
NEWSLETTER

WOODS HOLE
OCEANOGRAPHIC INSTITUTION



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Frozen continent offers biologists fertile ground

Assistant Scientist Brian Howes returned to WHOI from Antarctica in January with the first recorded data of how an ice-covered polar lake functions in winter. The data may help answer questions about global climate change and nutrient cycles in coastal systems.

Brian and his colleagues deployed equipment in Lake Fryxell a year ago to take water samples and measure changes in the lake's level, temperature and chemistry during the Antarctic winter.

Winter measurements had not been collected before because the extreme cold limits on-site studies. Temperatures dip as low as -40 degrees Fahrenheit during the winter months, from April to August. Lakes in this region, known as the McMurdo Dry Valleys, are some of the last ecosystems on earth that remain to be studied.

In the summer, photosynthesis influences the lake's oxygen and carbon dioxide levels, and is the sole source of organic matter in the water. But no one knows how the lake functions in winter, whether the oxygen is depleted in the water, or even how the small organisms living there survive. Brian and his colleagues are just now beginning to analyze their data.

The research team is also looking at the lake as a potential climate change indicator.

Water enters Lake Fryxell almost

Photo courtesy Brian Howes



Brian Howes, Dale Goehring, and their colleagues camped for 10 weeks in the Dry Valleys — part of the two percent of the Antarctic that is not permanently ice covered — to study the pristine ecosystem of Lake Fryxell.

exclusively from melting glaciers during the short Antarctic summer. The Dry Valley region is a desert and sees less than two inches of precipitation a year. Water loss from the lake occurs through evaporation of its ice cover. The lake's level has remained constant for 10,000 years, and some scientists believe subtle changes in climate would upset the melting-evaporation balance that keeps it constant.

The remote sampling equipment used to gather information on the lake was developed at WHOI specifi-

cally for this project, and most was being tried for the first time. Scientists from four departments helped construct it: Brian, Dale Goehring and Craig Taylor of Biology, Sandy Williams and Ken Doherty of AOP&E, Paul Fucile of Physical Oceanography, and Wayne Spencer of G&G.

The samplers are strings of devices that collect water at six to ten depths. Each was programmed to take samples three times during the winter to record changes at various lake levels. In more active systems,

Please turn to page 2

Kathleen Lilly sees personality in handwriting

Kathleen Lilly, a staff assistant in Marine Operations, recently received a degree in graphoanalysis, enabling her to analyze writing samples for personnel selection, vocational analysis and compatibility.

Kathleen earned her degree from the International School of Graphoanalysis in Chicago, the only school in the country to offer a comprehensive program that uses handwriting analysis to determine the personality of the writer.

"Your handwriting changes as you change," Kathleen says. "Repression and resentment can be seen in your handwriting. You can also see the maturing process in a person's handwriting." Kathleen says she has heard people brag that their handwriting hasn't changed since their teenage years. While that claim may sometimes be true, it is a sign of arrested development rather than lasting youth, she says.

Photo by Ellen Prihodko



Kathleen Lilly

Later this year, Kathleen plans to begin working with Ronald Rice, a licensed private investigator and graphoanalyst who specializes in

forgery and blackmail cases. In her work with Rice, Kathleen will specialize in personality traits and compatibility revealed through handwriting.

Kathleen became interested in graphoanalysis 22 years ago, when she was trying to narrow down a pool of candidates for a job opening in her former company. At the time, resumes were almost all handwritten, and when faced with the task of selecting 10 interviewees from 80 applicants, she couldn't help but wonder whether their handwriting could provide a key to their personalities.

"When you see 80 handwriting samples, the difference becomes obvious," Kathleen says. "It was like looking at 80 fingerprints."

A book she consulted predicted that one of the candidates would be eccentric. After that prediction proved true, Kathleen began to study graphoanalysis more seriously.

Antarctic research

Continued from page 1

samples would have to be taken much more frequently to record rapid changes, Brian says. But the Dry Valley lakes show some of the least surface water movement of any systems in the world.

Dale, Craig and Boston University student Dave Schlezinger accompanied Brian to Antarctica this year. When they arrived in mid-October, the team was not sure whether the instruments had survived the Arctic winter.

"We were concerned that unpredicted thickening of the ice sheet would incapacitate the instruments," Brian says. "We were also concerned about whether we'd be able to get the equipment out safely

from under 15 feet of ice."

The retrieval was a success, and the data, while not as complete as they had hoped, was extensive.

Before leaving Lake Fryxell, the research team retooled the equipment and redeployed it for another year. They also deployed new, updated sampling equipment developed at WHOI. They stayed three weeks longer than they originally intended — from mid-October to January 25 — almost the entire summer season.

"We're waiting to see what the second year brings," Brian says. "So little is known about what goes on in the winter that we cannot predict what the results will be."

Patriot's Day to remain a holiday

By popular vote, the Institution will continue to observe Patriot's Day as an official holiday rather than exchange it for the Friday after Thanksgiving.

The Benefits Advisory Committee reports that 60 percent of WHOI employees (511 out of 850) returned their Holiday Swap surveys. Of the responses, over 43 percent supported "no change," while 17 percent said it "didn't matter." With under 40 percent making up the "in favor" group, the BAC agreed to maintain the status quo.

Marine Policy hosts discussions on diversity

Scientists, social scientists, and policy makers came together in Woods Hole last month to discuss preserving marine biological diversity, or the variety of life in the ocean.

The Marine Biological Diversity Working Group, hosted by the WHOI Marine Policy Center, focused on bridging different ideas on biological diversity and on using scientific information to make public policy decisions on conservation efforts.

"Diversity among elements, in terms of the different functions they perform, helps to maintain systems," says Marine Policy Center Fellow Mark Eisworth. "The basic difference between species preservation and biological diversity is the recognition that diversity itself is important."

The multidisciplinary group was established in response to a growing awareness that human activities may threaten the variety of life in marine environments, Mark says. Although such threats have been studied by scientists, the general public and policy makers have not

paid as much attention to threats to the marine environment as they have to environmental threats on land.

Coastal areas are most affected by threats, such as pollution and agricultural development. However, some human activities, such as harvesting, also affect the deep sea.

The first day of the workshop focused on scientific questions, such as how species differ from one another, why there might be different levels of biological diversity in different areas of the ocean, and how conservation areas could be set up in certain areas, such as tropical coasts.

The second day focused on economic and policy issues, including how to establish conservation priorities and how to structure efforts to preserve biological diversity.

"The necessity for setting priorities is becoming more widely appreciated by scientists and public policy makers," says James Broadus, director of the Marine Policy Center. "A better understanding of how to set

those priorities is itself an urgent conservation priority. It's not obvious what choices to make if you're trying to conserve diversity. In a sense, you're forced to compare apples and oranges. You're forced to compare copepods and whales."

One of the goals of the workshop was to foster discussions between scientists and policy makers on how these types of decisions can be made, taking into account both scientific research and economic policy considerations.

"One thing that's tough to do is to get scientists and social scientists together and have an exchange," Mark says. "It seemed to work this time."

The Marine Biological Diversity Working Group, funded by the Pew Charitable Trusts, consists of over 50 professionals from scientific and policymaking organizations from across the United States. The February workshop was the group's second meeting. They first met in August 1989 in Woods Hole.

Oceans Alive series underway

The annual Oceans Alive series, sponsored by the WHOI Sea Grant program, is underway.

The six-week series began March 12 and offers talks on current scientific topics aimed at the general public.

The next speaker will be John Farrington, who will present a talk on the Fate and Effect of Oil in the Ocean March 26. Other WHOI speakers will include Rocky Geyer on April 9 and Phil Lobel on April 16.

All talks are held in Redfield Auditorium and begin at 7:30 p.m.



Photo by Sonya Hagopian

Research Specialist Paul Boutin (center) of AOP&E's Tomography Group hosted researchers from Scripps earlier this month as they prepared to go to sea on RV OCEANUS. They will be conducting research for AMODE (Acoustic Mid-Ocean Dynamics Experiment), a tomography experiment being conducted jointly with the University of Washington's Applied Physics Lab.

Ship notes

ATLANTIS II

ATLANTIS II departed Guaymas, Mexico, March 15 on Leg XXIII of Voyage #125.

This leg will carry the vessel to Acapulco.

The primary purpose of the cruise is to study productivity at hydrothermal vent systems in the Sea of Cortez. Four dives by DSV ALVIN will be made to collect samples.

A secondary purpose of the cruise is to study clams and tubeworms collected from a hydrocarbon seep environment. One dive by ALVIN will be made to collect samples for this purpose.

The All is due to arrive at Acapulco March 24.

OCEANUS

OCEANUS departed Woods Hole March 2 on Leg I of Voyage #237.

An intermediate port call at San Juan, Puerto Rico was made March 10 to load additional scientific equipment. The vessel will return to Woods Hole upon completion of the voyage.

The purpose of the cruise is to deploy an acoustic transceiver array south of Bermuda to initiate the 1991 Acoustic Mid-Ocean Dynamics Experiment (AMODE).

KNORR

The KNORR is expected to be delivered to Woods Hole by July 1, following completion of its upgrade and shipyard work.

The vessel will undergo shake-down and outfitting in Woods Hole through July.

Photo by Ellen Pridhodko



Employees in the Village spent much of the last three weeks hearing (and feeling) the first of 120 pilings being driven into the ground at Eel Pond. The Marine Biological Laboratory is beginning construction of a new Marine Resources Center. Over the next several weeks, workers will begin rebuilding the sea wall at the site. Construction of the three-and-a-half-story building is expected to be completed next February.

New directory offers facts on WHOI

The Oceanographic has recently published a directory to provide a general description of the Institution and the services available here.

The 136-page document includes pictures and abbreviated curricula of the entire scientific staff and part of the technical staff as well as an alphabetical listing of staff scientific interests. Thirty-four descriptive entries under the title "Scientific and Technical Centers of Expertise" range from "Acoustic Tomography Group" to "Versatec Color Plotter." There are also sections on WHOI ships, departments, centers, education programs, support services, and other groups and

facilities.

The Directory is intended to disseminate information outside the Institution and is being distributed internally to departmental and managers' offices and libraries. Personal copies are available in the Stockroom for \$6.50, which covers the cost of printing.

As this is the first attempt at such a publication, comments, corrections, and suggestions for future additions would be welcomed by Director of Communications Sallie Riggs, ext. 3341 (Coop), and Publications Manager Vicky Cullen, ext. 2719 (Blake).

Stockroom recall

There have been some minor problems with Mecca Connector #2006, supplied by the Stockroom.

Anyone who has purchased this part from the Stockroom in the last

six months should call Paul Boutin at ext. 2212 for advice. The part has been causing problems in certain applications.

Technical staff reorganization takes effect

A need for career ladders and position descriptions that address the major functional areas in scientific operations at the Institution led to the recently completed reorganization of the Technical Staff and Departmental Research Assistant structure. The new classification system took effect January 1 and affects more than 300 members of the Institution's approximately 850 employees.

"This reorganization was an enormous undertaking," Associate Director for Research Bob Gagosian notes. "We are all quite pleased with the outcome of a very complex process. There was truly full institution participation in this effort."

The initial discussions of the Technical Staff classification system began in 1987 under the aegis of former Director John H. Steele, and gained momentum as a consequence of the responses to the Model I, II and III Institution reorganization proposals initiated under the leadership of Craig E. Dorman in early 1989. Career paths with defined promotion criteria and procedures were non-existent for some of the Technical Staff positions and the then Departmental Research Assistant structure had not been closely evaluated in over 15 years.

In August 1989, Craig Dorman reconstituted the Technical Staff Task Force Committee with the specific charge of "designing position ladders that address the three functional areas in the scientific departments...scientific research, computer-driven operations and engineering activities." Members of the Task Force, representing the various groups within the Institution affected by this effort, included Judy Fenwick, Bob Gagosian (chair), Ruth Gorski, Bob Groman, Dale Leavitt, Geoff Thompson, Keith von der Heydt, Jean Whelan and Barbara Wickenden.

While the creation of the position descriptions and career ladders was the major assignment for the Task Force, its most useful activity centered on efforts to communicate its work throughout the Institution and bring back to its deliberations input from Institution colleagues. Open meetings, departmental meetings and informal exchanges all provided feedback and information to synthesize into the development of the final position descriptions, levels and career ladders.

Departmental Executive Assistants also played an important role in this process; their support of the proposed descriptions and ladders was critical to insure effective implementation. The Task Force results produced a classification system that was divided into three distinct career paths: Scientific Research, which closely paralleled the existing system, and Engineering and Information Systems, representing entirely new ladders. All three ladders provided for an additional senior level position at the top of the Departmental Assistant Graded structure, (e.g., Senior Research Assistant II) in recognition of the need for more enhanced position responsibilities at this level.

The Task Force made its formal recommendations to the Department

Chairmen and the Director on March 1, 1990. With that endorsement, the Graded Staff position descriptions were then approved by the Institution's Classification Review Board. The full set of recommendations was presented to the Executive Committee of the Board of Trustees in the spring; their approval was unanimous.

At this stage, a two-page position questionnaire was sent to all employees potentially affected by these new classifications. Using the new position descriptions as guidelines, employees were asked to indicate which of the new ladders appeared most descriptive of their overall short and long-term responsibilities. These questionnaires were then reviewed by department committees as well as the Engineering Council and the Information Systems Council, as appropriate.

Individual department recommendations were sent to the Personnel Office for compilation into the three career paths from an Institution-wide perspective, with no specific department designation. That master list was discussed by the Appointments and Promotions Council in mid-December 1990 and final approval sent forward to Bob Gagosian.

Distribution of technical and graded positions

Distribution between Technical and Graded Staff positions within each career ladder:

	Technical	Graded	TOTALS	%
Science/research	86	90	176	(58%)
Engineering	46	44	90	(30%)
Information Systems	16	21	37	(12%)

NEW FACES



Raymond Ainsworth
Info Systems Assoc. II
AOP&E
Clark 148
Ext. 2972
R. Groman



John Bailey
Engineering Asst. II
G&G
Bigelow 308
Ext. 2209
J. Hallinan/F. Wooding



Tracey Crago
Staff Asst. III
G&G
Clark 259
Ext. 2665
D. Ross



Timothy Duda
Assistant Scientist
AOP&E
Smith 307A
Ext. 2495
A. Williams 3rd



Edward Fallon
Research Asst. III
G&G
McLean 252B
Ext. 3307
A. McNichol



Garrett Ito
J.P. Student
Education/G&G
Clark 118
Ext. 4422
E. Uchupi



Steven Lerner
Research Engineer
AOP&E
Blake 109L
Ext. 2606
K. Stewart



Michael Purcell
Research Engineer
AOP&E
Bigelow G14
Ext. 3300
C. VonAlt



Mindy Roberts
J.P. Student
Education/AOP&E
MIT 48-320
Ext. 1691
O. Madsen



Ellen Roosen
Research Asst. II
G&G
McLean 207
Ext. 2958
L. Keigwin



Roger Stokey
Research Engineer
AOP&E
Bigelow 304
Ext. 3323
C. VonAlt



Ying Yang
Part-time Helper
Biology
Redfield 342
Ext. 2368
B. Woodin



Marcella Youngman
Staff Asst. III
AOP&E
Smith 301J
Ext. 2969
H. Berteaux

Promotions

Robert Bragdon II (Communications)
to Advertising & Business Coord. (10/2)

Jane Caruso (Directorate)
to Security Officer (1/1)

Robin Good (Development)
to Development Officer (1/27)

John Murphy, Jr. (Facilities)
to Senior Plant Mechanic (1/27)

Margaret Sulanowski (Chemistry)
to Senior Research Asst. II (1/28)

Ed Phares finally gets his chair

After 24 years with the Institution, Carpenter Shop Supervisor Ed Phares has finally gotten a new chair.

About 200 of Carpenter Shop Supervisor Ed Phares's friends and co-workers celebrated his retirement last month.

The highlight of the afternoon was a video showing Ed's fellow carpenters shortening the legs of his office chair. About five years ago, the carpenters started the tradition of cutting slices off the legs of Ed's chair, unbeknownst to him, whenever he was out of the office. The stunted chair, now several inches shorter than it originally was, made its way to Clark 5 for the retirement party as evidence, along with the video of one of the cutting sessions.

As a farewell gift, Ed received a new chair and the sawed off pieces of his old chair. He also got a power drill, and Carpenter Bud Baker constructed a bentwood magazine rack for Ed's wife, Shirley.

Photo by Ellen Prithodko



Assistant Facilities Manager Ernie Charette thanks outgoing Carpenter Shop Supervisor Ed Phares for his 24 years of service to WHOI.

Changes made in retirement benefit distribution

The Institution's practice of allowing employees to receive Retirement Plan benefits while working in Casual status after retirement has been under review recently.

"Although WHOI recognizes the advantage of this practice for both the retiree and the Institution, legislative changes and federal tax laws prohibit it from continuing in some cases," says Benefits Manager Terri Monroe.

"The Institution's Retirement Plan is a 'qualified plan' and must comply with IRS tax regulations," she says. "The Retirement Committee, as plan administrator, can pay a benefit from the plan only upon an employee's death, disability, attainment of normal retirement age (age 65), or termination of employment. Payment for any other reason would violate tax

qualification rules and possibly result in disqualification of the plan."

Employees who are under 65, therefore, may receive retirement benefits only if their employment with the Institution has been completely terminated. A "bona fide termination" is defined by the IRS as a complete termination with no implied or explicit agreement between the Institution and the retiree for either immediate rehire or rehire at a later date. There must be a complete separation, with no guarantee of future employment,

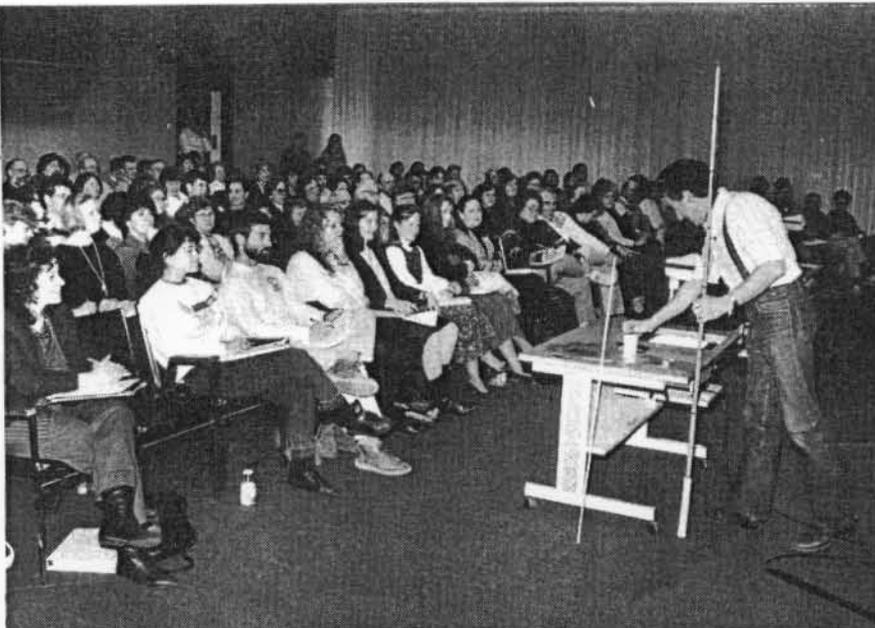
for an early retiree to receive benefit payments.

The IRS recognizes, however, that employees are eligible to receive their pensions at age 65, with or without a bona fide termination of employment. At age 65, employees can request that their retirement benefits begin simultaneously with their change to Casual status.

For further information on this policy and guidance in retirement planning, contact the Benefits Office, ext. 2705, 2706, or 2295.

Telephone tip — Making calls from home

Employees who live in the Falmouth area and have a touch tone phone can use the Direct Inward System Access (DISA) number — (508) 457-2196 — to avoid waiting to be reimbursed for long distance calls. The line is answered with an in-house dial tone, which should be followed with 9-1-number-billing code.



The Institution's premiere of an Introduction to Oceanography course is proving to be a big success. About 150 employees attended the first session March 11. The course will continue through April on Mondays and Wednesdays, 4:30 to 6 p.m., in Redfield Auditorium. Sessions through April 1 will provide overviews of the various aspects of oceanography. The April sessions will focus on research projects being conducted at WHOI. Call the Education Office at ext. 2200 for more information.

WHOI recycling efforts continue

WHOI is still recycling colored and white paper, according to Susan Kadar and Chris Wooding of the WHOI Recycling Committee.

The following papers are recyclable: computer paper, uncoated colored paper, black and white printer paper, and copier paper. Coated papers, such as those used

for color laser printers, are not recyclable.

Colored paper must be kept in a separate box from white paper. If they are mixed, the white paper becomes worthless and WHOI loses the financial benefits of recycling.

For more information, call Susan at ext. 2329 or Chris at ext. 2722.

Spring Golf Outing plans underway

The WHOI Spring Golf Outing will be held Saturday, April 27, at the Otis Golf Club on Massachusetts Military Reservation.

Golfers of all skill levels are welcome. The \$20 fee includes greens fee, food, and prizes, and is payable to Otis Golf Club the day of the outing. Pull carts can be rented for \$2, clubs for \$6 and motorized

carts for \$10.

Tee-off times will start at 11:15 a.m. Participants should arrive no later than 10:30 a.m. for their team assignment and tee time. Cut-off date for signing up is April 9.

Contact John Powers at ext. 2372 or Rick Murphy at ext. 3387 for more information.

Exhibit Center expands hours

The WHOI Exhibit Center is expanding its schedule for the 1991 season. It will open weekends beginning March 29, and will go to seven-day operation April 15.

Hours from March 29 to April 15 will be Fridays and Saturdays, 10 a.m. to 4 p.m., and Sundays, noon to 4 p.m., except Easter Sunday.

From April 15 to May 15, hours will be Mondays through Saturdays, 10 a.m. to 4 p.m., and Sundays noon to 4 p.m.

Summer hours, in effect from May 15 to October 15, will be Mondays through Saturdays, 9:30 a.m. to 5 p.m., and Sundays, noon to 5 p.m.

The number of visitors to the Exhibit Center continues to increase each year. More than 32,000 people, including international visitors and tour groups, visited Endeavour House in 1990 to see exhibits of WHOI's research facilities and ships and to learn about oceanographic research.

Attendance increased from 26,959 in 1989 to 32,636 in 1990. The Exhibit Center's best month was August, when 9,294 people visited, compared to 7,526 the previous year. The winter months saw sharp increases in attendance, partly because of warm weather, advertising efforts around the Thanksgiving and Christmas holidays, and added hours during Christmas week. While 195 people visited in December 1989, 1,129 people visited in December 1990.

The Exhibit Center expanded its six-day operating schedule from three months (June through August) in the early 1980s to six months (May through October) in 1989. Weekend hours in November and December have also been added to meet public demand..