

ASLO BULLETIN

American Society of Limnology and Oceanography

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MESSAGE FROM THE PRESIDENT

SCIENCE FOR A BLUE PLANET: LIMNOLOGY AND OCEANOGRAPHY TOGETHER

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ASLO has been and will be celebrating a series of 50-year anniversaries:

	Began	50th Anniversary
Limnological Society of America	1936	1986
LSA becomes ASLO	1948	1998
L&O first published	1956	2006

Of these anniversaries, the merger of the young Limnological Society of America with the Oceanographic Society of the Pacific is of particular significance for the position of ASLO in the modern scientific world, where specialization has been emphasized. The early history of the formation of ASLO has been documented in some detail by Lauff (Lauff, G.H. 1966. A history of the American Society of Limnology and Oceanography. In D. G. Frey [ed.], *Limnology in North America*. Univ. Wisconsin Press, pp. 667-682). In 1956, ASLO President Alfred C. Redfield summarized the philosophy behind the transformation of the LSA into ASLO:

Just as it had been accepted from the start that students of

The *ASLO Bulletin* is published 3 times annually (in March, August and November) by the American Society of Limnology and Oceanography, to provide members with up-to-date information on society activities and to serve as a forum for open discussion.

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TARGET DATES	for 1998 submissions: February 10, July 10, & October 10
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the biological, chemical and physical aspects of limnology had much to gain by association, so it was soon realized that the differences between fresh and salt water systems were trivial, when compared to the common principles with which limnologists and oceanographers alike are concerned.” (1956. *Limnol. Oceanography* 1:1).

This vision remains the underlying theme for ASLO, as shown in the recommendations presented by the 1996 Future of ASLO Committee (*ASLO Bulletin* 6(1)). This emphasis on understanding the coupled processes of aquatic science is seen in the papers published in *Limnology and Oceanography*, in the scientific programs of our meetings, and in the special activities of ASLO, such as DIALOG, which brings together recent graduates in both limnology and oceanography (see pp. 10-14)).

I began coming to ASLO meetings as a graduate student, and so accepted this overlap of the two disciplines as inherently reasonable and straightforward. After a year as president, I have a new appreciation for this aspect of ASLO. As we have been interacting with other societies to form the Council of Aquatic Sciences (CAS; see article on p. 6), I have learned more about the internal organization of other larger societies, e.g., the American Geophysical Union and the American Chemical Society. I am grateful to the past leadership of the society that ASLO has resisted separate divisions. Rather the goal of having an integrated approach has been maintained as a matter of course in many ASLO activities. The ASLO Future Committee affirmed this goal in their recommendations.

I think that the broad interests of the individual ASLO members are really the glue that holds ASLO together. The fact that many ASLO members have conducted research in both freshwater and marine systems is only one outward example of the breadth of interest.

Over the past year, I have also come to appreciate that the definitions of the two disciplines may foster collaboration. Within ASLO most everyone has an understanding of lim-

nology and oceanography as scientific disciplines. It's almost as simple as an ocean is an ocean, and a stream is a stream. In the broader scientific community, the meaning of "limnology" is not as well known. Jon Cole has provided the helpful tip that explaining limnology as "freshwater oceanography" is clear and brief. Even more challenging are the queries about limnology being a subdiscipline of another discipline. In May, I participated in a symposium on hydrology and fielded questions about limnology being a subdiscipline of hydrology. Two months later at NSF, the view that limnology was one of the many subdisciplines of ecosystem science was discussed. Both of these contrasting perspectives have their merits, and are more than a matter of semantics because of their influence on the allocation of research funds. But, it is great to be at an ASLO meeting, where we do not wonder about limnology being a subdiscipline of oceanography or the other way around.

Recognizing the puzzlement about limnology outside of ASLO, we could take further steps to educate our colleagues. Maybe we could raise money for the Endowment Fund by selling a bumper stickers:

- **SCIENCE FOR A BLUE PLANET:** Oceanography, the integrated study of biological, chemical and physical processes in oceans

- **SCIENCE FOR A BLUE PLANET:** Limnology, the integrated study of biological, chemical and physical processes in lakes, rivers, streams, wetlands

- **SCIENCE FOR A BLUE PLANET:** American Society of Limnology and Oceanography, promoting the integrated study of biological, chemical and physical processes in lakes, rivers, streams, wetlands and oceans

More seriously, we can take opportunities to promote a more holistic view of aquatic science through coordinated scientific activities with other societies, through educational initiatives, and public outreach. The recommendations provided by the 1998 Future of ASLO Committee provide important guidance in these directions.

PRESIDENT CLINTON AND VICE-PRESIDENT GORE FOCUS ATTENTION ON ECOSYSTEM RESEARCH AND ENVIRONMENTAL RESTORATION AT LAKE TAHOE

Charles R. Goldman, Director, Tahoe Research Group, University of California, Davis, CA 95616 (crgoldman@ucdavis.edu) and John E. Reuter, Director, Lake Tahoe Interagency Monitoring Program, University of California, Davis, CA 95616 (jereuter@ucdavis.edu)

On July 25-26 President Clinton and Vice-President Gore, along with EPA Administrator Carol Browner, USDA Secretary Dan Glickman, Interior Secretary Bruce Babbitt, U.S. Senators Harry Reid, Dianne Feinstein, Richard Bryan and Barbara Boxer, House Representatives Vic Fazio, John Doolittle, George Miller, Jim Gibbons, the Director of the White House Council on Environmental Quality Katie McGinty, and scores of other federal, state and local officials came to Lake Tahoe in support of efforts to restore lake water quality, forest health, and air quality. Earlier in the same week Governors Pete Wilson of California and Bob Miller of Nevada also pledged support from their respective states. The President reinforced the federal commitment for implementation of effective watershed management in the Lake Tahoe Basin stressing the fundamental link between ecosystem research and environmental restoration. Progress in these areas has involved close and constructive dialogue between multiple partners, including a diverse combination of public and private groups. These include federal, state and local agencies, specialized land-use interests (e.g. agriculture, grazing, timber harvest, etc.), public land ownership, individual property owners, recreation and tourism interests, environmental groups, etc. While all stakeholders have a vested interest in protecting environmental quality within a watershed, their focused concerns do not always coincide. As more and more of these groups come to appreciate the importance of taking a watershed-scale approach to resource management, the consensus process is becoming an increasingly effective approach for 'moving beyond the conflict'. Critical to consensus is the need for all interested parties to invest in a sound and comprehensive scientific data base.

The role of universities in the evolving dialogue on watershed management is critical and it is more important than ever that state and federal agencies take advantage of this resource. Although academic involvement in research at the watershed level dates back many decades, the contribution of university expertise in environmental protection has not been fully utilized by governmental agencies. Because universities do not have formal regulatory authority, they are often placed in a peripheral role for decisions related to environmental policy. Research and monitoring efforts by these institutions can, however, provide key information which are cornerstones for (1) understanding ecosystem processes, (2) determining the impacts of anthropogenic stress on environmental health, (3) formulating and evaluating watershed management options, and (4) forecasting long-term consequences of policy decisions on resource



President Bill Clinton and Vice President Al Gore examine Lake Tahoe zooplankton samples with University of California, Davis limnologist Charles R. Goldman, aboard the University's research vessel John Le Conte. Photo by Jay Mather, Sacramento Bee

sustainability. This is particularly true since in light of the unfortunate juxtaposition of budgetary demands to downsize agency staff and expenditures, the increased need to understand the effects of pollution (from the gene to the ecosystem level), and the continued public demand for clean water, air and land, the nation's universities are particularly well positioned to increase their contribution.

A closer working partnership between university researchers and agency scientific staff will allow for a much more effective ecological and economical approach to environmental protection. Serious concerns about ecological condition and long-term environmental protection underscore the need to provide the highest quality science to aid in problem resolution. Ecosystem health, sustainable environment, and watershed management are interrelated and part of the growing view that the fabric of the natural landscape is a complex weave of the interacting influences of physical, chemical and biological factors. Time after time, valid scientific data, with unbiased interpretation, have been a central feature for arriving at a successful consensus at Lake Tahoe. Without this foundation, discussions are carried out on a conceptual basis allowing for subjectivity and emotionalism. This only tends to reduce the prospect for consensus.

One of the better documented examples of this type of cooperative effort has come from the Lake Tahoe Basin, where almost 40 years of investigations by the Tahoe Research Group (TRG) at the University of California, Davis have provided clear evidence for the onset of cultural eutrophication in oligotrophic Lake Tahoe. These extensive and internationally renowned long-term investigations have served as the underlying basis for nearly all major policy decisions regarding water quality in the Tahoe Basin, including exportation of sewage and solid waste, strict control on building, installation of major erosion control projects, protection of wetlands, establishment of water quality thresholds, control of nonpoint source pollution, controls on dredging, and many others.

Known for its beauty and remarkable transparency, Lake Tahoe is a natural jewel in the Sierra Nevada mountains. Unfortunately, human development in the Tahoe Basin over the last five decades has been damaging. The lake has responded to increased nutrient loading from the streams, atmosphere and groundwater with steadily increasing algal growth (eutrophication) and a progressive reduction of clarity. The lake has lost approximately 33 feet, or one-third of its famous transparency during the last 30 years and oxygen concentrations in the deep, bottom waters have declined significantly. Thick growths of attached algae now coat the shoreline rocks in the spring. Urbanization has already eliminated or damaged wetlands, wet meadows and stream zone habitat, all crucial for a lake to cleanse and restore itself. Forest health is significantly compromised, aquatic biodiversity has been changed, and the degradation of air quality is all too visible. If current levels of land disturbance and pollution continue, the lake will lose its famous clarity in approximately 30 more years and many other aspects of ecosystem health will be in peril. New watershed management issues such as integrated erosion control, habitat restoration, and transportation are emerging as crucial to the lake's future. Serving as the focus for over 20 million visitor days annually, the preservation of Lake Tahoe, its watershed and air quality is a priority of legislators, community leaders, scientists, and the public.

The two-day event saw the President and Vice-President aboard the UC Davis Research Vessel John LeConte learning first-hand, and with considerable enthusiasm, about the water quality problems at Lake Tahoe and in particular the importance of long-term monitoring and research. On the first day Vice-President Gore discussed forest health and management issues, concerns of the Native American Washoe Tribe, and facilitated a comprehensive issues workshop. The second day featured President Clinton hosting a panel discussion consisting of legislative and community participants, as the conclusion to an extensive effort which lasted for over two months and which included at least 1,500 conferees. During the months of June and July, the Lake Tahoe Presidential Forum Steering Committee, assisted by numerous federal and state agency staff, conducted a series of three workshops on Water Quality, Forest Ecosystem Restoration, Recreation and Tourism, and Transportation

(the last hosted by Transportation Secretary Rodney Slater). These highly successful workshops addressed the pertinent issues using a panel discussion format with opportunity for significant public participation.

Why did the President come to Lake Tahoe? To provide federal assistance in helping protect a unique national resource that Mark Twain once referred to as "the fairest picture the whole Earth affords" - yes, in part. To direct federal agencies to work more closely together and with state and regional groups implementing existing environmental restoration plans - yes, in part. To commit about \$50 million over the next two years on environmental projects which include replacement of a leak-prone sewage export line, reduction of forest fuels and introduction of prescribed burning on federal lands, acquisition of environmentally sensitive parcels for preservation, to assist in the coordination of public transit in the most heavily populated portions of the Basin, and to provide needed funding a variety of much needed research and monitoring studies - again yes - in part. Clearly, all these actions are needed and were direct results of the visit by Clinton and Gore. Why did they come when they could have easily provided an executive order from Washington, D.C.?

In our opinion the President came to Lake Tahoe because of three very important reasons.

- First is the growing understanding by the commercial sector that the \$1 billion annual tourist and recreation-based economy depends on a pristine and sustainable environment. Like many other areas in the country, and especially the western United States, Tahoe occupies a position at the urban-wildlands interface. In this setting the environment and economy are inexorably linked.

- Second, despite a history of disagreement and quarreling between environmentalists and business interests which has literally persisted for four decades, most parties, with the help of federal, state and local regulatory powers, are now embracing the consensus process. In a variation of the win-win model for negotiation, all parties understand that if the lake, watershed and air quality lose, so do they.

- Last, but certainly not least, the importance of a reliable and comprehensive long-term water quality data base was a fundamental factor which contributed to the Presidential Forum. With over 35 years of continuous research and monitoring data collected by the University of California, Davis - Tahoe Research Group and the Lake Tahoe Inter-agency Monitoring Program, the scientific basis for documenting the deteriorating lake water quality and for evaluation of proposed restoration investments was already clearly established. The concept of adaptive watershed management is beginning to replace ecosystem management based solely on regulation. By themselves, water quality standards, thresholds and the like are not adequate to assess lake and watershed management alternatives. At Lake Tahoe and at many other aquatic ecosystems nationwide we need to know (1) what are the sources and relative contribution of pollutants, (2) how much of a reduction is necessary to achieve the desired environmental quality, and (3) how this reduction is

achieved within the constraints of both time and limited financial resources. The answers to these and other questions must be evaluated within a dynamic framework based on scientific understanding. In this case the role of the nation's universities and colleges will be essential and invaluable.

Understandably, the high level of federal attention recently demonstrated at Lake Tahoe cannot be given to all of the country's threatened environments. However, the model which led to the current success at Lake Tahoe is widely applicable and was the focus of the President's final remarks. The basis for cooperation is mutual benefit. Backed by sound science, traditionally competing parties can accomplish great things once it is clear that environmental and economic interests must cooperate and that consensus must be reached before irreparable damage is done to Lake Tahoe and a host of the nation's other stressed ecosystems.

1997 ELECTION RESULTS

C. Susan Weiler, ASLO Executive Director

The 1997 ballots were counted by Tellers Wayne Wurtsbaugh and Chris M. Luecke. This year 3,212 ballots were mailed and 698 were received (22% response rate). Newly elected Members-at-Large are **Louis Legendre**, **Saran Twombly** and **Michael J. Vanni**, who replace JoAnn M. Burkholder, Jonathan J. Cole and Sybil P. Seitzinger. Newly elected Secretary **Asit Mazumder** takes over for Polly A. Penhale. To provide continuity for this important position, Polly will remain on the Board for one more year as a non-voting member.

It is not easy to sum up the contributions of the individual members-at-large and officers, particularly in such limited space. While it is an honor to be nominated, there is hard work as well in being elected. The responsibilities of the Board are varied. Each member contributes in some way to every decision, and chairs at least one committee during his or her tenure. All have made significant contributions in many areas, but I would like to highlight one major accomplishment of each member rotating off the Board this year:

- **JoAnn Burkholder:** Through the Human Resources Committee and your involvement with Ben Cuker's minorities program, you have helped us all see the importance of public outreach to students and the general public.

- **Jon Cole:** Your work as chair of the new Meetings Committee has enabled us to better coordinate our meetings and plan meetings further in advance — and the ASLO 97 meeting which you co-chaired with Tim Hollibaugh has firmly established the Aquatic Sciences Meeting as *the* meeting for both limnologists and oceanographers to attend.

- **Sybil Seitzinger:** As Chair of the Awards committee you had a leadership role in the development of a new award this year, in environmental problem solving in the aquatic sciences, and in increasing the visibility of all our awards.

- **Polly Penhale:** How can anyone sum up your 12 years of leadership in a sentence! You have helped guide almost every annual meeting held during the past 12 years. Recently your thoughtful input and dedicated work has established an ongoing and mutually beneficial collaboration with AGU on

the Ocean Sciences Meeting, but your role in meeting development is just one highlight in more than a decade of dedicated service on behalf of ASLO.

Board membership is neither the beginning nor the end of service to ASLO. We look forward to Joann's, Jon's, Sybil's and Polly's continued service, as well as the presence of some new faces. **If you are interested in taking an active role in ASLO, please contact ASLO President Diane McKnight (mcknight@stripe.colorado.edu).** Committee membership changes each year, providing opportunities for interested members to become more involved. Service as an officer or Member-at-Large is another way to promote the aquatic sciences (see call for nominations below. And, while the Board makes decisions for the Society, you do not have to be a Board member to propose initiatives. Ben Cuker's program for underrepresented minorities is a classic example of an activity begun at the grass-roots level.

NOMINATIONS SOUGHT, 1998 ELECTION

The Nominations Committee needs your assistance in identifying candidates for **President-Elect** and **Member-at-Large**. The officers and 7 members-at-large (one for every 500 members of the society) constitute the ASLO Board of Directors. The Board decides how best to fulfill the purposes of ASLO defined by the Articles of Incorporation: "To promote the interests of limnology and oceanography and related sciences, to foster the exchange of information across the range of aquatic science, and to further investigations dealing with these subjects." It is the responsibility of the Board to conduct the on-going business of the society, to promote the interests of ASLO, and to represent the interests of the general membership.

The terms of president-elect, president, and past president are each 2 years. Normally the society alternates limnologists and oceanographers. The new President Elect, who will assume office July 1, 1998, will follow Thomas M. Malone in the Presidential sequence, while Diane M. McKnight will become Past President.

Newly elected members-at-large will replace Mark E. Hay and Catherine M. Pringle.

Please send nominations (including self nominations) to:

Susan Weiler, ASLO Executive Director
weiler@whitman.edu

To ensure consideration for the 1998 election, please **respond by November 1, 1997.**

**POSITION OPENING:
EDITOR-IN-CHIEF
LIMNOLOGY & OCEANOGRAPHY**

Application Deadline 1 FEBRUARY 1998

Applications are invited for the position of Editor-in-Chief of *Limnology and Oceanography*. Applicants must be a member of ASLO. The successful candidate will be responsible for the content and management of the journal and will replace Dr. David L. Kirchman who is stepping down at the end of CY 1998. Please send a letter of interest, the names of three references, and your curriculum vitae to:

ASLO Search Committee
Horn Point Laboratory
University of Maryland Center for Environmental Science
P.O. Box 775
Cambridge, MD 21613

For more information, please contact Dr. Susan Weiler (weiler@whitman.edu) and see the ASLO web page (<http://aslo.org/>).

**CRISTINA CALDERON AND KARLA HEIDELBERG:
STUDENT REPRESENTATIVES TO THE ASLO
BOARD OF DIRECTORS**

At its July Board meeting, a decision was made to have two student representatives on the ASLO Board of Directors, to serve overlapping two-year terms. The first two student representatives, with terms starting July 1, 1997, are:



Cristina D. Takacs Calderon
Montana State University
takacs@montana.edu

Cristina received her B.A. degree in Environmental, Population and Organismic Biology from the University of Boulder. She began work at Montana State University in 1994, and expects to graduate with an emphasis in microbial ecology in 1999



Karla Heidelberg
University of Maryland
Center for Environmental and
Estuarine Studies
karla@hpel.cees.edu

Karla received her B.A. degree from Maryville College. She began work at the University of Maryland in 1992 and expects to graduate with a concentration in oceanography next year.

Cristina and Karla are already at work developing a student page for the ASLO web site, and discussing plans for student activities at the upcoming ASLO meeting in St. Louis. It is our fervent hope that their activities will encourage more students to take an active role in ASLO—so please contact Karla and Cristina if you would like to get involved!

Applications are now being accepted for a two-year term as student representative, to begin on July 1, 1998.

Current graduate students who are ASLO members can apply for the positions, and selections will be made by the a committee of the ASLO Board, which will include the president and president-elect.

Applicants should provide the following (by e-mail, to weiler@whitman.edu):

- 1) Name, address, phone, fax, e-mail, institutional affiliation, date began graduate study and date expect to graduate
- 2) Statement of interest in serving on the ASLO Board; include a description of background that would contribute to the position of student representative
- 3) BRIEF CV (1 page maximum)
- 4) One letter of recommendation

Please address questions and applications to Susan Weiler (weiler@whitman.edu).

**COUNCIL OF AQUATIC SCIENCES (CAS):
PROGRESS REPORT**

Diane M. McKnight, Institute of Arctic and Alpine Research, University of Colorado, 1500 30th St. Boulder, CO 80309-0450

The historic first meeting of the Council of Aquatic Sciences (CAS) was hosted by ASLO at the 1997 Aquatic Sciences Meeting in Santa Fe. The meeting was attended by representatives of societies which had already joined CAS (ASLO, Estuarine Research Federation (ERF), North American Lake Management Society (NALMS) Society of Wetland Scientists (SWS), and by representatives of societies interested in CAS. The first meeting was very successful, with agreement reached on both goals & objectives and operational procedures. Firstly, we approved a charter for CAS (see box). We identified our priorities for the first years. These included: setting up a CAS web page; holding a workshop on high school education in limnology, and planning a joint symposium. We also scheduled our next meeting, to be hosted by ERF on October 12 in Providence, RI. An executive committee was established, consisting of representatives of the current CAS member societies.

I am glad to report that CAS has progressed since the first meeting. Our membership has expanded with the joining of the American Fisheries Society (AFS), American Institute of Fisheries Research Biologists (AIFRB), Desert Fishes Council (DFC), North American Benthological Society (NABS), Southeastern Fishes Council (SEFC) and the Water Environment Federation (WEF). We estimate that collectively CAS now represents more than 20,000 aquatic scientists and engineers. The Ecological Society of America (ESA) will consider CAS membership at their August meeting. Several societies, including the Phycological Society of America, American Geophysical Union, American Chemical Society, American Society of Microbiologists and the Canadian Society of Limnology, may send representatives to the October meeting. Another important development is that Nancy Rabalais is serving as the CAS treasurer and Joy

Bartholomew, ERF Executive Director, is providing coordination support.

CAS is supporting a summer intern who is working at the AFS office in Bethesda, MD. Development of a CAS web page is underway and will be maintained by the Coastal Services Center. The web page will present information about member societies (officers, committees, meetings, journals and other activities) and will have links to the web pages of other societies. CAS also now has a standard phone line (254-776-8099), Fax (254-776-3767) and toll-free number (800-550-4CAS) managed by the Schneider Group, which manages ASLO's business office.

The CAS educational initiative is also underway. David Brakke, a member of the ASLO Education Committee, will be chairing a workshop this fall at the University of Mary-

land, Townsend. The workshop will be organized with the National Association of Biology Teachers (NABT) and representatives from CAS member societies will participate. NABT currently distributes to its members a text, "Classroom Oceanography", for middle-school and high-school teachers. The specific goal of this workshop is to develop ideas for a companion text, "Classroom Limnology". A follow-up CAS/NABT activity will be the development of a text, "Estuaries for the Classroom". Members with ideas or material to contribute to this workshop should contact David Brakke. CAS is also interested in continuing education activities.

Other efforts will involve designing a brochure for CAS and developing proposals to request funds from foundations to begin to address other CAS goals.

CHARTER for the Council of Aquatic Sciences

*Approved February 14, 1997 by representatives of the four initial member societies:
American Society of Limnology and Oceanography, Diane M. McKnight
Estuarine Research Federation, Nancy N. Rabalais
North American Lake Management Society, G. Chris Holdren,
Society of Wetland Scientists, Duncan T. Patten*

I. MISSION OF THE COUNCIL OF AQUATIC SCIENCES:

The mission of the Council of Aquatic Sciences (CAS) is to promote the advancement and application of knowledge in the aquatic sciences through collaboration and coordination among societies.

II. FUNCTIONS SERVED BY THE CAS

The activities of the CAS will support, and be consistent with, the missions and activities of the member societies, and in no way interfere or compete with functions of these societies. Functions of the CAS will be to:

- 1) Identify and articulate areas of agreement and differences within the scientific community on issues involving aquatic sciences and resources.
- 2) Promote information exchange among science and management communities.
- 3) Formulate comprehensive strategies for proactive scientific research and management.
- 4) Contribute to formulation of scientifically sound policy.
- 5) Promote education for an informed public.

III. CAS MEMBERSHIP AND OFFICERS

The CAS will be composed of one representative from each of several scientific societies whose activities or expertise are relevant to the mission of the CAS. Individual representatives from each of these societies will be appointed or elected, and serve terms according to procedures established by each member society. An attempt will be made to maintain a balance of freshwater and marine expertise on the CAS. CAS members will elect an executive committee of three or more members who will select their own chair.

IV. FINANCES

Member societies will pay annual dues.

This charter was developed with the advice, guidance and unanimous agreement of the 14 meeting participants using the October, 1996 draft charter as a model, and was approved unanimously by the four voting members of CAS

1996 FINANCIAL STATEMENT
American Society of Limnology and Oceanography, Inc.

Revenue		Expenses (continued)	
Society		Business Office	
Dues	\$250,934.06	Contracted Services	\$75,356.41
Interest	8,220.64	Travel & Meeting	1,629.46
Investment Income (Boatmen's Trust)	30,463.00	General Office	<u>166.50</u>
Meeting - AGU	48,504.00		\$77,152.37
Other meetings	24,451.82	Executive Director's Office	
Meeting - Prepaid Santa Fe	169,343.97	Executive Director Salary	\$35,234.35
General Endowment	3,670.50	Secretary Salary	3,441.88
Student Travel	1,810.00	Benefits	8,980.13
Mailing List Rentals	1,550.00	Office Expenses	2,051.79
Bulletin Advertising	5,161.00	Travel & Miscellaneous	<u>9,625.63</u>
Miscellaneous	115.00		\$59,333.78
Refunds	<u>(125.00)</u>	President	
	\$544,098.99	Travel & Miscellaneous	\$ 6,628.33
Journal		Secretary	
Subscriptions	\$302,845.45	Office & Travel	\$ 3,508.84
Postage	6,070.00	Treasurer	
Reprints	36,356.78	Office & Travel	\$ 5,516.23
Miscellaneous		Journal	
Author Alterations	9,559.06	Publishing	\$257,754.06
Color Plates	1,155.67	Reprints	26,790.18
Page Charges	6,371.30	Postage	14,085.00
Copyright Release	2,239.42	Back Issues	7,325.64
Back Issues	<u>5,070.17</u>	Seattle Editorial Office:	
	\$369,667.85	Managing Editor Salary	85,712.42*
Grant	\$24,900.00	Editorial Assistant Salary	32,675.70*
TOTAL REVENUE	\$938,666.84	Benefits	32,569.54*
		Office Assistance	2,643.12*
		Associate Editors	8,250.00*
		Office Expense	14,766.01*
		Travel & Miscellaneous	1,775.45
		Office Rent	3,450.00
		Delaware Editorial Office:	
		Editor (Honorarium)	6,000.00
		Secretary Salary and Benefits	19,008.00
		Grad. Student Assist.	11,935.55
		Office Expenses	3,992.00
		Travel & Meetings	<u>2,000.00</u>
			\$530,732.67
		Directory	\$ 8,971.55
		TOTAL Expenses	\$818,700.62
		Net (Loss) Income	\$119,966.22
Expenses			
Society			
Prepaid Santa Fe Expenses	\$27,445.37		
General Travel	15,105.46		
Bulletin	18,781.40		
Miscellaneous Printing	3,432.55		
Web Services	194.70		
Annual Meetings	14,101.00		
Student Travel Awards	10,200.00		
Depreciation	2,715.43		
Insurance	704.00		
Inventory Storage	1,287.04		
Audit & Tax Preparation	2,950.00		
Bank Fees	9,518.94		
Investment Fees	3,434.23		
Gifts & Awards	3,065.59		
Contributions	1,000.00		
List Rentals	500.85		
Miscellaneous & General	<u>12,420.29</u>		
	\$126,856.85		

*Includes last quarter of 1995 (total of 5 quarters shown) and dual expenses for the past managing editor and current managing editor during transition.

The meeting was called to order at 6:00 PM by President Diane M. McKnight. She began by introducing Karla Heidelberg, a new student representative to the Board; Kevin Oliver, Managing Editor of *Limnology and Oceanography*, and Helen Schneider-Lemay, Business Manager. She outlined the topics to be discussed, which included the Future of ASLO Report which resulted from a small workshop held in December, 1996.

Polly A. Penhale presented the Secretary's Report. Membership in 1996 totaled 3972, with 2585 members from the United States, 271 from Canada and 896 from other countries. Students represented about 22% of the membership. The following members were reported as deceased during the past year: Arden R. Gaufin, Donald Miller, Robert H. Peters, Brian Shero, Flora Wang and Donald Zinn.

Russell A. Moll presented an interim Treasurer's Report. The transition to the new Business Office in Texas was proceeding smoothly. Initial financial analysis for 1996 indicated a net gain. He mentioned that the Finance Committee and the Endowment Committees had been requested to provide aid in the development of a long-term financial strategy.

The President announced that there would be two ASLO meetings in 1998. The Ocean Sciences Meeting, jointly held with the American Geophysical Union, was scheduled for February 9-13 in San Diego. The summer meeting will be held jointly with the Ecological Society of America in St. Louis from June 7-12; the meeting's theme is The Land-Water Interface: Science for a Sustainable Biosphere.

Diane McKnight opened the floor to members. Various suggestions related to meetings. There was a request made to hold the Ocean Sciences Meeting on the East Coast for alternate meetings. There was a request to set up a system whereby members could pay extra fees to receive the meeting Abstract Book by mail prior to meetings. It was noted that the goal is to have this information available on the World Wide Web in a timely manner.

The Future of ASLO Report was introduced by Diane McKnight. She provided a brief history of the activity, which

began in 1988 with the first Future of ASLO Report. Many of the recommendations in that report have been implemented, including the creation of the Executive Director's Office, the production of the *ASLO Bulletin*, and the development of special programs. Other recommendations, such as an increase in public policy activity, have not been implemented. The 1996 Future of ASLO Committee was chaired by John E. Hobbie. The 1996 Report highlighted ASLO's strengths in its journal and its meeting and recommended activities to broaden membership and breadth, to better link basic sciences to problems of the environment, to broaden its educational role, to better serve international members and to lead efforts in human resource diversity.

An open forum followed. Attendees were supportive of the Committee's recommendations. They noted that the 1996 Report did a fine job of building on the 1998 Report. Members acknowledged ASLO's strengths and endorsed recommendations to increase activities in educational arenas and in public policy. Some noted that they had hoped for a more activist report in terms of bringing scientific expertise into environmental management decision-making. It was noted that a strong scientific basis must be maintained if ASLO is to venture into the public policy arena.

A discussion on the journal followed. Comments touched on a number of topics. Some felt the journal was too predictable in terms of content and recommended broadening the topics covered. The increase in numbers of pages published was viewed both positively and negatively. Some felt this increase allowed for more good papers to reach readers; other felt it led to lower standards. Other topics covered included international activities, it was recommended that more effort be placed on attracting foreign members on the Board. The new policy of having student members on the Board was applauded. A broadened effort in educational activities was viewed positively. Diane McKnight concluded the discussion of the Future of ASLO Report by asking requesting that additional comments be sent to her.

The President adjourned the meeting at 7:30 PM.

Respectively submitted, Polly A. Penhale Secretary

NOTES FROM THE ASLO BUSINESS OFFICE

Helen Schneider Lemay, ASLO Business Manager (Tel: 800-929-ASLO - U.S. and Canada, or 254-399-9635 - Outside U.S. and Canada; Fax: 254-776-3767; business@aslo.org)

Please note the change in area code to 254.

We are settling in and getting to know our members and appreciate the communication that we have with many of you. We strive to keep all of your membership records current and ask that you notify us immediately of any changes. (This is especially important if your membership includes a subscription to *Limnology & Oceanography*!)

Believe it or not, membership renewal time will be here before we know it! Initial renewal notices for 1998 will be mailed in mid-September. As always, the business office will mail several rounds of notices, but please keep in mind that if you do not renew by January 1, 1998, your membership will be considered delinquent, and you will not continue to receive ASLO publications for 1998. This includes the latest issues of L&O and the membership directory.

Early renewal also will ensure that the information published in the directory contains your current information. All changes will be taken from renewal forms received prior to November 1, 1998, and these changes will be included in the 1998 directory.

The renewal form will include some new information and options for members.

1) Mailing lists: You will have the option of asking that your name be removed from non-ASLO mailings. There are times when organizations that are related to limnology and oceanography request the opportunity for a one-time rental of the ASLO membership list. Only those organizations and those mailings that are considered of interest and value to the society are allowed access to this list. However, if you had rather not receive these mailings, you may indicate this on your renewal form. For your information, the following organizations have requested mailing labels so far this year: Blackwell Science; Cameron Instrument Company, Intl.; Symposium on Microbial Ecology; J.C. List Company; Kluwer Academic Publishers; Oxford University Press; SLP Direct/CRC Press; Solomat; Ozone Action; and YSI Incorporated.

2) Credit card payments: ASLO allows members to pay for membership dues by using credit cards. We hope this has made your renewal more convenient and easier. However, if you choose to pay by check, the credit card bank fees that the society has to pay will be saved and that amount will go towards ASLO's student travel award fund. Help us help our students by paying with a check!

Finally, **spread the word about ASLO.** Encourage your colleagues, students, etc. to join and your library to subscribe to L&O. The more members and subscribers we have the broader our reach, and the greater value ASLO will remain for you.

We look forward to your continued memberships, and we like to hear from you.

DISSERTATIONS INITIATIVE FOR THE ADVANCEMENT OF LIMNOLOGY AND OCEANOGRAPHY: DIALOG II PROGRAM REPORT

C. Susan Weiler, Biology Department, Whitman College, Walla Walla, WA 99362 (weiler@whitman.edu)

The second DIALOG application period has closed, with 203 applications requested and 99 applications completed and returned by the deadline; of those, 87 applied for the symposium (compared with 137, 80 and 67 in 1994).

The 99 completed applications came from the following 28 countries: USA (47), Argentina (1), Australia (2), Brazil (2), Canada (5), China (1), Egypt (2), France (1), Germany (6), Greece (1), India (4), Israel (1), Japan (2), Nepal (1), Netherlands (1), Nigeria (1), N. Ireland (2), Pakistan (1), Poland (1), Russia (6), Spain (2), Switzerland (1), Sweden (2), Ukraine (1), United Kingdom (3), Venezuela (1), Zimbabwe (1). Of those, 53% were female and 47 % were male; and 60% were limnologists and 40 % were oceanographers.

The 87 symposium applicants had the following characteristics:

- 45 (52%) female, 42 (48%) male (compared with 34% female, 66% male in 1994)

The increase in female representation is consistent with demographic trends in graduate schools and in the ASLO membership.

- 53 (61%) limnologists, 34 (39%) oceanographers (compared with 34% limnologists, 66% oceanographers in 1994)

The ASLO membership is evenly split between limnologists and oceanographers. Mailings were made to more limnologically oriented societies this year to "correct" for the overrepresentation of oceanographers last time.

- 34 (39%) US citizens (compared with 39 (57%) in 1994)

- 3 (3.4%) under-represented minorities, up from 0 in 1994.

- Applications came from 23 countries: USA (43), Australia (2), Brazil (1), Canada (3), China (1), Egypt (2), Germany (5), Greece (1), India (4), N. Ireland (2), Nepal (1), Netherlands (1), Nigeria (1), Pakistan (2), Poland (1), Russia (6), Spain (1), Sweden (2), Switzerland (1), United Kingdom (3), Ukraine (1), Venezuela (1) and Zimbabwe (1).

- Twenty-four citizenships were represented (compared with 14 in 1997): American (34), Brazilian (1), British (1), Canadian (5), Chinese (5), Dutch (1), Egyptian (2), Ethiopian (1), French (1), German (11), Greek (1), Indian (6), N. Ireland (1), Israeli (1), Nepalese (1), Nigerian (1), Pakistani (2), Polish (1), Russian (6), Spanish (1), Swedish (1), Ukrainian (1), Venezuelan (1), and Zimbabwean (1).

A symposium will bring together 43 recent graduates for the purpose of catalyzing interdisciplinary and interinstitutional research and interactions. The only discouraging part of this program is choosing the applicants, each of whom has something unique and interesting to offer. With 87 excellent applicants from 23 different countries for 43 positions, the choice was not easy! I am grateful to Stephen Baines, Mandy Joye, Jim Kitchell, Hans Paerl, Deborah Penry and Saran Twombly for serving on the selection committee. With so

many qualified candidates, many factors in addition to excellence in research were considered and many truly exceptional individuals had to be turned away to maintain the “critical size” for fostering long-term interactions. Selection was based on scientific training, dissertation topic and execution, interdisciplinary experience and interests, letters of recommendation, and program balance.

This program is made possible through funding from the U.S. National Aeronautics and Space Administration (Ocean Biogeochemistry Program and Atmospheric Chemistry & Ecology Branch of Mission to Planet Earth Program), National Oceanic and Atmospheric Administration (Coastal Oceanography Program and Office of Oceanic & Atmospheric Research), National Science Foundation (Ecosystem Studies Program, Biological Oceanography Program, and Office of Polar Programs), Office of Naval Research (Biological and Chemical Oceanography Program and Molecular Biology Program), and the European Commission’s Marine Science and Technology (MAST III) Program. I am particularly grateful for Maarten Boersma, a participant in the first DIALOG Program for obtaining funding from the European Commission’s MAST Program—the program is now truly international!

Dissertation citations for the 99 program participants are listed below.

DIALOG II: Ph.D. Dissertations from September 1, 1994 - March 31, 1997

In order to provide a more complete introduction to the work of this most recent generation of aquatic science researchers, all submitted dissertation citations and abstracts from the DIALOG II program are posted on the ASLO web page,

<http://aslo.org>

Citations of all dissertations compiled as part of the DIALOG II program are listed below.

Ahmed, Mahmoud H. M. 1997. An environmental impact assessment of pollution on the Arabian Gulf. University of Alexandria (Egypt), 218 pp.

Aldridge, Frederick J. 1994. Application of nutrient enrichment bioassays to evaluate spatial and temporal limiting-nutrient patterns and to estimate surplus phosphorus concentrations in Lake Okeechobee. University of Florida (USA), 101 pp.

Avery, G. Brooks Jr. 1996. Rate and mechanistic controls on stable isotopic composition of biogenic methane in wetland environments. University of North Carolina at Chapel Hill (USA), 132 pp.

Basu, Ben K. 1997. Plankton development and trophic interactions in rivers. University of Ottawa (Canada), 212 pp.

Berman-Frank, Ilana. 1996. Inorganic carbon availability for dinoflagellate photosynthesis in Lake Kinneret, Israel. Bar-Ilan University (Israel), 162 pp.

Bezrukova, Elena V. 1996. Vegetation and climate of Pribaikalie in the late Glacial and Holocene. Limnological Institute, Siberian Branch of Russian Academy of Science, Irkutsk (Russia), 199 pp.

Boetius, Antje. 1996. Microbial enzymatic degradation of organic substances in deep-sea sediments. University of Bremen (Germany), 197 pp.

Brewer, Matthew C. 1996. *Daphnia* swimming behavior and its role in predator-prey interactions. University of Wisconsin at Milwaukee (USA), 155 pp.

Caceres, Carla E. 1997. Egg bank dynamics and daphnid species diversity in Oneida Lake, New York. Cornell University (USA), 177 pp.

Callisto, Marcos. 1996. Benthic macroinvertebrates in four Amazonian lotic ecosystems influenced by the activities of a bauxite mine (Porto Trombetas, Para, Brasil). Universidade Federal do Rio de Janeiro (Brazil), 140 pp.

Chai, Fei. 1995. Origin and maintenance of high nutrient condition in the equatorial Pacific, a biological-physical model study. Duke University (USA), 170 pp.

Cohen, Andrew N. 1996. Biological invasions in the San Francisco Estuary: A comprehensive regional analysis. University of California at Berkeley (USA), 465 pp.

Cottingham, Kathryn L. 1996. Phytoplankton responses to whole-lake manipulations of nutrients and food webs. University of Wisconsin at Madison (USA), 211 pp.

Daly, Kendra L. 1995. The influence of zooplankton on biogeochemical fluxes and stoichiometry in an Arctic marine system. University of Tennessee (USA), 183 pp.

D’Sa, Eurico J. 1996. Pigment dynamics in a coastal bottom boundary layer and its relation to the physical regime: Measurements using an in situ fiber optic fluorometer. University of Southern Mississippi (USA), 185 pp.

Ferreri, Cecilia P. 1995. Role of compensatory mechanisms in the population dynamics of Lake Trout (*Salvelinus namaycush*) in the U.S. Waters of Lake Superior. Michigan State University (USA), 86 pp.

Fleituch, Tadeusz M. 1996. Structure and functioning of bottom fauna in the Stradomka River. University of Lodz (Poland), 220 pp.

Fritz, Jennifer J. 1997. Growth dependence of coccolith detachment, carbon fixation and other associated processes by the coccolithophore *Emiliania huxleyi*. University of Miami (USA), 178 pp.

Fussmann, Gregor. 1996. Control of rotifers in a meso-eutrophic lake by bottom-up and top-down processes: Field studies and enclosure experiments. Christian Albrechts University, Kiel (Germany), 124pp.

Gao, Yu. 1997. Nitrate assimilation in the marine diatom *Skeletonema costatum*: Biochemical characterization and environmental regulation. University of Southern California (USA), 211 pp.

Genovese, Salvatore J. 1996. Regional and temporal variation in the ecology of an encrusting bryozoan in the Gulf of Maine. Northeastern University, Boston (USA), 242 pp.

George, Sunny. 1994. Studies on freshwater ostracods of Kerala. University of Calicut (India), 272 pp.

Gomez, Africa. 1996. Ecological genetics and mate recognition systems in sympatric rotifer populations. University of Valencia (Spain), 226 pp.

- Gonzalez, Ernesto J.** 1996. Phytoplankton-zooplankton interactions in natural and experimental conditions in a tropical reservoir (El Andino Reservoir, Venezuela). Central University of Venezuela (Venezuela), 347 pp.
- Gross, Elisabeth M.** 1995. Allelopathic action by submerged macrophytes on epiphytes and phytoplankton: Algicidal hydrolyzable polyphenols from *Myriophyllum spicatum*. University of Kiel (Germany), 148 pp.
- Grossart, Hans-Peter F.** 1995. Occurrence, formation, and microbial processes of lake snow aggregates and their significance in organic matter cycling in Lake Constance. University of Constance (Germany), 223 pp.
- Guan, RuiZhang.** 1996. Ecological studies on the crayfish *Pacifastacus leniusculus* (Dana). University of Buckingham (United Kingdom), 185 pp.
- Gudkov, Dmitri I.** 1996. Tritium in Ukrainian freshwater and its effects on hydrobionts. Institute of Hydrobiology (Ukraine), 224 pp.
- Guo, Laodong.** 1995. Cycling of dissolved and colloidal organic matter in oceanic environments as revealed by carbon and thorium isotopes. Texas A&M University (USA), 230 pp.
- Hagerthey, Scot E.** 1996. The ecological significance of groundwater-lake interactions: Epibenthic algal communities. Michigan Technological University (USA), 160 pp.
- Hamza, Waleed M. Reyad.** 1994. Phytoplankton, zooplankton and their relationships in two lakes of Northern Italy. Union of the Universities, Parma, Ferrara, Bologna and Roma (Italy), 172 pp.
- Heil, Cynthia A.** 1996. The influence of dissolved humic material (humic, fulvic and hydrophilic acids) on the ecology of marine phytoplankton. University of Rhode Island (USA), 483 pp.
- Hentschel, Brian T.** 1995. The nutrition of juvenile deposit-feeding polychaetes: Ontogenetic diet changes and food-related recruitment bottlenecks. University of Washington (USA), 155 pp.
- Hofmann, Annette.** 1996. Geochemical characteristics and transport processes of the particulate matter in the north basin of Lake Lugano (Switzerland, Italy). University of Geneva, F-A. Forel Institute (Switzerland), 392 pp.
- Hope, Diane.** 1995. The role of rivers and lakes in the transport of organic carbon and carbon dioxide. University of Aberdeen (Scotland), 186 pp.
- Horne, John K.** 1995. Spatial variance of mobile aquatic organisms: Capelin and cod in coastal Newfoundland waters. Memorial University of Newfoundland (Canada), 185 pp.
- Johnson, Mark D.** 1995. Ecosystem dynamics of protists and bacteria in a lotic wetland ecosystem. University of Alabama at Tualoosa (USA), 168 pp.
- Kaur, Parminder.** 1996. Spatio-temporal variations in epiphytic communities in relation to water quality of the Delhi segment of river Yamuna, and experiments on the patterns of colonisation of epiphyton on natural and artificial substrates. University of Delhi (India), 194 pp.
- Kebede, Elizabeth.** 1996. Phytoplankton in a salinity-alkalinity series of lakes in the Ethiopian Rift Valley. Uppsala University (Sweden), 178 pp.
- Khan, Muhammad I.** 1995. A lotic microcosm for ecological and ecotoxicological studies on benthic macroinvertebrates. University of London, Imperial College of Science, Technology & Medicine, London (United Kingdom), 148 pp.
- Kidd, Karen A.** 1996. Use of stable nitrogen isotope ratios to characterize food web structure and organochlorine accumulation in subarctic lakes in Yukon Territory, Alberta, Canada. University of Alberta (Canada), 193 pp.
- Kozlova, Tatyana A.** 1993. Dynamics of total chemical composition and lipids of benthic-pelagic Cottoidei of Lake Baikal during annual cycle. Limnological Institute of the Russian Academy of Sciences, Irkutsk (Russia), 178 pp.
- Kudela, Raphael M.** 1995. Characterization and prediction of planktonic nitrogenous nutrition and new production in Monterey Bay, California: Nutrient and physiological interactions. University of Southern California (USA), 326 pp.
- Laird, Kathleen R.** 1996. A high-resolution paleoclimatic record of a closed-basin lake in the Northern Great Plains. University of Minnesota (USA), 135 pp.
- Leonardos, Ioannis D.** 1996. Population dynamics of toothcarp (*Aphanius fasciatus*, Nardo 1827) in the Mesolongi and Etolikon Lagoons. Aristotle University of Thessaloniki (Greece), 198 pp.
- Lin, Senjie.** 1995. Studies of three cell cycle proteins (PCNA, p34cdc2, and cyclin B) as potential cell cycle markers for species-specific growth rate estimation of marine phytoplankton. State University of New York at Stony Brook (USA), 335 pp.
- Lindell, Mans J.** 1996. Effects of sunlight on organic matter and bacteria in lakes. Lund University (Sweden), 136 pp.
- Link, Jason S.** 1995. Impact of size-selective predation on Lake Superior crustacean zooplankton by lake herring (*Coregonus artedii*). Michigan Technological University (USA), 246 pp.
- Magorrian, Bridgeen H.** 1996. The impact of commercial trawling on the benthos of Strangford Lough. Queen's University of Belfast (Northern Ireland), 218 pp.
- Mbagwu, Iheanyi G.** 1995. Effects of pollution on macrobenthic invertebrates in Jakara Reservoir, Kano State Nigeria. Bayero University, Kano (Nigeria), 233 pp.
- McCarthy, Sheryl A.** 1996. Patterns of spatial and temporal variability in Hawaiian soft bottom benthos. University of Hawaii (USA), 239 pp.
- McQuoid, Melissa R.** 1995. Seasonal succession and interannual variability of diatoms (Bacillariophyceae) from Saanich Inlet, British Columbia, in relation to seasonal and climatic factors. University of Victoria (Canada), 294 pp.
- Mead, Kristina S.** 1996. Sex in the surf zone: The effect of hydrodynamic shear stress on the fertilization and early development of free-spawning invertebrates. Stanford University (USA), 186 pp.

- Meyer-Harms, Bettina.** 1996. Feeding strategy of calanoid copepods of different trophic levels in two areas of the Baltic Sea (Pomeranian Bight, Gotland Sea). University of Rostock (Germany), 180 pp.
- Msiska, Osishel V.** Reproductive and growth potential of the Lake Malawi tilapia, *Oreochromis Karongae*, in aquaculture. University of Malawi.
- Moline, Mark A.** 1996. Temporal dynamics and regulation of coastal Antarctic phytoplankton communities: Spring/Summer 1991-1994. University of California at Santa Barbara (USA), 356 pp.
- Moll, Andreas.** 1995. Regional distribution of primary production in the North Sea simulated by a three-dimensional model. University of Hamburg (Germany), 151 pp.
- Mumm, Heike.** 1996. Zooplankton development in Plusssee: Invertebrate predation in the context of a biomanipulation experiment and long term trends. University of Kiel (Germany), 156 pp.
- Nairn, Robert W.** 1996. Biogeochemistry of newly created riparian wetlands: Evaluation of water quality changes and soil development. Ohio State University (USA), 279 pp.
- O'Neil, Judith M.** 1995. Interaction of pelagic harpacticoid copepods and the colonial cyanobacterium *Trichodesmium* spp. University of Maryland (USA), 180 pp.
- Owen, Jeffrey S.** 1995. Stable nitrogen isotopes in Adirondack forest and aquatic ecosystems. State University of New York, College of Environmental Science & Forestry (USA), 128 pp.
- Parsons, Michael L.** 1996. Paleoindicators of changing water conditions in Louisiana estuaries. Louisiana State University (USA), 316 pp.
- Petrenko, Anne A.** 1997. Detection and characterization of the sewage plume at Sand Island, Hawaii. University of Southern California (USA), 249 pp.
- Pile, Adele J.** 1996. The role of microbial food webs in benthic-pelagic coupling in freshwater and marine ecosystems. College of William and Mary (USA), 161 pp.
- Pinheiro, Patricia R. de C.** 1996. Fractionation, characterization and dynamic of the dissolved phosphorus in Amazonian waters. Instituto Nacional de Pesquisas da Amazonia (Brazil), 121 pp.
- Puig, Alba.** 1992. Spatial and temporal structure of limnetic entomostraca (Crustacea) in E.R. Mexia Reservoir (Neuquen and Rio Negro provinces, Argentina). Buenos Aires University (Argentina), 180 pp.
- Qurechi, Naureen A.** 1995. The role of fecal pellets in the flux of carbon to the sea floor on a river-influenced continental shelf subject to hypoxia. Louisiana State University (USA) 255 pp.
- Rhode, Stephan C.** 1996. Sublethal UV-effects and UV-adaptations in *Daphnia*. Ludwig-Maximilians University (Germany), 150 pp.
- Richardson, Tammi L.** 1996. Buoyancy and vertical movements of marine planktonic diatoms. Dalhousie University (Canada), 146 pp.
- Roeck, Ute.** 1992. Mercury transfer as a descriptor of the hydrological functioning (river - aquifer exchange) of the upper Rhine flood plain in Alsace, France. Louis Pasteur University, Strasbourg (France), 252 pp.
- Romero, Jose R.** 1996. Stratification and mixing in hypersaline Mono Lake, California. University of California at Santa Barbara (USA), 238 pp.
- Sala, Ma. Montserrat.** 1995. Characterization of microbial activities of the microbial communities in the littoral zone of Lake Constance. Autonomous University of Barcelona (Spain), 246 pp.
- Sanyanga, Rudo A.** 1996. The inshore fish populations of Lake Kariba with reference to the biology of *Synodotis zambezensis* Peters, 1852. Stockholm University (Sweden), 115 pp.
- Schulz, Kimberly L.** 1996. The nutrition of two cladocerans, the predaceous Bythotrephes cederstroemi and the herbivorous Daphnia pulicaria. University of Michigan (USA), 212 pp.
- Sell, Anne F.** 1996. Changes within the zooplankton community as a consequence of extreme biomanipulation: The role of the invertebrate predator Chaoborus. University of Technology at Dresden (Germany), 121 pp.
- Shang, Shaoling.** 1995. Phosphorus cycling model study in Xiamen Western Sea, China. Xiamen University (China), 101 pp.
- Sharma, Subodh.** 1996. Biological assessment of water quality in the rivers of Nepal. University of Agriculture, Forestry and Renewable Natural Resources at Vienna (Austria), 398 pp.
- Shirenko, Larisa A.** 1995. Acidification influence on balance of production and decomposition in the small lakes of Karelian Isthmus. Institute of Limnology, Russian Academy of Sciences (Russia), 120 pp.
- Slotina, Svetlana E.** 1994. The role of biochemical self-purification process on the fate of pollutants and water quality in Lake Ladoga Basin. St. Petersburg Institute of Limnology (Russia), 218 pp.
- Soranno, Patricia A.** 1995. Phosphorus cycling in the Lake Mendota ecosystem: Internal versus external nutrient supply. University of Wisconsin at Madison (USA), 157 pp.
- Subramaniam, Ajit.** 1995. Optical properties of the marine cyanobacteria *Trichodesmium*: Applications to remote sensing. State University of New York at Stony Brook (USA), 180 pp.
- Sutheimer, Susan H.** 1995. Aluminum speciation in natural waters using high performance liquid chromatography with aluminum specific detection. Kent State University (USA), 267 pp.
- Sutherland, Terri-Ann F.** 1996. Biostabilization of estuarine subtidal sediments. Dalhousie University (Canada), 184 pp.
- Tank, Jennifer L.** 1996. Microbial activity on wood in streams: Exploring abiotic and biotic factors affecting the structure and function of wood biofilms. Virginia Polytechnic Institute and State University at Blacksburg (USA), 175 pp.

Thomas, Sabu. 1996. Limnology of a man-made reservoir on the Western Ghats, Southern Kerala. University of Kerala (India), 284 pp.

Twiss, Michael R. 1996. The influence of the microbial food web on trace metal cycling in lakes: An emphasis on the pelagic zone of Lake Erie. University of Quebec (Canada), 131 pp.

van Rooij, Jules M. 1996. Behavioural energetics of the parrotfish *Sparisoma viride*: Flexibility in a coral reef setting. University of Groningen (The Netherlands), 245 pp.

Venn, Cynthia. 1996. Recent benthic foraminiferida of two salt marshes on St. Catherines Island, Georgia: Paleological implications. University of Pittsburgh (USA), 126 pp.

Verschuren, Dirk. 1996. Recent and late-Holocene paleolimnology of Lakes Naivasha and Sonachi, Kenya. University of Minnesota, 320 pp.

Voytek, Mary A. 1996. Relative abundance and species diversity of autotrophic ammonia-oxidizing bacteria in aquatic systems. University of California at Santa Cruz (USA), 241 pp.

Walia, Archana. 1995. A study on the characteristics, leaching and toxicity of fly ash from I. P. thermal power station, Delhi and the impact assessment of its disposal on the limnology of river Yamuna. University of Delhi (India), 169 pp.

Wallace, William G. 1996. Acclimation and adaptation to pollutants: Effects on metal trophic transfer. State University of New York at Stony Brook (USA), 153 pp.

Weinberg, Irina V. 1995. Macrozoobenthos communities on stony beach of Lake Baikal. Irkutsk State University (Russia), 130 pp.

Weyhenmeyer, Gesa A. 1996. The significance of sediment resuspension in lakes. Uppsala University (Sweden), 162 pp.

Wolfe, Alexander P. 1994. A paleolimnological assessment of Late Quaternary environmental change on southwestern Cumberland Peninsula, Baffin Island, Northwest Territories, Canada. Queen's University (Canada), 161 pp.

Wolfstein, Kirsten. 1996. Investigations on the importance of phytoplankton as a component of suspended matter in the Elbe estuary. University of Hamburg (Germany), 164 pp.

Yager, Patricia L. 1996. The microbial fate of carbon in high-latitude seas: Impact of the microbial loop on oceanic uptake of carbon dioxide. University of Washington (USA), 174 pp.

Yamahira, Kazunori. 1996. The role of intertidal spawning on egg survival and the measurement of selection on the spawning tide level of the puffer *Takifugu niphobles*. Kyushu University (Japan), 60 pp.

Yee, Donald. 1997. Cobalt substitution for zinc in marine phytoplankton. Massachusetts Institute of Technology (USA), 167 pp.

Zubina, Larisa V. 1995. Peculiarities of oogenesis and reproductive cycle in ecologically different species of Baikalian cottid fishes (Cottidae, Abyssocottidae). Limnological Institute of the Russian Academy of Sciences, St. Petersburg University (Russia), 199 pp.

ASLO AWARD NOMINATIONS

1998 ASLO AWARD NOMINATIONS INVITED

Saran Twombly, ASLO Awards Committee Chair, Dept. Biological Sciences, University of Rhode Island, Kingston, RI 02881-0616 (plb101@uriacc.uri.edu)

Each year, ASLO recognizes its most outstanding scientists with the presentation of three awards:

- the **Raymond L. Lindeman Award**, which recognizes a young scientist for publication in a peer-reviewed journal;
- the **G. Evelyn Hutchinson Award**, recognizing a mid-career scientist who has contributed significantly to the field of aquatic sciences in the preceding 5-10 years; and
- the **Lifetime Achievement Award**, designated for an aquatic scientist who has made extraordinary, long-term contributions to the field.

Nominations for these awards represent one of the easiest, most important and positive ways that members of ASLO can contribute to the Society, to their colleagues, and to scientific excellence in general. Despite all of these positives, and despite the fact that the Society has many members well deserving of these awards, the number of nominations received for each award is typically small. The nomination procedure is neither complex nor lengthy, and your efforts promise a high return. Please consider nominating your most deserving colleague for these awards. Further information can be obtained from Susan Weiler (welier@whitman.edu) or me (PLB101@uriacc.uri.edu).

The deadline for 1998 nominations is January 15, 1998. Awards will be presented at the ASLO/ESA meeting in St. Louis, Missouri (June 7-12, 1998).

1998 AWARD NOMINATIONS

In some way, each of us acknowledges individuals and research programs that have profoundly affected our science, and promising young researchers whose exciting work deserves encouragement. What better way to do so than through a nomination for one of ASLO's awards? ASLO's awards provide opportunities to recognize outstanding individual performance and to highlight accomplishments of the aquatic science research community. The 1998 awards will be presented at the June 7-12 meeting in St. Louis, Missouri. Please take the time to nominate your colleagues for these awards. The deadline for 1998 nominations is January 15, 1996. Award details, including a list of previous recipients, is available on pp. vi-viii of the 1996/97 ASLO Membership Handbook and Directory. Please send nominations to the appropriate Award Committee Chair.

Raymond L. Lindeman Award

Eligible papers must deal with aquatic sciences, be written in English by an author who is no older than 35 years in 1996, and must be published in a 1996 volume of a peer-reviewed journal. Nominations should include a copy of the paper and a brief letter describing the impact of the paper on the field. Send nominations to:

Louis Legendre, Chair

Raymond L. Lindeman Award Subcommittee

GIROQ

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FAX: 418-656-2339

louis.legendre@bio.ulaval.ca

G. Evelyn Hutchinson Award

Emphasis in selection will be given for work accomplished during the preceding 5-10 years. Each nomination must be supported by a letter (not to exceed two pages) on qualifications. Ideally this letter should include statements that would form the basis of the presentation speech at the ASLO meeting. The nomination package may also include a list of important publications and other pertinent information, but in total this package shall be no more than 3 pages. The nomination should also be supported by 3 letters of endorsement of no more than 1 page each. These may be mailed separately or be included in the nomination package. The supporting letters should indicate the breadth of support for the nominees and the perspectives of different individuals to clearly indicate the contributions of the nominees in all their areas of expertise. Send nominations to:

Saran Twombly, Chair

G. Evelyn Hutchinson Award Subcommittee

Department of Biological Sciences

University of Rhode Island

Kingston, RI 02881-0816

Tel: 491-874-2609

FAX: 401-874-4256

plb101@uriacc.uri.edu

Lifetime Achievement Award

Emphasis in selection is given for contributions of any aquatic scientist whose work continues to be recognized for its importance and long-term influence. Emphasis in selection will be given for work accomplished during the preceding 5-10 years. Each nomination must be supported by a letter (not to exceed two pages) on qualifications. Ideally this letter should include statements that would form the basis of the presentation speech at the ASLO meeting. The nomination package may also include a list of important publications and other pertinent information, but in total this package shall be no more than 3 pages. The nomination should also be supported by 3 letters of endorsement of no more than 1 page each. These may be mailed separately or be included in the nomination package. The supporting letters should indicate the breadth of support for the nominees and the perspectives of different individuals to clearly indicate the contributions of the nominees in all their areas of expertise. Send nominations to:

Michael J. Vanni, Chair

Lifetime Achievement Award Subcommittee

Zoology Department

Miami University

Oxford, OH 45056

Tel: 513-529-3192

FAX: 513-529-6900

**"There are many good reasons to nominate
a colleague for an ASLO award and
no good excuses not to do so...."**

Robert H. Peters, 1996

ASLO FORUM

REBUILDING THE EXPERIMENTAL LAKES AREA

John A. Shearer and Ray Hesslein (Scientist-in-charge), Freshwater Institute, ELA Operations, 501 University Cres., Winnipeg, MB R3T 2N6 Canada (Fax: 204-984-2404; ShearerJ@DFO-MPO.GC.CA; HessleinR@dfo-mpo.gc.ca)

The Experimental Lakes Area (ELA) is very much “open for business”, and is rebuilding for the future.

Over the past several years, the Freshwater Institute (FWI) in Winnipeg, home base for ELA operations, has suffered major funding cutbacks and consequent staffing reductions. Particularly at risk was the freshwater research group that operates and staffs the ELA. Many feared that these cutbacks might spell the end for the Experimental Lakes program, and some ASLO members wrote letters of concern to the Canadian government, urging continued support for the ELA.

We are pleased to report that this situation has stabilized and the future of the ELA looks brighter than it has for some years. Approximately one-third of the freshwater science staff at the FWI has taken early retirement or moved to positions elsewhere. However, the core group that operates the ELA facility remains relatively intact, and is continuing with long-term research activities.

The Canadian Department of Fisheries and Oceans (DFO) has committed to funding the core operations of the ELA, including the long-term monitoring programs. For the first time in years, the Canadian government is directly supporting this important monitoring of natural lake ecosystems. We confidently expect these comprehensive data records to continue into their fourth decade. At the same time, we will be able to reduce the “out of pocket” costs for many users of the ELA facilities, thereby making it easier for visiting researchers to participate in the on-site scientific programs.

Equally encouraging is the commitment by DFO to replace several of the dilapidated buildings at the ELA field station. The kitchen/dining/meeting facility was replaced two years ago. This year we are replacing the aging workshop with a larger, more energy-efficient structure capable of accommodating the diverse construction and maintenance needs of a remote field station serving up to fifty researchers. All heating for the new building will come from the “waste heat” currently released to the environment from the diesel engines that power the electrical generators.

We are also replacing the station manager’s residence, and two of the original trailer laboratories, which have become difficult to keep operational. Over the next several years, we plan to replace other aging structures with more efficient, and energy-efficient, buildings, thereby reducing operating costs while improving the “usability” of the facility.

While DFO is making this significant commitment to the facility, and to long-term monitoring on site, they have made it clear that they are seeking partners to share in the experimental research programs. The scope of many scientific

activities for which the ELA is particularly suited extends beyond what DFO sees as its mandate. Because of DFO’s limited mandate and the significant staff reductions, the ELA on its own cannot do as much research as in the past. Funding, and research expertise, must come from other sources if the ELA is to continue to do the kinds of experimental studies for which it is renowned. Currently, several new ecosystem-scale experiments are in the planning phases, but inquiries regarding further collaboration or partnership are welcome. For more information, please contact me at the address above.

NATIONAL ASSOCIATION OF MARINE LABORATORIES LAUNCHES A LABORATORY NETWORK (LABNET)

Thomas C. Malone, Center for Estuarine and Environmental Studies, Horn Point Environmental Laboratory, P.O. Box 775, Cambridge, MD 21613 (malone@hpl.umces.edu)

In response to recommendations generated by the 1995 Sarasota Workshop on the “Roles of Coastal Laboratories in the Implementation of the Nation’s Emerging Priorities for Research in the Coastal Zone”, The National Association of Marine Laboratories (NAML) is working to design and implement LABORATORY NETWORK (LABNET), a bold attempt to network the nation’s coastal laboratories into a virtual monitoring system for detecting and forecasting environmental change in the coastal zone.

NAML represents over 125 laboratories that provide direct access to the diversity of ecosystems that define the U.S. coastal zone and to state agencies responsible for managing coastal environments and resources. NAML laboratories provide on-site resources for research, monitoring, education, and public outreach; and their faculties constitute a national brain trust of information and knowledge on the structure and function of coastal ecosystems. Although individual laboratories and their respective faculties have made many important contributions to coastal marine science, the collective potential of this network of coastal laboratories in the implementation of locally relevant, nationally coordinated monitoring programs has yet to be realized.

To this end, NAML initiated an effort (LABNET) to document and apply the collective assets of U.S. coastal laboratories to meet national needs for monitoring and research in the coastal zone. This is a three stage process that will be completed in 1998: (1) determine the technical feasibility and challenges that will have to be addressed in building the infrastructure for LABNET; (2) survey the NAML laboratories to document existing data bases, associated metadata, and activities that address issues of environmental change in the coastal zone; and (3) design and implement pilot projects to test the feasibility and usefulness of the LABNET concept. With funding from NOAA, EPA, and NSF, NAML conducted the “initiating” workshop in

Charleston, SC. The workshop, hosted by the NOAA Coastal Services Center, brought together an eclectic mix of computer technicians, scientists, and laboratory directors to define the goals of LABNET, develop operating guidelines, and identify technical issues that must be addressed to develop the infrastructure needed to make LABNET a reality.

After 3 days of hard work and constant lashing by Kenneth R. Tenore (President of NAML), the assembled group agreed on the following:

- LABNET should be an integrated and interactive network of coastal environmental data bases. The operational goal is to collate, integrate, visualize, and exchange data collected locally in a nearly seamless visualization and analysis environment. Technologies such as the Internet and World Wide Web are necessary but, in themselves, are not sufficient to achieve this goal.
- The scientific goal is to provide an effective and timely means to answer questions at regional to continental scales of interest and to assess local observations in a broader regional or global context, i.e., to address questions that require data and information from multiple sources.
- In this context, LABNET is NOT intended to be a vehicle for creating access to all data collected from all coastal ecosystems. Although this may effectively happen over time, LABNET will be problem-driven, i.e., once the infrastructure is in place to integrate diverse data from several laboratories, data will be targeted in response to the need to solve a particular problem. For example, if the goal is to document multi-year trends in the frequency, duration, or spatial extent of red tides in a particular region, LABNET will provide the means to network the appropriate set of laboratories and to explore historical data bases and/or to integrate data from ongoing monitoring efforts to determine the temporal and spatial coherence of blooms and quantify trends in the face of variability on shorter time scales.
- A survey will be conducted by the Institute for Survey and Policy Research, University of Wisconsin-Milwaukee. The survey, which will take place this fall, is intended to provide the information needed to design and implement 1-2 pilot projects, the purposes of which are to develop and test methods and protocols for quality control and the exchange, analysis, and visualization of data from diverse sources and to demonstrate the potential of the LABNET infrastructure to advance the understanding of important environmental issues and solve problems in a timely and cost-effective way.

A second workshop will be organized in 1998 to assess preliminary results from these pilot projects and to develop proposals to use LABNET to address problems that require the collective resources of coastal laboratories to monitor and evaluate changes in coastal ecosystems over extended periods.

For more information on the Sarasota Workshop, contact Tom Malone (malone@hpl.umces.edu). For more information on LABNET, contact Ken Tenore (tenore@cbl.umces.edu).

IMPACT OF MAJOR OCEANOGRAPHIC RESEARCH PROGRAMS: COMMUNITY INPUT REQUESTED

Rana A. Fine, Chair, NRC Committee on Major U.S. Oceanographic Research Programs, Rosenstiel School, University of Miami, 4600 Rickenbacker Causeway, Miami, FL 33149 and Dan Walker, Committee Study Director, National Research Council, Ocean Studies Board HA 470, 2101 Constitution Ave., NW, Washington, DC 20148

In June 1996, the National Research Council (NRC) formed the Committee on Major U.S. Oceanographic Research Programs to foster coordination among the large programs (e.g., Global Ocean Ecosystems Dynamics (GLOBEC), Joint Global Ocean Flux Study (JGOFS), World Ocean Circulation Experiment (WOCE), Coastal Ocean Program (CoOP), Ocean Drilling Processes (ODP), Climate Variability and Predictability (CLIVAR), Ridge Interdisciplinary Global Experiments (RIDGE), Marine Aspects of Earth System History (MESH) and examine their role in ocean research. In particular, the committee is charged with (1) enhancing information sharing and the coordinated implementation of the research plans of the major ongoing and future programs; (2) assisting the federal agencies and ocean sciences community in identifying gaps, as well as appropriate follow-on activities to existing programs; (3) making recommendations on how future major ocean programs should be planned, structured and organized; and (4) evaluating the impact of major ocean programs on the understanding of the oceans, development of research facilities, education, and collegiality in the academic community. The activity was initiated at the request of the National Science Foundation (NSF) Division of Ocean Sciences, is overseen by the NRC's Ocean Studies Board (OSB), and is funded by both NSF and the Office of Naval Research.

The Committee is currently gathering information from members of Scientific Steering Committees (SSCs) of several of the ongoing major ocean programs. We would also like to obtain input from past members of SSCs or others who have been involved with major programs. Because of the influence these programs have on ocean science funding, we are very interested in hearing the perspectives of ocean scientists who have not been involved with any of the major ocean programs. To facilitate obtaining input from such a broad cross-section of the ocean science community, we have posted a brief questionnaire on an Internet site. The questionnaire can be accessed as of August 1, 1997, via the OSB web page (<http://www2.nas.edu/OSB/>). We encourage you to provide specific, constructive responses to the questions. Your input, as well as a broad range of other information, will be used by the committee to formulate its findings and recommendations regarding the role and impact of major programs. The committee's report will be released in 1998. We encourage all members of the community to participate in this important discussion.

AN INVITATION FROM THE NATIONAL CENTER FOR ECOLOGICAL ANALYSIS AND SYNTHESIS

O. James Reichman, National Center for Ecological Analysis and Synthesis (reichman@nceas.ucsb.edu)

In May, 1995, the National Center for Ecological Analysis and Synthesis was established at UC-Santa Barbara. The Center's mission is to advance the state of ecological knowledge through a search for general patterns and principles by synthesizing existing information. The Center supports workshops, working groups (small groups intensively addressing an issue), sabbaticals, postdoctoral associates, and creative combinations of these approaches and others. Funds are available to cover travel, accommodations, and local costs for these activities, and stipends are available for sabbatical fellows and postdoctoral associates. Facilities include offices, meeting rooms, high performance computing capabilities, and logistical assistance is provided for arranging Center activities.

Ecology encompasses many associated disciplines and the Center is interested in involving scientists from a variety of fields in analyses of important ecological topics. Ecologists, and scientists in related disciplines, are encouraged to discuss possible activities with the Director or to submit proposals to NCEAS. Proposals that deal with particularly novel ideas or approaches, that bring innovative ideas to bear on important issues, or that synthesize existing information in a creative fashion are especially welcome. Additional information about the Center, including contacts, proposal guidelines, and deadlines, is available at <http://www.nceas.ucsb.edu>.

CAREER RENEWAL: A PERSONAL VIGNETTE

Frank Cynar, Geosciences Editor for Academic Press (fcynar@acad.com)

Six years ago, if you asked me about my career plans, I might share my enthusiasm about marine microbiology or marine biogeochemistry. My enthusiasm was a natural by-product of the preparation and submission of several ONR, NASA, and NSF grant proposals in these disciplines. At about the same time, I became aware of the plethora of reports in the pages of *Physics Today*, *Science*, and *EOS* describing the plight of many young PhDs. For a time however, blind optimism protected me from a full realization of these publicized woes. However, over time my sub-optimal performance in grantsmanship (as I prefer to think of it) and the hard reality of these reports converged. Here is a tale of how my own career transformation from an academic scientist to an academic science editor precipitated the publication of *Career Renewal*, a career guide for PhD scientists. In the autumn of 1993, following a financially truncated ONR contract and our son's first birthday, I assumed an enjoyable, albeit part-time, professorial position at the University of San Diego. There I discovered I liked teaching and the opportunity it afforded to bookish scholarship. This job was comfortable, but only for a while. The birth of our daughter and the continued paucity of tenure-track opportunities, replaced comfort with anxiety and financial stress. With the prodding and support of my wife, Nancy, and

former mentor at Scripps, Art Yayanos, I explored positions in industry that required qualifications I had little comprehension of. Miraculously I advanced through interviews with only the ingenuity, enthusiasm, and problem-solving skills developed during my years as an ocean-going and bench-top scientist. The same curiosity that nurtured my earliest interest in science, now propelled me through the mysterious world beyond the ivory tower. Over the next several months, my intermittent ambivalence about leaving the comfort of academia dissolved. It was replaced by an awareness that the proactive, open-minded attitude which served me so well in oceanography was equally applicable to satisfying careers outside of academia. With this newfound confidence, I set forth to select a career that would satisfy my curiosity and fulfill my commitment to advancing science and science education.

Today I have that job. As the Geosciences Editor for Academic Press, I enjoy researching and developing products and services for the informational needs of my science colleagues. I'm charged with the acquisition of scholarly books, serials, and other products that promise to serve the needs of academic and professional geoscientists around the world. I love my job and the satisfaction I derive from seeing my reference works, practical handbooks, trans-disciplinary monographs, and pedagogical textbooks help geoscientists to advance the earth and planetary sciences.

Pursuant to assuming duties as the Geosciences Editor at Academic Press and because of my experiences, I commissioned a resource guide to fill the needs of scientists seeking career rejuvenation and satisfaction. I solicited Dr. Stephen Rosen to champion this book project because of his accomplishments. Years before, within the pages of *Science*, I had read of his success in helping hundreds of scientists revive their careers. *Career Renewal: Tools for Scientists and Technical Professionals* is specifically targeted to Ph.D. scientists and contains the cognitive and behavioral tools needed to ensure long-term career health and well-being. It is gratifying to have facilitated the conceptualization and development of a timely resource for colleagues undergoing career reappraisal. Rosen and Paul's *Career Renewal* (ISBN 0-12-597060-9) will publish in Oct. 1997. Details are displayed on our WWW book catalog at <http://www.apcatalog.com/>.

NEPOTISM AND SEXISM IN PEER-REVIEW

Catherine M. Pringle and Patty A. Gowaty, Institute of Ecology, University of Georgia, Athens, GA 30602-2602 (pringle@sparrow.ecology.uga.edu or gowaty@ecology.uga.edu)

A recent study from Sweden (Wenneras, C. and A. Wold, 1997. Nepotism and sexism in peer-review. *Nature* 387:341-343) is the first to systematically document a mechanism of gender discrimination in science. The paper shows that reviewers' perceptions of the quality of scientific work differs by gender of applicant, even when the quantity and quality of the applicant's previous scientific work is similar.

Data indicate that reviewers routinely undervalue the quality of work by women relative to that by men. This

suggests an explanation for why women leave science more often than men do after achieving PhDs: it is more difficult for women to get funded, even when their work is as good as their male competitors.

This paper also reviewed the experimental papers demonstrating that it is also more difficult for women to publish than it is for men - not because of child care and family duties, but again because of the reviewers' perceptual bias. Experimental studies have shown that when reviewers think a paper is written by a woman, it is more likely to be returned with a recommendation for rejection (reference is cited in the *Nature* article).

Studies have documented that women as well as men are guilty of bias against women. We must *all* caution ourselves to be completely objective when reviewing the work of others. And so we are left with this challenging question: How do we self-monitor - in a reliable way - our own gender-biased behavior?

WILLIAM M. LEWIS, JR. RECEIVES NATURAL RESOURCES ACHIEVEMENT AWARD

William M. Lewis, Jr. of the University of Colorado was honored with the Renewable Natural Resources Foundation's (RNRF) 1996 Sustained Achievement Award. The award recognizes a long-term contribution and commitment by an individual in the natural resources profession. According to RNRF Chair Richard L. Duesterhaus, Dr. Lewis "personifies the ideal of a natural resources scientist committed to the application of sound scientific information to the stewardship of our planet." By serving as the chair for a number of National Academy of Sciences (NAS)/National Research Council (NRC) committee projects, Lewis has advanced the natural resources sciences immensely and added to the national debate on several environmental issues. Lewis chaired

the NRC's committee on wetland's characterization and authored the resulting report *Wetlands Characteristics and Boundaries*, which has had a significant impact on the congressional debate on wetlands legislation and the reauthorization of the Clean Water Act. His report presents a reference definition of wetlands that sets the stage for a fresh look at existing practices for regulating the use of wetlands. Lewis has also made significant contributions to studies involving river resource management in the Grand Canyon. For six years he has chaired a committee responsible for reviewing, critiquing, and making recommendations for conducting environmental studies of the lower Colorado River. The committee's conclusions and recommendations have suggested alternative research strategies and have led to many changes in the flow regime of the Colorado River, the way Glen Canyon Dam is operated, and a change in the way the Bureau of Reclamation will conduct large environmental studies in the future.

For over 25 years Dr. Lewis has played a leading role and made a national contribution to the science and study of water resources, water quality issues, and biology. He has also been an active researcher and educator. In addition, Lewis has served on the ASLO Board of Directors, chaired the 1994/1995 Challenges for Limnology Committee, and authored the report, *Challenges for Limnology in the United States and Canada: An Assessment of the Discipline in the 1990's* (ASLO Bulletin 4(2), 20 pp.)

Founded in 1972, the RNRF is a non-profit consortium of 20 professional, scientific and educational organizations whose purpose is to advance science, the application of science, and public education in managing and conserving renewable natural resources. RNRF's member organizations recognize that sustaining the Earth's renewable resources base will require an interdisciplinary approach to problem-solving by biological, physical and social scientists.

EDUCATION

Raymond P. Gerber, Section Editor (rgerber@sjcme.edu)

REALIZING ENVIRONMENTAL LITERACY THROUGH ADVANCED TECHNOLOGY AND EXPERIMENTATION

Jennifer I. Tougas, Institute of Ecology, University of Georgia, Athens, GA 30602

The University of Georgia requires undergraduates to complete an environmental literacy requirement for graduation. Ecology 100, the Ecological Basis of Environmental Issues, is one course that was developed to meet this requirement. A critical feature that separates Ecology 100 from other environmental literacy courses on campus is the use of hands-on field exercises. By actively involving students in long-term ecological research, students experience the scientific process first hand. This demystifies science for many students, particularly those lacking a scientific background. As a result, students that have completed Ecology 100 are prepared to make decisions in their lives based on scientific information they may encounter in newspapers and magazines.

Project RELATE, Realizing Environmental Literacy through Advanced Technology and Experimentation, is a collaborative effort between several departments at the University of Georgia, including Ecology, Geography and Instructional Technology. The Georgia State Botanical Garden serves as a living laboratory for field exercises, while interactive software delivers background information and analyzes data.

The lab: This lab combines experiential learning in the field with interactive computer support in the lab. Students compare two streams with differing land uses in the watersheds. One stream runs through a predominately forested watershed at the Georgia State Botanical Gardens while the other runs through an urban watershed through the center of campus and underneath the football stadium. In the field, students conduct macroinvertebrate and stream cross-section surveys. In the lab, students use computers to browse background information and to analyze the data they collected.

The setting: From the first week of the lab, students are They also measure the cross-sectional area of the stream channel.

Students use the interactive computer software during the third week. Background information is provided in a variety of ways, from quick time movies, to simulations of rain events in different watersheds, to queries on overhead photographs of the watersheds. The students also enter the data they collected and record the graphs produced by the computer. Students use both the background information and the graphs when writing their final report which is due during the fourth week of the lab.

The results: Students have responded positively to the field and computer exercises. While the field trips are highlights of the course for many students, the computer support is effective in delivering information to the students. On one final exam, the overall exam average was 78%, while the average for questions from the stream lab was 94%.

Contact information: For more information about this project, you can visit the Project RELATE web site at: <http://lpsl.coe.uga.edu/RELATE/Enviroilit.html>

You can also contact Dr. James Affolter (affolter@uga.cc.uga.edu), the director of research at the Georgia State Botanical Garden, or Dr. Thomas Reeves (treeves@moe.coe.uga.edu), professor of instructional technology.

ADVICE TO ADVISORS AND GRADUATE STUDENTS

Lorin K. Hatch, Tahoe Research Group, Division of Environmental Studies, Wickson Hall, One Shields Avenue, University of California, Davis, CA 95616 (lkhatch@ucdavis.edu)

The necessity of graduate student goal-setting and career planning is made evident by the increases in the number of journals and Internet databases, shrinking funding opportunities, and greater teaching loads. Presented here are the results of a 1996 *ASLO Bulletin* survey which asked university and college faculty for their advice to graduate students. It is hoped that by sharing the results of this survey, along with insight I have gained during my participation in the UC Davis Program in College Teaching, graduate students will have additional tools that can be used in career planning.

There were 33 surveys returned from the *ASLO Bulletin* and from circulation during the 1996 Milwaukee meeting: 16 limnologists, 17 oceanographers; 15 females, 18 males; 27 research faculty, 6 non-research (teaching-only) faculty. It was not appropriate to apply statistical analysis to the survey results, due in part to the small number of returned surveys and the open-ended nature of the questions. The most informative aspect of the surveys was the variety of responses, which I summarized as "top answers" (in no particular order) for each of the following questions:

- 1) What was the best decision you made to advance your career** (during/after graduate school)? Publish early; write proposals; gain teaching experience; pursue the best opportunities and post-docs.
- 2) What was your worst decision?** Too much time on non-research obligations (teaching, committees); not

publishing); changing research emphasis; overspecialization, career interruption.

- 3) If an opening in your field became available at your institution, what top three qualities would you deem desirable in an applicant?** Teaching ability/experience; research experience (publications/grants); communication skills; strong work ethic.
- 4) What do you see as the biggest stumbling block to graduate students pursuing an academic career in your field?** Lack of funding/jobs; older faculty not retiring; unclear personal goals; lack of a good mentor.
- 4a) What would you recommend to reduce the size of the stumbling block?** Reduce the number of graduate students; explore non-research activities; seek a good program and mentor; more funding.
- 5) What advice would you give to graduate students pursuing an academic career in your field?** Work hard; publish early and often; get teaching experience; be flexible (attain new skills, seek opportunities).
- 6) Do you think the number of Ph.D. students in your field should be reduced?** 13 yes; 19 no responses.
- 7) Do you think the Ph.D. degree should be oriented to train students for jobs outside academia?** Answers: 28 yes; 5 no.

Many of the survey responses might appear "obvious" and intuitive, but it is important to continually remind ourselves of our career priorities. It is also apparent that the issue of Ph.D. programs needs to be addressed; the growing number of researchers cannot all expect to obtain faculty research appointments, given the finite number of research universities. Perhaps non-research programs can participate in some way with research programs at a nearby university, ensuring that education remains exciting at both institutions. An infusion of research limnologists and oceanographers into these non-research institutions would also bring aquatic science research into the lives of more people. This increased public awareness might pay future dividends in the form of increased funding to the aquatic sciences.

The advisor-student relationship should not be taken lightly, even though workloads have made it difficult for both parties to focus on this partnership. The ability for them to work well with one another and complimentary personalities are desirable. The development of academic communication skills begins with this relationship, and mentors should encourage students to seek out opportunities to enhance these skills in both the written (proposals, publications) and oral (public speaking courses, conference talks, teaching) areas. Advisors and their students should sit down and analyze the student's aptitude for research, teaching, communication, etc. with specific career opportunities in mind. This evaluation does not necessarily mean that advisors should discourage students from pursuing a specific career track; the evaluation is done for the student's benefit to make the student aware of his/her strengths and weaknesses. This realistic approach necessitates the nurturing of the advisor-student relationship. Close interaction will likely shorten the length of graduate programs by ensuring that students are

progressing well and being trained for available jobs after graduate school.

Teaching potentially shapes the opinions of far more citizens than research, so teaching skills may be considered a social responsibility. Graduate students on the academic research career track should not be lulled into thinking that they can “fall back” into a teaching-only position if their research career plans fail to bear fruit. Teaching and communication skills are learned abilities that need to be developed during graduate school. College teaching programs at many universities are addressing these needs, enhancing the pool of qualified candidates for teaching positions. Participation in these programs should be encouraged for all graduate students, regardless of their future teaching plans, if only for the valuable communication skills that will be obtained. The enhancement of research abilities is also closely tied to teaching; as the old saying goes, one never understands a subject as well as when one teaches that subject.

Career opportunities for current and future limnology and oceanography graduate students are becoming more competitive, which emphasizes the need for advisors to evaluate the skills and expectations of their students early in their programs.

I thank all participants in this survey, and hope that these issues will continue to be addressed by ASLO. I welcome comments and ideas by others interested in education issues.

RESEARCH OPPORTUNITIES FOR UNDERGRADUATES IN TROPICAL LAKE STUDIES

The Nyanza Project is a new summer research training program for undergraduates, sponsored by the International Decade of East African Lakes (IDEAL) and funded by the National Science Foundation and the Lake Tanganyika Biodiversity Project. This 6 week program is open to sophomore-senior level undergraduates of any nationality attending a U.S. college or university, or to students from the countries surrounding Lake Tanganyika (Tanzania, Burundi, Zambia and Zaire), who are interested in continuing research careers in any aspect of aquatic sciences (limnology, ecology and evolutionary biology, conservation biology, geolimnology and paleolimnology). Students who are members of under-represented minority groups are particularly encouraged to apply.

The program will take place at Kigoma, Tanzania to take advantage of world class research opportunities at Lake Tanganyika. Students who are accepted into the program will have their airfare, room and board and research expenses paid by the project and will be given a stipend. Applications for the 1998 program (June 1-July 10) will be accepted until Jan. 1, 1998. For further information please contact (for U.S. Student inquiries):

The Nyanza Project
Department of Geosciences, University of Arizona
Tucson, AZ 85721
Tel. (520) 626-7312 Fax (520) 621-2672
nyanza@geo.arizona.edu
or visit our Web Site at: <http://www.geo.arizona.edu/nyanz>

LAKE LEGENDS

C. Susan Weiler, Bulletin Editor

The December, 1996 issue of *LakeLine* has a series of articles on legends involving lakes, with two contributed by ASLO member **David Brakke** (Magical powers, mystical beings and haunted waters: Lake lore in folk tales, legends and literature; and Geology redefined: Lake information according to folk tale and legend).

And while we are on the topic of Lake Legends, **Tommy Edmondson** has also published an article in *LakeLine* (December, 1996), this one on Libraries and Lakes. It is the text of a speech given in 1991 on the occasion of the University Of Washington library receiving its 5 millionth volume. Tommy's book, *The Uses of Ecology: Lake Washington and Beyond*, was selected to represent the five millionth volume.

This editor regrets that the page limitations of the *ASLO Bulletin* force loyal ASLO members to publish articles longer than 1-2 pages elsewhere!!! Don't let this deter you from reading David and Tommy's articles, and, of course, Tommy's book! If you can't find *LakeLine*, Tommy informs me that he has already been sending photocopies of the article as a reward to people who give evidence of having read *Uses of Ecology* and now that the article has been published he will be happy to send a reprint to anyone who requests it. I'm sure David will similarly reward interested individuals. I highly recommend them.

WATER QUALITY DATA FOR SAN FRANCISCO BAY NOW ON THE WORLD WIDE WEB

For almost three decades the U.S. Geological Survey has maintained a program of research and observation in San Francisco Bay. The program includes regular measurements of water quality at fixed stations along a 145-kilometer transect. The data set includes measures of salinity, temperature, dissolved oxygen, suspended sediments, turbidity, and chlorophyll concentration. A new web site has been established to describe the measurement program, display results of historic water quality measurements, and provide an opportunity to see the current conditions in San Francisco Bay from results of the most recent sampling cruise. Researchers, teachers, and students interested in data sets describing spatial and temporal variability of estuarine hydrography and water quality should view:

<http://sfbay.wr.usgs.gov/access/wqdata/index.html>

For more information, contact Jim Cloern (jcloern@usgs.gov).

SEA-BIRD ELECTRONICS

ASLO MEETINGS

ASLO/ESA 1998:

THE LAND-WATER INTERFACE: SCIENCE FOR A SUSTAINABLE BIOSPHERE

Catherine M. Pringle, University of Georgia, Institute of Ecology, 711 Biological Sciences Bldg., Athens, GA 30602-2602 (Tel: 706-542-4289; Fax: 706-542-3344; pringle@sparrow.ecology.uga.edu)

7-12 June 1998, St. Louis, Missouri

Abstract Deadline: 5 January 1998

Details: <http://aslo.org/>

ASLO is meeting with ESA in June of 1998 to focus on key research at the land-water interface with the goal of strengthening connections between research and management. As you can see from the plenary talks and special sessions listed below, this meeting has generated tremendous enthusiasm. To foster group interactions and discussion, the meeting format will include a full day of thought-provoking plenary addresses, followed by three days of concurrent sessions—each beginning with a plenary address and followed by panel discussions and synthesis. Poster presentations will be on view throughout the meeting with formal poster sessions after the concurrent oral sessions. Contributions from all areas of terrestrial and aquatic science are welcomed, but topics dealing with the land-water interface will have priority for oral presentation. Due to space limitations, ASLO and ESA members are encouraged to present posters.

Workshop ideas are still being requested, but I can mention one that has already been approved: “**Environmental outreach education in freshwater resources**” will be held Sunday, June 7. The goal of this workshop is to present information on some exemplary programs and provide a forum for discussion and the exchange of information on environmental outreach education for protection and conservation of water resources. For more information, please check the ASLO web page (<http://aslo.org/>), or contact Ron Bjorkland (rbjorkland@ggy.uga.edu) or me (pringle@sparrow.ecology.edu).

PLENARY SPEAKERS: As you may know from the recently mailed poster (please post prominently!), we have a stellar and exciting cast of plenary speakers which include:

JoAnn M. Burkholder, North Carolina State University: “The Land-Water Interface: Aquatic Ecosystems and the Increasingly Urbanized Coastal Setting.” Burkholder recently received a Pew Fellowship and is known for her discovery of and groundbreaking research on *Pfiesteria piscida*.

Theo Colburn, World Wildlife Fund: “Aquatic Ecosystems: Harbingers of Endocrine Disruption.” Colburn is a senior scientist with the World Wildlife Fund, the author of the book “Our Stolen Future,” and a recognized expert on endocrine-disrupting chemicals.

Jane Lubchenco, Oregon State University: “Science and Society: A New Social Contract.” Lubchenco is internationally renowned for her scientific achievements in marine ecology and leadership in linking science and policy. She also led the innovative efforts of the Ecological Society of

America to set national priorities for ecological research by creating the Sustainable Biosphere Initiative.

David Pimentel, Cornell University: “Water Resources, Agriculture, and Ecological Systems.” Pimentel is a recognized expert on pesticides in the environment and co-editor of the book “The Pesticide Question: Environment, Economics, and Ethics.”

Sandra Postel, Global Water Policy Project: “Water and Sustainability: The Challenges Ahead.” Postel is internationally renowned for her book “The Last Oasis” and the many Worldwatch Papers she has written on water resource issues during her tenure as Vice-President for Research at the Worldwatch Institute.

Robert J. Naiman, University of Washington: “Freshwater and Ecosystems: A Future Perspective.” Naiman played a key leadership role in the development of the Freshwater Imperative. He is editor of the book, “Watershed Management: Balancing Sustainability and Environmental Change.”

Garth Redfield, South Florida Water Management District: “Ecological Science, Land-Water Interactions, and Aquatic Ecosystem Management.” Redfield is currently lead environmental scientist of the South Florida Water Management District of West Palm Beach where he is involved in many interdisciplinary projects including restoration of the Everglades ecosystem. He is founding editor of the journal *Lake and Reservoir Management*.

Ivan Valiela, Boston University: “Integrating Ecosystem Concepts Across Terrestrial, Marine, and Freshwater Systems: New Paradigms for Sustainability.” Valiela is internationally recognized for his research on the linkages between terrestrial and aquatic ecosystems and is author of the textbook “Marine Ecological Processes”.

SPECIAL SESSIONS: There will be a total of 18 concurrent sessions, with six sessions per day:

- 1) **Aquatic Ecosystems in the Urban Landscape: Into the Foreseeable Future:** Michael J. Paul, Judy L. Mayer, Elisabeth Kramer, University of Georgia and Carol A. Couch, United States Geological Survey
- 2) **Arctic Contamination: Levels, Transport, and Human and Ecological Impacts:** M. Jawed Hameedi, National Oceanic and Atmospheric Administration, U.S. Department of Commerce
- 3) **Autotrophic and Heterotrophic Basis for Freshwater and Marine Food Webs:** Michael L. Pace, Institute of Ecosystem Studies and Amy D. Rosemond, University of Georgia
- 4) **Carbon Cycling in Boreal Ecosystems:** Jill L. Bubier and Patrick M. Crill University of New Hampshire
- 5) **Coastal Habitat Restoration:** Dail W. Brown, National Marine Fisheries Service and Thomas Ardito, National Oceanic and Atmospheric Administration

- 6) **Contemporary Issues Concerning Watershed and Estuarine Degradation and Restoration in Chesapeake and San Francisco Bay:** Walter R. Boynton, Chesapeake Biological Laboratory and James T. Hollibaugh, University of Georgia
- 7) **Ecological Indicators in Environmental Monitoring:** Brian H. Hill and Frank H. McCormick, US Environmental Protection Agency
- 8) **Ecosystem Impacts from Harmful Algal Blooms:** JoAnn M. Burkholder, North Carolina State University and Sandra Shumway, Southampton College
- 9) **Fisheries Ecology: From Lakes to Oceans:** James F. Kitchell, University of Wisconsin-Madison and James A. Rice, North Carolina State University
- 10) **Global-Scale Effects of Hydrological Alterations: What We Know And What We Need To Know:** David M. Rosenberg, Freshwater Institute and Catherine M. Pringle, University of Georgia
- 11) **Linkages between Ecosystems: The South Florida Hydroscape:** James W. Porter and Karen G. Porter, University of Georgia
- 12) **Linking Non-Linear and Non-Stationary Time-Series in Ecology to Climatic Forcing on Terrestrial and Aquatic Processes, Population and Community Ecology:** Andrea Belgrano, Royal Swedish Academy of Sciences
- 13) **Limitation of Primary Production across Ecosystems:** Kenneth H. Coale, Moss Landing Marine Laboratories and Lee F. Klinger, National Center for Atmospheric Research
- 14) **Resource Ratio Approaches to Understanding Ecological Processes in Freshwater, Marine, and Terrestrial Ecosystems:** Susan S. Kilham, Drexel University, Robert W. Sterner, University of Minnesota, and Stephen V. Smith, University of Hawaii
- 15) **Science-Management Connections at the Land-Water Interface:** Penelope Firth, National Science Foundation, and Elizabeth R. Blood, Jones Ecological Research Center
- 16) **Temporary Aquatic Habitats: Constraints & Opportunities:** Steven Schwartz, University of Haifa and David G. Jenkins, University of Illinois at Springfield
- 17) **Vascular Plants as Littoral Links:** Cathleen Wigand, Institute of Ecosystem Studies and Randolph Chambers, Fairfield University
- 18) **Linking Coastal Ecosystem and Watershed Health: The Mississippi River Basin and Hypoxia in the Gulf of Mexico:** Donald Boesch, University of Maryland, and Nancy Rabelais, Louisiana Universities Marine Consortium

REMINDER - ABSTRACTS DUE 5 JANUARY 1998!

The Call for Papers will be printed by mid-September for distribution. We plan to have it on the web prior to that (hopefully by mid August) and this will link from ASLO to ESA. Access information is not available right now so please check the ASLO home pages after August 30th for meeting information.

<http://aslo.org/>

The Call for Papers will be included with L&O Vol. 42, No. 3 and mailed to all ASLO non-Journal subscribers and 1997 non-ASLO member meeting attendees. It will also be mailed to all ESA members with the ESA Bulletin. Target mailing dates are mid-September for the L&O mailing and mid-October for the ESA mailing.

ASLO '99: AQUATIC SCIENCES MEETING UPDATE

C. Susan Weiler, Executive Director

Plans are progressing for the ASLO 1999 meeting. The most important news is that a location has been selected: The meeting will return to Santa Fe Feb. 1-5, 1997. To reduce the commute between sessions, this time the meeting will be held at the Sweeney Center, the Eldorado Hotel, and the Hilton Hotel. The Eldorado and Hilton are directly across a quiet street from each other and just a short walk from the Sweeney Center. After consideration of several options, the Board agreed that the change from the La Fonda and Inn at Loretto to the Eldorado and Hilton will significantly reduce, if not eliminate, concerns about distances and enable us to again take advantage of the unique setting offered by Santa Fe. Registration and other logistics will be handled by The Schneider Group, which also manages the ASLO Business Office.

Meeting co-chairs Karen F. Wishner (kwishner@gsosun1.gso.uri.edu) and John A. Downing (downing@iastate.edu) are just beginning the planning process and are seeking volunteers for the Program Committee. If you are interested in serving on the committee, please contact Karen or John. If you are interested in developing a special session, please send them a proposed title and brief (short paragraph) description.

SCIENTIFIC JOURNALS AVAILABLE: 1978 & LATER

Sarah Horrigan (horrigan_s@a1.eop.gov)

I have collections of old journals (L&O since 1978, *Applied and Environmental Microbiology* and *Microbiological Reviews* since 1983) which I no longer read but hate to throw away. I'll be happy to pay postage for shipping, if someone would use them.

JOBS

EDITOR-IN-CHIEF LIMNOLOGY & OCEANOGRAPHY

Application Deadline 1 FEBRUARY 1998:

Applications are invited for the position of Editor-in-Chief of Limnology and Oceanography. Applicants must be a member of ASLO. The successful candidate will be responsible for the content and management of the journal and will replace Dr. David Kirchman who is stepping down at the end of CY 1998. Please send a letter of interest, the names of three references, and your curriculum vitae to:

ASLO Search Committee
Horn Point Laboratory
University of Maryland Center for Environmental Science
P.O. Box 775
Cambridge, MD 21613

For more information, please contact Dr. Susan Weiler (weiler@whitman.edu) and see the ASLO home page (<http://aslo.org/>).

ASSISTANT PROFESSOR, AQUATIC ECOLOGY

The Department of Natural Resources and Environmental Sciences at the University of Illinois, Urbana-Champaign invites applications for a tenure-track position in aquatic ecology. Applicants should have a Ph.D. in aquatic ecology or a related natural resources field. Research should address natural resource sustainability and environmental problems. Teaching responsibilities will include courses in aquatic ecology.

Applications must be received by October 1, 1997, and should include a letter of application, statement of teaching and research interests, curriculum vitae, five abstracts, and names, addresses, and phone numbers of four references. Applications from women and minority candidates are encouraged. Position available January 1, 1998. Salary commensurate with qualifications and experience. The University of Illinois is an Affirmative Action/Equal Opportunity Employer. Send applications to:

Ms. Joyce Canaday
Department of NRES
W-503 Turner Hall
1102 South Goodwin Ave
Urbana, IL 61801
phone: 217-333-2771 or FAX 217-244-3219.

CALENDAR OF EVENTS

*Meetings and events submitted since the last issue of the ASLO Bulletin are presented below.
See the ASLO website, <http://aslo.org/> for a more complete listing*

Earth Observation & Environmental Information: EOEI '97

Dates: October 13 - 16, 1997

Location: Alexandria, Egypt

Topics: Remote sensing, geographical information systems (GIS), earth observation, data management, information infrastructure, scientific investigations, training and education in the three areas of: oceans and coastal processes; water resources; land use/land vegetation cover change. The conference is structured to address research priorities, observations, data and information systems, and education and training pertinent to global, regional and local activities in each of the three thematic areas.

Contact: Bashir Saleh, Arab Academy for Science and Technology and Maritime Transport, EOEI '97, P.O. Box 1029, Miami, Alexandria, Egypt (Tel: 203-5602578; Fax: 203-5602915; rugsd@rusys.eg.net; <http://www.ceosr.gmu.edu/news.html>).

CalCOFI Conference

Dates: October 28 - 30, 1997

Location: Lake Arrowhead, California

Topics: The Market Squid: What is known and what needs to be known for effective management.

Contact: Doyle A. Hanan, California Department of Fish and Game (dhanan@ucsd.edu).

5th Biennial Stormwater Research

Dates: November 5 - 7, 1997

Location: Tampa, Florida

Topics: Hosted by the Southwest Florida Water Management District. Sessions include: Pollutant Sources and Sinks; Best Management Practices; Retrofits and Watershed Planning.

Contact: Diane Daban, Southwest Florida Water Management District, 2379 Broad St., Brooksville, FL 31609-6800 (Tel: 352-796-7211 x 4297; Fax: 352-754-6885).

ASLO/AGU 1998 Ocean Sciences Meeting

Dates: February 9 - 13, 1998

Location: San Diego, California

Topics: This meeting is designed specifically to meet the needs of oceanographers, limnologists, meteorologists, and scientists working in related areas. Subdisciplines included are atmospheric sciences, hydrology, estuarine sciences, limnology, oceanography, and ocean technology.

Abstract Deadlines: October 9, 1997 (postal/express mail and e-mail) and October 16, 1997 (interactive web form)

Contact: Program Co-Chair Linda Duguay (lduguay@nsf.gov) or AGU Meetings Department, 2000 Florida Ave. NW, Washington, DC 20009 (Tel: 800-966-2481 or 202-462-6900; Fax: 202-328-0566; meetingsinfo@kosmos.agu.org (subject: 1998 Ocean Sciences Meeting) or see the ASLO Web page, <http://aslo.org/>

Advanced Phytoplankton Course: Taxonomy and Systematics

Dates: May 10-30, 1998

Location: Vico Equense (Naples), Italy

Topics: The 7th Advanced Phytoplankton Course, directed by G. R. Hasle (Oslo, Norway), is being organized by the Marine Botany Laboratory of the Stazione Zoologica 'A. Dohrn'. The faculty also includes: Marie-Joseph Chretiennot-Dinet (Banyuls-sur-Mer, France); Carina B. Lange (La Jolla, California); Jacob Larsen (Copenhagen, Denmark); Marina Montresor (Naples, Italy); Karen A. Steidinger (St. Petersburg, Florida); Jahn Thronsen (Oslo, Norway); Carmelo R. Tomas (St. Petersburg, Florida); and Adriana Zingone (Naples, Italy). The aim of the course is to increase and update the expertise of the students in the identification of diatoms, dinoflagellates, coccolithophorids and other phytoflagellates. The course will consist in the training on specific recognition of marine planktonic algae, with emphasis on light microscopy and use of taxonomic literature. Special attention will be given to species implicated in the formation of exceptional or harmful blooms. Participation is limited to 20 candidates with PhD, MSc degree or equivalent, and with documented experience in phytoplankton identification by microscopy. A good knowledge of the English language is necessary. A registration fee of ITL 500,000 (US \$310) is required, which includes course tuition and material. Full board for the whole period is ITL 1,700,000-2,500,000 (US \$1,100-1,600) depending on the accommodation. Applications have been made to different funding agencies for partial or total support of organizational expenses and student subsistence costs. Applications must include complete mailing address and a condensed curriculum vitae. The applicant's experience relevant to the course as well as research interests should be briefly reported. Two recommendation letters are welcome.

Contacts: Detailed and updated information, as well as the application form, may be found at: <http://www.szn.it/~phyto98/phytocourse.html> or obtained from D. Marino, Head of the Marine Botany Laboratory, Stazione Zoologica 'A. Dohrn', Villa Comunale 80121 Naples, Italy (Tel: +39-81-5833271, Fax: +39-81-7641355, E-mail: phyto98@alpha.szn.it). Applications must arrive not later than 15 October 1997. Acceptance will be indicated before 15 December 1997.

Nyanza Project: Undergraduate Training in Tropical Lake Studies

Dates: June 1 July 10, 1998

Location: Kigoma, Tanzania

Topics: The Nyanza Project is a new summer research training program for undergraduates, sponsored by the International Decade of East African Lakes (IDEAL) and funded by the National Science Foundation and the Lake Tanganyika Biodiversity Project. This 6 week program is open to sophomore-senior level undergraduates of any nationality attending a U.S. college or university, or to students from the countries surrounding Lake Tanganyika (Tanzania, Burundi, Zambia and Zaire), who are interested in continuing research careers in any aspect of aquatic sciences (limnology, ecology and evolutionary biology, conservation biology, geolimnology and paleolimnology). Students who are members of under-represented minority groups are particularly encouraged to apply. The program will take place at Kigoma, Tanzania to take advantage of world class research opportunities at Lake Tanganyika. Students who are accepted into the program will have their airfare, room and board and research expenses paid by the project and will be given a stipend. Applications for the 1998 program (June 1-July 10) will be accepted until Jan. 1, 1998.

Contact: The Nyanza Project, Department of Geosciences, University of Arizona, Tucson, AZ 85721 (Tel: 520-626-7312; Fax (520) 621-2672; nyanza@geo.arizona.edu or (from Africa) ltbp@twiga.com or <http://www.geo.arizona.edu/nyanza> & http://www.nri.orgLake_Tanganyika).

Watershed Management: Moving From Theory to Implementation

Dates: May 3 - 6, 1998

Location: Denver, Colorado

Topics: Water Environment Federation (WEF)-sponsored conference on Watershed Management, building on the 1996 conference sponsored together with the U.S. Environmental Protection Agency and 13 other Federal agencies. Attendees will hear the latest information on implementing watershed planning, protection, restoration, and education. Real-life experiences and lessons will be outlined, including issues related to western and arid lands such as water rights, quantity and scarcity, mining, watershed crisis, and water reuse. Abstracts related to Native American issues are encouraged. Particular consideration also will be placed on issues that cross boundaries, including local, regional, state, and national borders. The conference will include oral presentations, interactive discussions, posters, exhibits, and tours. Registration fees are approximately \$450 for full conference, advance registration for WEF members.

Contact: WEF Member Services Center, msc@wef.org.

Co-sponsored by ASLO

The Oceanography Society Meeting, Coastal and Marginal Seas

Dates: June 1-4, 1998

Location: Paris, France

Topics: The meeting format will include morning plenary sessions of invited talks on the daily session topics and interactive afternoon sessions of contributed poster abstracts focusing on, but not limited to, the day's session theme. Commercial and educational exhibits will be co-located with the posters. Themes will include: (1) Small scale processes: turbulence, particles and transformations; (2) Medium scale processes: transports, physical structures and plankton distributions; (3) Regional scale processes: circulation, budgets and population dynamics; and (4) Policy, Perspectives, New Directions and Late-breaking News.

Contact: TOS headquarters, 4052 Timber Ridge Drive, Virginia Beach, VA 23455, USA; Tel: 757-464-0131; Fax: 757-464- 1759; rhodesj@exis.net. or www.tos.org.

Co-sponsored by ASLO; ASLO members may register at the TOS-member rate.

ASLO/ESA Joint Meeting

The Land-Water Interface: Science for a Sustainable Biosphere

Dates: June 8-13, 1998

Location: St. Louis, Missouri

Topics: This joint meeting between ASLO and the Ecological Society of America (ESA) will focus on science at the land-water interface of both fresh- and salt-water systems. The meeting will include daily plenaries, invited and contributed presentations, and roundtable syntheses. Themes include integrating ecosystem concepts in freshwater, marine, and terrestrial systems; pulsing and temporal-spatial scales; limiting factors, food webs and carbon flow across systems; disturbance and recovery, nutrient stoichiometry, coastal eutrophication, hydrological modifications, ecosystem restoration, fisheries, and research connections to management. There will be no more than 6 concurrent oral sessions. Space has been reserved to enable all poster presentations to be on view throughout the meeting, with formal poster sessions at times with no concurrent oral sessions.

Contacts: Catherine M. Pringle, Institute of Ecology, University of Georgia, Athens, GA 30602 (pringle@sparrow.ecology.uga.edu); ASLO Business Office & Meetings Management, 5400 Bosque Blvd. Suite 680, Waco, TX 76710-4446 (Tel: 800-929-ASLO' 817-399-9635; Fax: 817-776-3767; business@aslo.org).

XXVII SIL Congress

Dates: August 9 - 15, 1998

Location: Dublin, Ireland

Topics: Conference will include regional limnology, limnology of specific water bodies, catchment studies, biodiversity, fresh and saltwater interactions, estuaries, paleoecology, agriculture & fresh waters, water treatment, limnology in the developing world, biology of aquatic organisms, theoretical limnology & modeling, scales, intermittent water bodies, Wetlands, peats, swamps & Marl lakes, River & canal management, education, and transnational issues.

Contact: XXVII SIL Congress, UCD Environmental Institute, Richview, Clonskeagh, Dublin 14, Ireland (sil98@ucd.ie or <http://nis.rte-tallaght.ie/conferences/sil98.html>).

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