
NEWSLETTER

WOODS HOLE
OCEANOGRAPHIC INSTITUTION



December 1991

The JASON Project

Demonstrating Scientific Teamwork

*Broadcasts Go On As Planned
Despite Loss of Equipment*

More photos on page 3

More than 7,600 students, teachers and members of the community participated in the 1991 JASON Project December 2-14 at WHOI's Redfield Auditorium. Sixty schools in southeastern Massachusetts and a few from as far away as New Hampshire traveled to WHOI for the sixty live one-hour broadcasts.

The show almost didn't go on. Just 10 days before the scheduled start of the project, November 21, the barge carrying all the equipment to be used in the broadcasts sank as it was being towed from Quayaquil, Ecuador, to Isla Baltra in the Galapagos Islands 600 miles west of Ecuador. There were no injuries.

WHOI had three 20-foot containers aboard the barge as well as the remotely operated vehicle (ROV) JASON Jr. EDS Corporation of Dallas lost satellite communications equipment, and Turner Broadcasting System lost its television production equipment. The barge sank in approximately 9,000 feet of water about 140 miles east of Isla Santa Cruz in the Galapagos. There is little hope of salvaging the barge or its contents, which were insured.

"Scientific exploration and

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Photo by Tom Kleindinst



Marine Biologist Jerry Wellington spoke live during the JASON Project from an underwater site near Seymour Island through a specially equipped helmet.

Jannasch Receives Scripps' Cody Award

Senior Scientist Holger Jannasch of the Biology Department will receive the Robert I. and Bettie P. Cody Award in Ocean Sciences from the Scripps Institution of Oceanography (SIO) in March in recognition of his contributions to marine microbiology.

In announcing the award, Scripps Director Edward Frieman said, "Dr. Jannasch is a world leader in studies of microbial ecology and has made many significant contribu-

tions to understanding the role of bacteria in marine and freshwater environments. He has provided many insights and concepts that are now well known within the community of ecological scientists, and we are very proud to have the opportunity to recognize these contributions with this Cody Award."

The award, a gold medal and a \$10,000 prize, recognizes outstanding scientific achievement in oceanography, marine biology and the

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Dorman Urges More Private Funding for Basic Science

During a recent visit to Japan, Director Craig Dorman called for more independent funding of basic research and indicated the United States needs "to improve the climate for venture-some and innovative science."

Dorman joined leaders of other ocean science institutions in Japan, the Soviet Union, Canada and the United States at an international conference on "New Directions of Oceanographic R & D" to examine current research activity and discuss future plans.

In his speech at the conference, Dorman noted, "In the United States prior to World War II, support of research and higher education primarily was the responsibility of industry and philanthropists." He also noted that in pre-World War II years scientists "had extensive latitude" in determining the direction of their research. "The money came to the Institution to pursue a basic program of science and to support

the process of investigation. The sponsors had faith that the scientists themselves were best at selecting and following paths of inquiry, along lines of very loosely described needs.

"Both the direct and indirect contributions of scientists to the war effort convinced our government of the value of science to national security," Dorman continued. "To ensure continuity of this resource, at the end of the war the Federal Government took upon itself the responsibility for funding the process of science, and established the National Science Foundation (NSF) to act as sponsor and coordinator. Philanthropy and industry came to play a less dominant role in maintaining the intellectual strength of the nation."

Dorman told the international audience that the environment for science in the United States has changed. "The national

consensus...for basic science as a major national priority is eroding. The very global environmental concerns that to us, here, imply a need for enhanced emphasis on fundamental studies, are seen by much of the populace as indicative of a failure of science to avoid the problem...and the perceived failure of projects like the Hubble Telescope decrease confidence in our ability to achieve results even when substantial funding is provided. In spite of vehement arguments by our scientific community, Congress staunchly supported the space station, and much of its funding will inevitably come from scientific budgets."

One solution Dorman proposed is more independent, private sector funding. "Our objective is not only to decrease the basic burden of raising salary support on the individual investigator, but also to offer opportunities for risk that are unsupportable by our federal funding structure."

UMASS/Lowell at WHOI Spring Term Registration Still Open

Registration is still open for the UMASS/Lowell at WHOI spring term. Telephone registration using Mastercard or Visa will be accepted through January 3, 1992 by calling UMASS/Lowell at 508-934-2404. After January 3 call 508-934-2480.

Registration by mail is also being accepted until January 15. If you do

not have a form, contact the Education Office (Clark 223) and mail the completed form to The University of Massachusetts Lowell, Division of Continuing Education, One University Avenue, Lowell, MA 01854. The form must be received no later than January 15, 1992.

Staff Committee Elects Members

Ann Henry of AOP&E, Wayne Spencer of G&G, and Suzanne Volkmann and Laura Praderio of ISC were recently elected to the Staff Committee. They will serve two-year terms beginning in January 1992.

An Open Meeting of the Staff Committee will be held January 8 at 3:30 p.m. in Redfield Auditorium.

Jannasch Receives Cody

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earth sciences. The selection committee consisted of scientists from Scripps and other national/international institutions. As part of the award ceremonies, Jannasch will present a general lecture for the public and a seminar for SIO faculty and students.

Property Office Notification Requested

Department Executive Assistants and any Institution property holders should notify the Property Office (Lee Wells, ext. 2410) as soon as notification is given that a property holder is leaving the Institution. This will allow the Property Office sufficient time to perform an inventory and transfer material to the new holder.



Dana Yoerger of AOP&E works on the computer program to enable students at some downlink sites to drive a specially equipped MiniROVER (in background), which replaced JASON Jr.

JASON Project 1991

Photos by Tom Kleindinst



Franz Hover (top) and Kurt Murphy (front) check the MiniROVER at the CRL test tank November 26 before shipment to the Galapagos Islands. Tagore Somers of Marquest, which supplied a special computer program for the remote driving, is partly hidden.



Among the students to ask live questions from WHOI was nine-year-old Heidi Scheer, daughter of Eddie Scheer of AOP&E.



Students in Redfield Lobby read some of the many letters and cards WHOI received.



Nathan Ulrich (left) and Donald Varnum (right) of Benthos conduct final checks on the MiniROVER before shipment. Behind Nathan is Franz Hover, with Tagore Somers second from right.

Vine Awarded Blakely Smith Medal

Scientist Emeritus Allyn Vine of the Geology and Geophysics Department received the 1991 Blakely Smith Medal from The Society of Naval Architects and Marine Engineers November 15 during the group's annual banquet in New York.

The award is given every two years and is presented for outstanding accomplishments in ocean engineering. Vine was honored for his lifelong interest in the oceans and as "a major contributor in the exploration of the deep ocean, oceanographic engineering, and the design of deep submersibles for research."

Biologist Receives Hometown Honor

Assistant Scientist Phil Lobel's curiosity about fish has taken him around the world and back, recently to his hometown of Beachwood, Ohio. Lobel was one of 16 inductees to the Beachwood High School Gallery of Success.

Lobel's high school honored him as one of the world's leading ichthyologists, noting that Lobel has discovered several species of fish, including *Synodus lobeli*, named in his honor. An article in the Cleveland Plain Dealer told of his interest in fish as a child and described his current work on spawning sounds.

Of the honor he told the reporter, "It's something my mother and family can relate to a lot more easily than a lot of the scientific things I do."

Total the Tabs!!

A container full of tabs from aluminum cans is on display in the Smith Lobby and will soon move to the Clark Lobby. For \$1.00 per chance, anyone can guess the number of tabs in the container. Funds will be donated to the Linda Morse Porteous Award.

The person whose guess is closest to the actual number will receive a large cranberry scoop magazine rack made and donated by Bud Baker in the Carpenter Shop. The drawing will be held in January.

For further information contact the Carpenter Shop, ext. 2211.

Samelson Honored by ONR

Assistant Scientist Roger Samelson of the Physical Oceanography Department has been selected by the Office of Naval Research (ONR) as one of 16 Young Investigators for 1992.

Samelson and the 15 other recipients were selected from 234 applicants who submitted research proposals to ONR in response to its 1992 program announcement. Each Young Investigator receives a basic award of \$75,000 a year for three years for their research activities. Samelson's proposed research will be on the coastal marine layer and the response of the coastal ocean to forcing from small-scale wind features.

The Young Investigator Program was established by the Chief of Naval Research eight years ago. It is open to U.S. citizens holding tenure-track positions at American colleges and universities who have earned their Ph.D. within the last five years.

Samelson received his bachelor's degree in physics from Stanford University, his master's degree in mathematics from Oregon State University and his doctorate in physical oceanography from Oregon State. He joined the Institution staff in 1987 as a postdoctoral investigator and was appointed to the scientific staff in 1989.



Child Care and Family Resource Directory Available

The WHOI Committee on Work and Family Life has published a listing of child care and other family resources in Falmouth and neighboring towns. The updated listing is based on previous efforts by members of the Federal Women's Program at the Northeast Fisheries Science Center of the National Marine Fisheries Service and a 1990 listing by Falmouth Early Childhood Consultant Davien Gould, who assisted the Committee on Work and Family Life with this new edition.

Copies of the Child Care and Family Resource Directory are available to WHOI employees through Elaine Wilcox in the Personnel Office (ext. 2706). Reference copies are located in the Research Library (Clark 135), the Document Library (Clark 141), the Data Library & Archives (McLean 1) and the MBL/WHOI Library Reference Room (Lillie 2).

Copies are also available to the general public for \$2.00 each through the Public Information Office, 93 Water Street (457-2000 ext. 2252).

United Way Campaign Nears Completion

The 1991 United Way Campaign, the only charitable campaign the Institution officially sponsors, is nearing completion. Response from the Institution staff has been wonderful, particularly in these difficult economic times. Contributions and pledges to date total \$24,071.25.

Garber Travel has generously donated two round-trip Continental Airline tickets to the Institution's campaign. The tickets are valid for travel anywhere Continental flies in the continental U.S. or Caribbean, with certain travel restrictions. A drawing to select the ticket winner from those who contributed to the campaign will be held in January.

If you have not sent in your contribution, please mail it as soon as possible to Co-Chairman Shelley Lauzon, Co-op.

Soviet Ship Visits MMA and WHOI

The Soviet Research Vessel *Dmitri Mendeleev* docked at the Massachusetts Maritime Academy (MMA) in Buzzards Bay November 18-19 following an invitation from WHOI and MMA. The ship had recovered a Scripps mooring which had broken loose in the eastern North Atlantic.

With the *Knorr* back at WHOI, sufficient dock space was not available at WHOI for the *Mendeleev* to visit Woods Hole. MMA and WHOI hosted a reception November 18 at MMA, during which the Institution presented books for the ship's library and a plaque in appreciation for the ship's assistance in recovering the Scripps mooring, which included some WHOI equipment. The mooring, part of the Subduction Experiment, was offloaded at MMA.

Associate Scientist Bob Weller of the Physical Oceanography Department hosted a luncheon and scientific meeting November 19 at WHOI for

Photo by Tom Kleindinst



Tugs assist the Dmitri Mendeleev from Buzzards Bay to the MMA dock.

nearly 30 members of the ship's science party. An additional 30 members of the ship's crew were invited to tour the Institution that afternoon following

a day of sightseeing on Cape Cod. The *Mendeleev* departed MMA that evening to resume North Atlantic studies before heading home.

Ship Notes

ATLANTIS II and ALVIN

R/V *Atlantis II* and DSV *Alvin* are scheduled to complete Voyage #125 Leg XXXV December 21 when they return to San Diego. *Atlantis II* departed San Diego November 24 and spent the month working at the 10°N hydrothermal vent site on the East Pacific Rise. During the cruise scientists investigated the influence of hydrothermal vent plumes on the transport of benthic invertebrate larvae and on the trophic dynamics and community structure of zooplankton. Scientific activities included fourteen *Alvin* dives and MOCNESS (Multiple Opening Closing Net Environmental Sensing System) plankton tows.

Following a holiday break, *Atlantis II* and *Alvin* will depart San Diego January 1 for Manzanillo,

Mexico, to begin the 1992 operating schedule. *Atlantis II* and *Alvin* will depart Manzanillo January 13 for a two-week geological and biological cruise on the East Pacific Rise, returning to Manzanillo January 26.

KNORR

R/V *Knorr* is at the dock undergoing completion of its major refit and upgrade. Its 1992 operating schedule will begin January 24 with a month-long geology cruise to the Mid-Atlantic Ridge.

OCEANUS

An NSF inspection was held aboard *Oceanus* December 17-18. The ship will remain in port through the holidays, with a scheduled departure January 1 for a Jacksonville, FL, shipyard and routine hull

maintenance. *Oceanus* will return to Woods Hole following the yard work and is scheduled to depart January 27 for a series of cruises in the eastern North Atlantic. The ship will return to Woods Hole in July.

Masters Named to KNORR, ATLANTIS II

Carl Swanson, who has been Acting Master of *Atlantis II* for the past few months, will assume the duties of Master of *Knorr* in January. Gary Chiljean, First Mate and Relief Master on *Atlantis II*, has been promoted to Master of *Atlantis II*. Mike Palmieri, who brought *Knorr* from the shipyard in Louisiana to Woods Hole and has served during the final stages of the upgrade and refit, will return to *Oceanus* as First Mate and Relief Master.

New Faces



Christopher H. Clark
Relief Oiler
R/V ATLANTIS II
Marine Operations
Ext. 2208
R. Morris



Robert S. Detrick
Senior Scientist
(Rehire)
G&G
Clark 435
Ext. 3335
G. M. Purdy



Derek F. Dineen
Dockworker
R/V EAGLE MAR
Marine Operations
Ext. 2208
D. Yowell



Gabor Dobosi
Guest Investigator
G&G
Clark 435
Ext. 2692
N. Shimizu



Amy L. Donner
Staff Assistant II
(Temp.)
Development
Fenno
Ext. 2392
D. Milot



Kelen Huang
Research Engineer
(Casual)
PO
Clark S178C
Ext. 2631
R. Weller



Dennis Hunt
Relief Mess Attendant
R/V KNORR
Marine Operations
Ext. 2208
M. Barros



William D. Lambert
Warehouse Worker
Services
Quissett Warehouse
Ext. 2411
R. Joyce



Edward A. Sonafrank, Jr.
Information Systems
Assoc. II
ISL
Clark 156
Ext. 3240
R. Groman



Maren E. Tracy
Research Assistant III
Chemistry
Clark 418
Ext. 3459
C. Goyet



Marie A. Tobey
Staff Assistant II
(Temp.)
Development
Fenno
Ext. 3319
D. Milot

Promotions

Timothy J. Connors (Marine Operations)
to ALVIN Pilot (10/10/91)

Delia W. Oppo (G&G)
to Assistant Scientist (10/20/91)

Robert L. Elder (AOP&E)
to Engineer II (10/21/91)

Nathan Ulrich (AOP&E)
to Assistant Scientist (10/21/91)

Samuel J. Lomba (Purchasing)
to Senior Stockroom Clerk (10/14/91)

Leo R. Wells (Purchasing)
to Property Agent (10/15/91)

Richard C. Lovering (Purchasing)
to Stockroom Supervisor (10/14/91)

Information Systems Center: A New Center at WHOI

The Information Processing and Communications Laboratory (IPCL), now called the Information Systems Center (ISC), became a Center July 1 and is no longer part of the Applied Ocean Physics and Engineering Department (AOP&E). Like the Marine Policy Center and the Coastal Research Center, ISC now reports directly to Bob Gagosian, Associate Director for Research. This change formalizes what has been ISC's philosophy: to serve the computing needs of the entire WHOI community.

ISC has been part of the Institution for over 25 years, providing programming and consulting services, documentation, and central computing resources. As the number and variety of computing platforms at WHOI grew, ISC took on the task of networking the

diverse platforms.

The network development began by using asynchronous broadband technology. It has since progressed with a combination of fiber optic, coax cable and twisted pair technology. ISC now supports 10 Megabit/second data transfers among most of the buildings at the Institution, as well as access to the Internet.

This fall ISC sponsored small meetings with Institution staff to discuss the current and future computing needs of the WHOI community. The results of these discussions will help ISC decide the best way to support the future needs of the staff. If you have not had the opportunity to offer suggestions or comments, contact Bob Groman at ext. 2409 or send Bob an e-mail message at rgroman@red.whoi.edu.

Joint Program Name Changed

After considerable deliberation by our colleagues at MIT, approval has been granted through the Dean of the Graduate School at MIT to change the name of the Joint Program in Oceanographic Engineering to the Joint Program in Applied Ocean Science and Engineering.

The Education Office will make the change in all new brochures, flyers and stationary as each is reprinted.

The official name of the graduate program is now: Joint Program in Oceanography/Applied Ocean Science and Engineering.

In Memoriam

The Woods Hole Oceanographic Institution announces with great sorrow the death December 19, 1991 of Harry E. Oakes. He was 54 years old.

Harry, Chief Engineer of *R/V Knorr*, was born February 13, 1937 and attended Providence Trade School and the U.S. Navy Air Conditioning and Refrigeration School. He served in the U.S. Navy from 1954 to 1959 as a Sea Duty Engineman, Second Class. Following his military service, Harry worked as a diesel engine repairman for Boston Diesel Service from 1959 to 1962, as a maintenance mechanic for Avco Research and Development from 1962 to 1964. He began employment at the Institution as an Oiler aboard *R/V Chain* in September 1964, leaving in March

1965 for a position as a diesel mechanic at Boston Diesel Service from 1965 to 1967. Well known at WHOI for his woodworking skills, Harry worked as a carpenter's helper for New England Store Fronts, Inc. from 1967 to 1969 and as a carpenter with A. DiChicco Builders from 1969 to 1970, when he returned to WHOI as Deck Engineer aboard *R/V Chain*.

Through the 1970's Harry worked in various engineering positions aboard the *Chain*, *Knorr* and *Oceanus* and as a mechanic and machinist in the Facilities Department. He was part of the crew which delivered the new *R/V Oceanus* to Woods Hole in 1975. He joined the crew of the *Knorr* in 1979 as First Assistant Engineer. In 1984 he

Additions to WHOI Families

Congratulations to:

Jill and Richard Arthur on the birth of their daughter, Emily Elizabeth, November 27 at Cape Cod Hospital. Emily weighed 8 lbs., 3 ozs. Jill is a staff assistant in the Development Office and Richard is an engineer in AOP&E.

Kim and Joel Fahnley on the birth of their daughter, Madeleine Louise, December 14 at Brigham & Women's Hospital in Boston. Madeline weighed 8 lbs., 7 ozs. Kim is an Executive Assistant for the Marine Policy Center and Joel is an Engineer in Facilities.

WHOI Grads Future Astronauts

Joint Program graduates Clark Freise, Wendy Lawrence and David Delonga have been selected as finalists in NASA's astronaut program.

Freise and Lawrence received masters degrees in 1988, and Delonga a Ph. D. in 1989.

Freise is at the Naval Polar Oceanography Center in Washington, D.C., Lawrence teaches physics at the U.S. Naval Academy at Annapolis, MD, and Delonga is the Engineer Officer on a nuclear submarine operating out of New London, CT.

was promoted to Chief Engineer, a position he held until his death. Harry had remained with the *Knorr* when it traveled to McDermott Shipyard in Louisiana in February 1989 for a major refit and upgrade. Poor health forced him to return home in May 1991.

Harry is survived by his wife, Mary Jane Oakes, of East Wareham; a son, Harry E. Oakes Jr. of California; and a daughter, Karen A. Oakes of Vermont. Burial was at the Massachusetts National Cemetery in Bourne. In lieu of flowers the family requests that donations be sent to the Lighthouse Hospice Association, Inc., P.O. Box 448, Wareham, MA 02571.

The JASON Project *Continued from page 1*

discovery is full of surprises and setbacks," Ballard said shortly after the barge sank. "However, in my 30-year career, I have never faced a situation as severe as the total loss of all of our equipment last week. To me, the fact we were able to go forward with our broadcast shows scientific teamwork at its best. During the broadcasts, we told the students how we responded to this situation and explained how scientists must be prepared to find alternatives quickly when things go wrong."

As soon as word of the sinking spread, efforts began at WHOI and elsewhere to find replacement equipment to keep the broadcasts on schedule. The Deep Submergence Laboratory's (DSL) testbed vehicle HYLAS was a candidate to replace JASON Jr., but the decision was made to use three shallow water ROVS called MiniROVERS manufactured by Benthos Inc. of North Falmouth. Two were provided by Harbor Branch Oceanographic Institution in Ft. Pierce, FL, one of the

20 downlink sites in North America. The third, a Benthos-owned MiniROVER which had recently been equipped with a specially designed computer control system by Bourne-based Marquest, was brought to WHOI and tested in the tank at CRL.

Dana Yoerger and his DSL colleagues worked long hours to prepare the vehicle and to ship a container of spare parts, office supplies and other necessities. Skip Gleason flew to Miami November 26 to coordinate replacement equipment arriving from around the country. That equipment was then flown to Ecuador, arriving on the Island of Baltra on Thanksgiving Day. A command center, named Jasonville, was quickly set up and all gear put into place and tested. At 10 a.m. EST December 2, the broadcasts went on as originally planned. Despite the equipment loss, there were almost no technical difficulties and things ran smoothly.

Some changes in the broadcasts were required, such as moving Bob Ballard from the Galapagos Islands to

Turner's Atlanta studios. Three sites were used instead of the original five.

The changes had no apparent effect on the enthusiasm of the students, who had studied a specially designed curriculum in preparation for the live broadcasts. They had lots of questions for the JASON Project Volunteers after the broadcasts, and letters continue to arrive at Ballard's office.

As New Bedford Standard-Times reporter Rachel Thomas commented in a column about a Westport Elementary School visit to WHOI for the broadcasts: "It seems that the fifth-graders have learned yet another lesson: Explorers are not only smart and resourceful, they hate to disappoint kids."

Sea Grant Sponsors Lecture Series

The second season of All-Cape Coastal Science Seminars, sponsored by the WHOI Sea Grant Program, began November 22 at the Cape Cod Museum of Natural History in Brewster with a lecture by David Manski of the Cape Cod National Seashore on marine debris studies.

The series resumes January 24 in Brewster with a lecture on "Seasonal Changes and Long-term Trends in the Quality of Chatham's Coastal Waters" by Robert Duncanson of the Chatham Water Quality Laboratory.

Assistant Scientist Brian Howes of the Biology Department will present a lecture February 28 on "Sulfur Metabolism in Cape Cod Salt Marshes" at Cape Cod Community College (CCCC).

Lectures are held from 4-5 p.m. and will be held monthly through May.

New Stockroom Hours

The Smith Stockroom hours are now 8 a.m. to 4 p.m. Monday through Friday. The Clark Stockroom is open 9 a.m. to 11 a.m. Monday through Friday.

JGOFS Appoints Logistics Coordinator

Susan Kadar, Chemistry Department Executive Assistant for 17 years, has assumed the new position of coordinator of U.S. Joint Global Ocean Flux Study (JGOFS) field programs. She will be responsible for the logistics of the U.S. JGOFS seagoing effort, including space assignments. "One of the difficulties of a program such as this is that people come from all different institutions to go to sea together," she said in a recent interview. "There is bound to be a certain amount of duplication of small gear, for example."

Kadar's first assignment will be the NSF-supported Equatorial Pacific Process Study (EqPac), scheduled to go to sea in 1992 aboard the Univer-

sity of Washington's new AGOR-class ship *Thomas G. Thompson*. She will help coordinate NASA aircraft overflights with ship movements, and will be responsible for seeing to it that cruise participants submit data reports after the cruise.

Once EqPac gets underway, she will begin working on logistics for projected U.S. JGOFS process studies in the Indian Ocean and the Southern Ocean.

Kadar began her career in oceanography in 1967 as a research assistant for WHOI Chemist Derek Spencer. She has participated in numerous cruises, including the Geochemical Ocean Sections Study (GEOSECS) program in 1974.