

## NEWSLETTER

Woods Hole  
Oceanographic Institution

March 1989

## ATLANTIS II Departs for GOFS Pilot Study

The pilot study for the GOFS (Global Ocean Flux Study) Program began this month when ATLANTIS II left Woods Hole on a cruise to study the spring phytoplankton blooms of the northeast Atlantic. The bloom studies, which will run through July, are only the first stage of WHOI involvement in the GOFS Program, which will continue over the next ten years and involve participation from at least ten nations: the U.S., Canada, Great Britain, West Germany, Holland, France, China, Japan, the U.S.S.R. and the Scandinavian countries.

The purpose of GOFS, which is being funded primarily by the National Science Foundation, is to attempt to understand how ocean life interacts with seawater chemistry on a global scale. The objective of the pilot study is to study aspects of the carbon and geochemical cycles related to the evolution of the spring phytoplankton bloom and its northward passage along 20°W. It is hoped that these studies will lay the operational basis for the ten-year study of biogeochemical fluxes, as well as test and develop procedures for international data management, archiving and exchange. The scientists also hope to develop and test techniques for measuring essential biogeochemical properties not presently observable using routine methods.

Scientists from five countries (the U.S., W. Germany, Canada, Holland and Great Britain) will participate in the pilot study. Principal Investigators from WHOI include Michael Bacon, Hugh Livingston and Ken Buesseler (working with radionuclide tracers); Peter Brewer (studying CO<sub>2</sub>); Sus Honjo (deploying moored sediment traps); Dan Repeta (studying ocean pigments); and Diane Stoecker (studying microzooplankton). Hopefully, research undertaken by these and other scientists will provide more information on the role of the oceans in the global carbon cycle and, consequently, global warming.

Part of this effort will involve the NASA P-3 flight program. The P-3 is an airplane that will fly low over the 20°W longitude during the cruises to acquire



data on the Atlantic's surface color and temperature and provide high-resolution spatial coverage. Flying out of Shannon, Ireland, and Reykjavik, Iceland, the P-3 will assist in the cruises through May. Its measurements of plankton blooms will be correlated with those taken by shipboard scientists taking part in the pilot study. These readings will provide the basis for comparing data from future airborne sources.

This pilot cruise will be the A-II's first without ALVIN in years. The ship has been modified to accommodate this phase of GOFS—the extendable part of the A-II's A-frame has been removed, sinks and fume hoods have been added, some lab spaces have been reconfigured, and berthing normally allocated to ALVIN personnel will be used by scientists taking part in GOFS. □

## KNORR Refit Update

R/V KNORR arrived at McDermott Shipyards in Amelia, LA, on February 15. Since that time, the four crew members who remained with the ship have worked with shipyard employees to give the vessel a thorough housecleaning. Most items aboard ship, including bedding, galley equipment and electronics, have been removed. All tanks and closed spaces have been opened and cleaned, and a safety certificate has been issued to permit cutting and burning in all areas.

An asbestos survey has been completed to determine the amount of the substance on the vessel. The next step will be to remove the asbestos in an approved and safe manner. During this phase of the operation, no other work will be underway on KNORR.

A preliminary stability test was also undertaken to give a base measurement against which to determine stability of the vessel after lengthening. Shipyard personnel are also completing engineering and design work, scheduling, accounting set-ups and other tasks. □

## OCEANUS Cruises Tropics

On February 25, OCEANUS departed Las Palmas, Canary Islands, for Leg VI of Voyage #205. The purpose of this leg is to determine large-scale circulation patterns in the tropical Atlantic by combining a variety of data types. Plans include making a trans-Atlantic section of CTD/hydrographic stations with Acoustic Doppler Current Profiles. The vessel is scheduled to dock in Bridgetown, Barbados, on March 25. □



Above, former WHOI Director John Steele is presented with an aerial photo of Woods Hole by new Director Craig Dorman at the Changing of the Guard ceremony on February 24. At right, John admires a ship's clock he was also given at the event as his wife, Evelyn, looks on. (Photos by Rob Brown.)



Above, Karen Rauss addresses a workshop for educators and youth leaders on February 17 at the NMFS Aquarium. The workshop, sponsored by the Network for Science Education of Southeastern Massachusetts, focused on ways to draw women into the sciences. It was partly coordinated by Lee Anne Campbell (center) of WHOI and attracted approximately 30 participants. (Photo by Rob Brown.)



This year's Woods Hole Harambee, held at MBL's Swope Center, was a happy occasion for all. The final festivity of the village's Black History Month, the Harambee featured music by the Phil Barboza Cape Verdean Band, dancing, good food and a book table provided by Savanna Books of Cambridge. (Photos by Rob Brown.)

## WHOI VAXes Joined to DEC Software Programs

WHOI has been approved for a program devised by Digital Equipment Corporation (DEC) called the Campuswide Software License Grant Program (CSLG). This program grants WHOI the licenses for Digital's non-royalty VAX software (currently 160 products) at no charge. The list includes the VMS operating system, and VMS and ULTRIX layered products. The ULTRIX operating system and DECShell also are granted to VAXes that have the AT&T Software Agreement.

The CSLG plan works in conjunction with, and is a prerequisite for, another program called the Education Software Library (ESL). We currently belong to this library through MIT (although we will be autonomous shortly). The ESL provides system managers with the cost-effective means of handling software maintenance and support. For a yearly fee, the ESL gives you the media for around 50 products, including updates. The fee to VAX system managers is

less than the cost for DEC software maintenance.

IPCL will manage both plans. VAX system managers will be asked to fill out a form with information about their systems and to sign compliance forms for copyright policies and adherence to the CSLG conditions. IPCL will maintain that information as well as the information that DEC provides about the plans.

If you want more information, call Chris Lynch, x2417, or send e-mail to CLYNCH. □

## Profile

### Sallye Davis, Able-bodied Seaman

Sallye Davis grew up in Texas, but her love of the ocean has brought her a long way from the Lone Star State.

Since 1984 Sallye has been a crew member of the vessel ATLANTIS II. One of four women who serve aboard the ship, she has worked herself up the ranks from Temporary Mess Attendant to Ordinary Seaman to her present position as Able-bodied Seaman. Presently she is studying for a Third Mate's license and doesn't rule out perhaps becoming a Master someday.

Sallye's background is a little different from that of most merchant marine. She holds B.A. and M.S. degrees in Zoology from the University of Hawaii and has had extensive scientific research experience. Prior to coming to WHOI, she studied mid-water fish in the Pacific, worked as a histologist in a neurophysiology lab at Princeton University, and, later, as a member of Princeton's Geology Department, she conducted radon analyses of seawater



Sallye Davis at work aboard the ATLANTIS II. (Photo by Anne Rabushka.)

as part of the Transient Tracers in the Ocean Project (TTO).

This last position brought her in contact with WHOI. In 1983 she spent seven weeks on the KNORR doing studies for the tropical Atlantic portion of TTO.

"At some point, I realized that what I liked most about oceanography was going to sea," Sallye says. "It seemed like the crew had more job security, more chances for advancement, and even more fun. Also, from a science point of view, working aboard the ship gives you a broader view of what's going on in science overall—when I

worked in a lab, it was easy to get completely absorbed in just one project."

Besides enjoying the science conducted aboard ship, Sallye also enjoys her crew mates and appreciates the fact that most of them have an active interest in the science being conducted. She, like the other crew members, spends an average of 9 months at sea each year, usually staying aboard ship for 4-5 months, then taking about 6 weeks off.

Of all her cruises aboard the A-II, Sallye found those to the Orient last year to be among the most interesting. In the course of her travels, she has also enjoyed working with ALVIN and its crew. "I'd kill for an ALVIN ride," she notes. "With ALVIN you're not just bringing up sample bottles. It's immediate gratification." One of Sallye's responsibilities is to swim out to ALVIN after it surfaces to help with recovery, although she "hates being damp and cold." Consequently, she is looking forward to getting the submarine back on board and taking it down to the waters off Bermuda for sea trials! □

### Determining the Need for Child Care

By now every employee should have received a green questionnaire asking for their views on child care in this area. The purpose of the questionnaire is to get a better sense of child care problems and how the Institution may be able to help alleviate this situation for WHOI families. The questionnaires should be returned to Vicky Cullen, chairman of the ad hoc committee established to address these issues, by April 1. Any comments or questions in this regard may be addressed to one of the following committee members: Julie Allen, Mary Berry, Vicky Cullen, Judy Fenwick, Steve Manganini, Laura Murphy, Edward Peltzer, Ray Schmidt and Deborah Shafer.

## Update on Color Copy Services

Canon color copies are available through MIT Graphic Services at a base rate of \$1.50 for an 8 1/2 x 11 copy. For large orders, the cost drops to \$1.00 per copy. WHOI Graphic Services maintains a purchase order for this service, but orders must be entered through WHOI Graphics to use it. The copier is located in MIT Building 11, Room 004, entrance at 60 Vassar Street. Cash is accepted for in-person orders. Copy work that goes to MIT from WHOI Graphics by shuttle is usually returned on the following shuttle run (that is, an order that goes out on Monday morning will return Wednesday afternoon).

Locally, there is a Canon color copier at New England Reprographics & Supply on Route 28, Marstons Mills, where an 8 1/2 x 11 costs \$3.50. There is a Sharp color copier (copies are generally not as high quality as from the Canon) at In & Out Photo, 383 Main St., E. Falmouth, where an 8 1/2 x 11 costs \$2.00.

For further information, call Vicky Cullen, x2719. □

The Institution announces with great sorrow the passing of a long-time friend and former employee, Dr. Egon Theodor Degens. Dr. Degens was 60 years old when he succumbed to cancer February 19.

Following his education in Germany and at Penn State, Dr. Degens became an Assistant Professor at the California Institute of Technology. He joined WHOI in 1964 and was promoted to Senior Scientist the following year.

## Ellen Druffel Receives Tenure

Ellen Druffel, Associate Scientist in the Chemistry Department since 1985, was recently awarded tenure.

Ellen holds a B.S. in Chemistry from Loyola-Marymount University, and M.S. and Ph.D. degrees in chemistry from the University of California at San Diego. She came to Woods Hole as an Assistant Scientist in 1981. Her research interests include upper ocean circulation using the bomb/radiocarbon transient, the carbon dioxide cycle, sediment geochemistry and solar variability. Her special interests include the influence of changes in climate on upper ocean circulation and the reconstruction of transient tracer time histories using deep-sea corals. She is the author or co-author of 35 scientific publications.



Ellen has received several awards during her career, most recently an NSF Visiting Professorship for Women Award, which allowed her to study trace metal distribution in corals as indicators of past climate (i.e., El Niño) at the University of California at Santa Cruz last year.

## In Memoriam: Dr. Egon Theodor Degens

Degens' years at Woods Hole were fruitful. Together with Dave Ross, he organized the first modern oceanographic cruise into the Black Sea in 1969 aboard ATLANTIS II. This cruise and subsequent published papers rekindled interest in the anaerobic basins of the world. Later, again with Dave Ross, he led an expedition to study the "A-II Hole" in the Red Sea, where the first hydrothermal ore deposits on the sea floor were discovered.

In 1973, Dr. Degens returned to Germany to head the University of Hamburg's Geology Department. He initiated major research efforts and brought new methods to ocean scientists of less advanced countries.

Dr. Degens' last cruise was to the Black Sea aboard the KNORR last year. His life-long study of the earth consummated in his book *Perspectives on Biogeochemistry*, which was published just before his death. □

## Awards

### Brewer Selected AGU Fellow

Senior Scientist Peter Brewer of the Chemistry Department was recently elected a Fellow of the American Geophysical Union, a recognition given to scientists who possess an "acknowledged imminence in a branch of geophysics." Peter's wife, Hilary, will accompany him to the award ceremony, which will be held at this May's AGU meeting in Baltimore.

Peter has served as Associate Editor of AGU's *Geophysical Research Letters* journal and as Secretary of its Oceanography Section. He is also Chairman of the GOFS steering committee for the U.S., as well as Vice Chairman of the international JGOFS (Joint GOFS) committee.

### John Hunt Honored

Scientist Emeritus John Hunt of the Chemistry Department was recently honored by the *Journal of Organic Geochemistry* on the occasion of his 70th birthday. Volume 12, number 6 of the publication, which is the official journal of the European Association of Organic Geochemists, contains a collection of birthday greetings and tributes to John from around the world.

In these tributes, John is referred to as the "Pied Piper" of organic geochemistry and one of the "early pioneers" shaping this interdisciplinary field. An associate from China comments that

"no one else has done better than [John] in melding and integrating geochemistry into proper balance with the contributions of geology, geophysics and other branches of geoscience."

### Schevill Receives Whaling Museum Award

The Kendall Whaling Museum in Sharon, MA, recently honored Scientist Emeritus Bill Schevill with its highest award "for pioneering cetacean research and for inspiring and guiding scientists and humanists in their search for knowledge about the whales." Museum Director Stuart Frank commented that the museum had never held a sympo-

sium where someone trained by Bill had not been a speaker.

### Davis Receives Lindeman Award

Cabell Davis of the Biology Department recently received the Lindeman Award from the American Society of Limnology and Oceanography. The award is presented annually for the outstanding paper published by a young scientist in any journal. Cabell's winning paper was entitled "Components of the Zooplankton Production Cycle in the Temperate Ocean," and it appeared in 1987 in Volume 45, Number 4 of the *Journal of Marine Research*.

### Blough, Davis Become Associate Scientists

Neil Blough of the Chemistry Department and Cabell Davis of Biology were both recently promoted to Associate Scientist status in their departments.

Cabell Davis came to the Institution in 1982 as a Postdoctoral Investigator, after earning his Ph.D. in Biology from Boston University; he had earned a B.S. from the University of Tampa in 1975. He became Visiting Scientist in 1984 and Assistant Scientist in 1985. The author or co-author of 8 scientific publications, Cabell's research interests include zooplankton ecology, fisheries ecology, biological/

physical modeling, and laboratory culture and field sampling of zooplankton.

Neil Blough graduated from the University of Pittsburgh with a B.S. in Chemistry in 1977, and from Northwestern with a Ph.D. in Biophysical Chemistry in 1983. After a stint as Postdoctoral Fellow at the University of California, Berkeley, he came to this Institution as an Assistant Scientist in 1985. Neil's research interests include photochemistry and redox and radical reactions in seawater. He is author or co-author of 14 scientific publications. □

## Personnel Changes

**Janice Baker** (Facilities) from Switchboard Receptionist to Senior Switchboard Operator.

**Mary Berry** (Education) from Staff Assistant II to Staff Assistant III.

**Neil Blough** (Chemistry) from Assistant Scientist to Associate Scientist.

**John Bracebridge** (Facilities) from Carpenter to Senior Carpenter.

**Richard Carter** (Facilities) from Senior Machinist to Experimental Machinist.

**Cabell Davis** (Biology) from Assistant Scientist to Associate Scientist.

**Brian Dister** (Chemistry) from Research Assistant II-Chemistry to Research Assistant III-Chemistry.

**Ellen Druffel** (Chemistry) from Associate Scientist without tenure to Associate Scientist with tenure.

**Anne Edwards** (Chemistry) from Staff Assistant II to Staff Assistant III.

**Kathryn Elder** (G&G) from Research Assistant I-Geology to Research Assistant II-Geology.

**Pamela Foster** (G&G) from Staff Assistant II to Staff Assistant III.

**Alan Gagnon** (G&G) from Research Assistant II-Geology to Research Assistant III-Geology.

**Lisa Goveia** (OE) from Research Assistant I-Computer Operations to Research Assistant II-Computer Operations.

**Faith Hampshire** (G&G) from Staff Assistant II to Staff Assistant III.

**Abbie Jackson** (Education) from Staff Assistant II to Staff Assistant III.

**Richard Krishfield** (G&G) from Research Assistant II-Electronics to Research Assistant III-Electronics.

## New Faces



**Edmund Brown**  
Electrician  
Facilities  
Iselin 142, x2483  
Dufur



**Barbara Hatzmann**  
Staff Assistant III  
Marine Operations  
38 Water St., x2293  
Grice



**Albert Hermann**  
Postdoctoral Investigator  
Physical Oceanography  
Clark 215A, x2780  
Owens



**Alan Hinton**  
Ocean Engineer  
Ocean Engineering  
Bigelow 305, x2427  
Prada



**Mark St. Pierre**  
Senior Machinist  
Facilities  
Iselin 233, x2245  
LeBlanc



**Carl Owen Wood**  
Cook  
Marine  
ATLANTIS II, x2208  
Bowen

**Andrew Maffei** (OE) from Research Associate to Research Specialist.

**Marguerite McElroy** (OE) from Research Assistant II-Data Processing to Research Assistant III-Data Processing.

**Laurel Moore** (OE) from Staff Assistant II to Staff Assistant III.

**Arthur Peterson** (Facilities) from Carpenter to Senior Carpenter.

**Robert Schneider** (G&G) from Visiting Investigator to Senior Research Specialist.

**Robert Tavares** (PO) from Research Assistant II-Electronics to Research Assistant III-Electronics. □

## Announcements

### Volunteers Needed for JASON Project

Volunteers are being sought for JASON Project activities that will be conducted May 1 through 14 at the Institution. Volunteers will work different shifts in Redfield Auditorium or the Exhibit Center between 10:00 am and 9:00 pm. An orientation session for volunteers will be held on April 10 at 10:00 am in Redfield. Anyone interested in volunteering to help in the event should contact Mary Jo Wheatley, x3338.

### Photographs Wanted for WHOI Annual Report

Photos of WHOI activities ashore and afloat are needed for the 1988 Annual Report now in preparation. Please contact Vicky Cullen, Blake 2, x2719, if you have photos to submit. Color and black and white pictures are welcome.

### Annual Women's Dinner

This year's Women's Dinner will be held on March 22 beginning at 7:00 p.m. in Fenn House. Social hour begins at 5:30. Reservations for the dinner were due by March 15. However, no reservations are necessary for the social hour, and all WHOI women are invited to attend.

### Chiropractic Society Presentation

Employees and their spouses are invited to attend an informal presentation by Michael Gottfried of the Massachusetts Chiropractic Society at Redfield Auditorium at noon on March 29. Chiropractic services have been covered by Blue Cross/Blue Shield since January 1.

### Joint Program Offices at MIT Relocate

The MIT/WHOI Joint Program office on the MIT campus has moved into new quarters. The office is now housed in Building 54, Room 911 (MIT 54-911). The phone numbers and cast of characters remain the same.

### New Arrivals

Talia Liane Singer-Clark was born to Robin Singer, Ocean Engineer in WHOI's OE Department, and her husband Tor Clark on January 24. Talia weighed 8lb 9oz when she was born at Jordan Hospital.

WHOI Library Technician Elisabeth Lake and her husband Brian welcomed their first child, Monika Nicole, on February 4. The baby weighed 6lb 10oz when she was born at Jordan Hospital.

### Diving Course Offered at WHOI

Applications are now being accepted for the next Institution scuba diving course, which is tentatively scheduled to begin in April. If you need to learn diving techniques to pursue your research, call Diving Officer Terry Rioux, x2239, for information. The deadline for applications for the course is March 31, but anyone interested should apply before then because the class is expected to fill up. Sorry, this course is not for those interested in learning to dive for recreation.

### CPR and First Aid Schedule for March and April

During March, CPR Course "C" will be offered on the 7th, 9th and 14th from 6:30 to 10:00 pm. Diver's First Aid will be offered on Wednesday the 8th from 1:00 to 5:00 pm.

During April, Standard First Aid will be offered on the 4th, 6th, 11th, 13th, and 18th from 6:30 to 10:00 pm. A CPR refresher course, the last one until July, will be offered on the 4th from 1:00 to 4:00 pm.

All classes will be held in the Redfield Auditorium. Please contact the Safety Office, x2242, if you plan to attend.

---