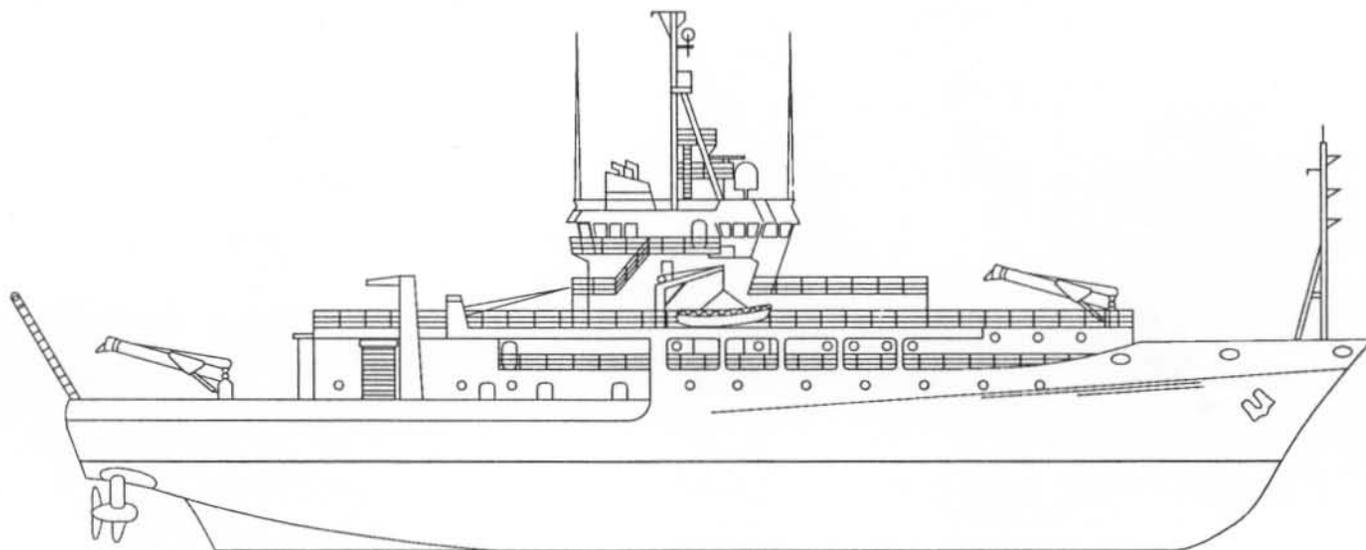

NEWSLETTER

WOODS HOLE
OCEANOGRAPHIC INSTITUTION



JUNE/JULY 1991

WHOI Selected to Operate Agor-25



Outboard profile of Agor-25

Congratulations WHOI

The Office of Naval Research (ONR) announced July 19 that WHOI has been selected by a competitive proposal process to operate AGOR-25, one of the Navy's two new research vessels.

The award of AGOR-25, which will replace the ATLANTIS II, strengthens the Institution's leadership role in deep submergence technology and operations. R/V

KNORR (AGOR-15), delivered to WHOI in 1970, has been upgraded to handle both manned and unmanned vehicles and gives WHOI unparalleled capabilities in deep submergence operations.

Scripps Institution of Oceanography in La Jolla, CA, was selected to operate the AGOR-25 sister ship, AGOR-24, for the University of California system.

The current procurement schedule for both AGOR-24 and AGOR-25 indicates the Navy will issue a request for proposals (RFP) immediately, with shipyard proposals due in September and the contract award for AGOR-24 made in November. Construction of AGOR-24 will start in March 1992, the contract option award for construction of

Please turn to page 11

WHOI Scientists Prepare for Arctic Cruise

The first international scientific expedition to attempt to reach the North Pole by ship is preparing to depart for the Arctic Ocean.

Sus Honjo of the Geology & Geophysics Department will be co-chief scientist on the cruise, which will include scientists from Canada, Germany, Japan, Norway, Sweden and the United States.

The expedition will involve three icebreakers — the U.S. Coast Guard POLAR STAR, the German POLARSTERN, and the Swedish ODEN. POLAR STAR was in Boston June 19-22 to load equipment from WHOI and other participants on the U.S. and Japanese teams before departing for Halifax, Nova Scotia, to load Canadian gear.

The three ships will meet in Tromsø, Norway, and depart for the North Pole in early August. They will cruise to areas of the deep Arctic Basin never before explored, pounding through ice sheets over 10 feet thick. The ships will return to Tromsø in mid-October.

The expedition received significant media attention during the POLAR STAR's stay in Boston. Reporters from Channels 4, 5, and 7 (NBC, ABC, CBS affiliates), Channel 56, the Christian Science Monitor

newspaper and radio, Associated Press, and the Boston Herald visited the dock and reported on the event.

Extensive research programs will be conducted from the POLAR STAR and from stations on the ice. Among

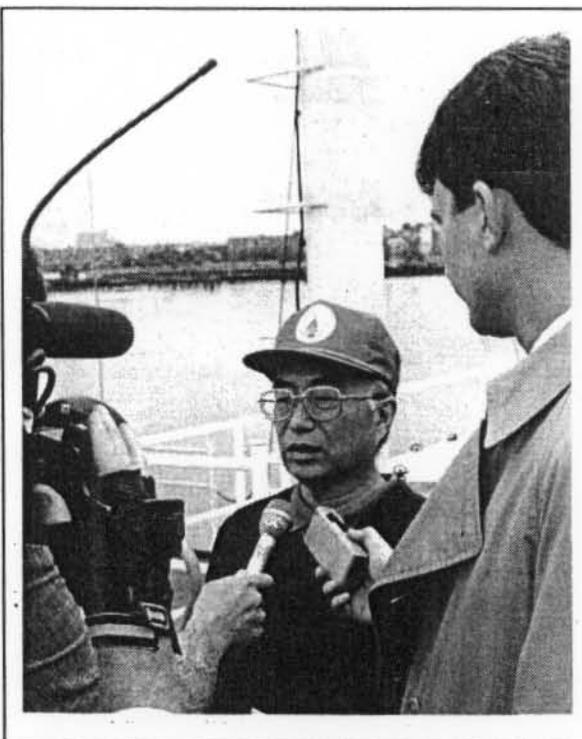
modeling major ocean currents like the Transpolar Drift which carries ice from Siberia to the North Pole and into the North Atlantic, tracing river input in the ice and upper

layers of the water in different areas of the Arctic Ocean, and studies of the exchange of carbon dioxide between the atmosphere and the water beneath the ice. Better understanding of global warming and the greenhouse effect will be among the important results of this research.

Four WHOI employees will be among the 20 scientists aboard the POLAR STAR, the largest representation from a single institution. Two WHOI Ice-Ocean Environmental Buoys, each with 232 sensors to transmit measurements from the atmosphere, the ice and the water below the ice, will be deployed. These automated polar stations, developed in cooperation with the Japan Marine Science and Technology Center (JAMSTEC), will relay data by satellite back to WHOI for at least 18 months

through the Arctic winters as they are carried by drifting ice. Other WHOI equipment, including a coring device built at WHOI and welded to the POLAR STAR's deck in Boston, will be used.

Photo by Tom Kleindinst



Sus Honjo talks to reporters in Boston while the POLAR STAR is prepared for its Arctic cruise.

the projects to be undertaken are Canadian efforts to reliably evaluate ice distribution in the Arctic Ocean using a microwave satellite, detailed U.S. studies of sea-ice behavior,

WHOI Hosts Earthwatch Students

The Education Office and Coastal Research Center hosted seven high school students in the Earthwatch program for two weeks in July. The students, gifted in the arts and humanities as well as science, were chosen through a nationwide competitive application process. Participants came from California, Florida, Louisiana, North Carolina and New Mexico.

The purpose of the WHOI

program was to give the students a hands-on involvement in scientific research. The topic chosen for the group was oil pollution and the continuing efforts to determine the long-term fate and effects of oil compounds in marsh sediments. The students collected core samples from area marshes and analyzed them in a laboratory under the direction of John Farrington, Bruce Tripp, George Hampson and Susan McGroddy.

The two-week visit also included an overview of the Institution, with tours conducted by WHOI staff through the Exhibit Center, Library, Seafloor Samples Lab and Buoy Lab. A collecting cruise aboard ASTERIAS, and visits to Waquoit Bay Estuarine Preserve, the Ocean Arks International Project at the Providence Sewage Treatment plant, and the Lloyd Center in South Dartmouth were also on their agenda.

New President Elected at Annual Meeting

This year's annual meetings of the Trustees and Corporation included the installation of a new Corporation president and coincided with the dedication of the \$5 million national carbon-14 dating facility and a lecture by a Nobel laureate.

James M. Clark was elected to fill the post left by outgoing President of the Corporation John H. Steele.

Other Corporation officers, all of whom were re-elected to their posts at the annual meeting, are: Chairman of the Board Guy Nichols, Director Craig Dorman, Vice President Charles Hollister, Treasurer Kenneth Safe, Jr., Assistant Treasurer Edwin Hiam, and Clerk Gary Walker. Trustees, Corporation Members, and committee members were also elected at the meeting.

Clark is a former chief executive officer of Hornblower-Weeks, Hemphill, Noyes in New York City and has been affiliated with Shearson Lehman Brothers, Inc. since 1986. He has maintained an active role at the Woods Hole Oceanographic Institution since 1976, when he joined the Associates Program. He has served WHOI as a Trustee since 1984, Member of the Corporation since 1983, and has been a member of the Executive Committee since 1985. He is also a member of the Institution's Development Committee and is Chairman of the Buildings and

Grounds Committee. His brother Hays is an Honorary Member of the Corporation and his late brother W. Van Alan was also a Member of the Corporation.

The annual meeting also included a science report by Senior Scientist John H. Steele on "The Ocean Landscape." A reception and dinner sponsored by the Associates under a tent on the Fenno House grounds for more than 200 Trustees, Corporation Members and Associates concluded the day's events.

AMS Dedication

About 250 employees, Trustees, Corporation Members and Associates toured the new lab and attended a dedication ceremony for the National Ocean Sciences Accelerator Mass Spectrometry Facility at the McLean Laboratory on June 14.

Robert Corell, assistant director for geosciences at the National Science Foundation (NSF), spoke on advances in carbon dating and congratulated WHOI on acquiring the facility.

The AMS facility at WHOI is only the seventh in the world, and is the newest and most sophisticated. It was funded by NSF to serve the national ocean science community. Glenn Jones is director of the facility.

Some of the individuals responsible for creating the new facility were

Photos, pages 4-5

also on hand for the dedication. Helen Walker and Oliver Egleston of Shepley, Bulfinch, Richardson & Abbott Architects attended, as well as F. Thomas Westcott, head of Westcott Construction.

The dedication also attracted state representatives Tom Cahir and Eric Turkington, and Falmouth Town Administrator Peter Boyer.

Sustainability

The annual meeting also included a lecture on "Sustainability: An Economist's Perspective," by Nobel Laureate Robert Solow, a member of the Senior Advisors Committee at the WHOI Marine Policy Center and Institute Professor at the Massachusetts Institute of Technology.

About 200 people filled the fifth floor of Clark to hear Solow speak on public policy, economic growth and resource conservation issues surrounding sustainability.

The lecture was the 18th J. Seward Johnson Lecture in Marine Policy presented in honor of the former WHOI Trustee and Corporation Member whose life-long interest in the oceans and ocean policy was instrumental in creating the Marine Policy Center.

Robin Good Elected to NEDRA Board

Robin Good, development officer for information operations, has been elected to the board of directors of the New England Development Research Association.

NEDRA, a professional organization of fund raising researchers, seeks to promote the role of research in identifying prospects (individuals, foundations and corporations) with the means and inclination to donate money to non-profit organizations.

"Although we're a relatively new

development office, we're already gaining regional recognition," Robin says. "Prospect research in Massachusetts has long been dominated by universities like Harvard and MIT, who have had the foresight to do research. The fact that we now have a seat at the table, so to speak, offers an exciting opportunity for inter-institutional exchanges of expertise and counsel."

Robin will join representatives from Harvard, Brown University, the

University of Vermont, Wesleyan University and New England Baptist Hospital on NEDRA's board of directors.

WHOI hosted the organization for a regional roundtable last March, and a NEDRA board retreat in July. WHOI Director of Development Jacquie Suitor was a panelist at the March roundtable.

Judy Thrasher, a research assistant in WHOI's development office, is also a member of NEDRA.



Craig Dorman and Chairman of the Board Guy Nichols tour the new facility.



Robert Solow speaks at Seward Johnson Lecture.



Glenn Jones explains the AMS facility to guests at the open house.

Recreation Facilities

Between 400 and 500 employees, students and their families gathered June 24 at the Institution's new recreation facilities behind Clark Laboratory on the Quissett Campus to celebrate the completion of a new baseball field and tennis and volleyball courts.

The Joseph V. McKee Jr. Ballfield and The James R. Shepley Tennis and Volleyball Courts at Woods Hole Oceanographic Institution will be officially dedicated later this summer when family members will be in attendance.

The funds for construction of the recreation facilities for Institution staff and students were given in memory of Joseph McKee and James Shepley by their family and friends. Long-time supporters of the Institution, they were close personal friends and died within a few months of each other in 1988.

Joseph V. McKee Jr. had a long affiliation with WHOI. At the time of his death in September 1988 he had been an Associate since 1958, a Corporation Member since 1969 and a Trustee since 1970. He also served as Vice President of the Associates from 1970 until his death and was Chairman of the Trustees Development Committee at the time of his death. He was affiliated with National Union Electric Corporation for many years, serving that firm as Vice President and Treasurer, Executive Vice President and Director and Chairman of the Board and President.

James R. Shepley was a highly respected journalist who served as President of Time, Inc. from 1969 to 1980, retiring as Chairman of the Executive Committee in 1982.

Landscape architect was Steve Stimson of BSS Design of Falmouth. Contractors were Lawrence Lynch Corporation, Grafton Briggs, Francisco Tavares, WW Cox Excavation and Cape Metal Fabricators, all of Falmouth.



Photo by Tom Keindinst

Books and Tapes Available for Loan

The Staff Training and Development Office, Nobska House, has a lending library of books and audio cassette tapes available to WHOI employees on a variety of topics. The following are some examples of new arrivals:

Books:

Speak for Yourself
Get to the Point
How to Talk So People Will Listen
Success with the Gentle Art of Verbal Self-Defense
The Secret Language of Success
You Just Don't Understand: Men and Women in Conversation

Tapes:

Personal Power
First-Time Manager
Listen Your Way to Success
Successful Communication Skills
Self Empowerment

Asterias' New Phone

The Research Vessel ASTERIAS is now equipped with a cellular phone.

If you need to contact Captain Dave Olmsted or anyone else who is out on ASTERIAS, call 1-776-1651.

To reserve time on ASTERIAS, continue to call Patty Odams at the Port Office, ext. 2208. Dave Olmsted's voice mail extension is 3322.

Thirteen Researchers Receive Mellon Grants

Thirteen WHOI researchers received awards from Mellon programs this year as seed money for innovative research projects.

The two Mellon programs, the Innovative Research Fund and the Joint Initiative Awards, were originally created by two separate challenge grants from the Andrew W. Mellon Foundation and many gifts and grants from individuals, corporations and foundations. The Innovative Research Fund and the Joint Initiative Awards program began making awards to scientists in 1981 and 1988, respectively. Awards are made through a competitive process to scientists doing new research that is not yet able to attract funding from traditional sources.

An ad hoc committee reviews proposals for the funding and presents its recommendations to Associate Director for Research Bob Gagosian, who in turn recommends recipients to Director Craig Dorman.

This year, eight Innovative Research Fund awards were granted

to individuals. Five Joint Initiative Awards were given to fund interdepartmental projects.

The Innovative Research Fund recipients are:

— Cheryl Ann Butman, "Near-Bed Microplankton in the Deep Sea: A Time-Series Study using a New Automated Plankton Pump;"

— David A. Caron, "Molecular Techniques for Studying Protistan Ecology;"

— Douglas Prasher, "Molecular Analysis of Microbial Surface Biofilms;"

— Werner G. Deuser, "Toward a Global Assessment of the Biological Pump: Variabilities, Trends, and Coherence between In-Situ and Remote-Sensing Time Series in the Sargasso Sea;"

— Ellen R. M. Druffel, "Numerical Modelling of Long-Term Changes in Surface Ocean Radiocarbon in the Pacific Ocean;"

— Mark D. Kurz, "New Techniques in Noble Gas Mass Spectrometry;"

— Edward R. Sholkovitz, "Negative Thermal Ion Mass Spectrometry: Development of a New Analytical Method to Study the Marine Geochemistry of Platinum Group Elements and Iron;"

— Daniel C. McCorkle, "Box Modeling Changes in Ocean Chemistry and Atmospheric CO₂;"

The Joint Initiative Award recipients are:

— William R. Martin, "The Role of Dissolved Organic Carbon of the Western Equatorial Pacific Ocean;"

— Scott J. Lehman, "Application of Organic Biomarker

Paleothermometry to Problems in Quaternary Paleoclimate;"

— Roger A. Samelson, "Kinematic Study of Tidal Dispersion;"

— Nobu Shimizu, "The Horoman Workshop;"

— Kathryn Kelly, "Analyses of Satellite Observations and Theories of Meteorological Forcing in Western Boundary Currents."

Two Books Offer Views of Arctic Research

Two books on the Arctic by members of the WHOI community have recently hit bookstores.

The Soviet Maritime Arctic, edited by former Marine Policy Center research fellow Lawson Brigham, is the first in a series of books on polar research to be put out by Bellhaven Press. The book is a multidisciplinary examination of the historical record and the cultural developments surrounding Soviet activities and policies. Contributors include historians, geographers, polar scientists, legal specialists and environmentalists from North America, Europe and the Soviet Union.

Lawson, now a member of the

Strategic Planning Staff at the U.S. Coast Guard and a Coast Guard commander, conceived and edited the book during his time at WHOI. The groundwork for many of the articles was laid during a May 1987 workshop sponsored by the Marine Policy Center.

Marine Policy Center Director Jim Broadus wrote the introduction to the book, and former Senior Research Fellow Chris Joyner contributed an article titled, "A Comparison of Soviet Arctic and Antarctic Policies."

WHOI Trustee and Corporation Member John Bockstoce has published another book on the Arctic, *Arctic Passages, A Unique Small-*

Boat Voyage in the Great Northern Waterway.

The book is Bockstoce's account of his exploration and research in the Arctic, interwoven with historical, archaeological and sociological information about the region and its people.

Bockstoce is the author of many articles and books on the Arctic, including *Whales, Ice and Men*, which received the John Lyman Book Award in 1986. Educated at Yale, he received a doctorate in archaeology from Oxford. Recently, the Royal Cruising Club of Great Britain awarded him its prestigious Tilman Medal for 20 years of voyaging in high latitudes.

Cecil Green Awards WHOI \$2.1 Million To Endow New Technology Development Program

Philanthropist Cecil H. Green, founder of Texas Instruments, has made a \$2.1 million commitment to endow a new technology innovation awards program at the Institution.

The new awards, to be named the Cecil H. and Ida M. Green Technology Innovation Awards, will encourage new approaches to instrument development by bringing Institution scientists and engineers together to design and create interdisciplinary technology. WHOI staff have a long history as leaders in the development of oceanographic instrumentation, much of which becomes commercially manufactured and used by the oceanographic community worldwide.

The Green gift matches a recent \$500,000 Kresge Foundation challenge grant (see April Newsletter) which required the Institution to raise \$2.1 million in endowment by September 1, 1992. The Kresge Foundation grant will be used to upgrade scientific instrumentation, including state-of-the-art fiber optic technology, on Research Vessel KNORR.

The gift is the result of a long relationship between Green and Charles Hollister, Vice President and Associate Director for External Affairs, begun some 10 years ago when Green came to WHOI to give the 1980 Joint Program commencement lecture.

"Cecil Green and his late wife Ida have donated more than \$200 million through the years to support basic scientific and medical research and education," Hollister notes. "The Cecil and Ida Green Technology Innovation Awards will allow teams of scientists and engineers at WHOI to compete for funding which is not available for new entrepreneurial projects. It will strengthen the collaboration between staff and help break down the barriers that some-



Charles Hollister (left) and Cecil Green at Associates Dinner.

Photo by Terri Corbett

times exist between different fields of research."

WHOI established the endowed fund to support competitive awards to develop new or improved instrumentation to meet the needs of pressing societal issues like global climate change. The awards will bring teams of scientists and engineers together on special focus projects. Under an award plan, scientists and engineers will submit short joint proposals which outline their hypotheses, designs, project concepts and budgets. The proposals will then be reviewed by a panel of their peers and awarded on the basis of creativity and innovation in meeting a special instrumentation need.

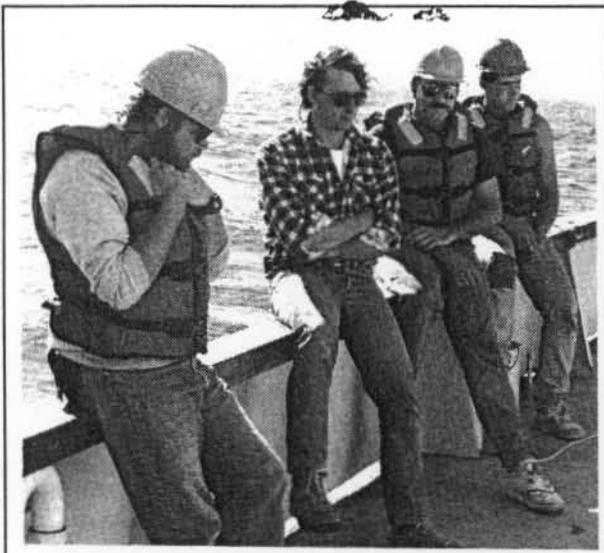
Cecil Green and his late wife Ida are internationally known for their support and encouragement of education and basic research in the sciences and in medicine on a global scale. Colleges, hospitals, museums, schools and universities in North America, Europe and Australia have benefited from their generosity. Among the major facilities constructed with matching or total contributions from the Greens are the Cecil and Ida Green Professional Center of the Colorado School of

Mines, the Cecil and Ida Green Building for Earth Sciences at MIT, several facilities at St. Mark's School of Texas in Dallas, the Cecil H. and Ida M. Green Hospital of Scripps Clinic in La Jolla, CA, and the Cecil H. Green Library at Stanford University.

Green attended the Institution's Annual Meeting and Associates Dinner June 14, during which he was named Honorary Chairman of the Woods Hole Oceanographic Institution Campaign. New Trustee John Bockstoce, a noted Arctic historian and author (see story page 7), has been named Chairman of the Capital Campaign.

The Woods Hole Oceanographic Institution Associates announced the establishment of an award in Green's honor at the Associates Dinner June 14. The Cecil H. Green Award will recognize individuals who have made outstanding contributions to oceanographic research at the Institution. The first award will be presented in 1992. Green was presented a certificate in recognition of his lifelong commitment to and support of international scientific collaboration, research and education.

Scenes at Sea Aboard ATLANTIS II



"Hurry up and wait..." (Left to right) Rick Bean, Mark DeRoche, Chris Griner, and Charlie Perry patiently waiting for ALVIN's elevator to break the surface...



...Moments later the crew jumps into action to retrieve the equipment.



Captain Paul Howland (left) and Chief Scientist Lauren Mullineaux.



"Chief" Hall and Herman Wagner in the Engine Room.

Photos by Sonya Hagopian

In Memoriam

Robert G. Weeks

The Woods Hole Oceanographic Institution announces with great sorrow the death of Robert G. Weeks June 11, at his home in Falmouth. He was 64 years old.

Bob was born in Falmouth and graduated from Lawrence High School. He worked at the Institution for more than 40 years, most recently serving as Mechanical Shop Supervisor. He began employment at the Institution in July 1944, working for Norman Wright as a laboratory assistant working on small boats. In August he left the Institution to serve more than three years in the U.S. Navy and was discharged as a Boatswain's Mate, 2nd class. On his own time he qualified as an airplane pilot under the G.I. Bill.

Bob served the Institution as a mechanic, welder, rigger, machinist, qualified scuba diver and aircraft pilot for multi-engine planes. Flying first in a single engine Stinson aircraft based at Coonamessett Airport and later a helio-courier pontoon plane

which the Institution housed in a hangar on Dyer's Dock, Bob supported many scientific projects including whale locating for Bill Schevill and Bill Watkins, meteorological and physical oceanography experiments and passenger transport. He did coastal photography with former WHOI scientist John Zeigler, once flying along the East Coast after a hurricane to document coastal damage. His extensive flying experience for the Institution also included an assignment as flight mechanic and co-pilot on the Institution's four-engine C54Q aircraft. When the Institution no longer operated its own aircraft Bob continued to serve as the Institution's pilot on charter planes, flying occasionally for science projects and aerial photography. He and retired employee David Owen started the Institution's Diving Program in 1951. In March 1974 Bob was designated Supervisor of the Institution's mechanical shop which then included mechanics, electricians

and welders.

Outside the Institution, Bob and his wife Doris and daughter Carolyn ran the Fieldcrest Tack Shop and Stable in Sippewissett for the past 27 years. He helped Doris each year with the Barnstable County Fair, which she serves as executive secretary, and travelled with her to fairs around the country. Bob was also an avid hunter, fisherman and scuba diver. For 50 years he served as a call firefighter and rescue diver for the Town of Falmouth.

Bob is survived by his wife Doris; daughters Carolyn Weeks and Phyllis Peterson of Falmouth; a son, Wayne Weeks, of Chatham; and a granddaughter, Ashley Peterson, of Falmouth.

Memorial donations may be made to the Nauset Workshop Inc., 895 Mary Dunn Road, Hyannis, MA 02601 or to Falmouth Hospital Foundation, Ter Heun Drive, Falmouth, MA 02540.

In Memoriam

Roger Revelle

It is with great sorrow that the Woods Hole Oceanographic Institution announces the death of Honorary Member and Honorary Trustee Roger Revelle July 15 in San Diego at age 82.

Revelle was planning to attend WHOI's History Colloquy July 15-19 to share reminiscences of Institution activities during World War II and into the mid-1950s. Revelle served as a commander in the U.S. Naval Reserve during World War II and was officer-in-charge of the oceanographic section of the Bureau of Ships. He assisted in establishing the Office of Naval Research, and from 1946 to 1948 headed its Geophysics Branch. He organized the oceanographic investigations of atomic

bomb tests, including Operation Crossroads, the first peacetime test at Bikini Atoll in 1946.

He received a bachelor's degree in geology from Pomona College and a doctorate in oceanography from Scripps Institution of Oceanography. He was a founder of the University of California, San Diego (UCSD) campus, and served as Director of UCSD's Scripps Institution of Oceanography from 1951 to 1964. A professor emeritus at the time of his death, he was most recently professor of science and public policy at UCSD.

In 1964 Revelle founded and became director of the Harvard University Center for Population Studies. In 1975 he returned to UCSD as professor of science and

public policy. He was a member of many national and international committees, professional societies and organizations and served in various national posts. He was the recipient of 13 honorary degrees and authored or coauthored several hundred scientific publications.

He is survived by his wife, Ellen, of La Jolla, CA; three daughters, Anne Shumway of Cambridge, MA, Mary Ellen Paci of Brookline, MA, and Carolyn Hufbauer of Chevy Chase, MD; one son, William Revelle of Evanston, IL; twelve grandchildren and four great-grandchildren.

A memorial service was held in La Jolla July 18. Donations may be made to the UCSD Foundation for the Revelle Scholarship Endowment Fund.

In Memoriam

George Broderson

The Woods Hole Oceanographic Institution announces with great sorrow the death of George "Brody" dePentheny Broderson June 27, at his home in Sandwich. He was 73 years old.

Brody was born in Hartford, CT, and educated in New Jersey. He began his long career at sea at age 13, working as a cabin boy on two Danish ships. Intrigued by mechanical objects, he worked on ships, automobiles and race cars until World War II, when he joined 10,000 other Americans as volunteers in Great Britain's Royal Air Force. When America entered the war he transferred to the U.S. Air Force. When he returned home, he worked as a taxi driver in New York City, often visiting Cape Cod on bass fishing trips with friends. In 1951 he bought a house in Sandwich and operated Brody's Auto Repair, the only garage in that town, for many years. He worked as a ship's mechanic and electrician for two

years for the U.S. Air Force in Thule, Greenland. As he was considering an offer to work in the South Pacific, a friend mentioned the new submersible project at WHOI under the direction of the late Earl Hays.

"Brody" joined the Institution staff in January 1964 as crew chief for the brand new Deep Submergence Vehicle ALVIN, which was under construction in Minneapolis. He assisted with the construction of the submersible's first support ship, Research Vessel LULU, from surplus Navy pontoons in Woods Hole, and was instrumental in developing both the submersible and LULU into valuable national scientific resources. He remained crew chief until LULU was retired from the Institution fleet in 1983. After his retirement, Brody continued to play a major role in ALVIN operations, performing fiberglass jobs as needed, particularly during periodic ALVIN overhauls, and utilizing his many skills for other special projects within the Institution.

Often described as "colorful" and "a character" by his many colleagues throughout the oceanographic community, Brody worked tirelessly to be sure the work got done on schedule, that scientists had what they needed, and that operations were conducted safely. He was an accomplished mechanic, able to fix anything that was broken, and often created equipment out of available materials at sea for a scientist's last-minute need. Brody always had a story to tell, and was proud of his involvement with so many historic moments in ocean science.

Survivors include his wife, Eva (Lloyd) Broderson of Sandwich; two daughters, Jacqueline Perra of Sandwich and Kye Sartini of Bristol, RI; and two grandchildren.

A memorial service was held July 7 Sandwich. Memorial donations may be made to St. John's Episcopal Church, Main Street, Sandwich, MA 02563.

Agor-25

Continued from page 1

AGOR-25 will be made in February 1994, with delivery of AGOR-24 to Scripps in November 1994, and delivery of AGOR-25 to WHOI in February 1997. The new ships will be based on the same design and specifications as the AGOR-23, Research Vessel T.G. THOMPSON, which is nearing completion at a Mississippi shipyard and will be operated by the University of Washington.

AGOR-25 will be 273 feet long, with a beam of 52.5 feet and a draft of 17 feet. The crew will number 22, with 28 scientific berths in state-rooms and the capacity for 10 additional berths in vans. Six labs will cover 4,225 square feet. Maxi-

mum speed will be 14.5 knots, cruising speed 12.5 knots. Cruising range will be 12,000 miles.

Propulsion will be diesel-electric, AC-DC with twin 3,000 horsepower azimuthing thrusters aft and one 1,100 horsepower azimuthing jet forward. The ship will be fully outfitted to include a deep sea trawling winch, deep-tow/survey winch, dynamic positioning, and a multi-beam echo sounding system.

Competing proposals were received from five institutions. Besides WHOI and Scripps, other competitors were Harbor Branch Oceanographic Institution, the University of Hawaii, and the Southeast Consortium for Ocean Research (SECOR), which

includes the University of Miami, Texas A & M University and the University of Texas.

In announcing the award, ONR noted that "WHOI's proposal was very responsive and presented a well rounded scientific and operations plan, including improvement to UNOLS fleet effectiveness. WHOI has efficiently operated U.S. Navy research vessels for more than 20 years."

Director Craig Dorman, in an Institution memo, congratulated George Grice and Bob Dinsmore, who led the proposal preparation team for WHOI, and the many people who assisted in putting together this effort.

New Faces



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Research Engineer
AOP&E
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B. Walden



Mark R. Anderson
JP Student
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Redfield 342
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J. Stegeman



Katherine G. Barbeau
JP Student
Education/Biology
Fye
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Stephen G. Bowen
JP Student
Education/AOP&E
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Ext. 3327



Karen E. Carmichael
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P. Duffy



Debra Coleman
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Quisset Whse.
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R. Joyce



Janet B. Costello
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R. Dimmock



Jamie S. Gerber
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T. Eglinton



Eda M. Hood
JP Student
Education/Chem.
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Ext. 2873
E. Sholkovitz



Emilie E. Hooft
JP Student
Education/G&G
Clark 118A
Ext. 3422
M. Kleinrock



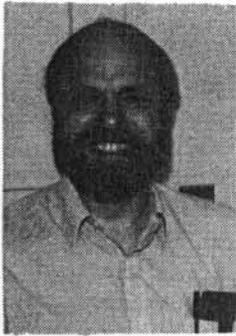
Terrance J. Howald
Research Asst. II
Biology
Shiverick
Ext. 2775
W. Watkins



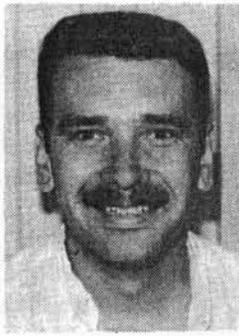
Gwyneth E. Hufford
JP Student
Education/PO
Clark 340
Ext. 3368
P. Richardson



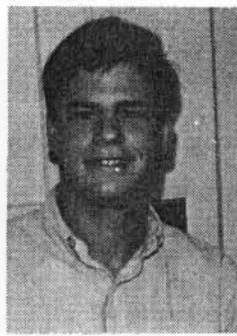
Michael P. Hurst
Accountant
Challenger
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V. LeFavor



James D. Irish
Research Specialist
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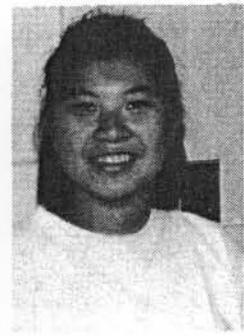
Matthew L. Johnson
JP Student
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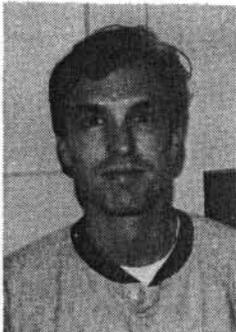
Robert W. Keefe
JP Student
Education/AOP&E
Bigelow 408
Ext. 3327



A. James Kettle
JP Student
Education/PO
Clark 304A
Ext. 2907
J. Price



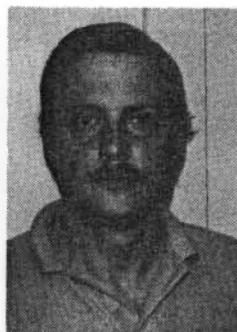
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Education/Biology
Redfield 324
Ext. 2564
D. Caron



Daniel Lizarralde
JP Student
Education/G&G
Clark S 272A
Ext. 2838
W. S. Holbrook



Lori Mahoney
Library Assistant
Library
McLean
Ext. 2850
W. Dunkle



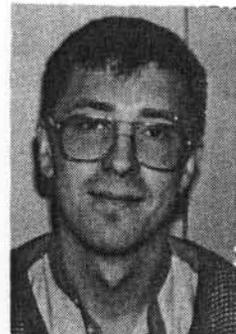
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Blake
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J. Cushman



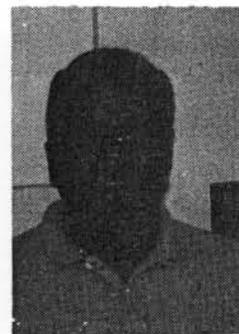
Marjorie F. Oleksiak
JP Student
Education/Biology
Redfield 342
Ext. 2368
J. Stegeman



Elizabeth B. Owens
Info. Systems Assoc. I
IPCL
Clark 160
Ext. 2417
G. Power



George Panteleyev
JP Student
Education/Chem.
Clark 418
Ext. 3459
R. Francois



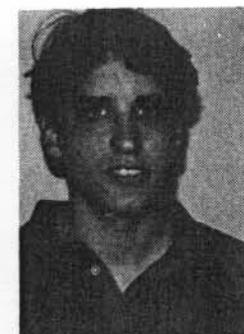
Frank R. Perry
Plant Mechanic
Facilities
Smith 121
Ext. 2701
M. Field



Douglas S. Ray
JP Student
Education/AOP&E
Bigelow 207
Ext. 2605



Julian P. Sachs
JP Student
Education/Chem.
Fye
D. Repeta



Randall A. Villeneuve
JP Student
Education/PO
Clark 3
Ext. 2804
L. Pratt

Spring Golf Outing Held

The WHOI spring golf outing was held April 27 at the Otis Golf Club on the Otis Military Reservation. Forty-eight people participated in the scramble format. First place went to the team of Terri Turner, Phil McClung, Bob Thropp and Bob Curran. Second place went to Mary Ann Lucas, Rob Handy, Sparky Bowman and Jerry Dipalma. Third place went to Lisa Dipalma, Dale Leavitt, Bob "Legs" Corey and Rick Murphy. All received trophies and gift certificates.

Longest drive trophies were given to Roberta Oberlander in the women's competition and to Rick Murphy in the men's. Closest to the pin trophies were given to John Goff and Paul Wessling.

Last place trophies were reluctantly accepted by Bonnie Woodward, Al Morton, Koza Takahashi and Scott Worriow.

In the honorable mention category:
Best Swing Award: Debbie Smith
Worst Swing Award: Bruce "Slasher" Keafer
Smoothest Putting Stroke: Koza Takahashi
Nature Award (always in the woods): Hovey "I'll Find It" Clifford
State of the Art Equipment Award: Erik Zettler

Thanks go to Steve Ferreira for filming the outing and to the WHOI Recreation Committee for trophies.

Staff Award

Mark Hahn, a postdoctoral investigator in the Biology Department, has been selected to receive the 1991 New Investigator Award sponsored by the Air Force Office of Scientific Research in conjunction with the Society of Environmental Toxicology and Chemistry. Mark will receive one-year salary and research support for "Characterization of the Ah Receptor in Fish."

Promotions

Pierrette M. Ahearn (Controller's)
to Senior Accounting Assistant 6/3

Alan R. Duester (AOP&E)
to Engineer II 5/13

Robert G. Goldsborough (AOP&E)
to Research Engineer 5/4

Robert Grieve (ALVIN)
to DSV Pilot 7/8

Brian J. Guest (PO)
to Engineering Assistant III 5/20

Brian L. Howes (Biology)
to Associate Scientist 5/29

Donna L. Lamonde (Controller's)
to Senior Accounting Assistant 6/3

John S. Merriam Jr. (AOP&E)
to Engineer II 5/4

Stephen P. O'Malley (G&G)
to Research Assistant II

Robin C. Singer (AOP&E)
to Engineer II 5/13

Deborah K. Smith (G&G)
to Associate Scientist 5/22



Dennis M. Wojcik
JP Student
Education/AOP&E
Bigelow 207
Ext. 2605



Eric C. Won
JP Student
Education/PO
Clark 339B
Ext. 2911
N. Fofonoff

Recent Births

Cyndy and Rick Chandler are proud to announce the birth of their second son, **Jonathan Wesley**, at Tobey Hospital June 10. Jonathan weighed 7 lbs., 7 oz. He has joined his two-year-old brother, Jeffrey, at home.

Judy McDowell and John Molongoski are happy to report the arrival of their first child, **Stefan Marian Molongoski**. Stefan was born November 19, 1990 in Bucharest, Romania. Judy travelled to Romania to pick him up, and the two arrived home May 19.

Ellen and Jon Howland are proud to announce the birth of their first son, David Samuel, at Jordan Hospital June 2. David weighed 8lbs., 14 oz.

Julie and Ben Allen are pleased to announce the arrival of their third daughter, Hannah Martha, at Jordan Hospital. Hannah weighed 8lbs. 4oz. She has joined her two sisters Rachel 5, and Libby 3, at their home.

Tips on Preventing Carpal Tunnel Syndrome

Carpal Tunnel Syndrome (CTS) is a repetitive motion injury occurring in the wrist area that, in most cases, can be corrected in the early stages with prevention, or treated with surgery in more advanced stages, although surgery offers no guarantee of recovery. Prevention involves redesigning the ergonomics of the work environment, which lends itself to good body posture and helps alleviate undue stress and strain on the wrist or carpal area.

It has come to the attention of the Women's Committee that several people at WHOI have been diagnosed with CTS, and some have had wrist surgery to alleviate pain and prevent further damage (with no guarantee). The Committee co-sponsored a lecture by an OSHA representative on repetitive motion in February and has prompted this follow-up article for employees.

Any type of worker can get CTS if they perform repetitive, stressful motions with the wrist (or carpal) and forearm: computer operators, typists, painters, lab assistants. Genetic

predisposition is a factor that may cause CTS in some people and not others—some people are just more prone. Help yourself by:

- ✓ Taking 10-15 minute breaks every hour from repetitive motions to let a stressed area recover. (You can still be productive in other work activities.)
- ✓ Keeping the range of wrist motion to less than 15-degree deviations. Try not to perform repetitive motions with hands bent sideways or upward at the wrist.

"Make tight fists, hold for one second, then stretch your fingers out wide and hold for five seconds. Repeat several times. With arms outstretched in front of you, raise and lower your hands several times. Rotate your hands ten times (make circles in the air with fingertips)."

Mark Sheehan "Avoiding Carpal Tunnel Syndrome: A guide for computer keyboard users," *IPCL Newsletter*, January 1991.

To reduce repetitive strain on the wrist area while working at a computer, author Paul Stout offers easy, practical solutions to redesigning the workstation in "Painless Word Processing, A Look at Computer Ergonomics," *WordPerfect The Magazine*, February 1991:

- ✓ Adjust seat so the home row of keys is at elbow height and wrists are straight.
- ✓ Work with elbows at a 90-degree angle.
- ✓ Use a keyboard with keys that are easy to press. Don't pound the keys.
- ✓ Keep wrists level. If the keyboard is too high, use a padded wrist rest; if it is too low, use a keyboard drawer.
- ✓ Don't reach for function keys, move hand closer to desired key.
- ✓ Position mouse at the same height and as close to the keyboard as possible.

For more information about CTS and other repetitive motion injuries, contact WHOI's Safety Officer, Eric Spencer, at x2242.

New Computer Goes on Line at Challenger Annex

Computer users who signed onto the green vax recently may have been pleasantly surprised at the speed with which their inquiries were processed. The new central computer, the size of an air conditioner, was recently installed in the Challenger Annex, and is six times faster than the room sized unit it replaced.

The older unit, traded into Digital Equipment Corporation for a newer model, was purchased in 1987. The speed and compactness of the new

unit are the result of engineers' ability to fit more transistors and resistors on a single transistor board.

In addition to being faster than its predecessor, the new unit will store more information in less space. A single cassette with 180 feet of tape will be able to hold what 13 2400-foot tapes held for use on the old computer.

The new computer is also more energy efficient. It will take about one-third of the electricity its prede-

cessor took to operate and to cool itself.

Accounting will be the biggest user of the new computer, followed by Payroll, the Stockroom, Personnel and the programmers who will set up the machine. Other WHOI employees will use the computer occasionally for accounting and stockroom inquiries.

Casual use of WHOI's central computer is expected to increase as the new accounting system makes more information available to users.

WHOI Submersible Recovers Navy Vehicle Off Southern California Coast

ALVIN has recovered an unmanned U.S. Navy vehicle from the ocean floor off the coast of southern California. The CURV III (Cable-controlled Underwater Recovery Vehicle) was lost June 12 in 7,200 feet of water about 130 miles southwest of Los Angeles during a salvage operation when its cable separated. It was located and recovered by ALVIN July 1 and appears to be in good condition.

ALVIN was in San Diego for a brief maintenance period prior to a scientific expedition when the Institution received a call from the U.S. Navy to assist with the search effort. ALVIN made four dives June 16-21 in the area where the vehicle was lost but did not find it. An acoustic beacon on CURV apparently shifted frequency, requiring additional Navy equipment to determine its location. A ten-day scientific cruise to Fieberling Guyot, an underwater seamount 500 miles west of San Diego, then proceeded as planned. Biologist Lauren Mullineaux was Chief Scientist of the cruise.

During the scientific cruise, the Navy deployed an additional search vessel to the loss site. The search

vessel, with the Navy's search contractor Oceaneering International, Inc., used a specialized towed pinger locator to confirm operation of the CURV III pinger and localize its position.

ALVIN and its support vessel, the 210-foot ATLANTIS II, completed the science cruise on June 30. The scientific party disembarked in San Diego and the ship and sub immediately returned to sea at the Navy's request to try again to locate CURV. They arrived at the dive site July 1 and were successful in locating the vehicle within a few hours on the first ALVIN dive. A tunable hydrophone, or underwater microphone which can receive different beacon frequencies, was used by two Navy contractor personnel aboard ALVIN to locate CURV during this second attempt. Once located, ALVIN used its manipulator arms to secure a lifting line on the vehicle to bring it to the surface.

ALVIN swimmers and Navy divers from the Consolidated Diving Unit, San Diego, rigged additional flotation to CURV III after ALVIN surfaced. CURV III was then recovered aboard ATLANTIS II and

found to be undamaged. CURV remained aboard ATLANTIS II until the ship arrived in Astoria, Oregon, July 6.

ATLANTIS II and ALVIN have an extensive scientific diving program off the Washington/Oregon coasts through October.

CURV III was built in 1990 and is operated by Eastport International of Upper Marlboro, Maryland, for the U.S. Navy's Supervisor of Salvage. It can work to 6,000 meters depth (20,000 feet) and is equipped with television and 35 mm cameras. It had made numerous successful search and salvage expeditions prior to its June 12 loss.

ALVIN has made nearly 2,500 dives since it was built in 1964 and is considered the world's most active research submersible. ALVIN has been called into service in the past to assist the Navy with search and salvage projects. Its most famous recovery effort occurred in 1966, when a hydrogen bomb was lost in the Mediterranean Sea off Spain in a B-52 airplane collision. ALVIN located the bomb and the original CURV recovered it.

Ship Notes

ATLANTIS II/ALVIN

R/V ATLANTIS II/DSV ALVIN are at work off the Washington and Oregon coasts on Leg XXIX of extended Voyage #125. The vessels left Seattle July 9 for a 20-dive series on the Juan de Fuca Ridge to study sulfide flanges at active hydrothermal vent systems. ATLANTIS II/ALVIN were scheduled to return to port July 31. Leg XXX will depart Seattle

August 5 for continued mid-ocean ridge work, arriving in Astoria, Oregon, August 13.

OCEANUS

R/V OCEANUS arrived in Woods Hole July 23, completing Leg IV of extended Voyage #240 in the eastern North Atlantic. The ship will depart on a Biology Department cruise July 29

for microbial ecology studies on Georges Bank and in the western Sargasso Sea near Bermuda, returning to Woods Hole August 22.

KNORR

R/V KNORR is completing final shipyard work in Louisiana and is scheduled to return to Woods Hole in September.