

ASLO BULLETIN

American Society of Limnology and Oceanography

Volume 2(2)

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ASLO ELECTION RESULTS

Polly A. Penhale, ASLO Secretary, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, VA 23062 (Omnet: p.penhale; Internet: ppenhale@nsf.gov)

The results of the 1993 election were compiled by tellers Carol Hatch and Amy Holt; a total of 648 ballots were received by the deadline.

The Vice President is Nancy H. Marcus (Florida State University). She will serve a 1-year term as Vice President, followed by a 2-year term as President. John G. Stockner (Canada Fisheries & Oceans, West Vancouver Lab.) was re-elected as Treasurer.

The new Members-at-Large are Erica J. H. Head (Bedford Institute of Oceanography) and Robert H. Peters (McGill University). Continuing Members-at-Large are: Benjamin E. Cuker (Hampton University), Sally MacIntyre (University of California, Santa Barbara), Diane M.

McKnight (U.S. Geological Survey), Barbara B. Prézelin (University of California, Santa Barbara), and Bess B. Ward (University of California, Santa Cruz).

Next year three new Members-at-Large will be elected to replace Ben Cuker, Diane McKnight, and Barbara Prézelin. There will also be an election for Secretary. ASLO is always interested in finding people willing to serve the Society in its elected positions. If you would like to be considered for service as a Member-at-Large or officer, or wish to recommend someone else, please send your suggestions to me and I will forward them to the Nominations Committee as soon as a Chair is designated. If you are interested in serving on an ASLO committee or working for the Society in some other capacity, please let me know that as well.

The ASLO Bulletin is published 3 times annually 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.

EDITOR: Dr. C. Susan Weiler, ASLO Executive Director, Dept. Biology, Whitman College, Walla Walla, WA 99362, USA
Tel: 509-527-5948; Fax: 509-527-5961; Omnet: s.weiler

TARGET DATES for 1993 submissions: Feb. 10, July 10, & Oct. 10, 1993.

ADVERTISING: Jobs, opportunities: \$14/line (80 characters & spaces per line); send to Susan Weiler (address above).

For-Profit advertisers: Camera-ready copy only. Send to Karen Hickey (address below).

MOVING?

Please send your change of address to: **Karen J. Hickey**, ASLO Business Director,
P.O. Box 1897, Lawrence, KS 66044-8897 Tel: 913-843-1221; Fax: 913-843-1274; Omnet: allen.press

ASLO NEWS

MESSAGE FROM THE VICE PRESIDENT

Nancy H. Marcus, Department of Oceanography, Florida State University, Tallahassee, FL 32306 (Tel: 904-644-5498; Fax: 904-644-2581; Omnet: n.marcus; Internet: marcus@ocean.fsu.edu)

I wish to express my thanks to all those members who voted in the last election. Your participation in the society as voting members is an important part of society governance. I also thank Ken Webb for the time and energy he has devoted to this society. I certainly hope that he will continue to provide his valuable input.

John Lehman has asked that I take charge of an effort to clearly define the role of the Executive Director of ASLO. I believe that this is a critical position for two important reasons. One is that the position ensures continuity within the Society as officers come and go. Another reason is, for the Society to function effectively, I believe we cannot rely solely on the volunteer efforts of our officers, board members, and other members (most of whom are employed as full-time researchers, teachers, and administrators). Your opinions on this matter will be welcomed. I am very interested to know what types of tasks and responsibilities you think this position should involve.

During the coming year I will also continue to serve as Chair and work with other members of the Committee on Education and Human Resources to prioritize and then pursue issues that are important to ASLO. I look forward to seeing many of you at the ASLO/AGU Ocean Sciences Meeting in San Diego (Feb. 21-25, 1994) and the ASLO '94 meeting in Miami (June 12-16, 1994).

MESSAGE FROM THE EDITOR: WHAT'S SO SPECIAL ABOUT AN L&O PAPER?

David L. Kirchman, Editor, *Limnology & Oceanography*, College of Marine Studies, University of Delaware, Lewes, DE 19958

I am still a bit surprised when people ask me how I intend to survive the tremendous work load of being the editor for *Limnology and Oceanography*. I point out to them that I had been an associate editor for nearly 3 years, which was sort of on-the-job training for my present position. I go on to say that I intend to have a life outside of the journal as I shed some of my associate editor duties to make way for more editor-in-chief-like tasks. I mention all this by way of introduction. As I discussed in my previous note in this Bulletin, changes in editor no longer necessarily portend changes in the journal (and I hope my work load), given our associate-editor system. That said, it still may be informative to give my views about the journal.

In future "Messages from the Editor", I will write about L&O issues and problems that we face and are trying to solve. I will try to answer any questions that you want to see addressed (so write to me!). But now I would like to step back a bit and to shed some light on what I think about L&O by answering the question, what's so special about an L&O article?

Many seem to think that only selected papers from specific fields are deemed appropriate for L&O. I suspect that some of this mythology has built up over the years under previous editors, and is based more on rumor than fact. I think the description on the back cover of the journal just about says it all. I would re-phrase those directions as follows: we consider any paper that illuminates some basic principle in aquatic science. This breath gives us more than enough challenges and thus we cannot consider applied topics. For those in subdisciplines that feel under-represented in L&O, let me point out that it is hard to accept a paper that is not submitted.

Although the topic of L&O papers is hardly restricted, I would like to think that there is something special about our papers. Perhaps our general guidelines again give some hints. In order to uncover a basic principle in aquatic systems, I think a paper should be built on presenting and testing an hypothesis, or even a "model". Less formally, a paper should "tell a story" and not just present a bunch of figures and tables. We don't want a memory dump of everything that happened during an experiment or that was encountered during a cruise. Data reports are best published elsewhere. No, the best papers put forward novel ideas and hypotheses and then use the data to prove them (ideally). Nearly as good are papers that prove previously suggested ideas which until now have resisted experimental attack.

This hypothesis-driven approach suggests that papers should include only data and text essential for the main story. I realize that it is tough for an author to drop that favorite figure containing arduously collected data, but if it's not part of the paper's main story line, it should be dumped. Cruel but true. Similarly, too many authors try to add subtle subplots in long and convoluted paragraphs, frequently based on mere whispers in the data. Again, hit the "delete" key. If the words outnumber the data points, it's time to consider removing some words, if not whole pages.

Why not include everything? Well, we would have less room to publish other papers, and rejection rates and delays would be even higher and longer than they are now. More importantly, a paper with many stories and subplots is harder to follow and to understand and will have less impact (on average) than a paper build on one or two good ideas. Text discussing vague trends in the data distracts the reader from the important ideas, and boring data can dilute the effect of interesting data. For every aficionado who follows that convoluted argument based on a zig in the curve when it should have zagged, you will lose 10 readers along the way. In short, I suggest that concise papers with a few figures (say six with a couple tables) have a better chance, on average, to be a good paper than a complex paper with many pages, tables, and figures.

Of course, we have and will publish papers that break all my guidelines. The best counter-examples, I suspect, come from field work. Frequently, seminal papers describe previ-

ously unobserved organisms or phenomena which were not predictable from theory then extant. These papers may say—may be able to say—little besides “here are the data.” Also, papers from field studies often include data (e.g. temperature or chlorophyll) not directly relevant to the main point of the paper, but this is justified when the measurements are essential for understanding the system and for putting the novel data in the proper context.

But the best of these papers still have one common trait, which I look for in every paper: the authors say why the data are important, or how the study answers a previously unanswered question. They show how their results should change our way of thinking. The few people that work in your field may not need these justifications or explanations, although I suspect they do. But if you want to reach out to our broad readership, to interest more than just the few people in your field, then you need to work hard at showing the reader why he or she should care about your paper.

Actually, my “guidelines” probably don’t say much to many of you. Good writers already knew what I’ve tried to say, and I doubt that my philosophy differs much from that of previous editors of L&O, which is why I began by emphasizing continuity rather than change during this switch in editorial regimes. I do hope we can publish papers faster, and I will try to improve the system so that we can better serve our authors and readers. But we will not sacrifice quality or abandon the care we take with each paper that we handle. We pay close attention to words and data as I was trying to say above. I suggest this is what really makes an L&O paper so special.

N.B. All L&O papers and correspondence about L&O papers should still be sent to the Seattle office. Please send suggestions about the journal and responses to my article directly to me in Delaware (address above).

Ad, Turner Designs

ASLO CODE OF ETHICS PROPOSED; PLEASE COMMENT!

Diane M. McKnight, Chair, ASLO Ethics Committee, USGS-WRD, 3215 Marine Street, Boulder, CO 80303 (Tel: 303-41-3015; Fax: 303-447-2505; Omnet: d.mcknight)

The ASLO Ethics Committee (Robert W. Howarth, Diane M. McKnight (Chair), Charles G. Trick, Mary A. Voytek, and Patricia A. Wheeler) was formed last year to consider the broad issues of ethics in the conduct of oceanographic and limnological research and the desirability of having an ethics policy. We met last February to discuss ethical issues in the context of a scientific society such as ASLO. We also attended the Sigma Xi Symposium on Ethics and Values in Science, which provided a useful foundation for our discussions. Previously, we had read the codes of ethics of many scientific societies that had been assembled for us by Susan Weiler.

Our first decision was that the Society would benefit from having a code of ethics as a way to emphasize the value ASLO members place on ethical conduct. The following draft code of professional conduct is the result of extended discussions and revisions. At this time, we submit the following draft to the membership for comment and plan to revise the code based on your suggestions. We also encourage discussion of the code with colleagues and students. The final version will be voted on by the membership at the time of the next ballot for officers of the society. Please send comments to me at the above address, before November 15, 1993.

Proposed Code of Professional Conduct

ASLO expects adherence to the highest ethical standards in both the conduct of research and application of that research to meet the scientific and policy needs of society. ASLO recognizes as legitimate and supports the provision of expertise in support of public policy. ASLO expects adherence to the highest ethical standards in both the conduct of research and application of that research to meet scientific and non-scientific societal needs. In all actions as professionals, the society deems reprehensible scientific misconduct, such as falsification, fabrication, and plagiarism, and otherwise deliberate deception and fraud, coercion of others, and tampering with or obstruction of the research of others. Further, the society recognizes an obligation on the part of individuals and institutions to identify and remedy scientific misconduct for the benefit of the scientific community.

In interactions with Colleagues, Students and Employees, members of ASLO have responsibilities to:

- Provide ethical and intellectual leadership, and accept responsibility for all research carried out under their supervision;
- Ensure a safe and healthy research environment, where everyone is informed of inherent risks and safety protocols;
- Avoid all forms of discrimination;
- Promote high standards in the education and training of students and post-doctoral associates;

- Establish and follow guidelines for the ownership of data, responsible authorship, and acknowledgment of contributions by others;
- Ensure the accessibility to colleagues of data, research results and research products generated through the conduct of their own research; and
- Respect the privileged nature of unpublished data, ideas and products.

As a members of the scientific community, members of ASLO have obligations to:

- Provide objective, accurate, and timely reviews of professional work of colleagues when requested;
- Communicate honestly and completely data and results;
- Fulfill professional commitments;
- Make available scientific findings through timely publication; and
- Provide service and guidance to the scientific profession and keep informed of advances in knowledge and techniques.

As citizens in local, national and global communities, members of ASLO have responsibilities to:

- Accurately represent expertise and identify as such factual knowledge and interpretation(s) based on that knowledge;
- Promote education of the public on scientific issues and present scientific results at public functions; and
- Promote environmental integrity and conduct research in a responsible and humane manner.

NOMINATIONS SOUGHT FOR BIWAKO ECOLOGY PRIZE

The citizens and government Japan's Shiga Prefecture established the Biwako Prize for Ecology to encourage the development of aquatic ecology and related fields.

The Shiga Prefectural Government is now seeking nominees for the third annual Biwako Prize for Ecology. This year, the selection committee would like to recommend a scientist who works in a developing country in Oceania, Southeast Asia, East Asia, or the Russian Far East. The nominee must be a citizen of the country where he or she works.

Please nominate suitable candidates for this prestigious award. Eligible nominees for the prize must be less than 50 years old in 1993, have made significant contributions to understanding of lake, river, estuarine, reservoir, aquaculture pond, or related environments, and show promise for further contributions through continued research. Prize winners receive certificates and five million yen (approximately US\$40,000).

The deadline for reception of nominations is September 30, 1993. Further information and nomination materials can be obtained by writing to: Mr. Yasuhara, Planning and Coordination Division, Planning Bureau, Shiga Prefectural Government, 4-1-1 Kyomachi, Otsu 520, Japan.

1993/94 ASLO DIRECTORY: PLEASE COMPLETE YOUR ENTRY UPDATE FORM!

Last year several members noted errors in their Directory entry. To avoid similar problems this year, all members will be provided with a complete listing of their ASLO Directory and data base information before publication of the Directory. So, sometime in August you should receive a computer-generated form with all information, complete with spaces for entering corrections and additions.

Let's all strive to make this Directory as accurate and complete as possible! Please take the time to complete your update form. Ignoring all statistical predictions, we are hoping for a 100% response rate for all information, so please leave no category unfilled!

The same address will be used for ASLO mailings and the Directory.

Please complete and return your form to Allen Press, P.O. Box 1897, Lawrence, KS 66044-8897 (Fax: 913-843-1274).

The deadline for inclusion in the next Directory is October 1. We are hoping it will be mailed out in December.

REPORT OF THE COMMITTEE ON MEMBERSHIP IN ECONOMICALLY DEVELOPING COUNTRIES

Richard D. Robarts, National Hydrology Research Center/Environment Canada, 11 Innovation Blvd., Saskatoon, SK S7N 3H5, Canada (Tel: 306-975-6047; Fax: 306-975-5143)

Aquatic science, like other disciplines, is becoming increasingly global in scope. The questions raised and the methods employed have always transcended national boundaries. Now, advances in transportation and communication are facilitating the internationalization of the scientific community. This trend can be readily seen in the increasingly international character of professional scientific societies such as ASLO, which presently draws members from 54 countries including the United States and Canada.

Membership and active participation in professional societies is a fundamental part of professional development, yet aquatic scientists in many countries are excluded from the international dialog. The current exchange rate with many countries makes it very difficult for individuals to pay the relatively modest (by U.S. standards) ASLO membership fees (presently U.S. \$75.00 for overseas delivery). Furthermore, many libraries cannot afford to subscribe to *Limnology* and *Oceanography* (presently U.S. \$160.00 per year).

As part of his ten-point action plan for the Society in 1991, then-president Trevor Platt asked me to chair a committee to consider how ASLO could help colleagues from economically developing countries (EDC's) become and remain active in ASLO. Other committee members were John M. Melack, Janet W. Reid, Sharon L. Smith, William D. Taylor, and C. Susan Weiler.

In addition to discussions among committee members having knowledge of working conditions in EDC's, a number of aquatic scientists in EDC's were contacted by letter and asked if they would like to make recommendations to the Committee. The points raised and the suggestions made

by the scientists who replied to the invitation were incorporated into the final report. In addition, we have included information supplied by ASLO members who responded to Trevor Platt's request for ideas. Finally, the Committee gratefully acknowledges the information supplied by Prof. Robert G. Wetzel on programs of the *Societas Internationalis Limnologiae* (SIL).

The following actions were recommended as ways to help individuals in EDC's become and remain active in ASLO. There is much overlap between the two categories below; and we have divided the recommendations into two sections based on their primary objective:

1) Identify ways to increase ASLO membership in EDC's:

- Develop and distribute ASLO brochures targeting EDC scientists.
- Encourage ASLO members to talk about the Society and distribute informational material when visiting EDC's.
- Develop programs to address the needs of EDC scientists.

2) Recommend steps to enable EDC members to become more active in ASLO:

- Establish a network of National Representatives
- Develop a mentoring program to assist EDC scientists with research and publication
- Develop a Program for sponsoring EDC members at meetings
- Facilitate exchanges between EDC's and other nations
- Institute special sessions relating to EDC issues at ASLO meetings
- Reduce EDC membership fees and library subscription rates
- Promote voluntary contributions toward membership fees for EDC scientists

The Committee concluded that ASLO should develop more partnership activities between members in EDC's and those in other countries. ASLO members should be encouraged by the Society to make a strong commitment to be interactive and supportive in these partnerships over the long term.

Each of these recommendations is discussed in detail in the final report, which is available from Susan Weiler (address on masthead). The ASLO Board has now read and discussed the report, and is considering how best to proceed. Your suggestions are welcome.

NEW NSF PROGRAM DIRECTOR

ASLO member Richard F. Dame is presently serving a 2-year term as Program Director of NSF's Ecosystems Program, in the Division of Environmental Biology. If you have any questions about NSF proposals, contact Richard at Ecosystems, National Science Foundation, 1800 G St. NW, Washington, DC 20550 (Tel. 202-357-9734).

BENJAMIN E. CUKER RECEIVES ASLO'S FIRST DISTINGUISHED SERVICE AWARD

In recognition for his service to ASLO through the development of the Committee On Underrepresented Minorities in Limnology and Oceanography's (CURMLO) program to foster careers in the aquatic sciences, Benjamin E. Cuker has been designated as the first recipient of the new ASLO Distinguished Service Award. This award recognizes a member who has displayed exceptional efforts that support the professional goals and enhance the stature of ASLO. The new award category was initiated by ASLO President John Lehman and approved by the Board at the ASLO '93 meeting in Edmonton. Ben was unanimously chosen by the Board to be the first recipient.

When asked how he became so committed to minorities issues, Ben responded that "I suppose that I was pre-adapted. I developed some sensitivities on the issue as a high school and college "radical" in the late sixties and early seventies." Ben attended Mumford High School in Detroit, MI, which was about 98% African-American at the time he graduated in 1972.

Ben received his B.S. (1976) and his M.S. (1978) from the University of Michigan's School of Natural Resources. He served on the School of Natural Resources' Affirmative Action Committee during his Junior year. During the summer between his junior and senior years, he attended the Univ. of Michigan's Biological Station, where he led a petition drive for affirmative action to get more minority students up to "Bug Camp."

While working on his Ph.D. at North Carolina State University (awarded 1981), he worked on the zoology department's minorities and women's committee, helping to prepare a recruiting brochure. After earning his doctorate, he took a position at Shaw Univ. in Raleigh, NC, and taught there for 7 years before moving to Hampton Univ. in 1988. Shaw, like Hampton is an historically African-American institution. Ben mentioned his interactions with Drs. Brad Brown, who is the director of the NMFS/NOAA S.E. Fisheries Center, and Joan R. Mitchell, who is a Science Associate with the NSF's Ocean Sciences Division, were extremely useful in the development of his NSF/ASLO proposal to hold workshops for minority students in conjunction with ASLO meetings. Brad received a small grant to bring some students from minority institutions to an American Fisheries Meeting in 1987; Ben attended, and was inspired by what he saw. Ben requested several times that ASLO develop a committee to deal with the under representation of minorities in the aquatic sciences. Never one to give up easily, he persevered despite initial lack of success. In 1989, ASLO President Clair Schelske formed CURMLO and asked that Ben chair it. "He was the first of several presidents who responded to my suggestion that we do something." Since that time, Ben has developed proposals and obtained funding from NSF to hold annual workshops to "expand linkages between under-represented minorities and careers in the aquatic sciences" at ASLO meetings. The concept is behind the program is that "our nation is at risk of falling behind if

we do not fully employ the talents and abilities of all segments of our society." Ben has also served as a panelist for the U.S. EPA's minority student fellowship program. In addition, he is serving as an ASLO Member-at-Large. Ben closed the interview by saying "I am of course extremely grateful to Claire Schelske for initiating the CURMLO Committee during his tenure as ASLO President, to Trevor Platt for his enthusiastic involvement with the student program, and to John Lehman for his support of the program and for establishing the Distinguished Service Award. And of course I'm grateful to ASLO for presenting me with the award. But my real motivation is simply the enjoyment I receive from working with these students at a critical point in their career development. I look forward to the day when they will be bringing their own students to ASLO meetings."

In addition to all this, Ben still finds time to shine as a teacher (he received NCSU's Outstanding Teaching Assistant Award (Zoology) in 1980, and Shaw University's Outstanding Teacher Award in 1988) and researcher. His research interests include general limnology, estuarine ecology, limnology of turbid systems, and benthic ecology. He is presently conducting a 3-year study supported by EPA, examining the influences of suspended clay pollution on the organization of lake ecosystems. Those who would like to know more about Ben's research should read Cuker, B. E., 1993, Suspended clays alter trophic interactions in the plankton. *Ecology* 74:944-953.

THIS YEAR YOU'LL HAVE NO ONE TO BLAME BUT YOURSELF IF YOUR ASLO DIRECTORY ENTRY ISN'T ACCURATE...

Sometime in August, all members will be mailed a computer-generated form with a complete listing of their ASLO Directory and data base information. To ensure more accurate and up-to-date entries, please take the time to complete your update form. Ignoring all statistical predictions, we are hoping for a 100% response rate for all information, so please leave no category unfilled!

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REPORT FROM THE COMMITTEE ON UNDER-REPRESENTED MINORITIES IN LIMNOLOGY AND OCEANOGRAPHY (CURMLO)

Benjamin E. Cuker, Center for Marine and Environmental Science, Hampton University, Hampton, VA 23668 (Tel: 804-727-5884).

The 1993 ASLO minorities program took place in concert with the Edmonton meetings. Participating this year were 59 students and 12 mentors. This include for the first time the presence of 3 Native Canadian students, through the good work of Marlene Evans. The pre-conference workshop began with greetings from the Society, given by ASLO Secretary, Polly Penhale. A special thanks goes to Dr. Robert Wetzel who gave the key-note address which drew together the connections between wetlands and their adjacent waterways.

The pre-conference workshop also included a field trip to the Devonian Botanical Gardens, and two panel presentations, one on how to listen to a scientific talk (by Doretha Foushee and Henry Williams), and the other on career paths in aquatic sciences (by Ambrose Jearld, Carol Daniels, Pernel Lewis, Melinda Davis, Percy Washington). These panelists also served as "meeting mentors," as did the following other ASLO members; Beverly Baker, Brian Bingham, Debbie Bronk, Malcom Butler, Daniel Childers, James Cotner, Russell Cuhel, Carloyn Currin, Marlene Evans, John Elder, David Millie, W. John O'Brien, Karen Long-Rowe, Kenneth Webb, Craig Williamson, Jonathan Wilson, and Marc Zimmerman. Thanks are due to all of these individuals for giving of their time and themselves to help the students navigate the meetings.

A student symposium was held on the evening of May 31, Chaired by Hampton University graduate students, James Stewart and Simone Moses. A crowd of about 100 was treated to 14 presentations of student research, which included such topics such as symbiotic algae in corals, chemoreception in snails, red tide algae, monsoons and productivity, and aquatic toxicology. Many of the students had prepared posters for the meetings, and several were brave enough to give platform presentations during the regular sessions.

Much of the success of this program can be traced to support provided by my colleagues on the ASLO Board as well as the rank and file ASLO members. Special thanks also go to Jan Crosby, Ellie Prepas and Dale Vitt for all their logistical support. The word of ASLO's efforts in this area is getting around. The week after the Edmonton meetings I gave a presentation on the ASLO model to the Ecological Society of America's committee on Women and Minorities. This meeting marked the end of the 3-year NSF funding for the project, however we are presently working on a new proposal and I am hopeful continued support for another 3 years.

MINORITIES AND CAREERS IN AQUATIC SCIENCES: A SPECIAL THANKS TO BEN CUKER

Robert G. Wetzel, Dept. Biological Sciences, University of Alabama, Box 870344, Tuscaloosa, AL 35487-0344

The fourth and most ambitious program to expand couplings among under-represented minorities and careers in aquatic sciences was held at the ASLO 1993 Annual Meeting in June. Sponsored by the National Science foundation under the leadership of Dr. Ben Cuker of Hampton University, the program encourages and counsels individuals from under-represented populations to elect careers in aquatic sciences. The efforts also train participants about the importance of effective scientific communication in publication, presentation of scientific papers, and dialogue at scientific meetings.

A two-day workshop prior to the meetings helped to prepare minority students for effective participation in the meetings. I was asked to present a special keynote address on the linkages of land-water interface regions and recipient lakes and rivers to set the stage for a dominant theme of the combined ASLO and Society of Wetland Scientists meetings. Subsequent discussions evaluated how to listen to oral papers for maximum understanding and career pathways in aquatic sciences.

A special symposium was held during which some 14 students presented papers on their current research findings and proposed studies. Most of the presentations were excellent; they were largely delivered with professional poise, illustrations were correct in content, depth and quantity, and the duration was precisely planned. I kept thinking of several of my peer scientists who should have been present to learn a few lessons on how to effectively present a paper!

A field trip to the Devonian Botanical Garden near Edmonton brought the participants, their scientific mentors, and others together for further informal exchange while exploring the delightful gradients of upland forests, fens of various stages, and bogs. Under magnificent weather, effervescent enthusiasm evaded from all.

A primary objective of the program is to enhance informal and formal interactions among minority students and professionals in aquatic sciences. Despite the additional social impediments and expectations often imposed upon minority students, it was abundantly clear that the participants of this program possessed all of the essential attributes of ability, drive and enthusiasm needed to make meaningful contributions to basic and applied aquatic sciences. That the minorities program is working well, behooving our discipline, ASLO, NSF, but most of all the student participants, is not disputed. As is nearly always the case, the energy and devotion of a leader underlies most successful endeavors. Ben Cuker was most appropriately recognized by ASLO for his efforts in this program (see article, p. 6 this Bulletin). The minorities program is an important activity of a strong scientific society that must be encouraged, nurtured, and enhanced. Ben, thank you for your leadership in this area!

DEBORAH L. PENRY RECEIVES NSF'S ALAN T. WATERMAN AWARD

ASLO member Deborah L. Penry is the 18th individual, first oceanographer, and second woman to receive the Alan T. Waterman Award, the National Science Foundation's most prestigious honor for young researchers. This award has been presented annually since 1976 to recognize an outstanding young (under 35) researcher in science, mathematics or engineering. The award, named after NSF's first director, was presented to Penry at the National Science Board's 1993 annual dinner. It includes up to \$500,000 of research support over three years. Acting NSF director Frederick M. Bernthal said that "Dr. Penry's research has won her international recognition as an oceanographer, and is an example of what progress can be made when a scientist looks beyond the boundaries of his or her own discipline." In her award acceptance speech Penry thanked Peter A. Jumars, for "teaching me how exciting and productive it is to think beyond one's chosen field of research" and Don Weston, her husband and fellow oceanographer, for "being my first, and probably my toughest, peer reviewer".

Penry received a B.S. in biology from the University of Delaware in 1979 and her Ph.D. in 1988 from the University of Washington's School of Oceanography. Penry has focused on the roles organisms play in physical and chemical processes in marine ecosystems, and in how they affect the rate of organic matter cycling in the ocean. Her dissertation, supervised by Pete Jumars, was a highly interdisciplinary application of chemical reactor theory from chemical engineering to digestion in animals. Her theoretical work and initial experimental research with marine deposit feeders has found widespread application. Since digestion is a primary pathway of organic matter degradation, Penry's work focuses on modeling and measuring digestive processes. Penry's application of the principles of chemical reactor theory and design has provided a unique theoretical framework for her physiological experiments. Penry is also interested in how physical, chemical and biological processes interact in marine communities and, in particular, how the feeding and digestive activities of deposit and suspension feeders affect the communities in which they live.

After receiving her Ph.D., Penry worked with Bruce W. Frost at the University of Washington in a postdoctoral capacity, extending her experiments to suspension-feeding copepods. She held a second postdoc with Michael R. Roman of the University of Maryland and continued her work with copepods before accepting her current position as an assistant professor in the Department of Integrative Biology of the University of California at Berkeley, where she has begun to extend applications of reactor theory to taxa as diverse as insects, ciliates, and carnivorous plants.

Penry considers the award "both a great honor and great challenge, and I will do my best to live up to both. Getting an independent research program started has been difficult for me as it is for many new researchers. The fact that an interdisciplinary committee of scientists and engineers saw promise in my work is as valuable to me as the research

support the award provides." When asked about the Award banquet, Penry said she really enjoyed the evening, but confessed to one disappointment: Pete Jumars was unable to attend at the last minute, so she missed an unprecedented opportunity to see him in a tuxedo!

Those interested in a good overview of her work should read Penry, D.L. and P.A. Jumars, 1987, Modeling animal guts as chemical reactors, *American Naturalist*, 129: 69-96.

W. T. EDMONDSON RECEIVES YALE'S WILBUR LUCIUS CROSS MEDAL

John G. Stockner, Canada Fisheries & Oceans West Vancouver Lab., 4160 Marine Dr., W. Vancouver, BC V7V 1N6, Canada

It is a pleasure to report to ASLO members that one of our founding members, Professor emeritus W.T. "Tommy" Edmondson of the University of Washington, has again been honored for his outstanding achievements in aquatic science. In May he was in New Haven, Connecticut to receive the Wilbur Lucius Cross Medal, the highest honor conferred by the Yale University's Alumni Association:

"W. T. "Tommy" Edmondson, B.S., 1938, Ph.D., 1942, Zoology. Scholar, public servant, and teacher at the University of Washington since 1949; prolific author, one of the world's greatest aquatic and theoretical ecologists, your mentor in your student days was the late G. Evelyn Hutchinson, the founder of the science of ecology. His most distinguished disciple, you became the most eminent ecologist of the Pacific Northwest, and played a central role in protecting the purity of freshwater lakes in the State of Washington. You provided the citizens of metropolitan Seattle with the technical information that permitted them to make informed decisions before the vote that resulted in a united community effort to clean up Lake Washington. A long time member of the National Academy of Sciences, you have received every honor that your scholarly discipline can confer. Your distinguished career has been shared with your wife, Yvette, former editor of *Limnology and Oceanography*. In appreciation of the distinction you have brought to Yale and to the Graduate School, the Alumni Association now confers on you its highest honor, the Wilbur Lucius Cross Medal." Yale Alumni Award presentation, May 24, 1993.

Though officially "retired" since June 1986 Tommy continues his pursuit of science, currently unraveling the complexities of the plankton community in Lake Washington as it continues to show gradual changes following sewage diversion. It was especially heartening to see both Yvette and Tommy in fine spirit and good health in mid-May in Stresa, Italy where they were attending the 5th ILEC conference. We were able to take time off one evening to reminisce and enjoy together some of the Epicurean treats found abundantly along the shores of Lago Maggiore in Pallanza. Tommy, congratulations on your most recent honor!

Hutchinson's TREATISE ON LIMNOLOGY, VOL. IV, THE BENTHOS is now in print. It will appear on Wiley's fall book list, priced at \$120/copy.

ASLO FORUM

LIMNOLOGY SUPPORT AT THE NATIONAL SCIENCE FOUNDATION

Penny Firth, CEES Secretariat, Room 305, National Science Foundation, 1800 G St. NW, Washington, DC 20550, and Grace Wyngaard, Dept. Biology, James Madison University, Harrisonburg, VA 22807.

Any opinions, findings and conclusions or recommendations expressed in this paper are those of the authors and do not necessarily represent the views of the National Science Foundation.

In the past several years a number of people have inquired and expressed concern regarding the support for limnological research by the National Science Foundation. There is a perception among some members of the scientific community that the discipline of Limnology has not been well-served at the NSF. Communications from a variety of sources suggest that many limnologists perceive a problem with the status of the discipline and with the leadership being shown by the federal government in this area. Consistently mentioned issues include the fate of proposals involving biogeochemistry, and the lack of a "home within the NSF" for the subdisciplines of physical and chemical Limnology.

Limnology is, in the truest sense, interdisciplinary. This has worked in its favor in terms of cross-fertilization between fields, however it may have split the focus on Limnology in terms of the NSF structure: there is no Limnology program at the Foundation. Many Limnology proposals are received by the Division of Environmental Biology (DEB) because of their strong ecological content. Others go to the Division of Ocean Sciences (OCE) which oversees Great Lakes research, the Division of Polar Programs (DPP), the Earth Sciences Division (EAR) which has a new program in Hydrology, the Division of International Programs (INT) or other divisions. Limnologists have commented that proposals with minimal biological components tend to fall through the cracks between the scope of Limnology supported by DEB and that supported by the other divisions.

Limnos Group. Several staff at the NSF were convinced that there was a need for new and more flexible institutional arrangements for this interdisciplinary field. With this in mind, early in 1992, NSF personnel with interests in Limnology started meeting regularly to discuss the issues outlined above and provide, at least on an ad hoc basis, an "address for Limnology" within the NSF. The Limnos group, as it became known, tasked itself to periodically evaluate the status of limnological research supported by the Foundation, discuss joint review activities for specific proposals, and involve itself as appropriate in programmatic planning for interagency and public/private sector activities by groups such as the Freshwater Imperative (FWI) group, the Committee on Earth and Environmental Sciences of the Federal Coordinating Council for Science, Engineering and Technology (CEES), the CEES Subcommittee on Water Resources (SWR), and the Water Science and Technology Board of the National Academy of Sciences National Research Council.

In the same time frame as the Limnos group was establishing itself, the NSF established a program in Hydrologic Sciences. This program addresses the central role played by hydrologic processes in the geology, physics, chemistry, and biology of earth systems. It is an initial response to the report, *Opportunities in the Hydrologic Sciences* (National Academy Press, Washington, D.C. 1991), which calls for a coherent program for support of basic research in this vital area. The Program will provide funding for basic research dealing with the Earth's hydrologic cycle and the role of water on and near the continental surfaces of the Earth. The Program views hydrologic sciences as a geoscience interactive on a wide range of space and time scales with the ocean, atmospheric, and solid earth sciences as well as with plant and animal sciences. The Limnos Group is currently comprised of individuals representing 7 Divisions from the Directorates of Biological Sciences, Geosciences, and Social, Behavioral and Economic Sciences, including the new Hydrologic Sciences Program.

Status of Limnological Research Supported by NSF.

The Limnos group is at an interim stage in its first analysis of the status of limnological research at NSF. The first step this group undertook was to determine which programs supported limnological research in fiscal year (FY) 1991 and to gather data on the number and specific research areas of the awards.

Decisions on which awards should be included in or excluded from the Limnology "envelope" were problematical. The Limnos group attempted to err on the side of a broad definition, including research projects dealing with the physical, biological, geological or chemical aspects of inland waters. This meant that studies which might not be defined as "classic" Limnology were included. For example, systematic studies of the phylogeny of freshwater organisms, paleoclimate studies set in lakes, behavioral studies of fishes, and facilities and workshop awards were all included.

Table 1 lists the Divisions and Programs that supported Limnology during FY 1991, together with the total number of active awards and a breakdown of these into the subdisciplines of Biological, Chemical, Geological, and Physical Limnology. Many awards included more than one of these subdisciplines. Although this list is not exhaustive, it undoubtedly includes most of the FY 1991 awards in the broadly defined field of Limnology. Award amounts are not shown in Table 1 because the proportion of each study that was relevant to Limnology varied considerably among the awards, and total award amounts would have overestimated the level of funding for limnological research. In addition, awards differed in the number of P.I.s supported and whether the monies were expended during FY 1991 or spread out over several years.

Support for Limnological research is widely dispersed in the Foundation: 13 Programs in 7 Divisions representing 3 Directorates fund Limnology. The majority of the awards

funded Biological Limnology and the fewest awards were in the categories of Chemical and Physical Limnology.

Most of the proposals that received awards were funded by a single Program, with the exception of 5 proposals that were jointly funded between DEB and OCE. This low level of joint funding reflects a low number of joint reviews.

These data suggest that more could be done to investigate intersections of related fields and increase opportunities for joint funding. It also indicates that, while interdisciplinary research occurs freely within Divisions, there are few interdisciplinary projects supported by the NSF that go beyond the boundaries of any single Division.

Joint Review Activities. The Limnos group currently provides, on an *ad hoc* basis, a forum for discussion of proposals that seem to be located in one of the “cracks” between Programs, or that clearly overlap multiple Programs. Normally when a Program receives a proposal that is broader than the focus of the Program, the Program Officer distributes it to other Program Officers for possible joint review and funding. We hope that the Limnos group will streamline this process somewhat, to the benefit of both the NSF personnel and the P.I.s.

Proposals should still be submitted to individual Programs: the Limnos group does NOT represent a Limnology Program and will NOT function as a merit review panel. P.I.s are strongly encouraged, as always, to discuss research ideas with Program Officers in the disciplinary areas that would encompass the research of the P.I. Limnos can, however, serve as a vehicle for distribution of interdisciplinary Limnology proposals to the relevant NSF Programs. Toward this end, P.I.s may indicate to Program Officers that they wish their proposal to be discussed at a meeting of the Limnos group in order to give it the best opportunity for possible joint review.

Programmatic Planning. A variety of current activities involve programmatic planning in Limnology. The Limnos group has been involving itself in these activities as appropriate and is expected to continue to do so:

- The Freshwater Imperative (FWI) - The FWI grew from the concern of a group of scientists that there is a pressing national need for a predictive understanding of freshwater ecological systems and freshwater resources in the context of global environmental change. The *ad hoc* FWI group is open to representatives from all federal agencies and regularly invites persons not affiliated with the Federal government to give briefings on specific topics of interest to the group. The FWI group encourages basin-level studies that address the need for a predictive understanding of socioeconomic and ecological issues in a sustainable management framework. An FWI pilot study guided by these principles and supported by the Tennessee Valley Authority, NASA, Oak Ridge National Laboratory, the Nature Conservancy, and the USDA Agricultural Research Service is currently underway. This pilot study may provide the basis for future studies that apply this approach on a larger scale. The Limnos group would be expected to discuss NSF participation in such studies.

- A Research Agenda - An NSF award was recently made to the University of Washington (P.I.s: Bob Naiman and John Magnuson) to assemble a multidisciplinary team of scientists for the purpose of developing a research agenda for ecological inland water research in the United States. The Limnos group discussed this proposal and promoted the joint funding that it eventually received (support was obtained from several Federal agencies including NSF, EPA, NASA, NOAA, and TVA). The workshop, held in January 1993, is the first step in a process of building community consensus that will involve scientists, educators and decision makers from the public and private sectors.

- The CEES Subcommittee on Water Resources (SWR) - The purpose of the SWR is to increase the overall effectiveness and productivity of Federal R&D efforts directed toward continental water resources so that a sound scientific basis exists to develop the policies and practices needed to utilize, protect, and enhance these resources. The SWR was chartered in December 1991 and is developing a strategic plan. The Limnos group has received various iterations of this plan for discussion and a number of NSF personnel have contributed to the plan.

- A Study of the Status of Limnology - The Water Science and Technology Board of the National Research Council has submitted a proposal to undertake a study to assess the science of inland aquatic ecosystems, especially as it relates to interdisciplinary education and research and its application to the management of aquatic ecosystems. The Limnos group discussed the prospectus for this proposal early in 1992 and has promoted joint review of the proposal by several Divisions.

Clearly, the activities listed above will be enhanced by thoughtful comments from the scientific community. The scope and scale of community participation in programmatic planning will depend largely on the activity being planned. Individual scientists as well as scientific societies that wish to contribute to programmatic planning activities in Limnology are always welcome to contact NSF Program Officers for guidance.

Future Goals. We hope that this informal interim status report will stimulate responses and suggestions from the scientific community. As an *ad hoc* group, Limnos depends on the interest and voluntary participation of a very busy set of people at the NSF. The first year of its existence has been, we believe, successful. We hope that the functions this group performs will provide compelling reasons for its continued existence and that it will continue to serve the limnological scientific community as well as the Foundation.

The staff at NSF welcome communications with the scientific community about what may be done to improve the health of Limnology. The names and telephone numbers of cognizant Program Directors are provided in Table I to encourage P.I.s to discuss with them proposal submission and the most appropriate Program for their particular proposal. If a proposal may be relevant to more than one Program, the P.I. is encouraged to talk with as many different Program Officers as applicable.

LIMNOLOGISTS IN URUGUAY

Dr. Roland Psenner, Universität Innsbruck Institut für Zoologie, Abteilung Limnologie, A-6020 Innsbruck, Tecknikerstrasse 25, Austria

I was a little astonished to read in the last ASLO Bulletin (2(1), 1993) that Dr. Eppley's colleagues knew of no limnologists at the University of Uruguay in Montevideo. I presented two courses in Montevideo last October (on acidification and microbial food webs). These were organized by Ruben Sommaruga from the Department of Limnology of the Faculty of Sciences at the University. During my visit I met many young, hard-working, talented and highly motivated limnologists. Some of them I knew from the UNESCO course on limnology which has been organized annually by the Austrian Academy of Sciences for the past 15 years at Mondsee, near Salzburg (usually 12 students from developing countries attend each year). Dr. Eppley is completely right in stating that it is a hard life to be a scientist in Uruguay. Yet despite many hardships (I remember that last October Ruben received a journal from England with a one year delay!), they read and publish in journals such as *Limnology and Oceanography* (e.g., L&O 37(5):1092-1100, 1992). I would encourage any ASLO member visiting Uruguay to stop by the Limnology Department at the University and look up the following young scientists working there: Ruben Sommaruga, Daniel Conde, Rafael Arocena, Daniel Fabian, Ramon DeLeon, Lizet DeLeon, Nestor Mazzeo, Guillermo Chalar, and Wilson Pintos, Facultad de Ciencias, Sección Limnología, Tristán Narvaja 1674, 11200 Montevideo, Uruguay (Fax 5982-409973; Internet: limno@fcien.edu.uy).

Those interested in the UNESCO course may write to: International Post-Graduate Course on Limnology, Mag. Franz. Neidl, Institute of Limnology, Austrian Academy of Sciences, A-5310 MONDSEE, Austria (Fax 43-6232-3578).

DEPARTMENTS OF LIMNOLOGY AND OCEANOGRAPHY AT THE UNIVERSITY OF URUGUAY

Dr. Eva Danulat, Head of Oceanography and Lic. Wilson Pintos, Head of Limnology, University of Uruguay, Tristán Narvaja 1674, 11200 Montevideo, Uruguay

Dr. Psenner has mailed us a copy of the article by Dr. Eppley from the ASLO Bulletin. After reading it, we have no doubts that he approached the issues with good intentions but was either badly advised or had difficulty with the language. The members of the commission appointed by the President of Uruguay "to develop plans and funding for a new, private university to train people for (primarily) employment in marine-related fields" (cited from Eppley's article) would surely know that the University of Uruguay has both Departments of Limnology and Oceanography; this is the only State University of Uruguay ("Universidad de la República"). Most of the scientists working today in the National Fisheries Institute (INAPE) mentioned by Dr. Eppley, have received and keep receiving their training in the very same Departments; in fact, one of us (E.D.) is presently teaching a postgraduate course with three participants from the INAPE.

We are sorry that Dr. Eppley was not able to get in contact with the departments we are heading. There will be even more to see if he (or any other ASLO member) should visit in the future. Certainly, compared to the "First World", most laboratories at this Faculty of Science are small and modestly equipped; on the other hand, both the departments of limnology and oceanography keep experiencing important improvements regarding staff, further development of research activities and the consolidation of postgraduate training programs. Additionally, within the coming two years, a new building which is under construction right now, will provide much larger, better-equipped facilities for this Faculty.

ASLO MEETING DATES: PLEASE CONSIDER THE ACADEMIC CALENDAR

Gisèle Muller-Parker, Shannon Point Marine Center, Western Washington University, 1900 Shannon Pt. Road, Anacortes, WA 98221-4042

The scheduling of the last two annual ASLO meetings during the academic year (February 9 - 14, 1992 and May 30 - June 3, 1993) prompts me to make the following request to future meeting organizers: Please give careful consideration to the academic calendar before selecting a date for the meeting. Faculty engaged in teaching and most undergraduate and graduate students are unable to attend scientific meetings scheduled during an academic session. Even if we do manage to attend, we can only afford to do so for one or two days, and we must find substitute lecturers for our classes. We all recognize the importance of student participation. These students should feel free to attend ASLO meetings without compromising grades in courses. I ask that you try to schedule meetings in either the third or the fourth week of June, when all colleges and universities have completed the academic year. I realize that this issue does not apply to researchers, and that individual field seasons may conflict in late June. It will not be possible to accommodate all schedules, but at least some consideration of the students and the teaching commitments of some of the ASLO members is warranted. I'm sorry that I missed the last two meetings. I look forward to the Miami meeting (held the week after our final exams!). Thank you.

INTERESTED IN SERVING THE SOCIETY?

ASLO is always interested in identifying members willing to serve the Society in its elected positions. If you would like to be considered for service as a Member-at-Large or officer, or wish to recommend someone else, please send your suggestions to Polly Penhale and she will forward them to the Nominations Committee as soon as a Chair is designated. If you are interested in serving on an ASLO Committee or working for the Society in some other capacity, please let Polly know that as well: Dr. Polly A. Penhale, ASLO Secretary, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, VA 23062 (Omnet: p.penhale; Internet: ppenhale@nsf.gov).

REPORT ON THE IDEAL SYMPOSIUM ON THE EAST AFRICAN LAKES

T. C. Johnson, Duke University Marine Laboratory, Beaufort, NC 28516 (Tel: 919-728-2111; Fax: 919-728-2514; Internet: tjohnson@acpub.duke.edu), K. Keltx, University of Minnesota, J.T. Lehman, University of Michigan and A. Wuest, EAWAG/ET

The International Decade for the East African Lakes (IDEAL) held the International Symposium on the Limnology, Climatology and Paleoclimatology of the East African Lakes on February 17-21, 1993 at the Uganda Freshwater Fisheries Research Organization (UFFRO) in Jinja, Uganda. Approximately 125 scientists attended from North America, Europe, Africa and New Zealand.

The meeting highlighted a vast array of interdisciplinary problems presented by the African great lakes. Physical processes in these tropical lakes are unique where Coriolis force is low and prevailing winds are unidirectional for extended periods of time. The lakes' chemistry is strongly affected by biological and perhaps geothermal processes, and shows remnants of past low-stand conditions. Biological food webs have evolved that are unlike any others found on the planet. Rates and spatial patterns of speciation of endemic fishes have begun to be traced by DNA sequencing, and found to contain some surprises. The paleoclimatic record in the lake sediments archives a history of the Inter-tropical Convergence Zone and the Earth's tropical heat engine. It is beginning to reveal some abrupt changes not only during the transition from the last glacial maximum, but also within the Holocene.

Twenty-seven oral presentations and forty-two posters provided overviews and the latest results from African climatological and limnological research of the past decade. The secluded location in Jinja provided an excellent opportunity to examine in depth topics ranging from tectonics to aquatic biology, chemistry and physics, modern climate dynamics, anthropogenic impact, evolutionary biology and paleoclimatology.

The physical limnology of the rift lakes differs significantly from their North American counterparts. The wind field is strongly unidirectional as it is channeled through the rift valley. The vertical density structure is characterized by small temperature gradients but a large thermal expansivity, so the surface layer is subject to more intense convective mixing and is therefore usually deeper than the epilimnion of temperate lakes. Most of the water balance of the large African lakes is dominated by rainfall and evaporation, making them particularly susceptible to shifting between closed- and open-basin status with a slight change in annual rainfall and evaporation. The different basin morphologies and proximity to the equator provide unique opportunities to model fluid flow with varying boundary conditions and inertial periods that are hundreds of hours in duration.

The nutrient profiles of Lakes Tanganyika, Malawi and Victoria were discussed in terms of the relative sizes of the dissolved inorganic and organic pools, new productivity and the importance of atmospheric deposition of nitrate. The nutrient budget and nutrient profiles of Lake Tanganyika

show distinct differences between the north and south basins of the lake below the depth of their adjoining sill. The isotopically heavy bottom waters of Lake Tanganyika reflect more saline and perhaps cooler conditions than present, and the ^4He profile shows a significant input of helium at a depth of 300-400 m. Pore water chemistry from Lakes Turkana and Malawi show evidence for methanogenesis, previous lowstands of the lakes and, in the case of Malawi, unusually high ammonium concentration in one of the cores.

An onshore-to-offshore gradient in the importance of fish planktivory versus invertebrate predation affects size and body morphology among many of the zooplankton of the African great lakes. There are major differences in the species composition of the food webs in the large east African lakes. Mitochondrial DNA analyses of the fish from the various lakes show patterns of common ancestry. The Lake Victoria cichlids are closely related to those found in the western rift lakes Albert and Edward and, surprisingly, are more closely related to those in Malawi than in Tanganyika. The reasons for this apparent geographic hop in evolution are not yet clear.

High-resolution seismic profiles and sediment coring show that the large lakes have more complex patterns of sedimentation than the small, shallow lakes. Paleoclimate signals are encoded in the terrigenous, biogenous and authogenic components of the sediments and are beginning to be interpreted on time scales ranging from millennia to seasons. The isotopic composition of the organic matter accumulating in tropical lakes is of particular interest for paleolimnological studies despite its complexity because the organic component is always present and provides the best potential for continuous isotopic records from all lakes. Innovative new coring technologies were discussed for better recovery of lake sediments for paleoclimate studies.

There are apparent connections of East African climate to sea surface temperature anomaly patterns and the El Nino/Southern Oscillation. There is spatial coherency in the African rainfall anomaly patterns, especially associated with the short rainy season.

Paleoclimatological results were presented by several speakers. Holocene fluctuations in the levels of several lakes were summarized on different time scales. Patterns of spatial coherence, time leads and lags relative to the global climate were considered, as well as time windows of abrupt change.

Human population growth in the drainage basins of the large African lakes averages about 3.5% per year and exacerbates the pressures imposed upon the lakes from fishing, chemical pollution, introduction of exotic species of plants and animals, and watershed disturbance causing accelerated siltation in nearshore habitats.

The fourth day of the conference was devoted to further developing a Science and Implementation Plan for IDEAL. Key scientific questions were developed within four sub-disciplines (climate and physical limnology; biological processes and evolutionary biology; geochemistry; and paleoclimatology) along with recommendations for the field and laboratory analyses, data archiving and logistical activi-

ties required to answer these questions. The Science and Implementation Plan will be published in summer 1993 and will be available from the IDEAL Office at Duke University Marine Laboratory, Beaufort, NC 28516.

The Symposium ended with a banquet on the fourth night with Dr. E. B. Worthington as guest speaker, reminiscing about his research activities on the large east African lakes in the late 1920's and early 30's. He told fascinating tales of the discovery of hundreds of new species of fish on Lakes Victoria, Edward and Albert, of coercing the African King's Rifles to provide logistical assistance on Lake Rudolph, and of establishing the fisheries research laboratories at Jinja, Kisumu and other key sites on the African lakes. Sponsors of the meeting were the U. S. National Science

Foundation, the National Atmospheric and Space Administration, the Regional Office for Science and Technology in Africa of UNESCO, UNEP, the International Geosphere Biosphere Program and the Societas Internationalis Limnologiae.

A symposium volume containing the manuscripts of all of the invited speakers and most of the poster presentations will be prepared for publication during the coming year. We have learned much in the past 65 years, but it is clear that we have only begun to tap the wealth of knowledge about the evolution of life, climate and aquatic systems that can be gained from a major scientific initiative on the oldest tropical lakes on Earth.

1993 ASLO AWARD RECIPIENTS

TIMOTHY R. PARSONS RECEIVES 1993 G. EVELYN HUTCHINSON MEDAL

The 1993 G. Evelyn Hutchinson Medal was awarded to Timothy R. Parsons of the University of British Columbia, "in recognition of his achievements in combining chemistry with biology to make the ocean's ecology more predictable". ASLO presents this award annually to the individual who best exemplifies the standards of scholarship and creativity set by Professor Hutchinson's work in limnology and oceanography. John Lehman presented the Medal at the ASLO '93 meeting in Edmonton, AB Canada.

Parsons completed his B.S. (1953) and M.S. (1955) degrees in Agricultural chemistry from McGill University, followed by a Ph.D. (1958) in Biochemistry from McGill University. Since obtaining his Ph.D. he has held positions as a Research Scientist at the Fisheries Research Board of Canada (1958-1962; 1964-1971), a Programme Specialist in the UNESCO Oceanography Office (1962-1964), and, since 1971, a Professor in the Depts. of Oceanography and Zoology at the University of British Columbia, where he is now Professor Emeritus. Parsons has published over 150 articles on oceanographic subjects. His favorite is: Parsons, T.R., 1979. Some ecological, experimental and evolutionary aspects of the upwelling ecosystem. *South African Journal of Science* 75: 536-540.

When asked how he first became interested in aquatic science, Parsons answered that he grew up along the "beautiful Atlantic sea shores of Cornwall, U.K. This convinced me of the joys of studying marine life. It was only after I had completed 9 years of studies at McGill University, firstly in Agriculture and secondly Medicine (biochemistry) that I discovered that you could actually get paid for what I had always thought of as just fun. Oceanography became to me a hobby [along with stamp collecting] and I was fortunate in being introduced to the more serious side of that hobby by the late Dr. John Strickland. I had actually come across his name in medicine at McGill because my thesis was on silicosis and the only person to have done any real basic chemistry on the determination of silicate was a chap named

John Strickland. He had migrated from London University to the Fisheries Research Board in Nanaimo in 1957 and was looking for an assistant in 1958, just when I happened to complete my Ph.D."

Parsons is the 12th recipient of the Hutchinson Medal. The other Hutchinson Laureates and their year of award are: **Gene E. Likens** (1982), **John E. Hobbie** (1983); **Richard W. Eppley** (1984); **David W. Schindler** (1985); **Eville Gorham** (1986); **Lawrence R. Pomeroy** (1987); **Trevor Platt** (1988); **Daniel A. Livingstone** (1989); **W. Thomas Edmondson** (1990), **Richard C. Dugdale** (1991), and **Robert G. Wetzel** (1992). A brief summary of Parsons' career and the text of his acceptance speech will appear in L&O later this year.

NOMINATIONS OPEN FOR 1994 G. EVELYN HUTCHINSON AWARD

Nominations are now open for the 1994 G. Evelyn Hutchinson Medal. The award is made in recognition of continued excellence in any aspect of limnology or oceanography. Anyone may nominate a candidate for the award, but the recipient must be a member of ASLO. Emphasis in selection will be given for work done during the preceding 5 years or for contributions of an active scientist whose work continues to be recognized for its importance. The award is intended to symbolize the quality and innovations toward which the society strives and to remind its members of these goals. Each nomination must be supported by a letter (not to exceed two pages) on qualifications. This letter should be crafted so that it could be the basis of the presentation speech for the nominee who is selected for the award. 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 three pages. A nomination letter can be supported by signatures of more than one ASLO member or a list of supporting signatures can be sent to support the nomination package. Prior nominations may be resubmitted. Nomination materials should be sent to the Hutchinson Award Committee Chair, c/o Susan Weiler, ASLO Executive Director (Address on masthead).

JOHN R. REINFELDER RECEIVES 1993 LINDEMAN AWARD

Glenn Lopez, Marine Sciences Research Center, SUNY, Stony Brook, NY 11794-5000

The Lindeman Award is presented annually to recognize outstanding work by a limnologist or oceanographer 35 years or younger in age. The 1993 Award was presented to John R. Reinfelder for the paper: Reinfelder, J.R. and N.S. Fisher, 1991. The assimilation of elements ingested by marine copepods, *Science* 251: 794-796. This paper provides a mechanistic model, singularly backed by experimental data, to explain the absorption of elements by copepods on the basis of elemental distribution in algal food. The model described in this paper has been supported by later work on other animals with short gut residence times. The importance of a model that predicts the absorption of elements from americium (nil) to selenium (almost complete) has significant ramifications in several major areas, from the elucidation of element cycling in the ocean to an understanding of the physiology of digestion.

John became interested in aquatic habitats early on, spending a lot of time on Long Island Sound with his father, who was a fishing lure designer. He remains an avid sailor and fisherman. His scientific interest in the oceans was further stimulated during his undergraduate years at Johns Hopkins University by attending a SEA semester at Woods Hole. At Johns Hopkins, John was introduced to research on algal physiology in Howard Seliger's laboratory.

John came to the Marine Sciences Research Center of SUNY Stony Brook in 1988 after getting his B.S. in Biology. With Nick Fisher as his major advisor, John began focusing on the trophic transfer of metals from phytoplankton to marine copepods. This work exploited radiotracer techniques to study the kinetics of bioaccumulation and depuration of metals and metalloids in the organisms. Within a year, John helped develop a new technique to quantify the assimilation of efficiency of ingested elements. Shortly afterwards, he discovered that the assimilation of elements in copepods was directly proportional to the cytoplasmic distribution of the elements in the diatom cells which served as their diet. For his doctoral dissertation, John also studied the trophic transfer of elements from phytoplankton into adult bivalves and the transfer of elements from zooplankton to fish. For some of his research he visited Scott Fowler's laboratory at the Marine Environment Laboratory in Monaco. He was awarded his Ph.D. from Stony Brook in 1993, having completed his doctoral dissertation, "The fate of elements digested by marine planktivores". He is currently a postdoctoral investigator with Francois Morel at MIT.

John is also very interested in music. He plays trombone and guitar, and brought to Stony Brook his appreciation of jazz and blues. In other words, he has excellent musical tastes, a fact appreciated by those within earshot of Nick's laboratory!

Previous Lindeman Award recipients are: **James W. Ammerman** (1987) for Ammerman, J.W. and F. Azam, 1985, Bacterial 5'-nucleotidase in aquatic ecosystems: A

novel mechanism of phosphorus regeneration, *Science* 227, 1338-1340; **Marlon R. Lewis** (1988), for Lewis, M.R., W.G. Harrison, N.S. Oakey, D. Hebert, and T. Platt, 1986, Vertical Nitrate fluxes in the oligotrophic ocean, *Science* 234: 870-873; **Cabell S. Davis III** (1989) for Davis, C.S., 1987, Components of the zooplankton production cycle in the temperate ocean, *J. Mar. Res.* 45: 947-983; **James J. Elser** (1990) for Elser, J.J., M.M. Elser, N.A. MacKay and S. R. Carpenter, 1988, Zooplankton-mediated transitions between N- and P-limited algal growth, *Limnol. Oceanogr.* 33: 1-14; **Bart T. De Stasio, Jr.** (1991) for De Stasio, B.T. Jr. 1989, The seed bank of a freshwater crustacean: Copepodology for the plant ecologist, *Ecology* 70: 1377-1389; and **Sherry Schiff** (1992) for Schiff, S.L., R. Aravena, S.E. Trumbore and P.J. Dillon, 1990, Dissolved organic carbon cycling in forested watersheds: A carbon isotope approach. *Water Resources Res.* 26: 2949-2957.

NOMINATIONS OPEN FOR 1994 LINDEMAN AWARD

Nominations for the 1994 Lindeman Award are requested. Eligible papers must deal with the aquatic sciences, be written in English by an author who is no older than 35 years in 1992, and must be published in a 1992 volume of a peer-reviewed journal. Nominations, which should consist of a copy of the paper and brief letter describing the impact of the paper on the field, should be sent to the Lindeman Award Committee Chair, c/o Susan Weiler, ASLO Executive Director (address on masthead).

1993 ASLO/ONR STUDENT POSTER AWARD RECIPIENTS

C. Susan Weiler, Poster Award Committee Chair, Dept. Biology, Whitman College, Walla Walla, WA 99362 (Tel: 509-527-5948; Fax: 509-527-5961; Onnet: s.weiler)

Seventy students entered the Student Poster Award competition at the ASLO '93 meeting in Edmonton. This Award was instituted in 1988 at the ASLO/Boulder summer meeting. A "tradition" of an award with local significance was initiated in 1989 at the Joint ASLO/Society of Canadian Limnologists Meeting, where the awardee received a brass goldminer's pan and a Canadian \$100 gold coin. This year, the student poster awardees each received an arrangement of pressed, dried flowers from the Devonian Botanical Garden. Since 1992, winners have also received a \$500 cash award from the U.S. Office of Naval Research. Three awards were presented:

Angeline K-Y. Lam for Lam, A.K-Y., S.E. Hruday, B.G. Kotak and E.E. Prepas, Chemical effect and fate of cyanobacterial toxin, Microcystin-LR.

Angeline received her B.Sc. in Chemistry from the University of Alberta in Edmonton, AB Canada in 1989. After graduation, she spent 2.5 years working in both the industrial and governmental sectors, analyzing air and water samples for pollutants. She worked one of these years with Dr. Ellie E. Prepas, and became fascinated by the temporal

dynamics of freshwater phytoplankton and the hepato-(liver) toxins produced by the cyanobacteria. After attending a graduate course on physical/chemical aspects of wastewater management offered by the U. Alberta's Dept. of Civil

Engineering, she developed an interest in drinking water treatment. In addition, she gained expertise in phytoplankton taxonomy, particularly cyanobacteria, and the isolation and culture of cells from natural cyanobacterial blooms. In 1992, she began her M.S. degree with Dr. Prepas. Her current research involves temporal changes in microcystin-LR and the relative proportion of *Microcystis* spp. in three Alberta drinking-water lakes, control of toxic cyanobacterial blooms by chemical addition and stability of microcystin-LR in water. The results of these studies will provide information for farmers and water-treatment managers concerning the prediction of toxic cyanobacterial blooms and control of these blooms in drinking-water supplies. In addition to her thesis research, Angeline has studied ecology and taught introductory biology laboratories. After completing her degree, Angeline hopes to continue her work on characterizing and modeling the environmental persistence of contaminants in drinking-water reservoirs and their implications for human health.

Lynn A. Leonard for Leonard, L.A., M.E. Luther, A.C. Hine and D.J. Reed, Free surface flow in marsh canopies.

Lynn received her M.S. degree in Geology from Duke University in 1988 where she evaluated the parameters controlling sand losses from beach renourishment projects with Dr. Orrin H. Pilkey as her advisor. Following graduation, she entered the Department of Marine Science at the University of South Florida in order to pursue interdisciplinary research. Lynn's dissertation work, under the direction of Dr. Albert C. Hine, involves a detailed study of creek/marsh surface sedimentation linkages using a variety of techniques including state-of-the-art, hot-wire anemometry velocity probes capable of directly measuring shear stress. Her research has ranged from the development of a marsh creek sediment budget, to assessing the effects of extratropical storms on creek sediment transport, to the evaluation of cross-levee sediment transport processes and marsh surface sedimentation accumulation. To successfully conduct this interdisciplinary, field- and laboratory-intensive project, Lynn has combined aspects of physical sedimentology, fluid dynamics, botany and isotope chemistry. In addition, she has become technologically proficient in the use of electronics as well as data storage, management, and processing on a variety of computer systems. Lynn is actively studying the effects of flow turbulence, as a function of vegetation characteristics on sedimentation processes; this is the subject of the poster presented at the ASLO meeting. Lynn has developed strong ties with the LUMCON program and is directly interacting with Dr. Denise Reed of that program. She plans post-doctoral studies to examine comparative marsh sedimentary processes in the Louisiana and west Florida coastal marsh systems.

Brenda M. Miskimmin for Miskimmin, B.M. and D.W. Schindler, D.C.G. Muir and N.B. Grift, Fate of organochlorine contaminants applied to lakes thirty years ago.

Brenda received her B.S. from Trent University in Peterborough, Ontario in 1987. Her honours thesis, under the direction of Drs. D. Lasenby and C. Metcalfe, examined the uptake of PCB's by an amphipod as influenced by anionic surfactants. During her undergraduate years, Brenda spent two summers working at the Experimental Lakes Area for aquatic microbiologists Drs. Rudd and Kelly, on the effects of DOC and other variables on methyl mercury formation and sediment-water partitioning. On completing her M.S. (U. of Manitoba) in August 1989, Brenda moved to Edmonton to begin her Ph.D. with Dr. David Schindler at the University of Alberta. With a complete switch in direction, her research involves a paleolimnological approach to reconstructing the effect of toxaphene poisoning (in the early 1960's) and trout stocking on invertebrates in Alberta lakes. The subject of her poster resulted from a need to confirm the toxaphene treatment date in sediment cores using toxaphene as a date marker. The organochlorine results revealed toxaphene as much more than just a marker, but indicated a consistent pattern of highly chlorinated forms at the 1961/62 depth, lower chlorinated forms in shallower depths, and significant amounts of toxaphene in surface sediments. The Alberta government has been made aware of these results and has collected trout from the lakes to have them analyzed for toxaphene residues. To this point, Brenda has received 14 awards and scholarships (including this poster award). After her Ph.D., Brenda hopes to combine experiences from her diverse past projects to examine other problems in contaminated freshwater systems.

Judging: Each poster was examined by at least three judges, and the top 20% were evaluated by another team of four judges. To avoid judge burn-out, no one judge evaluated more than 11 posters. Posters were judged on the basis of innovation and/or significant scientific insight, as well as the quality of experimental design and methods, and the overall visual quality and impact.

Special thanks go to the following individuals who served as judges this year: Iris C. Anderson, Michael Arts, John Bishop, Debbie Bronk, Randy Chambers, Russell Cuhel, Diana Engle, Marlene Evans, Hans Gottgens, Carl Hershner, Bob Jellison, Mandy Joye, Jim LaBaugh, Sallie MacIntyre, Tom Malone, Diane McKnight, Jim Nelson, Richard D. Robarts, Tom Sibley, Stephen Threlkeld, Charlie Trick, Ed Urban, and Ken Webb.

I also thank Carmen Aguilar (recipient of a 1991 ASLO Student Poster Award) for helping out with the final round of judging, and for already volunteering to judge at the next meeting! If you are also interested in judging student posters at either the ASLO/AGU Ocean Sciences Meeting in San Diego or the ASLO '94 meeting in Miami, please let me know. I spoke with almost all judges after the session, and they assured me that 10 or so posters was a comfortable load and allowed time to peruse other posters of interest. Furthermore, one learns a great deal about how to put

together a good poster by concentrating on these outstanding student efforts. And finally, it was really fun to have an excuse to devote extra time to posters which might or might not be in one's primary subject area. So, whether your motivation is community service, personal enrichment, or just plain fun, please join your colleagues on the Student Poster Award Committee! Just send your name, address, phone, and fax to Susan Weiler at the above address, and tell me which meeting(s) you will be attending.

COMMITTEE FOR THE NATIONAL INSTITUTE FOR THE ENVIRONMENT PROPOSAL AVAILABLE

*David E. Blockstein, Executive Director, Committee
for the NIE, 730 11th St. NW, Washington, DC
200014521 (Tel. 202-628-4303; Fax 202-628-4311)*

The Committee for the National Institute for the Environment (CNIE) is a national, non-profit organization consisting of over 5,000 scientists, educators, and other citizens and scores of organizations and professional societies representing academia, government, business, environmentalists, and the general public. After three years of effort by the CNIE involving numerous meetings, extensive studies and reviews, and wide and diverse consultation, the CNIE is proposing the creation of a new science agency, the National Institute for the Environment (NIE) to address the serious environmental challenges of our nation and the world. The central mission of the proposed NIE is to improve the scientific basis for making decisions on environmental issues. In order to accomplish this mission, the following goals have been set:

- Increase scientific understanding of environmental issues by sponsoring credible, problem-focused research;
- Assist decision making by providing comprehensive assessments of current environmental knowledge and its implications;
- Facilitate and expand access to environmental information and better communicate scientific and technological results; and
- Strengthen the capacity to address environmental issues by sponsoring higher education and training.

Membership is free and open to all who support the concept of the NIE. To join, send your name, address, phone and fax number to the Washington, DC office (address above).

The CNIE has published an executive summary, "A Proposal for a National Institute for the Environment: Need, Rationale, and Structure". Copies may be requested from David Blockstein at the above address.

JOHN H. MARTIN REMEMBERED

It is with deep sadness that I announce ASLO member John H. Martin died of cancer on June 18, at the age of 58. John was raised in Old Lyme, Connecticut, and earned his B.A. at Colby College in Maine and his Ph.D. at the University of Rhode Island. Before coming to Moss Landing Marine Laboratory, he was a scientist for the United States Atomic Energy Commission, and later served on the faculty at Stanford's Hopkins Marine Station.

John's most important recent contributions have been the development of ultra-clean techniques for aquatic trace-metal work, and research toward understanding the role of iron in the global carbon cycle. John also helped found the Global Ocean Flux Study. According to Hugh Ducklow and Penny Chisholm (U.S. JGOFS News, June 1993), "For many of us, the VERTEX program, which John created to explore the ways by which primary production is transported and recycled in the oceanic interior, was a forerunner and principal model for JGOFS. John correctly saw that understanding of the ocean carbon cycle required sensitive, precise and rigorously controlled measurements of primary production rates and simple, replicated observations of particle sedimentation through the water column."

I first met John during the planning of the ASLO symposium on "What controls phytoplankton production in nutrient-rich areas of the open sea?", which debated what he referred to along with others as the "geritol solution" to global warming. Had I known John better, I would not have been surprised by his unfailing good humor during the symposium planning, and even during the symposium itself, which he fully expected to be very controversial. In the end, the symposium participants concluded that "sufficient evidence exists in support of the hypothesis that iron plays an important role in regulating the productivity and trophic structure of planktonic communities to warrant increased efforts to explore this hypothesis." I was also extremely impressed with his deep concern about global sustainability. He was not an advocate of the "quick fix".

John was recently elected as a Fellow of the American Geophysical Union, which cited him "for his important contributions to our understanding of the interactive cycling of carbon, nutrients, and trace metals in the ocean, and for his unselfish and enthusiastic support of major oceanographic field programs." As Hugh and Penny so beautifully expressed in U.S. JGOFS News, "Like all great scientists, John identified fundamentally important and difficult problems and sought simple, elegant solutions for them. But armed with imagination and a compelling passion for the problems that interested him, he attracted attention well beyond scientific circles. His success in engaging public interest and concern for critical environmental issues is a legacy of enduring value for all of us."

At the new site of Moss Landing Marine Laboratories there will be a memorial garden which the faculty has named "Martin's Point of View". I can see John's eyes twinkling at that.

C. Susan Weiler, Executive Director

ASLO MEETING ANNOUNCEMENTS

ASLO/AGU OCEAN SCIENCES '94

Polly Penhale, Ocean Sciences Program Committee, National Science Foundation, DPP 620, 1800 G St. NW, Washington, DC 20550 (Tel: 202-357-7894; Fax: 202-357-9422; Omnet: P.Penhale; Internet: ppenhale@nsf.gov)

The Ocean Sciences Meeting, sponsored by ASLO and AGU will be held February 21-25, 1994 in San Diego. The last joint Ocean Sciences Meeting was held in 1990 in New Orleans; 1994 will be an opportunity to repeat this very successful meeting.

Co-chairs are Polly A. Penhale (ASLO) and Suzette Kimball (AGU). Other ASLO Program Committee members are Charles S. Hopkinson, Jr., Darcy J. Lonsdale, Mark D. Ohman, and Walker O. Smith, Jr.

This meeting is designed specifically to meet the needs of oceanographers, limnologists, meteorologists, and scientists from other related disciplines. Contributed papers in the following areas are encouraged: large-scale transport and circulation; biogeochemical processes; land-sea interactions; ocean optics; polar oceanography; nearshore sediment transport and shelf sedimentation; planktonic and benthic food webs, air-sea chemistry and dissolved gases, whole-ecosystem experiments, particulate organic matter degradation and flux, and long-term research and data bases. Contributed papers are not limited to these areas, and special sessions are also planned.

The abstract deadline is November 18, 1993.

All members of AGU and ASLO will automatically receive the Call for Papers, with housing and registration information. Others wishing to receive information should telephone AGU at 202-462-6900 or 800-966-2481 (Fax: 202-328-0566).

1994 ASLO/PSA JOINT MEETING

Alina Szmant, ASLO 1994 meeting Co-Chair, University of Miami/RSMAS, 4600 Rickenbacker Causeway, Miami, FL 33149 (Tel. 305-361-4609; Fax: 305-361-4600; Omnet: a.szmant; Internet: aszmant@rcf.miami)

The ASLO summer 1994 meeting will be held June 12-16 at the Hyatt Regency in Miami, Florida. We will be meeting with the Psychological Society of America (PSA), following up on a terrific joint meeting during ASLO's 50th anniversary celebration in Rhode Island (1986). Dennis Hanisak (Harbor Branch Oceanographic Inst.) is serving as the Co-Chair and PSA representative for the meeting. In contrast to the 1986 dinner at one of the Newport mansions, we plan to provide a Caribbean style feast at the Miami Seaquarium, complete with a killer whale show, a talk by Dr. Bossert (the head veterinarian) and a steel and/or reggae band!

There will be special hotel rates at the Hyatt (downtown) and at the Doubletree (Coconut Grove) as well as other less expensive hotels, and dorm rooms will be available on the U of Miami campus. We are planning field trips to the Everglades, the Florida Keys (including Florida Bay, mangrove forests, grass-beds, coral reefs, and Sloppy Joe's, Hemmingway's favorite haunt in Key West), Lake Okeechobee and the South Florida Water Management District, freshwater springs in central Florida, and possibly to Bahamas coral reefs if there is enough interest.

We plan to have a focus on tropical systems, land-margin interfaces, warm-water freshwater systems, marshes, as well as the wide range of ASLO/PSA topics. There are over a dozen special sessions already being planned, but we need more! If you are interested in organizing a special session, have ideas or special requests for plenary speakers/topics or have any questions, please contact me at the above address.

Please mark your calendars and tell your colleagues and save up your travel funds to attend both Oceans '94 in San Diego and Summer '94 in Miami.

NEAL F. LANE NOMINATED AS NEW NSF DIRECTOR

Neal F. Lane has been nominated by U.S. President Clinton to become the next director of the National Science Foundation. Lane earned his degrees from the University of Oklahoma at Norman. He has a specialty in theoretical atomic physics, and is presently a professor of physics and Provost at Rice University in Houston, Texas. In addition to his impressive list of professional research and administrative accomplishments, Lane has a strong record of community service, and is currently President of Sigma Xi, the Scientific Research Society (a multi- and inter-disciplinary scientific honor society with ca. 100,000 members worldwide). In a July 23 issue of *Science*, he stated "I don't consider the [NSF] job to be a step along the way to anywhere. I plan to devote the full [6 years] required to succeed." Lane is unassuming by temperament, and colleagues regard him as a good listener and easy to work with. His broad interests and collegial nature should serve NSF well.

JOBS

Professor of Aquatic Biology/Ecology position at The Swiss Federal Institute of Technology in Zurich (ETHZ). The position is at the Limnology Department of the Swiss Federal Institute for Water Resources and Water Pollution Control (EAWAG). Duties encompass teaching, research, and consulting in the area of structure and function of aquatic ecosystems. The experimental research should focus on biological and ecological processes in aquatic systems and the relation between these systems and their environment. The research objectives should be directed towards the development of new ecological concepts for a sustainable use of water resources, and the improvement of the role of lakes and rivers as habitats for organisms and as part of the environment. Teaching responsibilities include classroom, laboratory, and field work with biology, environmental science and environmental technology students. The professor should be actively involved in bridging the gap between research and practice. Applicants should have an outstanding, internationally competitive academic record in either ecology, limnology, zoology, plant sciences, or similar disciplines. They should be ready for interdisciplinary collaboration with natural and social scientists, and engineers. **Please submit your application together with a curriculum vitae and a list of publications to the President of ETH Zurich, Prof. J. Nüesch, ETH Zentrum, CH-8092 Zurich, no later than September 30, 1993.** The ETHZ specifically encourages women to apply with a view towards increasing the proportion of female professors.

Ad, South Florida Water
Manage District job

ASSOCIATION FOR WOMEN IN SCIENCE AWIS

AWIS has published **A HAND UP: WOMEN MENTORING WOMEN IN SCIENCE** (Deborah C. Fort, Ed., 1993). This book, written for students and those in early career stages, contains advice on balancing personal and professional life, feminism and science, succeeding in college, graduate school and beyond, finding a job, avoiding sexism and harassment, finding a mentor (and/or becoming one), and more. It may be ordered from the AWIS national office, 1522 K St. NW, Suite 820, Washington, DC 20005 (Tel. 202-408-0742) (\$16.50 AWIS members, \$20.50 non-members).

CALENDAR OF EVENTS, 1993-1994

Joint ECSA/VAE Symposium on Particles in Estuaries and Coastal Waters

Dates: August 30 - September 3, 1993

Location: Haren, The Netherlands

Topics: Physical, chemical and biological role of small organisms, organic particles, minerals and aggregates in shallow coastal systems.

Contact: Victor N. de Jonge, Rijkswaterstaat Tidal Waters Division, P.O. Box 207, 9750 AE Haren (GN), The Netherlands (Tel: +31-50-331359; Fax: +31-50-340772).

International Conference on Food Webs: Integration of Patterns and Dynamics

Dates: September 12 - 16, 1993

Location: Pingree Conference Center, W of Fort Collins, Colorado

Topics: Review food web research, with the goals of: exploring food web research as an integrative paradigm; fostering interaction among scientists using different approaches; improving integration of food web theory into other areas of ecology; and exploring new approaches. Specific topics will include: temporal and spatial factors that affect food web structure; top-down and bottom-up factors; nutrient cycling and the importance of detrital food webs; complex interactions in food webs; comparison of approaches (connectivity, energy flow and species interactions); applications to managed ecosystems; and exploring generalities among different communities.

Contact: Michael J. Vanni, Dept. Zoology, Miami University, Oxford, OH 45056 (Tel.: 513-529-3192; Fax: 513-529-6900; Bitnet: mjvanni@miamiu).

BIOGEOMON - Symposium on Ecosystem Behavior: Evaluation of Integrated Monitoring in Small Catchments

DATES: September 18 - 20, 1993

Location: Prague, Czechoslovakia

Topics: The purpose is to bring together experts who interpret and scientifically evaluate data from biological and chemical monitoring of small catchments and from related monitoring programs. Topics will include: the design and operation of monitoring networks; long-term changes and mass balances of ecosystems; response of biota to environmental changes; models of ecosystem behavior; and predictions of policy makers.

Format: To promote close interaction among researchers, BIOGEOMON will have the character of a workshop, with review lectures and contributed poster presentations which will serve as the basis for panel discussions.

Contact: Tom Paces and Jiri Cerny, Czech Geological Survey, Malostranske namesti 19, 118 21 Prague 1, Czechoslovakia (Fax: +42-2-7980965).

12th North American Diatom Symposium

Dates: September 23 - 25, 1993

Location: University Field Station (Delta Marsh), Manitoba, Canada

Topics: Verbal and poster presentations on any topic pertinent to diatoms, extant or extinct, freshwater or marine. No concurrent sessions. A panel discussion or debate involving participants and invited speakers will also be held.

Contact: L. Gordon Goldsborough, Dept. Botany, Brandon University, Brandon, MB, Canada R7A 6A9 (Tel.: 204-727-9786; Fax: 204-726-4573; e-mail: goldsborough@brandonu.ca).

European Environmental Research Organisation Symposium on European Coastal Seas: From Science to Management

Dates: October 4 - 6, 1993

Location: Barcelona, Spain

Purpose: To bring together an international group of young and established scientists from different disciplines to discuss science and management of European coastal seas and improve the transfer of knowledge from science to management. Emphasis is placed on physico-chemical and bio-organic processes. Monitoring strategies as well as marine management and global issues will be addressed.

Contact: EERO (European Environmental Research Organization) Training Centre, P.O. Box 182, 6700 AD Wageningen, The Netherlands (Tel: +31-8370-84924; Fax: +31-8370-84941)

International Symposium on the Ecological Effects of Arctic Airborne Contaminants

Dates: October 4 - 8, 1993

Location: Reykjavik, Iceland

Topics: Technical sessions include: Factors and Processes Influencing Arctic Deposition; Airborne Contaminants in the Arctic; Human Health Issues; Effects on Arctic Ecosystems (Ecological Effects of Airborne Contaminants and Detecting Ecosystem Response); Contaminant Relationship to Climate Change; and Information Gaps and Research Needs (Panel Discussion).

Contact: Dixon H. Landers, Arctic Contaminants Research Program, USEPA Environmental Research Laboratory, 200 SW 35th St., Corvallis, OR 97333 (Tel: 503-754-4427; Fax: 503-754-4716).

6th International Conference on Toxic Marine Phytoplankton

Dates: October 18 - 22, 1993

Location: Nantes, France

Topics: The purpose is to study noxious or toxic species, their proliferation in coastal areas or the open sea and their effects on human health, aquaculture and biological resources. Topics will include ecology, taxonomy, physiology, immunology, molecular biology, toxicology and epidemiology.

Contact: 6th International Conference on Toxic Marine Phytoplankton, Cité des Congrès, 5 rue de Valmy, 44041 Nantes cedex, France.

12th Biennial International Estuarine Research Conference

Dates: November 14 - 18, 1993

Location: Hilton Head, South Carolina

Abstract deadline: 30 April, 1993

Contact: Rick DeVoe, SC Sea Grant Consortium, 287 Meeting Street, Charleston, SC, 29401 (Tel: 803-727-2078; Fax: 803-727-2080).

International Association for Sediment Water Science's 6th International Symposium on Interactions between Sediments and Water

Dates: December 5 - 8, 1993

Location: Santa Barbara, California

Purpose: Present and discuss current research associated with all aspects of freshwater and marine systems, their sediments, and especially the interactions between the sediments, suspended matter, water, and biota; the role of sediments and suspended matter in aquatic ecosystems; and the management of water resources.

Contact: Wilbert Lick, Department of Mechanical & Environmental Engineering, University of California, Santa Barbara, CA 93106 USA (Tel: 805-893-4295; Fax: 805-893-8651; Registration Fax: 805-684-6979).

Symposium on Pacific Salmon and their Ecosystems: Status and Future Options

Dates: January 10 - 12, 1994

Location: Seattle, Washington

Purposes: Assess changes in anadromous Pacific Northwest salmonid populations; examine factors responsible for those changes; and identify options for restoring Pacific Salmon to the Northwest.

Contact: For information, Deanna J. Stouder, Fisheries Research Institute WH-10, University of Washington, Seattle, WA 98195 (Tel: 206-685-2724; Fax: 206-685-7471; Internet: stouder@u.washington.edu); to be included on future mailings, Continuing Education, College of Forest Resources, AR-10, University of Washington, Seattle, WA 98105 (Fax: 206-685-0790).

American Society of Limnology and Oceanography & American Geophysical Union: Ocean Sciences 94

Dates: February 21 - 25, 1994

Location: San Diego, California

Topics: Atmospheric sciences, estuarine sciences, limnology, oceanography, ocean technology. Contributed papers are encouraged in the following areas: large-scale transport and circulation; biogeochemical processes; land-sea interactions; ocean optics; polar oceanography; nearshore sediment transport and shelf sedimentation; planktonic and benthic food webs; air-sea chemistry and dissolved gases; whole-ecosystem experiments; particulate organic matter degradation and flux; and long-term research and data bases. Topics are not limited to these areas: Special sessions are also being organized.

Deadline for Abstracts: November 18, 1993.

Contact: ASLO members will automatically receive the Call for Papers. For other information contact Ocean Sciences 94, American Geophysical Union, 2000 Florida Ave. NW, Washington, DC 20009.

Spring American Chemical Society Meeting

Dates: March 13 - 18, 1994

Location: San Diego, California

Topics: A major theme for this ACS meeting is aquatic chemistry. Several special symposia are planned: The Colloidal State in Seawater (focusing on : Observation and distribution of colloidal matter in seawater, composition of marine colloids, colloid dynamics (e.g., production, aggregation, microbial utilization) and state-of-the-art collection and analysis methodologies); and Measurement and Reactivity of Organic Materials in Natural Waters (covers recent findings on the quantification, characterization and transformation of dissolved, colloidal and particulate organic matter in marine and freshwater environments. Interactions between these different phases and the role of microbiological processes on organic geochemistry will receive strong emphasis).

Abstract Deadline: November 1, 1993

Contact: Mark L. Wells (Colloidal symposium), Inst. Marine Sciences, 272 Applied Sciences Bldg, UCSC, Santa Cruz, CA 95064 (Tel: 408-459-3877; Fax: 408-459-4882; Omnet: m.wells); or Jim Bauer (Measurement symposium), Dept. Chemistry, B-169, Florida State University, Tallahassee, FL 32306-3048 (Tel: 904-644-9696; Fax: 904-644-2581; Omnet: w.landing).

American Society of Limnology and Oceanography & Phycological Society of America: 1994 Joint Meeting

Dates: June 12 - 16, 1994

Location: Miami, Florida

Topics: Focus will be on tropical systems, land-margin interfaces, warm-water freshwater systems, marshes, as well as the wide range of ASLO/PSA topics. A variety of special sessions are planned.

Contact: Alina Szmant, ASLO '94 Meeting Co-Chair, University of Miami/RSMAS, 4600 Rickenbacker Causeway, Miami FL 33149 (Tel: 305-361-4609; Fax: 305-361-4600; Omnet: a.szmant; Internet: asmant@rcf.miami).

6th International SIL Workshop on Aquatic Microbial Ecology

Dates: June 17 - 23, 1994

Location: Uppsala, Sweden

Topics: Measurement of microbial activities involved in the carbon cycle of aquatic ecosystems, including pelagic processes and sediment-water interactions. Topics should relate to microbial interactions in the water column or surface sediments, or roles of microbes in nutrient cycles and fluxes, and may encompass different levels of organization, from dissolved organic matter and viruses to the organization of food webs. Organizers expect an increased emphasis on the application of new methods, particularly molecular biological, for identifying microbes and assessing microbial diversity. This meeting is co-sponsored by ASLO.

Contact: Russell T. Bell, Institute of Limnology, Uppsala University, Norbyvägen 20, S 752 36 Uppsala, Sweden (Tel: 46-18-18 27 12; Fax: 46-18-53 11 34).

International Conference on Tropical Limnology

Dates: July 4 - 8, 1994

Location: Salatiga/Central Java, Indonesia

Topics: Commemorating the 65th anniversary of the Ruttner-Thienemann Limnological Sunda Expedition, the meeting will present results on limnology in tropical countries. Objectives are to: Exchange experimental results, methods, research results, observations and ideas on tropical limnology; collect information on limnological trends and activities in tropical countries; and evaluate the possibilities of further cooperations between concerned groups in tropical limnology and tropical wetlands for the benefit of the improvement of the understanding of various interrelated fields in aquatic sciences. Topics include: tropical lake, reservoir, riverine and phytotelmnic limnology; tropical wetland limnology and conservation; and limnological education in tropical countries.

Contact: Faculty of Science and Mathematics, Satya Wacana Christian University, JL. Diponegoro 52-60, Sjalatiga 50711, Indonesia (Fax: 0298-81-81420).

International Conference on Sustaining the Ecological Integrity of Large Floodplain Rivers: Application of Ecological Knowledge to River Management

Dates: July 12 - 15, 1994

Location: La Crosse, Wisconsin

Topics: River experts from every continent will address topics concerning the ecology and management of large floodplain rivers. The conference will focus on invited synthesis papers presented in keynote platform sessions, and special contributed poster sessions featuring current ideas and experiences about ecological integrity.

Contact: Ms. Penny Tiedt (registration), University of Wisconsin-La Crosse, Continuing Education, 1725 State St., La Crosse, WI 54601 (Tel: 608-785-6503; Fax: 608-785-6547); or Dr. Kenneth S. Lubinski (program), U.S. Fish and Wildlife Service, Environmental Management Technical Center, 575 Lester Ave., Onalaska, WI 54650 (Tel: 608-783-7550; Fax: 608-783-8058).

ICES Zooplankton Symposium

Dates: August 15 - 18, 1994

Location: Plymouth, UK

Topics: Meeting will focus on zooplankton production measurement and its role in global ecosystems and biogeochemical cycles. Goals are to stimulate new research directions to test the proposition that zooplankton population dynamics and ocean physics are directly coupled. Themes will include new technologies for rapid at-sea population characterization including production indices, and coupled physical/biological models.

Contact: Roger P. Harris, Plymouth Marine Laboratory, or J.C. Gamble, Sir Alister Hardy Foundation for Ocean Science, Prospect Place, Plymouth PL1 3DH, U.K. (Tel: +44 (0)752-222772; Fax: +44 (0)752-670637; Omnet: PML.UK or J.Gamble.CPR).

13th Symposium, International Society for Diatom Research

Dates: September 1 - 7, 1994

Location: Acquafredda di Maratea (Potenza), Italy

Topics: All aspects of diatom research: morphology, cytology, genetics, reproductive biology, physiology, biochemistry, molecular biology, ecology, biogeography, paleontology, phylogeny and systematics. Oral and poster presentations are solicited on marine as well as freshwater diatoms, living as well as fossil.

Contact: Jean Gilder Congressi snc, 13th Int. Diatom Symposium, via G. Guagliariello 35/E, I-80131 Napoli, Italy (Tel: +39-81-546-3779; Fax: +39-81-546-3781).

LAND MARGIN ECOSYSTEMS RESEARCH PROGRAM: MEETING REPORT AVAILABLE

The National Science Foundation began the Land Margin Ecosystems Research (LMER) program in 1988 to help answer the scientific and societal questions about the present functions and future changes of coastal environments. Each project is an integrated multidisciplinary study of organization and function of a particular coastal system. There are presently five sites, sharing a common approach to the study of the linkage of land and nearby marine systems and the impact of major natural perturbations on these regions. Chesapeake Bay is a large mid-Atlantic estuary with a very large, complex watershed in a temperate, relatively moist climate. The Columbia River, in the Pacific Northwest, is an estuary with short residence times due to large freshwater inflows. Tomales Bay, in coastal northern California, is a medium-sized drowned rift valley, adjacent to a small watershed mostly covered by grasslands. Waquoit Bay, on Cape Cod in Massachusetts, is a small shallow bay, fed by several forested and urbanized subwatersheds. The Plum Island Sound estuary in northern New England, a medium-sized estuary with extensive areas of intertidal wetlands, receives runoff from two small watersheds with contrasting degrees of urbanization.

Each year the LMER program holds workshops to consider and discuss topics of importance to all LMER scientists. The theme of the 1992 meeting was how to carry out cooperative and comparative research. Participants at each of the four workshops were asked to both identify the research and methods needed for such research and to identify specific comparative research questions and projects. The workshops focused on vertical coupling between sediment and water in coastal systems; coupling between land and water; the use of geographic information systems in LMER studies, and insertion of biological and chemical processes in physical transport models.

To receive copies of the 1992 report, which describes the LMER program, summarizes the meetings for a general audience, and reports on the meeting's four workshops (Vertical Coupling, Coupling between Land and Water, Use of Geographic Information Systems and Biological-Physical Modeling) for a more technical readership, contact John E. Hobbie or Deborah G. Scanton, LMER Coordination Office, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543 (Fax 508-457-1548).

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