

NEWSLETTER

WOODS HOLE
OCEANOGRAPHIC INSTITUTION



AUGUST-SEPTEMBER 1995

Deep-Diving Submersible ALVIN Sets Another Dive Record

The nation's first research submarine, the Deep Submergence Vehicle (DSV) *Alvin*, passed another milestone in its long career September 20 when it made its 3,000th dive to the ocean floor, a record no other deep-diving sub has achieved. *Alvin* is one of only seven deep-diving (10,000 feet or more) manned submersibles in the world and is considered by far the most active of the group, making between 150 and 200 dives to depths up to nearly 15,000 feet each year for scientific and engineering research.

The 23-foot, three-person submersible has been operated by Woods Hole Oceanographic Institution since 1964 for the U.S. ocean research community. It is owned by the Office of Naval Research and supported by the Navy, the National Science Foundation and the National Oceanic and Atmospheric Administration (NOAA). *Alvin* and its support vessel, the 210-foot Research Vessel *Atlantis II*, are on an extended voyage in the Pacific which began in January 1995 with departure from Woods Hole. The ship and sub are due back in Woods Hole in 1996.

Dive #3,000 was made on the Juan de Fuca Ridge off the coast of Washington as part of a series of twelve dives near 47°57'N, 129°06'W to study geological and geochemical processes at

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WHOI Names Paul Clemente Chief Financial Officer

Paul Clemente, Jr., a resident of Hingham and former Associate Vice President for Financial Affairs at Boston University, assumed his duties as Associate Director for Finance and Administration at WHOI on October 2.

In his new position Clemente is responsible for directing all business and financial operations of the Institution, with specific responsibility for accounting and finance, facilities, human resources, commercial affairs and procurement operations. WHOI, the largest private non-profit marine research organization in the U.S., has an annual operating budget of nearly \$90 million and a staff of more than 950 employees and graduate students.

"I am very pleased that Paul Clemente has joined our senior management team," WHOI

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Courtesy Alvin Crew



Marking the historic dive prior to launch were (left to right) Pat Hickey, Steve Faluotico, Blee Williams, Matt Heinz, Dave Olds and Paul McCaffrey of the at-sea *Alvin* operations group.

Photo by Al Duester



The Autonomous Benthic Explorer (ABE) successfully completed its first science mission in August on the Blanco Escarpment off the coast of Oregon (see article page 5).



Paul Clemente

Clemente *continued from page 1*

Director Bob Gagosian said in announcing the appointment. "With his wealth of hands-on financial experience and management expertise he will help the Institution successfully meet the challenges ahead."

Clemente received a Bachelor of Science in Management from Northeastern University in 1977, a Master's Degree in Accountancy from Bentley College in 1979, and completed the Advanced Management Development Program at Boston University.

Prior to joining the WHOI staff Clemente worked for Boston University (BU) for fifteen years. Thirteen of those years were spent in the Office of Financial Affairs, where he served as Associate Comptroller, then Comptroller, with promotion to his most recent position as Associate Vice President for Financial Affairs in 1987.

The Newsletter is published monthly for employees, students and members of the Woods Hole Oceanographic Institution community. Copy deadline is the 25th of the month. Ideas for stories, photos, and items of interest to the community are welcome and should be sent to: Editor, Newsletter, News Office, Woods Hole Oceanographic Institution, Woods Hole, MA 02543. Telephone 508-457-2000 ext. 2270 or 3340.

Writer/Editor: Shelley M. Lauzon
Staff Support: Kathleen Patterson

In this role, he directed a staff of 84 employees performing university-wide accounting and disbursement functions, student accounts, collections, indirect costs and grant accounting. He was also responsible for development and implementation of university accounting policies and preparation of financial statements and regulatory reports. He negotiated the University's research indirect costs rate and worked closely with the Vice President for Financial Affairs and the Treasurer in financing, cash management and investments.

While at BU Clemente was involved in a wide range of different projects that included financial responsibility for the construction of an \$80 million, 241,000 square-foot Center for Photonics Research and the Chairmanship of the Boston University/Chelsea Partnership, an initiative of BU President John Silber to provide a model for education reform to an urban environment. As Chairman of the Boston University/Chelsea Partnership, Clemente had overall responsibility for the management of a \$26 million urban public school district with 4,500 students and 600 employees.

In addition, Clemente served as Treasurer of A Different September Foundation, a Chelsea partnership fundraising organization, and as Treasurer of the Boston University Charter School.

Prior to joining the Boston University staff in 1980 Clemente worked for the Commonwealth of Massachusetts as Senior Auditor in the Division of Insurance and as the Executive Accountant for the then newly-formed State Ethics Commission.

WHOI Controller Maureen Nunez served as Acting Associate Director for several months this summer prior to Paul's arrival. She has resumed her duties as Controller.

Paul Clemente resides in Hingham with his wife, Patricia, and daughters Sharyn, 15, and Michelle, 13. His office is in Bell House.

"I believe it is the mission of the financial and administrative functions of WHOI to provide an outstanding level of customer service to those inside and outside the organization," Clemente said of his management philosophy. "The service should support the needs and strategy of the organization, help all members of the WHOI community get their jobs done, and at all times promote the name and reputation of the Institution.

"The key to attaining this mission is the recognition of the concept of customer service combined with the establishment of a general strategic direction. That direction recognizes that any institution in order to remain successful and competitive must find ways to improve customer service, improve efficiency and reduce costs while always being in compliance with all government laws and regulations," he said. "Accordingly, my management philosophy establishes the strategic direction and provides every employee with goals that support the direction. Whenever a policy is made, procedure established or system implemented, it must satisfy the strategic goals and directions. In no instance can any policy, procedure, etc. be established that erodes service, increases costs, increases paper or violates any laws or regulations. The use of technology is an integral part of the strategic direction.

"Every employee is expected to make continual progress toward the strategic direction and is evaluated on the basis of that progress," he added. "I look forward to working with the WHOI community as I establish the goals and directions of the administrative functions reporting to me."

Congressman Visits WHOI

A key member of Congress and members of his staff have visited the Institution several times during the past few months as part of the Institution's ongoing efforts in Washington.

Congressman Jerry Lewis of California, chair of the House of Representatives' Appropriations Committee for Veterans Affairs, Housing and Urban Development (HUD) and Independent Agencies, visited the Institution September 25. One of the independent agencies under the committee's oversight is the National Science Foundation, which supports half of WHOI's government sponsored research. Other independent agencies are NASA and the Environmental Protection Agency.

The Congressman and his wife spent a weekend in Falmouth and toured the Institution, visiting labs and learning about a variety of research and engineering projects. Other members of his staff also visited WHOI in September and October.

The Institution's Washington strategy includes informing and educating members of Congress and their staffs as to current ocean research and technology developments and their value to the nation. It also includes working with key funding agency personnel.

In late May Director Bob Gagosian was invited by the Chief of Naval Operations, Admiral J.M. Boorda, to attend a meeting in Washington at which they discussed the importance of ocean sciences and engineering to the U.S. Navy and to national security. As a result of the meeting \$12 million which had been cut was reinstated into the 1997 Navy budget for ocean science research.

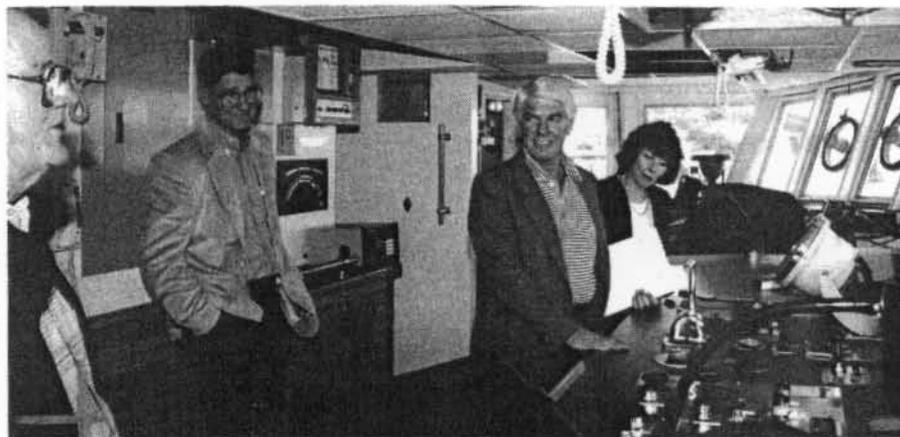
"This action will have a long-lasting effect since this new number becomes the funding floor for the next several years' budget process," Bob Gagosian said. "Along with this reinstatement came the written confirmation that 'understanding the

Photo by John Porteous



Barrie Walden (back to camera) explains how ABE operates to Congressman Jerry Lewis (second from left) and his chief of staff, Arlene Willis. Dick Pittenger is at far right.

Photo by Rick Chandler



At the helm: Congressman Lewis and Arlene Willis stand on the bridge of Research Vessel Oceanus during a tour of the ship September 25. Joe Coburn of Marine Operations is at left.

oceans is fundamental to our national security, as well as to global economic and environmental well-being. A robust competency in oceanography is a core requirement and responsibility of the U.S. Navy. It is so vital to the success of naval operations that the Navy must lead in focusing national attention on ocean policy and programs.' This is a major vote of confidence and commitment by the Chief of Naval Operations, the Navy's top military officer, and clearly results from the kind of strategy we

need to be pursuing in Washington."

Bob Gagosian said the key is to identify "key individuals who have the authority to make decisions and make things happen" and to stay focused in articulating the importance of ocean research so that the 'pot' for that research will stay as healthy as possible. WHOI staff can then compete for the funds.

Editor's Note: WHOI's Washington strategy will be featured in the next Newsletter.

Dive 3,000 *continued from page 1*

hydrothermal vents along the Endeavor Segment of the ridge. Chief Scientist for the cruise was John Delaney of the University of Washington in Seattle. In addition to scientists from Woods Hole Oceanographic Institution and the University of Washington, members of the science party represented the NOAA Pacific Marine Environmental Laboratory in Seattle, Cornell University, and the University of Quebec in Montreal. Making Dive #3,000 were Pilot Patrick Hickey, a veteran of more than 300 dives, and John Delaney and Deborah S. Kelley of the University of Washington.

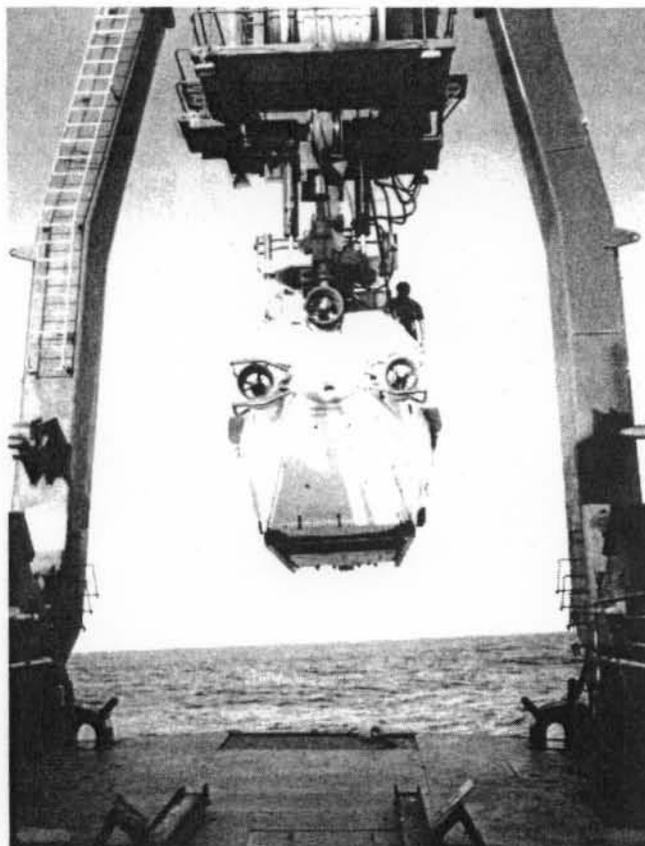
"...The amazing discoveries and tremendous capabilities for research and technology development through Alvin's diving operations represent the very best of American ingenuity and commitment to excellence. The Alvin and the men and women of WHOI who make its operations possible are extraordinary assets to the world of marine science, and I am proud that you call Massachusetts home...."

Excerpt from congratulatory message sent September 20 by Massachusetts Senator John Kerry to the *Atlantis II*

Dive #3,000 represents but one in a long list of accomplishments for *Alvin*. Named for the late Institution scientist Allyn Vine, the sub has made numerous contributions to marine science and engineering through the years. Although used largely for engineering studies in its first ten years, *Alvin's* value as a research tool was proven in 1966 when it located a hydrogen bomb dropped in the Mediterranean Sea off Spain in an airplane collision. As pilots became increasingly skilled at maneuvering the sub and a corps of experienced scientific users was assembled, the ratio of testing to working dives moved heavily toward the scientific by the early 1970s.

Alvin's initial steel personnel sphere allowed the sub to dive to 6,000 feet. A titanium sphere installed in 1973 more than doubled the sub's depth capability. Major scientific use began in 1974 with the first extensive study of the North Atlantic portion of the Mid-Ocean Ridge system during Project FAMOUS (French-American Mid-Ocean Undersea Study). The Mid-Ocean Ridge system, an underwater mountain range which circles the earth like the seams on a baseball, covers twenty-three percent of the planet and is

Photo courtesy Alvin Group



Another day, another dive: Alvin is launched from Atlantis II September 20 to begin dive 3,000.

the largest undersea geologic feature on Earth. Only about one percent of the ridge has been explored, much of that in *Alvin*. During the 1974 expedition scientists obtained information that confirmed the theory of seafloor spreading. Demand for use of the sub increased.

"...Over the years, as Alvin has grown in technological capability and its diving schedule increased dramatically, the submarine has proved invaluable in fostering a better understanding of the ocean environment and seafloor geology. We are all grateful for the significant role that Alvin has played, and continues to play, in the marine sciences. I commend you and all of the personnel on board Alvin for your tireless dedication to marine research and exploration...."

Excerpt from letter to Chief Pilot Pat Hickey from Massachusetts Senator Edward Kennedy

The 1977 discovery of bizarre marine life, including foot-long clams and mussels and red-tipped worms up to 12 feet in length, at hydrothermal vents on the Galapagos Rift in the Eastern Pacific expanded the sub's role in ocean exploration. Heavy

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Alvin Dive 3,000 *Continued from page 4*

demand for use of *Alvin* for biological, chemical, geological, geophysical, and engineering studies continues from scientists throughout the United States and with participation by scientists from around the world.

Alvin's diving schedule increased dramatically in 1983 when *Atlantis II* was converted to serve as its support vessel. During its first 16 years of operation from the 105-foot catamaran *LULU* (since retired by the Navy), *Alvin* made 1,000 dives (Dive #1,000 was made January 15, 1980 - the 50th anniversary of the Institution's founding). The second thousand dives were made in half that time, with Dive #2,000 occurring March 22, 1988. The third thousand dives have taken about seven years.

Featured in many newspaper and magazine articles and television programs through the years, the sub gained worldwide attention again in July 1986 when it explored the wreck of the R.M.S. *Titanic* during the Institution's second expedition to the wreck, which was located in 1985 with WHOI's unmanned vehicle *ARGO*.

"I send my sincere congratulations on Atlantis II's participation in the 3,000th dive of Alvin. Your vessel's contributions to this memorable occasion are worthy of praise. I'm told that the 3,000th dive took place as your ship and the Alvin are in the midst of an extended voyage in the Pacific. Since 1983, Atlantis II has proven essential in expediting dives and providing support for Alvin. Your cooperative effort is a source of pride for Massachusetts as well as an invaluable contribution to marine science and engineering. I commend you and your crew for your tireless dedication to marine research and exploration, and I wish you all safe passage throughout your voyage."

Excerpt from letter to *Atlantis II* Master Gary Chiljean from Senator Edward Kennedy

In 1994 the sub's depth capability was extended from 4,000 meters (13,124 feet) to 4,500 meters (14,764 feet), enabling *Alvin* to reach 86 percent of the world's ocean floor. About every two years or so the sub undergoes a major overhaul in Woods Hole, where it is taken apart down to its titanium frame, upgraded with the latest technology, and put back together to resume its diving schedule. The next overhaul is scheduled in late 1996. *Alvin's* pilots, who are also its mechanics, are part of the sea-going group of 10, supported by a shore-based group of 8.

Alvin and *Atlantis II* are continuing diving operations off the Mexican coasts through the end of the year.

ABE Successfully Completes First Science Mission

As often happens, ABE's first science cruise had its ups, and downs, literally. But when it was over, the robotic vehicle had successfully completed its dives and provided geologist Maurice Tivey with some useful data.

Officially known as the Autonomous Benthic Explorer but better known around WHOI as ABE, the Institution's first autonomous vehicle was designed and built by the Applied Ocean Physics and Engineering department under the direction of Al Bradley, Barrie Walden and Dana Yoerger (see spring/summer 1995 *Oceanus* article). Many others have helped in the project, both ashore and at sea.

ABE was tested at sea during two cruises in July and August aboard *Atlantis II* off the coast of Oregon. After working out some bugs on the July cruise, the vehicle returned to sea in August for its first science mission, a survey of a lava flow from a 1993 eruption on the Juan de Fuca Ridge at a depth of about 2,000 meters.

While *Alvin* performed its work during the day, ABE was deployed at night and recovered before *Alvin* was launched in the morning. The vehicle conducted magnetic surveys over some new lava flows, following the bottom between seven and 20 meters over the often steep terrain and through a diffuse hydrothermal vent plume *Alvin* had discovered several years ago. The vehicle successfully completed all seven of its dives, with six of the seven dives yielding complete data sets.

That data is being analyzed by Maurice Tivey, who is trying to understand how ocean crust is formed and how fast the magnetism of the sea floor changes. ABE surveyed several locations where earthquakes occurred, one in 1993 and another sometime between 1982 and 1991, each with detectable magnetic signals. Tivey was pleased with the results and says ABE offers oceanographers a very useful tool for long-term monitoring.

"No other autonomous underwater vehicles (AUVs), to our knowledge, look like ABE," Dana Yoerger says of the vehicle's design, often likened to that of the starship *Enterprise* of *Star Trek* fame. "It works very well because it provides a stable platform. We're not trying to go fast or very far but rather to maneuver in tight spaces close to the bottom, which is often pretty rugged terrain."

ABE covered 35 kilometers of bottom during the cruise. "Power is the thing," Al Bradley adds. "ABE was not designed to be an elevator system, so climbing takes a lot of power. The slower you go the farther you can travel."

The ABE design team is excited about its recent cruise results and future possibilities for the vehicle. "We could stop dead and climb up the side of a steep cliff," Yoerger says. "It was rock solid in pitch and roll, the cameras were

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New Faces



Shannon M. Bard
JP Student
Biology
MIT 68-135
883-2110
M. Hahn



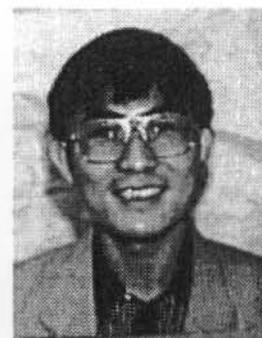
Maria Borga
MPOM Fellow
MPC
Crowell
Ext. 2747
A. Solow



Paul Clemente
Assoc. Director for
Finance & Admin.
Directorate
Bell
Ext. 2291
R. Gagosian



Daniel A. Curran
Senior MPOM Fellow
MPC
Caryn
Ext. 2496
A. Gaines



Min-Han Dai
Postdoctoral Scholar
MC&G
Clark 416
Ext. 3466
K. Buesseler



Neal W. Driscoll
Assistant Scientist
G&G
Clark 256
Ext. 2619
G. M. Purdy



Carrie T. Friedman
JP Student
G&G
MIT 54-810
Ext. 3451
M. Tivey/S. Humphris



Cynthia Gallo
Research Assistant III
MC&G
Clark 408
Ext. 3281
M. Bacon



Damon Gannon
Research Assistant II
Biology
Shiverick
Ext. 3257
W. Watkins



Jennifer E. Georgen
JP Student
G&G
MIT 54-822
Ext. 883-1949
M. McNutt/J. Lin



Tracey Gregg
Postdoctoral Fellow
G&G
McLean 202A
Ext. 2615
D. Fornari



Matthew D. Grund
Engineer II
AOP&E
Bigelow 408
Ext. 2446
D. Frye



Keiko Hattori
Guest Investigator
G&G
Clark 118A
Ext. 2947
S. Hart



Allegra Hosford
JP Student
G&G
MIT 54-812
Ext. 2838
R. Detrick



Daniel Kilfoyle
JP Student
AOP&E
Caryn
Ext. 4453
J. Catipovic

Employee Recognition Celebration September 14 Attracts 450

An estimated 450 employees and retirees attended the Seventh Annual Employee Recognition Celebration September 14 under a tent on the Fenno House lawn.

The celebration honored the contributions of all employees but particularly those employees in regular status, at half time or more, who have completed 10, 20, and 30 years of accrued service between January 1 and December 31, 1995. Thirty-three were honored this year for ten years of service, sixteen for 20 years of service and five employees for 30 years of service.

Paul Boutin and Allan Gordon of the Applied Ocean Physics and Engineering Department, Jane Ridge of the Biology Department, Earl Young of the Geology and Geophysics Department, and Richard Payne of the Physical Oceanography Department were honored for 30 years of service. Ten-year recipients receive a WHOI pin, 20-year recipients a pin and clock, and 30-year recipients a pin and a choice of a WHOI rocker or straight chair.

The annual celebration also included the "employee" awards. The Vetlesen Award is presented to an individual, the Penzance Award for group contributions, and the Linda Morse-Porteous Award to an outstanding female technician on the graded or technical staff.

A. Lawrence "Jake" Peirson, Associate Dean and Registrar, received the Vetlesen Award "for exceptional contributions not merely above and

beyond superb performance of their jobs and service on committees, but for true selfless dedication of a major portion of themselves to the entire WHOI community over a long period of time."

Jake joined the WHOI staff in the summer of 1967 and has been involved in Education Office programs ever since. Nominations noted that he "has worked endless hours to make the WHOI-MIT Joint Program work since its inception in the late 60s" and that he has "used his great heart and calm insight to solve a

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Vetlesen Award recipient Jake Peirson (with plaque) poses with Education Office colleagues (left to right) Lee Campbell, Maria Silva, Julia Westwater and Marcey Simon.



Linda Morse-Porteous Award recipient Freddie Valois displays the award plaque.



Dave Simoneau (center) accepts the Penzance Award from Director Bob Gagosian on behalf of the Buoy Engineering and Rigging Shops. Larry Costello of the Rigging Shop is at left.

Photos by Tom Kleindinst



Human Resources Manager Kathy LaBernz (right) reads the name of a door prize winner. Maggie Walden is at left.



Alan Gagnon of the Geology and Geophysics Department displays his 10-year service pin.



Jay Dufur tries his hand at the photo contest.



Ollie Zafiriou was the lucky door prize winner of two airline tickets, courtesy of Garber Travel.



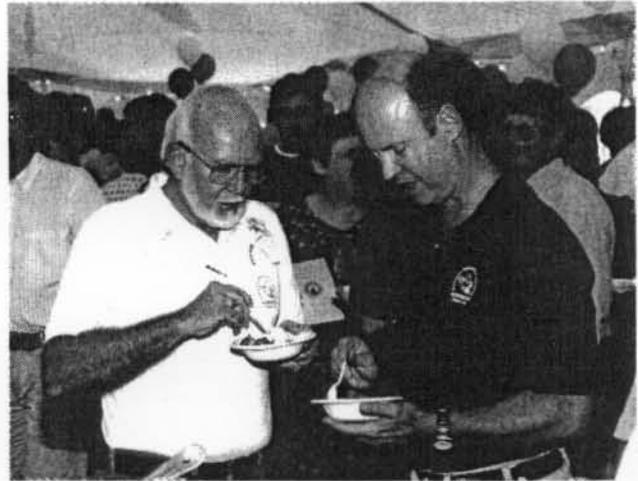
Jack Cook (left) and Dale Leavitt enjoy the refreshments.



Maggie Walden pins a boutonniere on 10-year pin recipient Bryan Way.



Freddie Valois shared some thoughts about Linda Morse-Porteous with the crowd.



Charlie Corwin and George Meier of the Alvin group enjoy refreshments.

Employee Recognition *continued from page 8*

myriad of large and small issues that plague any serious educational effort, especially one that joins two highly independent institutions situated 80 miles apart."

Other nominations noted that Jake's "dedication to WHOI people and to the education efforts at WHOI, including employee education efforts, is extraordinary" and that he "puts in long hours during evenings and weekends many times throughout the year to make certain that WHOI employees and students receive the best possible education the resources of the Institution will allow."

The Penzance Award, "for sustained exceptional performance, for outstanding representation of the WHOI spirit and for major contributions to the personal and professional lives of our staff," was presented to the Buoy Engineering and Rigging Shops which include John Kemp, John Bouthillette, Steve Murphy, Dave Simoneau, Larry Costello and Jack Reese. Dave Simoneau accepted the award on behalf of the group.

Nominations noted that the Buoy Engineering and Rigging Shops "bring an enthusiasm, selflessness and expertise to the projects they work on which is a credit to themselves and WHOI" and that they "demonstrate an Institution loyalty and spirit that is sometimes forgotten in today's more complicated business of ocean science."

Other WHOI colleagues said they have "evolved into a institutional, national and international resource." They are "extremely competent and accommodating of the people they work for and with" and noted that "their approach with all comers is always to solve any problem and to see to it that the project at hand is completed successfully."

Still others said the Buoy Engineering and Rigging Shops operated in "an atmosphere of great camaraderie that time and again proves to be a fertile ground for developing new approaches and techniques." They

"epitomize the seagoing, can-do spirit which has produced the Institution's outstanding track record of successfully designing, deploying, and recovering instruments at sea."

Dale Goehringer presented the Linda Morse-Porteous Award, which is given for leadership, dedication and quality of work, abilities as a role model and/or mentor to junior women, and involvement in the WHOI community. Dale noted her personal relationship with the recipient and recalled examples of her many attributes as a mentor and role model.

Recipient Frederica "Freddie" Valois of the Biology Department spoke about the many contributions of Linda Morse-Porteous to the Institution and hoped that women new to WHOI would continue to benefit from her legacy.

Human Resources Manager Kathy LaBernz thanked all who helped with the event, particularly Nancy Barry, Pam Goulart and Maggie Walden of Human Resources, and staff in other areas of the administration, Facilities, Graphic Services and Procurement. Outside vendors O.C. Tanner, Chef Roland's Fine Foods and Ivy's Florist also assisted with the arrangements.

Employee representatives on the Penzance and Vetlesen Award committees were Mike Caruso, Hovey Clifford, Babs Ferreira, Pam Hart, Patty Odams, Kathy Patterson, Roy Smith and Bruce Tripp.

The program portion of the celebration culminated with the selection of door prizes winners. Two round-trip coach class airline tickets via Northwest Airlines, valid anywhere Northwest flies in the contiguous United States, were won by Ollie Zafiriou. Rob Olson and George Hampson received movie passes to local theaters, Craig Marquette and Andy Bowen received ice cream coupons, and Melissa Weidman and Scott McIntyre won bottles of wine. A photo contest, featuring old Human Resources photos of staff members taken when they were hired, was won by Cheryl Daniels, who received a bottle of wine.

Safety Committee Appointed

An Institution Safety Committee has been formed with responsibility "for making the Institution a safe work place shared by all."

Appointed by Associate Director for Research Jim Luyten earlier this year, the committee is chaired by Rick Trask of the Physical Oceanography Department. Other members include Nancy Barry (Human Resources), John Bouthillette (Applied Ocean Physics and Engineering), Peggy Chandler (Director's Office), Alan Fler (Marine Chemistry and Geochemistry), Bob Flynn (Marine Operations), Rick Galat (Facilities), Lew Karchner (Safety Office), Bill McKeon (Facilities), Ann McNichol (Geology and Geophysics), Carl Wirsén (Biology) and Bonnie Woodward (Safety Office).

"For any safety program to be successful, there must exist a structured organization which complements the 'goodwill efforts' of the WHOI population, and which maintains an authoritative overview of the implemented safety programs at the Institution," states the committee's charge.

One goal of the Safety Committee is to heighten WHOI staff awareness of safe practices on a daily basis. The committee plans to share information and ideas through department and group meetings and forums and will re-activate a periodic safety column in the *Newsletter*.

National Geographic Meets at WHOI

Among the groups to hold meetings at the Institution in recent weeks was the National Geographic Society's Committee on Research and Exploration, which met at Carriage House September 30 to October 2. Former Director John Steele is a long-time member of the committee. Several WHOI staff gave presentations on their research, and the group visited the dock to learn more about WHOI's deep-ocean exploration vehicles.

World Wide Web Classes Offered

In response to requests for more sessions, the MBL/WHOI Library and the Woods Hole scientific community Web group is again offering Thursday noon introductory sessions for the Netscape World Wide Web browser, as well as introductory sessions on hypertext markup language. All sessions will be held in Loeb 308 at MBL from noon to 1:00 pm on the days indicated below.

The Netscape sessions include an introduction to the features of the Netscape browser and a tour of some interesting and useful locations on the World Wide Web. Instructions for downloading and installing Netscape will be distributed.

The introduction to hypertext markup language, html, is intended for more experienced Web users who need to know more about how the Web is constructed. After attending this session, users should be able to write their own home page as well as understand how effects are achieved on others' home pages.

Class size is limited to 20 per session and advance registration is required. To register, email becky@mbi.edu, giving your name, institutional affiliation, location, phone number, and the session you wish to attend. For further information, email Maggie Rioux at mrrioux@mbi.edu or mrrioux@whoi.edu.

Introduction to Netscape and the World Wide Web for MS Windows Users will be held November 16 and December 7.

Introduction to Netscape and the World Wide Web for Macintosh Users will be held November 30 and December 14.

Introduction to the Hypertext Markup Language will be offered November 9 and December 21.

Photo by Shelley Lauzon



Joint Program student Gaspar Taroncher (left) helps prospective donors complete paperwork during a bone marrow testing drive at WHOI July 25 to benefit former Joint Program student Alan Kuo, who was diagnosed with leukemia earlier this year. More than 100 participated in the screening by having a blood test, which can determine a compatible donor. Friends of Alan Kuo held numerous fundraising activities this spring and summer to raise the nearly \$10,000 needed to pay for blood tests, which cost about \$50 each. Although no compatible donor for Alan was found from the July effort, the drive will continue in the Boston area.

In Memoriam

The Woods Hole Oceanographic Institution announces with great sorrow the death August 30, 1995 of **Victor F. Fontana** at Falmouth Hospital after a long battle with cancer. He was 75.

Victor Fontana was born in Hoboken, New Jersey, in 1920 and grew up in Quincy, MA, where he graduated from Quincy High School. He served in the U.S. Navy as a corpsman during World War II. After the war he worked in delivery at the South Weymouth Laundry from 1953 to 1957, as a salesman for Hunts Potato Chip Company in Braintree from 1957 to 1967, and as a clerical worker at the General Dynamics shipyard from 1967 to 1974. Victor moved to Falmouth and joined the WHOI staff in September 1974 as a services assistant in the Facilities Department assigned to Clark Laboratory. He was promoted to Senior Services Assistant in 1979 at Clark, with responsibilities for mail delivery and general service duties. He was honored December 2, 1982 upon his retirement with Victor Fontana Day, during which he was presented numerous gifts and mementos at a large gathering in Clark 507.

Following his retirement Victor spent winters in Florida but continued his connection to the Institution. In May 1983 he joined Manpower as a temporary worker and returned to WHOI as a shuttle driver until poor health forced him to give up the position. He is survived by a sister, Marie Jackson, of Falmouth; a niece, Delphina Andrews, and her husband, Vincent, of Falmouth; and several other nieces and nephews.

At his request, donations in Victor's memory can be made to the Institution's Education Office, c/o Development, Fenno House MS #40, WHOI, Woods Hole, MA, 02543.

Photo by Shelley Lauzon



Chris Weidman celebrated completion of his doctoral defense September 6 with champagne and caviar at Nobska Point with wife Melissa (right), family and friends. Following his defense Chris, much to his surprise, was picked up in a vintage car chauffeured by fellow Geology and Geophysics Department Joint Program student Gary Jaroslow and driven to Nobska Point for the noon celebration.

*His dissertation is entitled "Development and Application of the Mollusc *Arctica islandica* as a Paleooceanographic Tool for the North Atlantic Ocean."*

Environmental Journalists Visit WHOI

More than 125 members of the Society of Environmental Journalists (SEJ) visited WHOI October 26 to learn more about Institution research and engineering activities. The day-long trip to WHOI was hosted by the News Office.

The visit is one of five day trips offered to SEJ members prior to the official start of their fifth national conference October 26-29 in Cambridge. MIT served as the principal conference sponsor.

While at WHOI the journalists visited the dock to see the Remotely Operated Vehicle JASON and the Autonomous Benthic Explorer (ABE), and learned about various coastal research and international projects at sites around the Institution. Director Bob Gagosian spoke with the group on the importance of the ocean.

Other day trips offered to the SEJ members were the Harvard Experimental Forest, the Selectra Corporation's

electric car manufacturing plant, Boston Harbor and the Deer Island sewage treatment plant, and a tour of Boston's urban environment. Trips to Walden Pond and a Whale Watch were offered at the conclusion of the conference.

SEJ members are working members of the print, radio and television media primarily from the United States. Among the topics discussed at their national conference were biodiversity, the environment in international trade and politics, global climate change, the New England fisheries crisis and air pollution. The International Federation of Environmental Journalists also participated in the SEJ conference. Vice President Al Gore was among the speakers at the conference.

The visit to WHOI was the largest of the SEJ field trips, attracting more than a fourth of those registered for the conference.



From left to right: Katie Boissonneault, Allegra Hosford, Laura Connors and Jennifer Georgen.



NOAA Chief Scientist Kathryn Sullivan (second from right) and Associate Director for Education and Dean of Graduate Studies John Farrington (right) helped send off the cruise.

A New Class Sets Sail

Members of the entering class in the MIT/WHOI Joint Graduate Program got to know each other during a cruise June 22-July 1 aboard the Sea Education Association's vessel *Westward*.

Kathryn Sullivan, chief scientist of the National Oceanic and Atmospheric Administration (NOAA), and Associate Director for Education and Dean of Graduate Studies John Farrington spoke with students before the vessel departed. The vessel traveled to Georges Bank and south of Cape Cod.

A land-based orientation session was held for the new graduate students July 7 at Carriage House. Twenty-six students entered with the 1995 class; 147 students are enrolled in the Joint Program.

Katie Boissonneault at the helm



Steve Fries, dressed appropriately in his WHOI T-shirt!

Darwin's Ship Focus of Book by WHOI Trustee

"HMS *Beagle*: The Story of Darwin's Ship" was recently published by W.M. Norton & Company. Its author, Keith S. Thomson, is President of the Academy of Natural Sciences in Philadelphia and a WHOI Trustee.

While much has been written about Charles Darwin and his scientific and intellectual adventures on the HMS *Beagle* in the 1830s and 1840s, little has been known until now about the ship, a ten-gun brig.

Thomson chronicles the history of the ship and its crew, from the discovery of plans showing how it was built, through three major rebuildings and reconstruction of the cabin in which Darwin lived and worked. The book ends with the *Beagle's* last days in 1870, standing vigil off the coast of England as Watch Vessel 7. It is unknown what happened to the ship since no physical pieces exist, although Thomson says it was probably sold for scrap.

"For me the story of HMS *Beagle* is a story of connections - of loves, of ideas, of natural science, and the opening and closing of distances in the nineteenth century," Thomson writes in the book's Preface. "I started to learn the story of HMS *Beagle* because my profession is that of a biologist, and I have a strong interest both in the history of science (which must include Darwin) and in ships and the sea."

Keith Thomson is a zoologist, paleontologist and former dean of the Graduate School of Arts and Sciences at Yale University. He is also an adjunct professor of geology at the University of Pennsylvania and Honorary Curator of the Peabody Museum of Natural History at Yale University. He received a bachelor's degree from the University of Birmingham, and his master's and doctoral degrees from Harvard University.

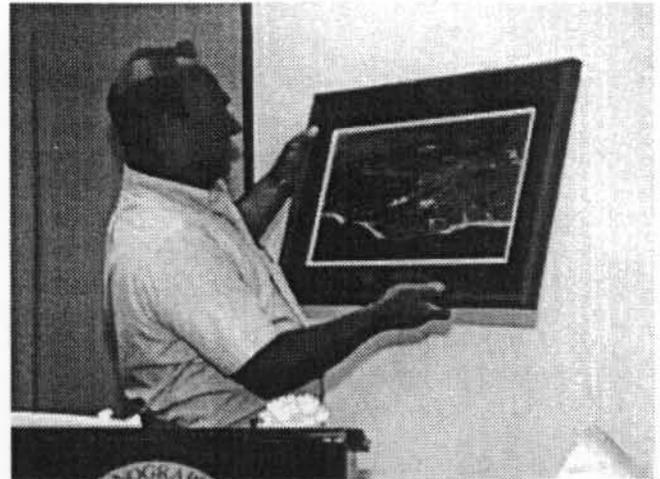
Thomson serves as a WHOI Trustee and is a member of the Executive Committee. He is chair of the Trustee Appointments and Promotions Policy Ad Hoc Committee and serves on the Education Ad Hoc Committee.

Zip Code Plus 4 Becoming a Reality

The U.S. Postal Service is reminding the business community that all business mail must be addressed properly with name, street address, city and state, five digit zip code plus 4 and a bar code to enable their scanners to read and electronically route the mail correctly.

While the zip plus 4 and bar code isn't yet required on every piece of mail, they will be mandatory in the not too distant future. If the 9 digits and bar code aren't used, mail will be returned to the sender for proper addressing. Incoming WHOI mail should also include the mail stop number after the person's name.

Photos by Shelley Lauzon



Ed Denton of the Applied Ocean Physics and Engineering (AOP&E) Department admires an aerial photo of Falmouth, one of several gifts presented to him during a retirement party at Carriage House July 26. Ed retired after more than 31 years of service to WHOI.



Other AOP&E Department colleagues to retire in the past few months were Neil Brown and Don Koelsch. Neil (pictured above at right speaking with Rob Goldsborough) retired after more than 12 years of service. Don retired after nearly 24 years of service. The pair were honored by colleagues at a joint retirement party in Clark 507 in June.

ABE continued from page 5

pointed down and the sonar worked well. We had good heading despite high magnetic signals. The vehicle has the potential to take incredible images of the sea floor."

Tivey will present his magnetic data from ABE at the fall American Geophysical Union meeting in San Francisco in December. The group hopes word of the vehicle's capabilities will begin to spread in the scientific community.

New Project Manager Appointed for AGOR-25

John W. Thompson of Vancleave, Mississippi, brings decades of experience in the shipbuilding industry to his new position as WHOI's on-site representative for AGOR-25, the Research Vessel *Atlantis*, under construction at Halter Marine in Moss Point, Mississippi.

Thompson was hired in July following the sudden death of William Collins June 26.

As WHOI's on-site construction representative Thompson is the primary point of contact for all technical issues, providing on-site guidance and assistance to expedite the resolution of technical problems. He ensures that regulatory requirements are incorporated in construction and reviews working drawings and vendor plans as required. Other responsibilities include monitoring the shipyard's quality control, assisting in the coordination of all government reviews and comments, reviewing the trial agenda and verifying the completion of milestones and other key events.

Thompson will also coordinate on-site vessel familiarization and training for prospective crew members upon their arrival in the shipyard. He will assist in monitoring acceptance trials and will notify the shipyard regarding correction of warranty items.

Working on the *Atlantis* is not totally new to him. From August 1993 to July 1995 Thompson served as an engineer with John McMullen Associates at Halter Marine, assigned to the AGOR project in support of the Naval Sea Systems Command (NAVSEA). He was responsible for review of detailed design drawings, technical manuals and test agendas, specification compliance and regulatory requirements from the U.S. Coast Guard and American Bureau of Shipping.

The son of a shipbuilder, John Thompson was born and raised in New Jersey, where he graduated from Camden High School in 1953. He started his career as a machinist apprentice for the New York Shipbuilding Corporation in Camden, where he became a machinery supervisor and then foreman, working on submarines from pre-launch to delivery.

In 1969 Thompson moved to Mississippi to work at Ingalls Shipbuilding in Pascagoula. He held numerous positions overseeing major portions of submarine new construction and overhaul, commercial construction and the overhaul of U.S. Navy ships until 1981, when he left to serve briefly as a marine consultant to shipbuilding and manufacturing firms.

In 1982 he was named production controller for the Department of Defense, Supervisor of Shipbuilding, in Pascagoula. He joined John J. McMullen Associates in 1985 as a senior engineering technician, leaving Mississippi in 1988 to serve as repair superintendent and deputy repair officer for the Trident Repair Facility at Bangor, Washington for two years. He returned to Mississippi in 1990 to work as production manager for

Avondale Industries in Gulfport, and in 1993 joined John J. McMullen Associates at Halter Marine.

"Having been involved with the AGOR project for NAVSEA has made the transition to on-site construction

rep for WHOI fairly easy," Thompson said of his new position. "I work closely with the other on-site construction representatives from Scripps and NOAA, although WHOI's ship is somewhat different from the AGOR-24 (*Roger Revelle*) to be operated by Scripps.

"I am enjoying this opportunity and am learning a lot about Woods Hole Oceanographic Institution and what goes on here," he said during a recent visit to WHOI.

Photo by Jerry Cotter



John Thompson

Fish Stocks Topic of Day of Science

More than 200 attended the annual Associates Day of Science September 15 at Clark Laboratory. The theme for the afternoon program was "Where have all the fish gone?"

Associate Scientist Andy Solow, director of the Marine Policy Center, discussed the type of information that is needed to manage the recovery of the depleted stocks on Georges Bank. Senior Scientist Peter Wiebe of the Biology Department provided an overview of the U.S. GLOBEC (Global Ocean Ecosystems) Georges Bank Program. He also discussed the program's objectives, highlighting some of the research efforts to date.

David Mountain, deputy division chief of the National Marine Fisheries Service in Woods Hole, explained how physical processes on Georges Bank influence the survival of early life stages of fish, particularly commercially valuable cod and haddock.

Assistant Scientist Scott Gallager of the Biology Department focused on cod larvae and their prey, and the ways behavioral information is obtained and used to study how plankton populations and communities function. He showed video footage taken at sea on some of the 25 GLOBEC/Georges Bank cruises this year, including video from the Video Plankton Recorder (VPR), an underwater microscope he developed with department colleague Cabell Davis.

A reception and poster sessions followed under a tent on the Fenno House lawn. The event is organized by the Associates Program, headed by Lesley Reilly.



Hello. Are You There? George Tupper of the Physical Oceanography Department (right) listens intently as Jeff Stolp of R/V Oceanus watches the instruments in the ship's main lab during a mooring cruise earlier this year in the South Atlantic off Brazil.

Exhibit Center Open For Holiday Season

The Institution's Exhibit Center and Gift Shop hours for November and December are Fridays and Saturdays 10 a.m. to 4:30 p.m. and Sundays noon to 4:30 p.m. (except December 24 and 31). Holiday week hours December 19-23 and December 26-30 will be 10 a.m. to 4:30 p.m. The Exhibit Center will be closed in January and February 1996. WHOI employees, Associates and Volunteers are entitled to a 15 percent discount on most of the items carried in the Gift Shop that are not available at the stockrooms. A number of new gift items have been added this year.

WHOI Cookbook Available

Another holiday gift idea is the WHOI Cookbook, *Sailors' Delight*, which was printed earlier this year. The hardcover cookbook was prepared by the Employee Capital Campaign Committee's Cookbook Committee and includes more than 270 recipes. It is available to staff and students for \$8.00 plus tax at the Stockroom. Copies will also be available to other individuals at the Exhibit Center for \$10 plus tax (plus \$2.00 shipping and handling).

Proceeds from the sale of the cookbooks are donated on behalf of Institution staff to the Capital Campaign.

Ship Notes

ATLANTIS II/ALVIN

R/V *Atlantis II* and DSV *Alvin* arrived in San Diego in early October, completing a series of dives off the coasts of Washington and Oregon during the summer months. Following at-sea engineering tests of *Alvin* light, camera and control systems October 17 and 18, the ship and sub departed San Diego October 20 for Manzanillo, Mexico, where they arrived October 24. After two days in port they departed on Leg XVII to study the dynamics of basaltic eruptions in the deep sea. Nine *Alvin* dives are planned to observe eruption sites and to collect geological samples in the vicinity of 12°44' N, 102°35' W. Night-time activities will include camera tow surveys and rock dredge stations. *Atlantis II* and *Alvin* are due back in Manzanillo November 7.

The vessels are scheduled to depart November 11 to continue a long-term program investigating the temporal changes in the biological community structure, water chemistry and associated geological features at newly-formed hydrothermal vents on the crest of the East Pacific Rise near 10° N. Nineteen *Alvin* dives will be made to collect biological, water and rock samples. Night activities will include camera tow surveys, rock dredging and CTD/rosette stations. *Atlantis II* and *Alvin* are due at Manzanillo December 3.

KNORR

R/V *Knorr* arrived in Singapore October 15, completing Leg XI of extended Voyage #145 which had departed Muscat, Oman, August 29. The ship departed Singapore November 1 for Daupier, Australia, to embark the next science party. While enroute extensive tests and engineering evaluation of the newly-installed Sea Beam system will be conducted before arrival in Daupier November 10. *Knorr* will return to Singapore November 26-30 before heading west to conduct a high resolution hydrographic transect across the Indian Ocean toward Africa. *Knorr* is due to arrive in Mombasa, Kenya, in late January 1996.

OCEANUS

R/V *Oceanus* remains at the WHOI dock for repairs and maintenance through the end of the year. The vessel's engines are being overhauled by the crew and the stern A-frame is being enlarged.

Telephone Tip

Employees are reminded to give out their direct inward dial telephone number (289 plus the four-digit extension) to callers in an effort to reduce the number of operator-assisted calls.