



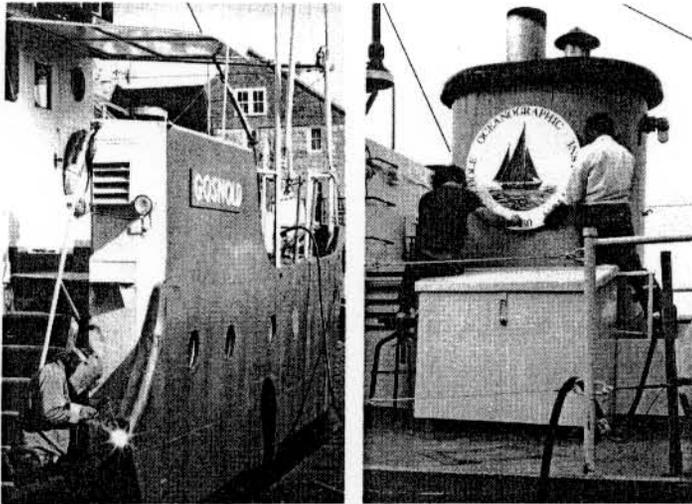
NEWSLETTER

Volume 14

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★ ★ ★ OCEANOGRAPHIC SHIP NOTES ★ ★ ★



Finishing touches are put on GOSNOLD before her departure by Peter Bumpus, left, Jon Wood, and Lech Kaminski.

GOSNOLD departed on Voyage 206 October 15 to serve briefly as escort to LULU during diving operations near Oceanographer Canyon and then turned south for a year's assignment with the Harbor Branch Foundation in Ft. Pierce, Florida. Her operations will be directed by Harbor Branch Foundation Scientific Director Burr Steinbach and will include a biological species survey of the waters off Florida for the Smithsonian Institution.

CHAIN is at dockside undergoing annual maintenance work before departing about November 19 on Voyage 115, a seven-leg joint W.H.O.I.-M.I.T. expedition to the South Atlantic extending to mid-June. The scientific program combines geology and geophysics with physical oceanography and chemistry in an interdisciplinary approach to understanding problems of sedimentation and circulation as well as tectonics. One area of study, the South Atlantic, is of great tectonic significance as somewhere within it lie the past and possibly the

present boundaries between the North American, South American, and African continental plates. There will also be interdisciplinary research in the Equatorial Atlantic, where there is a lack of significant geological, geophysical, and geochemical information. Geophysical data obtained on this cruise will also be useful in deciding future drilling locations for the GLOMAR CHALLENGER's on-going Deep Sea Drilling Project.

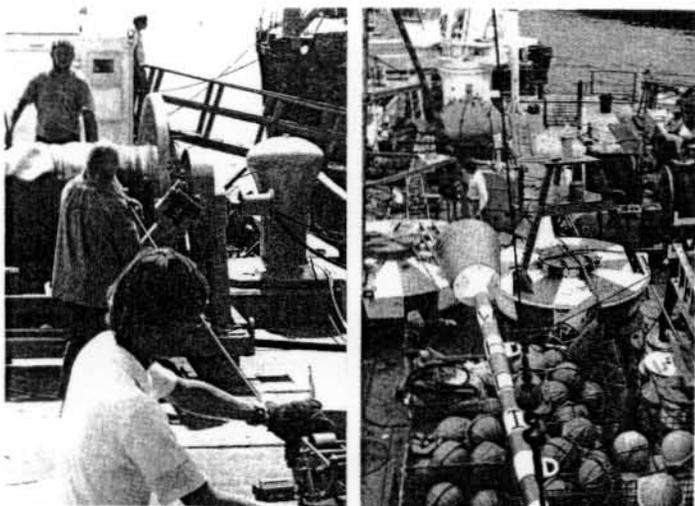
LULU and ALVIN will also spend the winter months working out of Harbor Branch and other Florida ports following completion of testing of new components on ALVIN and prior to joining next summer's FAMOUS expedition to the mid-Atlantic.

ATLANTIS II is continuing Voyage 78, which includes large volume water stations, midwater trawls, plankton tows and gravity tows, currently in the area of Puerto Rico.



ALVIN sails aboard LULU for recent test cruise with Ed Bland, John Donnelly, Bill Madison, Russ Graham, Jess Baugh, Andy Barrs, and Ken Wagner.

KNORR carried more than 90 tons of buoy gear when she departed October 13 on Voyage 34 to initiate Physical Oceanography's Internal Wave Experiment and to recover, service, and set moorings at Site D. Internal waves are similar to surface waves except that they occur beneath the surface, and they are ten times higher and a hundred times longer and slower. This study of the phenomenon features a three-dimensional three-legged mooring in the deep ocean --, each instrumented leg is 6,000 meters long and leads to an apex float resting 600 meters below the surface. The mooring will remain at its site, halfway between Bermuda and the Bahamas, for about 75 days, with recovery scheduled for a December KNORR cruise.



At left, Jack Scharff, Betty Guillard, and David Barnes wind one of the legs for the Internal Wave Experiment tri-mooring. At right, the heavily-laden deck of the KNORR as she prepared to sail for buoy cruise.

KNORR will head south again into the northern Sargasso Sea about November 11 for biological studies of Gulf Stream rings with emphasis on spatial patterns of phytoplankton, zooplankton, and fish across a cold-core ring. (Gulf Stream rings form when meanders of the Gulf Stream become so accentuated that they break away from the Stream forming a ring of swiftly moving Gulf Stream water around a core of seawater of different origin. Rings forming to the south or east of the Stream entrap cold water of slope origin. Rings forming to the north or west of the Stream contain warm core water of Sargasso Sea origin.) There will also be collections of planktonic larva and deep sea benthic animals

for life history studies, and other studies will examine the effect of controlled amounts of copper on the heterotrophic activity of natural microbial populations.

CSANADY IS NEW SENIOR SCIENTIST

Gabe Csanady has joined the Physical Oceanography Department as a Senior Scientist. His is already a familiar face here at the Institution as he spent September to April, 1972-73, here assembling and analyzing data from the International Field Year on the Great Lakes (1968-1970). This was an International Hydrologic Decade project for which he served as chairman of the Water Movement Subcommittee.

He is Hungarian-born and holds the Dipl. Ing. from the Technische Hochschule, Munich, and a Ph.D. from the University of New South Wales, Australia. He held various engineering positions in the electric power generation industry in Germany and Australia before joining the mechanical engineering faculty of the University of New South Wales in 1954. He later served on the faculties of the College of Aeronautics in Cranfield, England, and the University of Windsor in Ontario. Since 1963, he has been a professor at the University of Waterloo, Ontario, and was Mechanical Engineering Department Chairman from 1964 to 1967.

His professional activities include three associate editorships, for the "Journal of Applied Meteorology", "Atmospheric Environment" and "Water, Air, and Soil Pollution". He received the President's Prize from the Canadian Meteorological Society in 1970 for research which examined the dispersal of air pollutants over relatively large areas, work done for Travelers' Research Center, Hartford, Conn.

He will continue his work on Great Lakes Field Year data here at the Institution, and he will also study the dynamics of the continental shelf.

THREE ARE PROMOTED TO ASSOCIATE SCIENTIST

Three Assistant Scientists have been promoted to Associate Scientist positions. They are Fred Grassle and Gil Rowe of the Biology Department and Jack Whitehead of Physical Oceanography.

Fred Grassle and Gil Rowe were graduate school contemporaries at Duke, which awarded

both their Ph.D.'s. Fred did undergraduate work at Yale, and Gil's B.S. and M.S. degrees are from Texas A & M.

Fred joined the Oceanographic in 1969 following two years as a Fulbright Scholar at the University of Queensland, Australia. He served on the Staff Committee's Library Study Group, which recently issued its report, and he is a member of the Journal Club Committee. His present work concerns deep sea bottom communities, and he is studying the genetics of polychaete worms with his wife, Judy, who is at M.B.L.

Gil was a research associate at Florida State before coming to Woods Hole as a postdoctoral fellow in 1968. His present work concerns coupling between sediment biological processes and the physical and chemical characteristics of near-bottom water.

Jack Whitehead was assistant research geophysicist at the U.C.L.A. Institute of Geophysics and Planetary Physics before joining the Physical Oceanography Department in 1971 as Assistant Scientist. Jack holds a B.S. from Tufts and M.S. and Ph.D. degrees

from Yale. He is working on laboratory and theoretical models of oceanic circulations and processes. Other research interests include stability problems of geophysical processes and fundamental fluid dynamics work.

UNITED FUND APPEAL UNDERWAY, A LETTER FROM OUR CAMPAIGN CHAIRMAN

Dear Fellow Employees,

The Cape Cod United Fund drive is well underway. Remember there are 16 worthwhile organizations to support.

To date, 12% have contributed, giving an approximate total of \$3,000. I am sure with its remaining 88% W.H.O.I. will top last year's contribution of \$9,400.

A reminder: please mark your pledge cards in the appropriate places and return to me through interoffice mail, Redfield 2-12.

Be early and give generously!

Thanks -

Nat Corwin



Photos by Chic Medeiros



DAY OF SCIENCE DRAWS CROWD

More than 100 Associates attended the annual Day of Science activities at the Institution September 28, and a total of more than 300 Associates, scientists, and friends of the Institution sat down to lunch in a large, striped tent on the Quissett campus.

Upper left picture shows Board Chairman Charles F. Adams, right, with Mr. and Mrs. Van Alan Clark, Sr., whose gift of \$4 million was announced as a special feature of the day.

Lower left picture shows the visitors touring the dock and shop area with a display of cores from the giant corer, and upper right picture shows Cam Gifford describing aquaculture experiments.

MARINE POLICY BEGINS NEW YEAR

The 1973-74 Marine Policy Fellows are in residence at Crowell House, have completed an introductory course in oceanography given by Dave Ross, and are beginning work on their individual projects.

The four postdoctoral fellows are Dan Ciobanu, Rahmatullah Khan, Susan Peterson, and Leah Smith. Those in the predoctoral program are Jack Appleman, Austin Pulle, Charles Odidi-Okidi, and Jan-Olaf Willums.

Dan Ciobanu holds a number of degrees, both from his native Romania and from U.S. Institutions. Following completion of his LL.B. work at the University of Bucharest, he was appointed a research associate of the Romanian Academy of Sciences. He also served as a legal advisor to the Romanian Ministry of Foreign Affairs and earned a doctoral degree from the University of Cluj. As a Fulbright Scholar, he has earned a Ph.D. from the Fletcher School of Law and Diplomacy and an S.J.D. from Harvard Law School. He also holds the diploma of the Hague Academy of International Law, where he spent two months this summer. As a research Associate at Fletcher, his responsibilities include assisting in a course on law of the sea. His work in Woods Hole will consider "Binding Force of the Conventional Law of the Sea Upon Third Parties."

Rahmatullah Khan is Associate Professor at the Centre of International Legal Studies of Jawaharlal Nehru University, New Delhi. He is the author of three books, editor of two, and has written many articles on international law. His work here will concern international management of fisheries in the Indian Ocean.

Susan Peterson did undergraduate work in anthropology at the University of Illinois, and she has just completed a Ph.D. at the University of Hawaii. Her dissertation title was "Retailing Patterns in the Honolulu Fish Market: A Study of Factors Influencing Marketing Decisions." While here at Woods Hole, she will turn her attention to New England fishermen to examine how they perceive their role in international, state, and local fishing and to consider the outlook for New England fishermen in the face of certain possible restrictions.

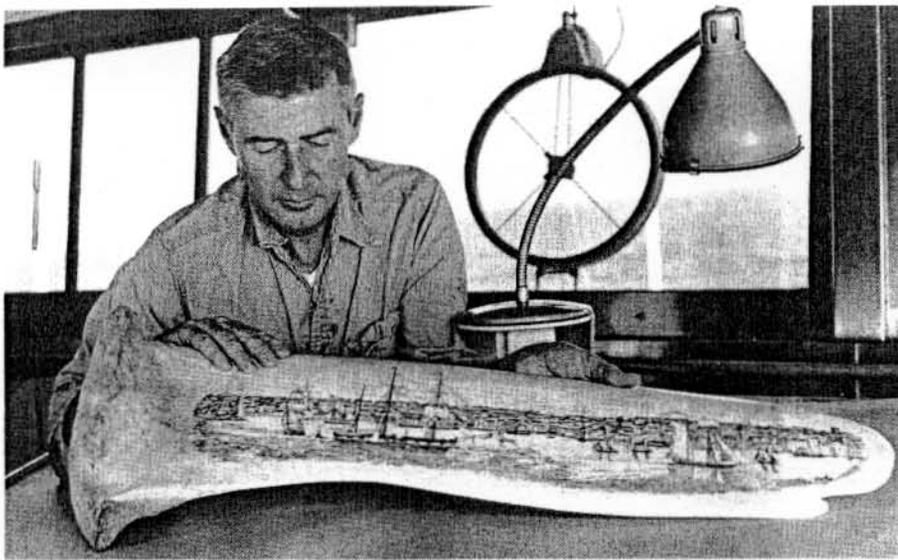
Leah Smith is an economist who holds an undergraduate degree from Stanford and a Ph.D. from Johns Hopkins. She taught at North Carolina State for a time and has recently been doing economic research in Boston. Her work here will concern the economic benefits of doing oceanographic research including a look at research related to aquaculture. Some other examples of the technology which has resulted from basic research will also be examined with particular attention to the pattern of diffusion of the technology to wider use.

Jack Appleman is a physics graduate of Harvey Mudd College, did graduate study at Yale in fluid physics, and then turned to policy studies at Harvard in the John F. Kennedy School of Government Public Policy Program. He spent the summer of 1967 in Woods Hole as a research assistant in geophysics. His work in the Marine Policy Program will concern Environmental Protection Agency regulation of ocean dumping in the New York Bight.

Austin Pulle is a Ceylonese and a graduate of the University of Sri Lanka, Colombo, Sri Lanka (Ceylon). He holds an LL.B. degree from that university and an LL.M. from the Harvard Law School. He is a doctoral candidate at Harvard Law School and is working on the dissertation topic "Effective International Controls on Marine Pollution". He will consider the problems of compliance relating to marine pollution treaties and the formulation of a strategy for compliance with international marine pollution controls.

Charles Odidi-Okidi is a Kenyan, who worked four years for the Kenya Ministry of Home Affairs before traveling far north to Alaska Methodist University, where he earned a B.A. in social science. He is now a student at The Fletcher School of Law and Diplomacy. His work in Woods Hole will consider prospects for establishment of regional regulatory arrangements for selected activities in ocean space, particularly fisheries, pollution, and scientific research.

Jan-Olaf Willums is a Norwegian who has lived in several European countries and was an exchange student in Japan. He



At left, Buzzy McLaughlin on the bridge of the KNORR with engraved jawbone. Picture below shows a whale's tooth at right with scene pencilled in; tooth at left illustrates next step with scene inked over and lines scratched out in reverse.

SCRIMSHANDER

One of the prime items in the annual Falmouth Heart Fund auction this February will be a large piece of scrimshaw by the KNORR's chief Engineer Buzzy McLaughlin, one of the few modern-day scrimshanders who still goes to sea. Buzzy has engraved a 35-inch section of whale jawbone with a mid-19th century view of the New Bedford port and has donated it for the auction.

The scene is taken from the initial portion of a gigantic Benjamin Russell watercolor. Russell was a member of a New Bedford whaling family, and he returned in 1845 from a four-year whaling voyage around the world with sketches for the painting. The muslin, which measures 1,300 x 8½ feet, is entitled "Panorama of a Whaling Voyage Around the World" and includes scenes in the Azores, the Cape Verde Islands, Rio de Janeiro, and several Pacific Islands with many lively whaling scenes along the way. The panorama belongs to the New Bedford Whaling Museum and has been exhibited in its entirety only once in recent times, in August of 1960 in New Bedford.

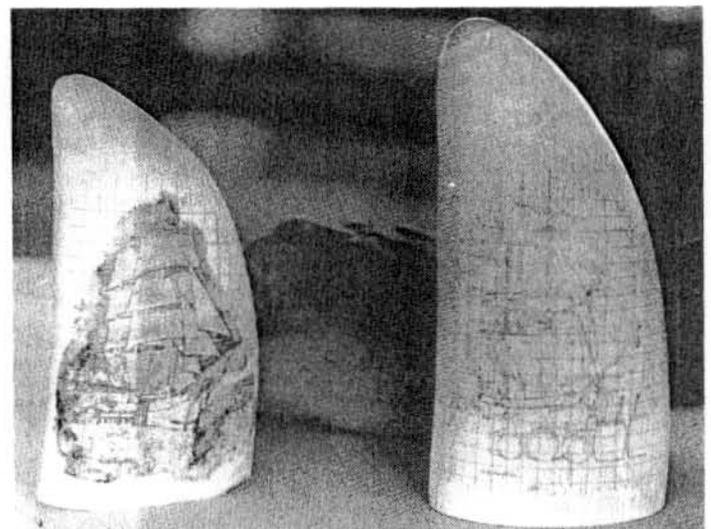
This is the second jawbone section Buzzy has done; the other carries a whaling scene and forms a lamp base in his Falmouth home. He has also etched about 150 teeth in his nine years of scrimshanding; his family has two, and the others have all been gifts to friends and interested strangers (including Sir George Deacon, Jacques Cousteau, and Hubert Humphrey).

Buzzy has been at sea for nearly 30 years, first in the Navy, later in the Army Transport Service, and with the Oceanographic since 1963. (Actually, he spent 14 months on the MENTOR, RELIANCE, and CARYN after the Navy, so 1963 started his second tour with W.H.O.I.) He has been the KNORR's Chief since she went into service in 1970.

The engraving on the jawbone took about 75 hours after the surface was carefully scraped and sanded perfectly smooth. The next step was to square off the picture to be transferred to the bone and pencil the same number of squares on the engraving surface. After the picture was pencil-drawn to scale on the engraving surface, square by square, the engraving with the traditional sail needle began.

Scrimshaw is growing more valuable because the sperm whale, which provides the best materials for the art, has recently been declared an endangered species, and importation of any part of the animal has been outlawed. This jawbone was given to Buzzy by Dick Backus, who says it was part of a basketful of whale teeth and bones he bought in the Azores nearly a decade ago.

The jawbone will be on display from time to time until the auction in the window of the Clan Patrick shop on Main Street in Falmouth.



Volume Six of *Fishes of the Western North Atlantic* has been dedicated to Bill Schroeder, who served the Institution for many years as business manager and resident ichthyologist until his retirement in 1968. This 698-page volume is the latest addition to work begun by Bill Schroeder and Dr. Bigelow when they published Volume One in 1948 and Volume Two in 1953.

The entire set of *Fishes of the Western North Atlantic* has been published as Memoirs of the Sears Foundation for Marine Research at Yale University. Dan Merriman of the Sears Foundation made a special trip to Falmouth last month to insure that Bill Schroeder received the very first copy of Volume Six distributed.

Bill's first scientific paper dealt with the clam industry of southern Florida, and his first publication on fishes, with Dr. Bigelow in 1927, was on sharks and skates of the northwestern Atlantic. Over the next 20 years, Bill was author or coauthor of 30 ichthyological notes and papers.

In addition to the western north Atlantic volumes, Bill published *Fishes of Chesapeake Bay* in 1927 with Samuel F. Hildebrand and *Fishes of the Gulf of Maine* in 1953 with Dr. Bigelow.

In their introduction to the first volume of *Fishes of the Western North Atlantic*, Bigelow and Schroeder wrote:

"This volume, the first of a series, describes the lancelets, the hagfishes, and the lampreys, and those most interesting animals, the sharks. It has been written on the premise that it should be useful to those in many walks of life -- to those casually or vitally interested in the general phenomena of life in our waters, . . . to the sportsman . . . to the fisherman . . . as well as to the amateur ichthyologist and the professional scientist. Special stress has been given to the relationship of the fishes to ourselves - in most cases this relationship is to man's advantage, but the present volume also carries this theme in reverse -- some sharks will attack man!"

Bill Schroeder has been a member of the Board of Editors for *Fishes of the Western North Atlantic* since its inception, and he is esteemed by ichthyologists the world over. Named after him are a mollusk, a crustacean, an anchovy, a carp, a freshwater ray, a sawshark, a bathyclupeid, and a new genus of catsharks, *Schroederichtys*.

The final paragraph of the dedication of Volume Six reads, "'Honest men esteem and value nothing so much in this world as a real friend.' In that spirit, and with rare appreciation, this sixth part of Memoir I, *Fishes of the Western North Atlantic* is dedicated to Schroeder, William C."

MARINE POLICY (continued)

did undergraduate and master's work at the Swiss Federal Institute of Technology, where he won several scientific honors and awards. He was a research assistant for the executive office of MODE for part of this year, and he is a Ph.D. candidate in the M.I.T. Department of Ocean Engineering and Management. His work here will examine marine resource development in several areas of the Chinese coast with consideration of the technical requirements for development of oil resources there and technology transfer from west to east to facilitate the development.

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Notes, notices, and any items of interest to the Oceanographic community are welcomed by the Newsletter. See Editor Vicky Briscoe, office in the Coop Building, or phone 252.



Fold your arms and put your right heel out . . . discussing final disposition of gear aboard KNORR for September cruise are John Farrington, Dick Backus, John Teal, Bob Gagosian, Charley Price, Ed Carpenter, Asa Wing, and James McCarthy (of Chesapeake Bay Institute).

NOTICES

Jim Heirtzler and Dave Ross visited Cairo last month under the auspices of the Office of International Programs of the National Science Foundation to lay groundwork for possible cooperative research in the Eastern Mediterranean with Egyptian scientists. The program would be a geological and geophysical study of the Eastern Mediterranean. They discussed the program with officials of Egyptian universities, the Academy of Scientific Research and Technology, and other scientific bodies.

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The Gray Museum at M.B.L. contains a reference collection of the plants, invertebrates, and fishes from northeastern North America. Anyone who would like access to the collection should contact Amelie Scheltema, ext. 337, or the curator, Dr. Marie Abbott, 548-3705, ext. 508. The museum welcomes new acquisitions of identified specimens not well represented in the collection.

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Al Vine's travels recently have included a visit to his alma mater, Lehigh University, to receive an honorary doctor of science degree at fall graduation ceremonies and a trip to Bowdoin College to deliver one of the college's annual Elliot Lectures in Oceanography.

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A yoga class will be held Thursdays at 5:00 p.m. at Endeavour House beginning November 8. For further information, contact Mabellina Philbin, ext. 330 or 548-0848.

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Oceanographic wives' coffee get-togethers started again October 23. The monthly events are held from 10:00 to 11:30 a.m. at the Carriage House. The next two will be November 13 and December 18. This year's organizers, Karen Joyce, Pat Kerfoot, Josie Little, and Barb Spindel, invite one and all to come get acquainted. Children are welcome.

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Lost or Strayed: Large Army tent from Warehouse during week of October 15. If you have borrowed the tent, please call ext. 466 and notify Al Driscoll of its location.

* * * *

The drama reading group is meeting at Endeavour House Tuesday evenings at 7:30 for scene studies and workshop. Anyone interested is encouraged to attend -- male voices are particularly needed.

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The stamp collectors among us have been distressed by the disappearance of foreign stamps from their mail, particularly that coming from eastern bloc countries. They note that stamps lose their value if they are in any way damaged as they are removed from their envelopes, and great care is required. Surely the courtesy of a request for the stamps is due, in any case, the addressee of the mail!

* * * *

A note from Michelle Staltare: "Since there were so many at the luncheon on Tuesday, October 23, I'd like to take this opportunity to thank you all again and to express my appreciation to you for coming. I'll really enjoy my gifts and will always remember the friends I've made here at WHOI."

* * * *

A "Tel-a-Story" projector has been placed in the Smith lobby with slides showing construction progress on the Quissett campus. This is in response to a number of interested inquiries received by the Facilities Office. Anyone interested should stop by for a quick visit to the new campus. It has also been noted that many interesting slides of scientific work, particularly at sea, are unavailable to most of us; perhaps continued use of this projector could remedy this situation and let us all know a little more about what's going on. Anyone with an interesting set of slides that might be appropriate for such viewing should contact Vicky Briscoe, ext. 252.

* * * *

The idea of this sheet is to give everybody a chance to share ideas, efficient practices, and general information. If you have a bit of information that makes your life easier and that you think might be good for others to know about (or something you'd like us to find out about), call the Newsletter, extension 252, and let us know about it.

Collected Reprint
Contribution Numbers

Newsletter,
November 1, 1973

The annual publication *Collected Reprints of the Woods Hole Oceanographic Institution* compiles the work of Institution staff members especially for use by small libraries and those in foreign countries which cannot provide their users with an extensive scientific library. The collection is put together by Mary Sears and distributed to 1,300 institutions and libraries throughout the world. Included are new scientific work and scientific reviews; generally not included are book reviews, short encyclopedia articles, and popular articles. Inclusion is subject to length requirements: articles more than 100 pages in length may be given a contribution number and listed in *Collected Reprints* but not actually physically included because of the expense of reproduction.

It is the responsibility of the department chairmen to decide whether a paper is appropriate for inclusion in *Collected Reprints*. When a chairman has done this, the department secretary or the author should contact Joan Hulburt (ext. 235) for the next number up on the list (as of October 16, 1973, 3,215 numbers had been assigned). At this time, Joan needs the following information:

Names of Authors
Title
Journal of Submission
Grants and Contracts Involved
Who Authorized Issuance of Number

When the proof copy is received from the publication, the author should see that the W.H.O.I. Contribution Number is included on it. (Note that *Nature* does not put the Contribution Number in the publication but does add it on reprints.) At this time, Mary's office should be notified of the address for ordering reprints (or forms for doing so should be sent to her), the page size of the journal, and whether there are funds for page charges. *Collected Reprints* is published in a 7 x 10-inch format; smaller page size can be accepted, but larger cannot and arrangements must be made for reduction in the size of the pages from larger journals. Mary's office will order 150 reprints for the authors and any required for contracts or grants, as well as what she needs for *Collected Reprints*.