tracer experiments will also be conducted to determine the uptake rate of cadmium, iron, manganese and zinc. Dr. Brinkhuis and his graduate student, WAYNE F. PENELLO, will also attempt to determine if metals taken up by eelgrass can be transferred to organisms living on eelgrass. Results from this phase of the research will assess the potential for metal introduction from sediments into other organisms that feed on the microbiota that inhabits eelgrass blades.



The MSRC Softball Team, The New York Bights, had an excellent season this past summer (18-6). The Bights were the Eastern Division champions, but lost the league trophy in the play-off games. Five of our players were elected to the All Star Team: PAUL FLAGG, MONTE HEATON, ANDY MIRCHEL, RICK WILKE and BILL WISE. The team members wish to thank all of their supporters.

**MSRC SELECTED TO HOST 1979 ANNUAL MEETING  
OF AMERICAN SOCIETY OF LIMNOLOGY AND  
OCEANOGRAPHY**

Dr. George Saunders, President of the American Society of Limnology and Oceanography (ALSO) announced that their governing board had selected the Marine Sciences Research Center and the State University of New York at Stony Brook to host the 1979 ALSO Annual Meeting. Each year the meeting is held at one of the leading oceanographic or limnologic centers in North America and brings together nearly 1,000 aquatic scientists for a week of formal and informal meetings. We hope to have one, or more, sessions devoted to important problems of regional interest. If you have suggestions for symposium topics please send them to us.

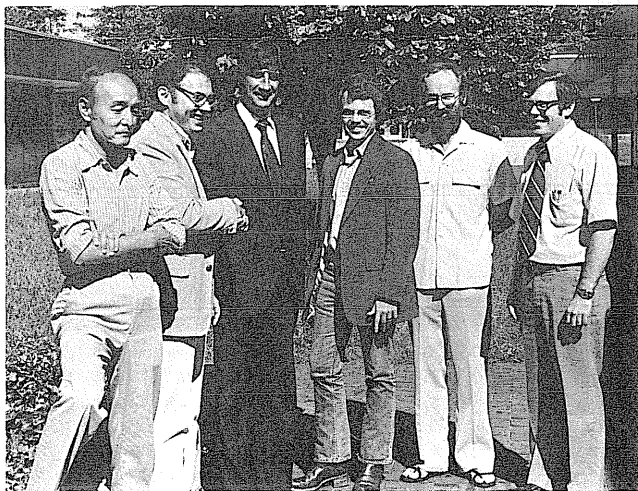
**AUGUST GRADUATE**

GERALD M. CAPRIULO, The Seasonal Importance of Micro-zooplankton as Grazers of Phytoplankton Biomass in Long Island Sound (Professor E. J. CARPENTER)

**STONYBROOK MARINE SCIENTISTS RECEIVE  
GREEN LIGHT ON UNIQUE COAL WASTE DISPOSAL  
PROJECT**

Professors IVER W. DUEDALL and HAROLD B. O'CONNORS are serving as the co-principal investigators in an investigation of the feasibility of converting burned coal residue into a chemically inert form with the possibility of using this material to form artificial fishing reefs.

MSRC ASSOCIATES welcome your participation. Contact Mrs. Jeri Schoof at (516) 246-6543 for information concerning individual and organizational memberships. All contributions are tax deductible and will be used to support education and research.



Faculty members Akira Okubo, Iver Duedall, Henry Bokuniewicz, Malcolm Bowman, and Jerry Schubel welcome Chilean oceanographer Dr. Lisandro Chuecas (third from left) to MSRC.

**SEMINAR SCHEDULE**

Oct.			
13	4:00	TBA	
20	4:00	<u>Stability of Barrier Island Inlets</u> Dr. R. BURNS, Virginia Institute of Marine Science	
27	4:00	<u>Management Plan for Great South Bay Hard Clam Resource</u> Mr. S. BUCKNER, Town of Islip	
Nov.			
3	4:00	<u>Functional and Numerical Responses of Coastal Tintinnids: Implications for the Neritic Food Chain</u> Dr. J. HEINBOKEL, Chesapeake Bay Institute	
10	4:00	TBA Dr. K. PEREZ, EPA Narragansett Laboratory	
17	4:00	<u>Uptake of Heavy Metals by Eelgrass in Great South Bay</u> Dr. B. BRINKHUIS, MSRC	
Dec.			
1	4:00	<u>Recent Developments in Coastal Frontology</u> Dr. M. J. BOWMAN, MSRC	
8	4:00	<u>Biostratigraphy of Chesapeake Bay Tributaries</u> Dr. G. BRUSH, Department of Natural Resources, Maryland	
15	4:00	<u>Sedimentary Processes in Long Island Sound</u> Dr. H. BOKUNIEWICZ, MSRC	

TBA=To Be Announced

All seminars are held in Building F, Room 163 on the South Campus.



Stony Brook, New York 11794

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