

ASLO BULLETIN

American Society of Limnology and Oceanography

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MESSAGE FROM THE PRESIDENT

LOOKING FORWARD

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Since 1948, when the Limnological Society of America expanded to become the American Society of Limnology and Oceanography, the Society's mission has been to promote interest and research in aquatic science. It has accomplished this largely (but not exclusively) through the production of a high-quality journal and excellent scientific meetings. The coming year will continue this tradition. The Board approved an increase in the number and size of pages in *Limnology and Oceanography*, which will afford members and non-members alike access to a greater number of high-quality scientific papers (see related article by L&O Editor David Kirchman). ASLO will be sponsoring two special symposia in addition to the annual meeting in Reno in June, 1995. Diane McKnight, an ASLO Member-at-Large

for the last three years, is Co-Chair of the ASLO/NABS Symposium on the Regional Assessment of Freshwater Ecosystems and Climate Change in North America, which will be held October 24-26, 1994 near Washington, D.C. The symposium is being supported with funds from the Environmental Protection Agency and U.S. Geological Survey. The Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) symposium will be held in December, 1994 at the Bermuda Biological Station and bring together 40 recent Ph.D. recipients in biological oceanography and limnology to foster the exchange of information among these two groups. ASLO's Executive Director, Susan Weiler, was instrumental in developing the program and obtaining funding from the NSF, NOAA, NASA and ONR.

In addition to these activities I plan to work with Dr. Weiler and the Committee on Education and Human Resources to develop programs aimed at improving aquatic science education and the public's general understanding of

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.

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TARGET DATES for 1994 submissions: Feb. 10, July 10, & Oct. 10, 1994.

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

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science. One of my aims is to offer special workshops at the annual meetings in Reno and Milwaukee, and the next Ocean Sciences meeting. One idea already under consideration is a workshop on audio/video/computer tools for undergraduate limnology and oceanography courses. I urge members to contact me with ideas they may have and I would especially like to thank those of you who have already written to me and expressed your interest in and support of these efforts.

I also plan to establish a collection of aquatic science slides and videos for use at various grade levels. Eventually I hope the collection could be maintained by ASLO and rented or sold to provide funds for student and educational activities. Please let me know if you have a few slides or brief video footage you would be willing to donate to ASLO for eventual arrangement into special collections.

Following the meeting in Miami I appointed a special ad hoc committee to examine and revise ASLO's By-Laws so that the Society's structure and operating procedures conform to the By-Laws. The committee consists of Ken Webb (Chair), Peter Starkweather, Richard Robarts, Lynda Shapiro, Henry Williams, Susan Weiler (ex-officio), and myself as the Board representative. The goal for the committee is to provide the Board with a revision by mid fall so that the membership can receive and review the changes by late Fall. This will be followed by a mail ballot in the spring.

During the coming year the Society will embark on a vigorous campaign to establish a one-million dollar endow-

ment for ASLO. Darcy Lonsdale has been actively working on this project. Private funding will be sought to support a variety of education activities, such as: student travel awards; support of a post-doctoral award; special projects such as career brochures, workshops, slide/video collections; subsidy of journal subscriptions and membership in ASLO to libraries and scientists in the former Soviet Union and Economically developing Countries; provision of matching funds for special symposia and issues of *Limnology and Oceanography*; and a National Lecturer Program. Please let me know if you have other ideas or would like to become involved.

The Future of ASLO Committee was established by the Board to make recommendations on the future of ASLO. In 1988 the committee submitted its report to the Board for consideration and action at its December, 1988 meeting. Since many actions stemming from this report have taken place over the past few years, we thought it would be useful to provide members with an overview of the major recommendations and accomplishments to date. A summary is found in this issue of the Bulletin. The full report can be obtained from Susan Weiler.

In ending this message I remind you that ASLO owes its existence largely to the volunteer efforts of its members. I would therefore like to extend my thanks to all of you who have contributed your time over the years and urge those of you who have not, to get involved.

ASLO ELECTIONS

1994 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

Results of the 1994 election were reported to me by Nominations Committee Chair Curtis Suttle. Votes were compiled by tellers Curtis Suttle and Kenneth H. Dunton. In total there were 539 ballots cast (roughly 14% of the membership). The results are presented below.

Secretary: Polly A. Penhale (College of William and Mary) was re-elected for a 3-year term.

Members-at-Large: JoAnn M. Burkholder (North Carolina State University), Jonathan J. Cole (Institute of Ecosystem Studies, Cary Arboretum), and Sybil P. Seitzinger (Rutgers University) were elected for 3-year terms. They join continuing Members-at-Large Erica J.H. Head (Bedford Institute of Oceanography), Robert H. Peters (McGill University), Sally MacIntyre (University of California, Santa Barbara), and Bess B. Ward (University of California, Santa Cruz).

Code of Professional Conduct: The proposed Code was approved (89.4% in favor). It will be published annually in the ASLO Directory.

John T. Lehman announced his resignation from the ASLO Board and will thus not serve a year's term as Past President. Nancy H. Marcus began her two-year term as President in June.

1995 ELECTIONS: NOMINATIONS SOUGHT FOR VICE PRESIDENT AND MEMBERS-AT-LARGE

Benjamin E. Cuker, Nominations Committee Chair, Center for Marine and Environmental Science, Hampton University, Hampton, VA 23668 (Tel: 804-727-5884; Omnet.: b.cuker)

On behalf of the 1995 Nominations Committee (myself, John J. Cullen, Saran Twombly, and Polly A. Penhale (ex officio), I invite you to submit nominations for the positions of Vice-President and Members-at-Large. Nominations will be accepted through October 31, 1994. The elections will take place by mail ballot during the late winter/early spring period.

The Vice President serves a 1-year term, followed by a 2-year term as President and 1-year term as Past President. The first year is spent working with Committees, becoming established as a Board member, and identifying areas for Board consideration over the next two years. The Vice President and Past President serve as active members of the Board of Directors, and fill in for the President in his/her absence.

There are seven Members-at-Large in all. Each is elected to represent 500 members of the Society, and serves a 3-year term. With the officers, they constitute the Board of Directors and are charged with managing the affairs of the Society. This year two Members-at-Large will be elected.

It is essential for the health of the Society that the membership be represented by a body which reflects the compo-

sition of the membership, and as such it is important for the membership to be involved in the nomination process. Given the breadth of our Society and accomplishments of our members, identifying potential Board members is a great responsibility, and no easy task. Never-the-less, select we must! Please send nominations (including self nominations) to me at the above address, phone or e-mail.

Each nomination should include the complete name, address, and phone number of the nominee. Any additional statement of support for the nominee would also be welcomed. Nominations for Members-at-Large from last year have been forwarded to me, and will be reconsidered. The

nominations committee will solicit CV's from all nominees.

Note that all ASLO members are eligible to run for office, including those whom may reside in nations other than Canada or the US. The committee will look for a balanced slate composed of individuals who are committed to take on the chores of Society governance and leadership. Election to the Board is more than an honor and involves a significant contribution of time and energy.

There are many other channels for service to ASLO. If you are interested in serving on an ASLO committee or working for the Society in some other capacity, please Contact President Marcus.

ASLO NEWS

ASLO FINANCES: STATUS REPORT

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

At the San Diego meeting last February, the ASLO Board discussed an unaudited final cash accounting which showed a loss of over \$26,000. Since this was reported to the membership in the last issue of the *Bulletin* and caused some concern at the Business meeting, the Board wishes to clarify that the final audit for 1993, which is done by the accrual method, revealed a net income of better than \$35,000. You might well ask what accounts for the difference between the two methods. Cash-basis accounting recognizes revenues when received rather than earned (for example, 1994 dues paid in 1993 are put in the 1993 account), and expenses are recognized when paid rather than when the obligation is incurred. Accrual-basis accounting recognizes revenues when earned rather than received (for example, dues designated for 1994 are recorded as deferred support and revenue, and eventually moved to the 1994 account). Similarly, expenses are recognized when the obligation is incurred rather than when paid (for example, expenses associated with the 1992 journal, but paid in 1993, are moved to the 1992 account). In essence, cash accounting is done on the basis of whatever money actually comes in or goes out in a given year, while accrual accounting transfers both income and outflow to the applicable year.

In 1993, we carried over more expenses from the preceding year than usual. The main cause of the difference between the cash and accrual accounts for 1993 was our success in reducing the backlog of L&O issues. Now that we have reduced the backlog, the cost and accrual accounts should agree more closely. It should be much easier to compare the fiscal reports at year end now that we are getting back on schedule.

Over the years since ASLO's founding, sound business management has enabled ASLO to accumulate equity of more than \$300,000, most of which is presently invested in Treasury Bills. After considering several alternatives, the Board recently approved the use of Worthen Trust Company, Inc. to manage investment of ASLO's reserves and our new Endowment fund. We look forward to working with

them to develop a secure investment strategy with a better rate of return than we presently enjoy from Treasury Bills. Funds generated will be used to protect the equity from inflation, as matching funds for external donations to the Endowment, as a back-up for unanticipated expenses, and for expanded programs.

At the annual meeting in Miami, the membership approved an increase in dues. With such sound finances, you may wonder why your 1995 dues will increase. The reason is that services and expenses have gone up in several areas, necessitating increased revenue. The number of pages of L&O published annually has increased by 400 (22%) since the last dues increase. While increasing the page size of L&O will result in some savings (about \$15,000), it does not cover the printing cost of the 400 new pages. The editorial staff has increased to handle the increased pages in L&O and the separation of the Managing Editor's and Editor-in-Chief's offices. Finally, postage costs have risen significantly over the past several years, and further increases have already been announced for the next several years.

Student dues will increase for the first time in 12 years (from \$25/year to \$35/year). Emeritus members and members w/o journal will pay an additional \$5/year. Dues will increase by \$10 for full members inside North America, and by \$20 for those outside North America. The difference is due to the high cost of air-lifting publications outside North America. Even with the increase, the air-lift expense is still subsidized by the Society. The Board is aware that this increase places a particularly large burden on our members from economically developing countries. A list of unduly impacted countries and a policy for members from these countries should be established soon. If the increase presents a hardship for you, please contact Karen Hickey, ASLO's Business Manager.

The Society is now poised to begin a 5-year, \$1 million endowment campaign. The Board has identified Educational initiatives as the highest priority for fundraising (see the President's message). Please let President Marcus know if you would like to become involved in the endowment campaign, or have suggestions concerning it.

The society is in sound financial shape, and the next few years should be particularly exciting ones for the Society.

MESSAGE FROM THE L&O EDITOR: CHANGES IN L&O

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

I interrupt my series of sermons about writing scientific papers in order to report some news about Limnology and Oceanography which will impact future authors and should interest all. The short of it is that the ASLO Board has approved a number of changes that I think will greatly help the journal.

First, you may notice that L&O issues have become a bit portly over the last few months. The increased heft is from packing more pages in each issue. At its meeting in San Diego last February, the ASLO Board approved an increase in the number of pages we can publish from 2000 to 2200 pages per year. The immediate need for this increase was to reduce the backlog of papers which had built up over the last few months. In the near future, this backlog should be gone, and we should be able to push papers into press much faster than before. It also means more opportunities for you to publish your paper in your journal. More on that below.

Next year will bring a more noticeable change to the journal. We will increase the page size from its current 7 X 10 to 8 1/2 X 11, effective with the January 1995 issue. The journal gains much from this change. First, individual issues will slim down with this larger page format; they will look again like a journal rather than a book. This larger format paves the way for further increases in page numbers in the future. Also, perhaps some of you have become adept at photocopying L&O to fill up the pages, but I never did and wasted paper in the process. But the biggest reason to go to the large format is economics: ASLO saves much money by increasing the page size. Increasing the number of published pages alone without increasing the page size would have been quite expensive.

Another change that may affect some of you is that we will start, in 1995, levying page charges for papers exceeding 10 pages. Right now the limit is 20 pages, which only has affected the most verbose. Note that the new page charges probably will not affect the average L&O paper. Now the average paper is about 13 pages—with our current format. That paper next year would be less than 10 pages when published in the larger format. Of course we will consider arguments from authors who cannot pay these charges. And some papers may deserve more room than the average. But I suspect most long papers could say the same thing in fewer pages. So, these page charges may curb long-winded authors while giving ASLO some extra pocket change.

Finally, I would like to announce some changes in the managing editor's office in Seattle. The ASLO Board approved hiring more help for that office, which should lighten the load for those overworked folks, and it should allow us to speed up handling of papers. That extra help may also prove valuable as we start to move into electronic publishing. A larger change is that Lyn Cole, managing editor of the journal for many years, will be retiring in 1996. Although

that seems far off, a committee (I am its chair) has already been looking into journal operations after Lyn retires. Among many issues, this committee has to consider the type and amount of copy and technical editing the journal should have. I welcome any comments and suggestions.

I have been pleased by the support provided by the ASLO Board for the journal. The changes discussed above and other actions set the stage for continued success of L&O. But the real key to L&O is its authors and readers. In particular, I want to emphasize that, even with our higher submission rate, the larger size of the journal increases opportunities for publishing your paper in a timely fashion. We welcome good papers from everywhere, but I especially urge North American authors to submit their work; the submission rate from the US and Canada has not kept up with other countries, I suspect, for the wrong reasons. Some may find this hard to believe, but I suspect your chances of getting published—quickly—in L&O are as good as with many journals. The difference is that you know your paper will be reviewed and edited thoroughly. That will not matter much to those who write perfectly or do not need to be associated with the number one journal in both limnology and oceanography (measured by citation impact). But for the rest of us, we need all the help we can get. So, send in your paper now.

NEW ASLO MEMBERSHIP BENEFIT: A DOCUMENT SEARCH AND DELIVERY SYSTEM

ASLO has recently arranged with the UnCover Company to provide free on-line searching of the UnCover data base of periodical tables of contents and a discount rate for obtaining articles.

This new service is known as *Access to UnCover*. The data base contains the tables of contents of over 15,000 scholarly journals, from 1988 to present. Searches can be made by title, key word, or by author. You can also "recreate" the tables of contents pages from journals of particular interest to you.

Copies of the full text of articles can be ordered on-line; they are delivered via fax, usually within 24 hours. Payment for document delivery is made either by credit card or through a deposit account. The document delivery fee includes the Service Charge, a Fax Surcharge, and a Copyright Fee.

ASLO members can order delivery of the full text of articles at the lowest available service charge (\$6.50 instead of \$8.50). We have negotiated this arrangement as part of an agreement to include *Limnology and Oceanography* in the Access to UnCover data base. There is no cost to members or the Society. We hope this service will provide members with a convenient way to take advantage of the new on-line searching technologies.

To use *Access to UnCover*, ASLO members need only access to the Internet and Telnet. Once on the Internet, Telnet to the *Access to UnCover* address: allen.carl.org. At the prompt, enter the Password: DELIVER.

REPORT OF 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; Omnet: b.cuker)

CURMLO hosted its fifth program at the Miami ASLO/PSA meetings, June 11 - 16, 1994. This was the first in a series of three programs to be supported by a new cycle of funding from NSF, Ocean Sciences. The three-year award is for \$292,117 (US dollars) and will support minority students and mentors to attend the three ASLO summer meetings as well as the pre-conference workshops. The award is to Hampton University, acting jointly with ASLO, with me as P.I. The award covers all expenses (travel, registration, housing, food, field trips, meeting rooms, etc.) except for ASLO student membership, which is provided by the Society as an in-kind match.

Attending this year were 66 students (21 graduate and 45 undergraduates) and 14 mentors. This was the largest group yet. The students came from across the US and its territories. Among the 80 participants were African-American, Hispanic, Native-American, Pacific-Islander and Puerto Rican students. The pre-conference workshop began on Saturday evening with greetings from the Society given by Vice-President Nancy Marcus. The keynote address, "Science and Algae Without Walls," was given by Dr. Gisele Muller-Parker. Sunday morning was devoted to a snorkeling field-trip to the Florida Keys. This was followed by several panel discussions that covered how to plan attendance at the meeting, how to meet people and tips on giving a good presentation. The following persons served on these panels: Dr. Ambrose Jearld, Dr. Melinda Davis, Dr. Brian Bingham, James Stewart, Alfred Gonzalez, III, Dr. Carol Daniels, Dr. Percy Washington, Dr. Henry Williams, Dr. Johnathan Wilson, Marcia Jones, Cathy Needham, Dr. Doretha Foushee, Dr. Matt Gilligan, Dionne Hoskins, and Athena Ganchorre.

The students got to see more of how ASLO functions by attending the Business meeting on Monday.

The student symposium was held Monday evening, and a packed crowd of over 120 heard 16 presentations in a session chaired by graduate students James Stewart and Dionne Hoskins. Topics ranged from metal uptake in macrophytes to the distribution of fauna on seamounts. The students presentations were received enthusiastically by the audience, that included such ASLO leaders as Nancy Marcus, Susan Weiler, and Robert Wetzel.

In addition to the Student Symposium, over twenty students presented posters or gave oral presentations in the regular sessions.

This year time and space was also devoted to recruiters. The South Florida Management District and the New York Fish and Wildlife Program recruited students at a special table at the poster session.

A special thanks is owed to the ASLO members who served as "meeting mentors" this year. They took the time and energy to aid the students in navigating the sessions and

to help them get the most out of the meetings. The mentors were Beverly Baker, Brian Bingham, Daniel Childers, Jorge E. Corredor, Carol Daniels, Melinda Davis Marlene S. Evans, Doretha Foushee, Matthew Gilligan Maria J. Gonzalez, Ambrose Jearld, David Millie Joseph P. Montoya, DeLois Powell, Wawaise J. Walker, Percy Washington, Kathy Webster, Henry Williams, Craig Williamson, and Jonathan Wilson.

Another session is planned for the ASLO '95 meeting in Reno. Please let me know if you know of students who might be interested in the program, or would like to become involved yourself as a meeting mentor, panelist, etc.

MESSAGE FROM THE BULLETIN EDITOR: NEW POLICIES

C. Susan Weiler, *Bulletin* Editor, Dept. Biology, Whitman College, Walla Walla, WA 99362 (Tel: 509-527-5948; Fax: 509-527-5961; Internet: weiler@whitman.edu)

The *Bulletin* serves many functions, including: Society news; short notes on topics of general interest; letters pertaining to issues raised in the *Bulletin*, in L&O, or "at large" by individual members; other news or summaries of information and events relevant to members; and reviews, particularly of software (book reviews are specifically reserved for L&O).

At the June, 1994 meeting, the ASLO Board passed a motion that "All general communications to the ASLO membership from ASLO officers or Members-at-Large using or relating to their ASLO position shall be printed in the ASLO *Bulletin*, excepting: letters/notes/articles printed in *Limnology and Oceanography*; promotional letters approved for distribution by Allen Press; or those granted exception by the Executive Committee or Board of Directors."

Among other things, I hope the *Bulletin* can serve as a forum for collegial discourse. Controversy is welcome, provided it takes a constructive rather than destructive form.

Whatever the topic, Editors even of non-peer-reviewed publications have a responsibility to distinguish fact from opinion, correct errors, and reject statements that are counter to accepted practice, or which are false or damaging.

Given this, there may be times when an author and the Editor disagree. The Board passed the following policy in June, 1994 to address such instances: "If an author disagrees with the *Bulletin* Editor's decision on a contribution to the ASLO *Bulletin*, the author may submit a written request and justification for reconsideration to the Editor. If the author is still dissatisfied after reconsideration, a written appeal may be submitted for consideration by the full Board."

With that established, I invite you all to submit articles, particularly on scientific controversies that might stimulate a lively and productive debate!

**Remember to nominate your colleagues for the
G. Evelyn Hutchinson Medal,
Lifetime Achievement Award and Lindeman Award!
Details on pages 10 and 11.**

1988 FUTURE OF ASLO COMMITTEE REPORT: SUMMARY OF RECOMMENDATIONS AND ACTIONS TO DATE

The Future of ASLO Committee (Kenneth H. Mann, Chair; Alice Alldredge; Christopher F. D'Elia; Richard W. Eppley; John T. Lehman; Bruce J. Peterson; Lawrence R. Pomeroy; David W. Schindler; Joseph Shapiro; and Peter L. Starkweather) was established by the ASLO Board of Directors and met December 2-4, 1988 in Monterey, California to "assess the status of present society activities and recommend changes for the future." Besides the Committee, also present at the meeting were four executive officers, Claire Schelske (President), Polly Penhale (Secretary), John Stockner (Treasurer), and Richard Barber (Past President). The Committee concluded that "the time is right to institute significant changes in the structure and function of the Society to increase its service to its members, to preserve and expand the quality of *Limnology and Oceanography*, and to improve the identity, continuity and management of the Society."

Many of the recommendations have already been implemented, while others are still under consideration by the Board and various committees formed to address specific issues. A summary of the Future of ASLO Committee Report's Recommendations and actions to date are presented below, to inform members of what has been accomplished and what is still under consideration. The text itself appears in plain text, and summaries of actions taken on recommendations appear in italics. The complete report is available from the Executive Director.

SUMMARY LIST OF RECOMMENDATIONS

I. Proposed Changes in the Structure of the Society

- Change the term of the Vice President to 2 years to be consistent with the President's term.
Presently under consideration by the By-Laws Committee.
- Establish standing committees on Finances, Meetings, and Publications.
The Board approved the concept of standing committees on Finance, Meetings and Publications in 1990, but they have yet to be established. A Committee on Finance was established in 1991, and dissolved in 1992 after presentation of its report and establishment of an Endowment Committee.
- Establish task-oriented committees for Awards, Education, and Development and Endowment.
The Student Poster Award program was expanded in 1992. In 1993, the Board initiated two new awards: The ASLO Lifetime Achievement Award. and the Distinguished Service Award. A single Award committee has not yet been established. There is a separate committee for each award. Education and Development & Endow-

ment committees were established in 1991. The Education and Endowment committees are collaborating on the newly approved \$1 million, 5-year endowment campaign to be organized by Darcy Lonsdale as Chair of the Endowment Committee.

- Establish working groups to promote liaison with other societies and to increase the breadth of ASLO.
No working groups have been formed. ASLO has become more interactive with other societies through joint and co-sponsored meetings (since 1990 with AGU, British Ecological Society, NABS, PSA, SIL, SWS, and TOS) and through membership in the Council of Scientific Society Presidents and the Council on Ocean Affairs. ASLO continues to interact with AAAS as an affiliate society.
- Establish an ASLO Office and Recruit an Executive Officer.
A position was advertised in the fall, 1989, and Susan Weiler was hired part-time as the ASLO Executive Director in the spring, 1990. While the report recommended the office be established in Washington, DC, no residency requirements were placed on the position. An office is provided through Weiler's appointment with Whitman College.

II. Publications

- Establish a Bulletin to be published quarterly, which would carry communication to members, the Call for Papers and Abstracts for meetings and serve as a forum for discussion and news. Recruit an Editor of the Bulletin.
The Executive Director serves as the Editor for the ASLO Bulletin, which was launched in 1990 as a greatly expanded Communication to Members. The name was changed to the ASLO Bulletin with the first issue of 1992. The Call for Papers and meeting abstracts have not yet been incorporated in the Bulletin. The Bulletin is published 3 times annually.
- Expand of[sic] the journal from 6 to 8 issues and from 1600 to 2000 pages.
The journal was expanded to 8 issues with 1800 pages in 1989. In 1993 the number of pages authorized was increased to 2000 for 1994. In 1994 the number of pages authorized was increased to 2200 for 1995, with the page size increased to 8.5" x 11".
- Add editors under the editor-in-chief as necessary.
A team of associate editors with an editor-in-chief was initiated in 1990.
- Hire an additional part-time copy editor.
The hiring of additional editorial staff was authorized in 1989.

- Evaluate the role of the Editorial Board. *The Editorial Board was never well defined, and there have been no new elections for members since 1990; the Board ceased to exist in 1993. In 1993, the Board approved the appointment of six members of an Editorial Board to be selected by the Editor. Further evaluation of the role of the Editorial Board has begun now that the associate editor system is in place and David Kirchman has completed his transition to Editor-in-Chief. The Editorial Board will be evaluated by the By-Laws Committee.*

III. Meetings

- Alternate the winter meeting between an ocean emphasis and a broad aquatic sciences emphasis with appropriate joint sponsorship by other societies. *This was initiated with the ASLO '92 Aquatic Science meeting in Santa Fe and renewal of the AGU/ASLO Ocean Science Meeting in 1994. There is some concern about the proliferation of meetings and financial constraints on attendance. The Board has not yet decided*

whether to alternate winter meetings between an ocean and broad aquatic science emphasis, whether to re-structure the summer meeting in alternate years, or whether to develop some other alternative.

- Use working groups to help plan program breadth and maintain continuity. *At present, this is still the responsibility of the individual meeting program committees, with guidance from the ASLO Secretary.*
- Continue holding summer meetings at universities where possible, alternating between an inland site and a coastal site, with co-sponsorship with other societies as appropriate. Provide coordination for meetings through the Executive Director. *This has been accomplished with the ASLO/SWS meeting in 1993, and the ASLO/PSA meeting in 1994. Coordination of annual meetings is presently the responsibility of ASLO's Secretary, with the Executive Director helping out as needed.*

AQUATIC SCIENCE EDUCATION

Nancy H. Marcus, Dept. Oceanography, Florida State University, Tallahassee, FL 32306-3048, USA (Tel: 904-644-5498; Fax: 904-644-2581; Internet: marcus@ocean.fsu.edu)

Education has been designated as the priority focus for the new ASLO endowment campaign. Since this is also a topic of particular interest to me, it seems natural to make this a focus of my term as President of ASLO.

As part of this effort, I would like to organize workshops for pre-college teachers that could be held at our meetings. Teachers could be selected from the communities surrounding the site of the annual meeting. Please let me know if you would like to become involved.

Plans are already underway to hold workshops on undergraduate education at the 1994 and 1995 ASLO meetings and the 1996 Ocean Sciences meeting. These should provide instructors/professors/scientists with opportunities to share strategies for effective teaching of limnology and oceanography. The Reno session will focus on slides, videos, computer software and accessing and using some of the data bases now available on CD-ROM or via the Internet.. Our eventual goal is to develop a resource list and establish and maintain slide and video collections that could be sold to educators with the proceeds used to support ASLO educational activities. Please let me know if you could contribute slide or video material, have experience with a useful computer program or data base you would like to share, or would like to lead a session on some other topic.

Please consider what ASLO could do to foster education at a level(s) of particular interest to you, and get involved!

REPORT CARD ON THE FUTURE OF ASLO: RESULTS OF SECTIONS A-D

The following information was presented by President Lehman to the ASLO Board at the June, 1993 meeting in Edmonton. This information extends the questionnaire results that were printed in the Spring, 1993 issue of the ASLO Bulletin, highlighting goals of the society (Section E). The total number of respondents was 208, or 6% of the membership (154 full members, 16 foreign, 16 student, 8 emeritus, 9 full w/o L&O). Number and percent of those responding are given for each answer.

Section A: Journal Operations

Q: What model of journal operations do you favor?
72 (46%) centralized editorial office
85 (54%) semi-autonomous associate editors

Q: What aspects of L&O do you like the most?
Quality and price [no numbers or percentages were given]

Q: What aspects of L&O do you like the least?
The time it takes to get a publication out [no numbers or percentages were given]

Q: Do you perceive the need for additional ASLO publications?
28 (17%) Yes (with or without qualification)
140 (83%) No

Section B: Meetings

Q: Do you favor meetings where the program and invited papers are
1) largely designed by the organizing committee;
2) where sessions are organized around the field of contributed papers; or
3) Where the organizing committee selects session topics and we fill them in with contributed papers?
Option 1, 21 (12%); Option 2, 46 (26%);
Option 3, 60 (33%); Options 1+2, 12 (7%);
Options 2+3, 19 (11%); Options 1+3, 6 (9%);
All Options, 16 (9%)

Q: How many times per year should ASLO meet as a whole society?
1 < 1
163 (85%) 1
28 (15%) 1-2

Q: How many times per year should ASLO meet as subdisciplinary groups?
8 (13%) 0
8 (13%) 0.5
24 (38%) 1
2 (3%) 1-2
9 (14%) any number

Q: Do you prefer the venue of university campus or convention center?
86 (46%) University
26 (14%) Convention center
74 (40%) either — based on cost

Q: How many concurrent sessions are optimal? Cumulative frequency:
1 1
7 (5%) 2
38 (27%) 3
88 (63%) 4
105 (76%) 5
133 (96%) 6

Section C: By-Laws

Q: Should the term of the vice-president be extended to 2 years?
122 (79%) Yes; 33 (21%) No
Q: Should incumbents for Secretary and Treasurer be able to stand for election unopposed?
73 (66%) Yes; 37 (34%) No
Q: Should there be term limits for Secretary and Treasurer?
73 (47%) Yes; 83 (53%) No
Q: Should ASLO erect a series of standing committees?
108 (67%) Yes; 53 (33%) No
Choices for standing committees were diverse and varied.
Q: Are you willing to increase dues to pay for operations of the committees?
85 (51%) Yes; 83 (49%) No

Section D: Executive Staffing

Q: Are you pleased with the content and scope of activities described?
135 (90%) Yes; 15 (10%) No
Q: Would you support increased executive staffing and effort?
77 (51%) Yes; includes 18 (12%) qualified yes;
73 (49%) No
Q: Are you pleased with the content and scope of the Bulletin?
33 (88%) Yes; includes 7 (5%) qualified yes (want more job ads, controversy, pictures)
19 (12%) No
Q: Should the Bulletin be electronic?
44 (26%) Yes; 96 (57%) No; 29 (17%) Both

ASLO FORUM

EXTREME MEASUREMENTS FROM AQUATIC SYSTEMS: WHAT ARE THE LIMITS? A COMPILATION IN PROGRESS

Carlos M. Duarte, Centro de Estudios Avanzados de Blanes, Camino de Santa Barbara, s/n17300 Blanes, Girona, Spain (FAX: 34-72-337806; Internet: DUARTE@CEAB.ES) and Mark V. Hoyer, Dept. Fisheries and Aquatic Sciences, 7922 NW 71 St., Gainesville, FL 32606, USA (FAX: 904-392-3462; Internet: DANJRI@nervm.nerdc.ufl.edu)

Aquatic scientists often compare the values of different aquatic variables they collect to those reported by scientists from other parts of the world. This fundamental exercise contributes to the knowledge of ecological limits these variables can have. In addition, these comparisons often reveal interesting aspects (or inconsistencies!) in the data.

When newly measured values are close to the minimum or maximum reported values, they indicate measurements that may need to be reexamined for correctness or the values may add insight into the ecological functions of that particular system. The usefulness of a compilation of extreme measurements is demonstrated by the wide use of similar, albeit more limited in scope, efforts in the past, such as Eppley's compilation of temperature and phytoplankton growth (Eppley, R.W., 1972. Temperature and phytoplankton growth in the sea. *Fisheries Bulletin* 70:1063-1085.) Hence, we believe that there is a need for a comprehensive compilation of published ranges of physical, chemical, and biological variables that have been measured by other aquatic scientists in rivers, lakes, wetlands and oceans.

The following is a partial list of the types of values that should be compiled: Physical properties (longitude, latitude, area, depth, residence time, sedimentation rate, current, turbulence, density, temperature, optical properties, etc.); Chemical properties (salinity, specific conductance, conservative ion concentrations, nutrient concentrations, oxygen concentrations, dissolved organic carbon, etc.); Biological properties for primary producers and other trophic levels (aquatic macrophytes, algae, bacteria, protozoa, zooplankton, fish, amphibians, aquatic reptiles, aquatic birds and other aquatic wildlife) including biomass, metabolism (respiration, photosynthesis), immigration, reproduction, growth, recruitment, mortality (natural and harvested), emigration etc...

We are attempting to organize this type of data and publish it in an appropriate journal for the general use of aquatic scientists around the world. We ask for your help with this task. If you have measured or know of a value for an ecological variable that may represent a high or low limit and have some way of citing the work so that the scientific community can use it, please send the documentation of this value (date and location of sample, method, value, and citation) to us. We have no funding for this project and thus no real deadline. We believe, however, that with your help a completion date of 1996 seems reasonable. We will make sure contributors get a free copy of the finished product. Thank you for your help.

LAND MARGIN ECOSYSTEM RESEARCH REPORT AVAILABLE

A report of the Land Margin Ecosystems Research (LMER) 1993 All-Scientists' Meeting is now available.

The LMER program began in 1988 and is supported by NSF's Division of Environmental Biology and Division of Ocean Sciences. The program's goal is to increase understanding of 1) the organization and function of land-margin ecosystems, 2) the linkages between these systems at the land-sea interface and those in adjacent terrestrial and marine systems, and 3) the impact of major natural environmental perturbations on these regions.

LMER promotes multidisciplinary research coordinated among investigators; comparative approaches encompassing parallel studies in different ecosystems either by a given research team or across research teams; appropriate development of large-scale conceptual, analytical and numerical models to guide research and facilitate comparisons; and experimental studies across a wide range of space and time scales, including mesocosms and experiments at the ecosystem scale made possible by natural events on human activities.

There are presently five LMER sites, widely distributed geographically and representing different types of land-margin environments. 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 large freshwater inflow, short residence times and relatively dry watershed. 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 is a medium-sized estuary with extensive areas of intertidal wetlands that receives runoff from two small watersheds with contrasting degrees of urbanization.

In order to promote coordination and communication among sites, NSF funds annual meetings for all LMER scientists. Copies of the 1993 report are available from the LMER Office, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA 02543.

ENVIRONMENTAL MANAGEMENT OF ENCLOSED COASTAL SEAS (EMECS) NEWSLETTER

The EMECS Newsletter is periodically published in both Japanese and English, with 7,500 copies distributed worldwide. Its purpose is to promote the exchange of information among researchers involved in the environmental management of enclosed coastal seas. For more information, contact: Water Quality Division, Environmental Bureau, Public Health and Environmental Department, Hyogo Prefectural Government, 10-1, Shimoyamatedori 5-chome, Chuo-ku, Kobe 650, Japan (Fax: 81-78-382-1580).

1994 ASLO AWARD RECIPIENTS

PETER A. JUMARS RECEIVES 1994 G. EVELYN HUTCHINSON MEDAL

The 1994 G. Evelyn Hutchinson Medal was awarded to Peter A. Jumars of the University of Washington, "for his outstanding work in biological oceanography, and particularly for his significant advances in understanding interactions among benthic organisms, sediments, and the physical environment". 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 '94 meeting in Miami.

After receiving a B.A. in biology from the University of Delaware in 1969, Jumars began a Ph.D. program in Oceanography at the Scripps Institution of Oceanography (University of California, San Diego). He conducted his dissertation research under the direction of R.R. Hessler and was awarded a Ph.D. in 1974, with a dissertation titled "Dispersion patterns and species diversity of macrobenthos in two bathyal communities". Afterwards he spent a year at the University of Southern California as a postdoctoral researcher with Kristian Fauchald. Except for two years on leave with the Office of Naval Research, he has since been on the faculty at the University of Washington. He has published more than 80 documents since receiving his degree in 1974.

Jumars exemplifies many of the traits we associate with G. Evelyn Hutchinson. As noted by one of his nominators, both have used widely varying approaches to dissect the operation of aquatic ecosystems, both have profound impacts on the people around them, and both have influenced the ways that their colleagues approach science. Peter has also contributed much to the greater community, including service as the Editor of *Limnology and Oceanography* (1986-1992).

A brief summary of Jumars' career and the text of his acceptance speech will appear in the November issue of L&O.

Jumars is the 13th 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), **Robert G. Wetzel** (1992), and **Timothy R. Parsons** (1993). A brief summary of Jumars' career and the text of his acceptance speech will appear in L&O later this year.

DAVID C. SMITH RECEIVES 1994 LINDEMAN AWARD

James T. Hollibaugh, Tiburon Centers., San Francisco State University, P.O. Box 855, Tiburon, CA 94920

The Lindeman Award is presented annually to recognize outstanding work by a limnologist or oceanographer 35 years or younger in age. The 1994 Award was presented to David C. Smith for the paper: Smith, D.C., M. Simon, A. Alldredge and F. Azam, 1992, "Intense hydrolytic enzyme activity on marine aggregates and implications for rapid particle dissolution", *Nature* 359: 139-142.

This paper is significant for a number of reasons. First, it resolves the apparent conflict between slow growth of particle-associated bacteria (low C demand) and the ob-

1995 HUTCHINSON AWARD: NOMINATIONS OPEN

Nominations are now open for the 1995 Hutchinson award. 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 5-10 years. 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 Sally MacIntyre, Hutchinson Award Committee Chair, Marine Science Institute, University of California, Santa Barbara, Santa Barbara, CA 93106 (Tel: 805-893-2623; Fax: 805-893-8062; Internet: sally@seaotter.ucsb.edu). The deadline for nominations is February 15, 1995.

1994 LINDEMAN AWARD: NOMINATIONS OPEN

Nominations for the 1995 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 1993, and must be published in a 1993 volume of a peer-reviewed journal. Nominations, which should consist of a copy of the paper and a brief letter describing the impact of the paper on the field, should be sent to Erica J.H. Head, Lindeman Award Committee Chair, Biological Oceanography Division, Bedford Inst. of Oceanography, P.O. Box 1006, Dartmouth, NS B2Y 4A2 CANADA (Tel. 902-426-2317; Fax: 902-426-9388; Internet: erica=j=head%biobod%dfosf@sfnet.dfo.ca). Don't pass up this opportunity to honor a young scientist! The deadline for nominations is February 15, 1995.

served rapid turnover of particle carbon (rapid loss from sinking flux). In addition the paper demonstrates a mechanism for DOC generation from POC in the mesopelagial region and points out the importance of this process in the vertical flux of organic C in the ocean. It also puts forth the hypothesis that high cell-specific protease activities may be an adaptation for survival in a virus-infested environment.

The paper offers a conceptual breakthrough in the ecology of particle-associated bacteria. In the early 1970's it was generally believed that only particle-associated bacteria were "active". That view changed in the late 1970's when F. Azam and R. Hodson demonstrated that free-living bacterioplankton were active with respect to the uptake of simple organic molecules, and that their activity dominated the total activity in most aquatic habitats. At the extreme, D. Karl et al. (1988) suggested that particles were actually "bad" places for bacteria and that bacteria on particles, often present in large numbers, must be dead or inactive. Smith's paper shows that, although their activity as measured traditionally by uptake of defined substrates may be low, particle-associated bacteria are nonetheless very active and important in a geochemical context.

David was born in Pittsburg, PA in 1960, and later moved to California. He first became interested in marine biology at a "college night" sponsored by his high school. He stopped at a booth sponsored by Long Beach State University and expressed an interest in math or science careers. When the Long Beach State representative came to marine biology, he looked no further (before this, David has no idea that marine biology was a career option!). He completed a B.S. in Marine Biology at California State University at Long Beach, and received his Ph.D. from Scripps Institution of Oceanography in 1994, under the direction of Farooq Azam.

David has indicated that he is "very honored, and a little bit intimidated, to receive an award named after Ray Lindeman" and requested that this article acknowledge the substantial contributions of his co-authors. David has already co-authored 14 papers, a record that might have left Lindeman breathless, particularly since he apparently finds time for a life outside the lab! David is married, and has an avid interest in baseball.

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; **Sherry L. 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; and **John R. Reinfelder** (1993) for Reinfelder, J.R. and N.S. Fisher, 1991. The assimilation of elements ingested by marine copepods, *Science* 251: 794-796.

KENNETH H. MANN RECEIVES ASLO'S FIRST LIFETIME ACHIEVEMENT AWARD

Kenneth H. Mann was awarded ASLO's first Lifetime Achievement Award, "in recognition of his significant achievements in the aquatic sciences, his contributions to the stature of these fields, and his role as a model for those at earlier career stages". Ken was born in Dovercourt, Essex, England in 1923 and began his career as a freshwater ecologist at the University of Reading (United Kingdom) where he both taught and conducted research. He earned his Ph.D. from the University of Reading in 1953 and his D.Sc. from the University of London in 1966. During this period, he published 31 papers on freshwater ecology.

In 1967, Mann emigrated to Canada and became a government scientist with the Fisheries Research Board's Marine Ecology Laboratory, located at the Bedford Institute of Oceanography. Five years later (1972), he returned to the academic environment by crossing the harbor to become Professor and Chair of the Department of Biology at Dalhousie University. For eight years, the Department thrived under his leadership and produced many outstanding students. In 1980, Ken returned to the Bedford Institute of Oceanography to become Director of the Marine Ecology Laboratory, while retaining a joint appointment with Dalhousie. The next seven years were a difficult period, with shrinking resources and increasing demand for "relevance" in government research. Ken effectively defended

LIFETIME ACHIEVEMENT AWARD: NOMINATIONS OPEN

Nominations are solicited for ASLO's 1995 Lifetime Achievement Award. 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. ASLO's awards provide a unique opportunity to recognize our members and to publicize their accomplishments. Please send nominations and supporting material to Bess B. Ward, Lifetime Achievement Award Committee Chair, Marine Sciences Program, University of California, Santa Cruz, CA 95064 (Tel: 408-459-3171; Fax 408-459-4882; Internet: bbw@cats.ucsc.edu; Omnet: b.ward). The deadline for nominations is February 15, 1995.

the need for sound ecological research in government laboratories and, under his leadership the Marine Ecology Laboratory maintained its reputation for excellence until it was dissolved by government reorganization in 1987. At that time, he left administration and became a full-time research scientist in the Habitat Ecology Division. He “retired” in 1993, but remains very active in both university and government affairs as an emeritus scientist.

Mann has produced 161 publications to date. Through them he has covered a wide range of freshwater and coastal marine studies, and brought together various aspects of biological oceanography, physical oceanography, and systems science as well. He has made important scientific contributions to both freshwater and marine ecology. His research has covered a broad variety of topics including productivity of various macrophytes, detrital food webs, decomposition processes, energy flow in marine ecosystems, kelp/sea urchin/lobster interactions, coastal zone management, numerical modeling, fish production, and phycotoxins. He has served well both government and university institutions in the United Kingdom and Canada, and has contributed to numerous international activities.. He has excelled as a teacher, researcher, administrator, author, editor, and lecturer. His influence has extended well beyond the confines of academia and government research and administration. He has been an effective and influential interpreter of science, and has endeavored to apply the results of his research to answering practical questions.

His contributions consist not only of his original contributions in ecosystem research, but in equal measure his lucid syntheses of knowledge across the entire field. He is author or co-author of three influential textbooks (*Ecology of Coastal Waters: A Systems Approach*, *Dynamics of Marine Ecosystems*, and, with R.S.K. Barnes, *Fundamentals of Aquatic Ecosystems*), as well as co-editor of several specialized works.

This editor was lucky enough to share dinner and conversation with Ken and his wife at the Miami picnic. For those of you who weren't there, Ken graciously consented to pen (ink jet? etherize?) the theme of our conversation, which is presented below. Ken's background and his acceptance speech will be presented in the November issue of L&O.

REFLECTIONS ON A CAREER IN SCIENCE

Ken Mann, Dept. Fisheries and Oceans, Habitat Ecology Division, B110, Bedford Institute of Oceanography, Box 1006 Dartmouth, NS B2Y 4A2, CANADA

When I was young, I tended to subscribe to Henry Ford's famous dictum “History is bunk”, but as I matured I began to see some virtue in having a historical perspective. It may be that some of our younger members, finding a tenure-track appointment elusive, are wondering whether all the years of barely surviving on soft money are likely to prove worthwhile. Here is my historical perspective, for what it is worth.

On the whole, I count it a privilege to have been paid all my life for doing what most interests me. It has been a satisfying career, and the satisfaction stems not so much

from any sense of achievement as from the opportunity to give expression to two deeply felt emotions. The first of these is a sense of the wonder and beauty of living organisms. The second is a perception that the universe embodies a great wisdom, of which we may now and then catch a glimpse in the form of some regularity, scientific generalization, or even a law.

By accident of circumstances (which included the second world war), I found myself in 1949 at a small British university studying a guild of 14 species of freshwater leeches. They ranged from small, translucent predators to the big, classic “medicinal” blood-sucking leech. Strange as it may seem, I was entranced by their beauty and the elegance of their adaptations. There are species adapted to attacking snails, and others that attack fishes, birds and mammals. There are predators that ingest midge larvae, and others that (with difficulty) ingest earthworms. Leech habitats range from temporary pools to fast-running rivers and large lakes, and some species are amphibious. Their physiological and life history adaptations held me enthralled.

About the time this project was winding down, I became aware of the emerging ideas about ecosystem function. The generalizations about trophic pathways, energy flow and nutrient cycling were new and exciting, and appealed to the other, more quantitative side of my nature. It seemed a wholly new way of looking at the world, and one that held the possibility of leading to predictions about the consequences of human perturbations. For the remainder of my career, these two themes were intertwined. I have studied a wide range of organisms, including marsh plants, mussels, fish, seaweed, sea urchins and lobsters. The challenge has been to simultaneously understand them as superbly adapted organisms and as parts of the life support systems which incorporate energy from the sun and elements of the earth. There have been successes and there have been failures, but there has always been satisfaction in the trying.

The context in which science is pursued has changed greatly over the years. Immediately after World War II there was little money for biological research, especially in Europe. Academics were poorly paid, and the prevailing role model was that of the scholar, dedicated to his field and eking out a modest living while using all his ingenuity to maintain research support. Thus, all the field travel for my Ph.D. research was on a bicycle, and undergraduates taking my field course were expected to travel in the same way.

The research climate began to change after the Russians launched their first earth-orbiting satellite, Sputnik I, in 1957. The western powers were afraid that the Russians were ahead in science and technology, so they began to pour resources into higher education and scientific research. Academic salaries began to rise and research funds became more plentiful. From the late '50s to the mid-'70s there was a steady expansion in both university and government science. Those completing higher degrees were assured of a job and people began to enter the field because of the career prospects, and not necessarily from a dedication to the subject. The relative ease of obtaining research funding changed the

atmosphere of research labs. To be sure, things became possible that were not possible in earlier times, and there was a sense of great adventure, but there was also a widespread view that to solve a problem, all that was necessary was to “throw money at it”. For some people, big budgets were a substitute for hard thinking.

As we all know, the trend of the last 10 or 15 years has been towards greater difficulty in obtaining research funding, and a reduction in the number of career opportunities, as the effort in science has moved towards steady state and the professional staff have reached middle age. The career prospects of young scientists are now closer to those of a young musician or a dancer, with the prospects of a long period on ‘soft money’ and career appointments available only to the lucky few. This trend has some positive aspects. I have the impression that successful research proposals are better thought out than in earlier times, and the standard of presentations at scientific meetings has improved enormously.

In my career, I have seen the emergence of the professional research manager. When I was young, team work in science was often suspect. It was believed that the most original ideas were the product of a single mind, and that those ideas were best expressed in single-author papers. It was also believed that important advances in scientific understanding could not be planned, so there was little attempt to manage science. The guideline when making appointments to universities or government labs was “Pick a good man and give him his head” (an unfortunately sexist metaphor left over from the horse and buggy era). Yet those of us interested in ecosystem function recognized that it was necessary to study several processes simultaneously, using a multi-disciplinary team. At first, it was hard work convincing granting agencies that a multi-disciplinary team could go beyond mere data collection, or that broadly based ecology was a suitable topic for a higher degree. The wheel has come full circle, and granting agencies are now so enamored of collaborative research that they earmark large amounts of money for such projects, to the chagrin of those who prefer the more individual approach. In some cases, it is a condition of the funding that the project be managed by a complex hierarchy, which must approve research programs and check on results. This carries the danger that those who control the funds try to determine the research approach, and this can be a recipe for mediocrity. Usually, only those closest to the problems understand which approach is most likely to succeed.

The advice given to persons making career choices used to be “Do what you like, but like what you do”. These days, it is the fortunate person who has full freedom of choice in the matter. In Sweden, some years ago, it was not uncommon for people to work for 10 years for their doctorate, while at the end of it the probability of continuing in research was very small. I once asked a graduate student what motivated her to persevere. She said, “I believe that these years may well be the best years of my life, so I intend to make the best of them.” In the present economic climate, this

may well be the situation of graduate students in many countries. If those had been my prospects in 1949, I am not sure whether I would have persevered. As it was, I “did what I liked” for a decade with very little financial reward, but in the end things turned out differently. Would I do it again? You bet I would!

1994 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; Omnet: s.weiler; Internet: weiler@whitman.edu)

1994 AGU/ASLO OCEAN SCIENCES MEETING:

Three ASLO/ONR Student Poster Awards were presented to recognize outstanding work by students at the 1994 AGU/ASLO Ocean Sciences meeting in San Diego. The three student poster award recipients each received a \$500 cash award from the U.S. Office of Naval Research. Awards were presented to:

Lidewijde Maria Eijsink for Eijsink, L.M. and G.J. de Lange, “Various Phosphorus Phases in Sediments from the Eastern Mediterranean; a Comparison of Some Sequential Extraction Methods.” Lidewijde was born on the 12th of May 1971 in Arnhem, The Netherlands. In 1989 she graduated from highschool and started her study in Geology at the University of Utrecht, The Netherlands. In the final part of her undergraduate study she specialized in marine geochemistry and worked on a research project entitled: “The Testing of Some Sequential Extraction Schemes for Phosphorus and Their Application to the Eastern Mediterranean Sediments”. This work was done within the PALAEOFLUX (Biogeochemical Fluxes in the Mediterranean Water-Sediment System) MAST-II programme funded by the E.C. After graduation in May, 1994, she will continue her research on the speciation of phosphorus in eastern Mediterranean sediments in a Ph.D. project at the University of Leeds, United Kingdom.

Eric L. Canuteson for Canuteson, E.L., J.A. Hildebrand, P.R. Parker and M.A. Zumberge, “Construction and Testing of an Ocean Bottom Absolute Gravity Meter”. Eric received his B.A. in physics from Colorado College in 1990. After graduation, he entered the Ph.D. program in geophysics at Scripps Institution of Oceanography (University of California, San Diego). His research involves development of instrumentation for marine geodesy. Specifically, under the direction of Mark Zumberge, his thesis involves the construction and testing of an ocean bottom absolute gravity meter (OBAGM) and the establishment of several permanent geodetic monuments on the sea floor near the Juan de Fuca ridge axis. An absolute gravity meter determines gravity by tracking the position of a falling mirror in a vacuum with a laser interferometer. Initially, Eric focused on the development of a novel vibration isolated fiber optic interferometer for the OBAGM. Unlike the optical systems in previous absolute gravity meters, the new interferometer allows for remote operation and leveling to adapt to underwater use. After completing the optical subsystem and integrating it

into the OBAGM, Eric concentrated on the initial ocean testing of OBAGM. Now that the OBAGM has been successfully deployed on the ocean floor, the next step in his research is to establish some permanent sites along the Juan de Fuca ridge where the instrument can be deployed on an annual basis. With a time series of gravity measurements, future researchers will be able to test models of ridge processes against real data from an active spreading center.

Michael R. Penn for Penn, M.R., M.T. Auer and E. Van Orman, "Seasonal and Vertical Variability in the Phosphorus Fractions of the Seston in a Calcareous, Hypereutrophic Lake". Michael received his B.S. in industrial engineering (1986) and M.S. in civil and environmental engineering (1991), both from the University of Michigan. For the past three years he has been supported by a U.S. Dept. of Education Doctoral Fellowship. He expects to receive a Ph.D. degree in environmental engineering from Michigan Technological University in 1994. His research interests include the fate and transformation of nutrients and toxics in sediments and the attendant impacts on overlying waters. Other interests include the decomposition of organics, paleolimnology and sediment transport.

ASLO member **David Hutchins** received one of 4 awards for outstanding oral presentation, for Hutchins, D.S., G.R. DiTullio and K.W. Bruland, "Regeneration and recycling of biological iron: The other half of the iron story". David received a B.S. in 1987 and an M.S. in 1989 in Biology from Portland State University. His master's work (in the laboratory of John Rueter) dealt with the relationship between nitrogen fixation and iron nutrition in freshwater marine cyanobacteria. David then moved to the University of California at Santa Cruz, where he worked under Ken Bruland. His research interests there concerned the role of marine plankton communities in the cycling of trace metals. Important results from his dissertation work included the first demonstration that phytoplankton communities can regenerate and recycle cellular iron, zinc and manganese. Other results from his work at Santa Cruz demonstrated that trace metals can be regenerated from phytoplankton cells by the action of planktonic grazers, and that the biological recycling of iron is nearly efficient as that of nitrogen. David completed his Ph.D. in March, 1994 and is currently doing postdoctoral research with Nick Fisher at SUNY Stony Brook. His work there will include investigations into the trophic transfer and biological dynamics of radionuclides originating from ocean dumping of nuclear waste materials. He also intends to continue and expand his research into the role of phytoplankton communities in the biogeochemical cycling of trace metals, especially iron.

1994 ASLO/PSA MEETING

Forty two students entered the Student Poster Award competition at the ASLO '94 meeting in Miami. This year, the student poster awardees each received a \$500 cash award from the U.S. Office of Naval Research, and a marine fossil from ASLO, keeping with the tradition of an award with "local significance." Three awards were presented:

Deana L. Erdner for Erdner, D.L., N. Price and D.M.

Anderson, "A Molecular Response to Iron Limitation in Marine Phytoplankton". Deana received her B.S. degree in Biological Sciences from Carnegie Mellon University in Pittsburgh, PA in 1991. Her undergraduate research utilized traditional molecular genetic techniques in studies of fission yeast. She decided to pursue graduate studies in oceanography, hoping to employ molecular techniques to examine the physiological responses of marine organisms to chemical stress. In the fall of 1991, she entered the Joint Program in Oceanography at MIT and the Woods Hole Oceanographic Institution to work with Dr. Donald Anderson. Her dissertation work examines the molecular-level effects of iron limitation on eukaryotic marine phytoplankton. This has required analysis by a variety of biochemical and molecular techniques, including HPLC, protein purification, antibody generation and use in immunoassays, as well as traditional cloning techniques, sequencing and mRNA work. In her poster, she described the identification of a protein (flavodoxin) induced by iron limitation and the prevalence of this response in a variety of eukaryotic phytoplankton clones. In addition, the results of an in-depth study of flavodoxin induction in a diatom indicate that this protein could be a useful diagnostic indicator of iron stress in natural waters. Her thesis work has been supported by a DOE Graduate Fellowship for Global Change, through which she has had the opportunity to collaborate closely with Dr. Julie LaRoche, of the Brookhaven National Laboratory, on the genetic aspects of the project. After completing her Ph.D., Deana hopes to focus on the practical applications of molecular techniques in marine systems.

Jennifer I. Tougas for Tougas, J.I. and J.W. Porter, "Scleractinian Coral Settlement to Artificial Substrata in the Florida Keys: Work in Progress". Jennifer received her B.S. in Zoology from the University of Georgia in 1991. As an undergraduate, she began working with Jim Porter on a coral monitoring project in the Florida Keys. Currently, she is a Ph.D. candidate in Ecology at the University of Georgia with Porter as her advisor. Her dissertation has three distinct components. The first is a three-year study of scleractinian recruitment patterns to artificial substrata in Biscayne National Park. The second component is a detailed seasonal study of the elliptical star coral, *Dichocoenia stellaris*. This study includes seasonal production and respiration measurements using an in situ respirometer, and chlorophyll, tissue composition and gonadal development analyses. Finally, she will incorporate an outreach component as one chapter of her dissertation. She anticipates this will involve an interactive multi-media computer program on some of the ecosystems found in south Florida. After graduating in 1996, she intends to specialize in environmental education, bringing current research to the public.

Yvonne Vadeboncoeur for Vadeboncoeur, Y., D.M. Lodge, D.L. Christensen and K.L. Cottingham, "Impact of Whole-Lake Nutrient Enrichment on the Ratio of Benthic to Pelagic Chlorophyll". Yvonne received her B.A. and M.A. in zoology from the University of Montana. She was introduced to limnology, stream ecology, and phycology at the Univer-

sity of Montana's Biological Station at Flathead Lake. During her first summer of graduate school, she was awarded a graduate internship to Oak Ridge National Laboratory, where she worked under the supervision of Patrick Mulholland on the effects of reduced pH on periphyton in streams. After returning to Montana, Yvonne completed her thesis with Andrew Sheldon on longitudinal and seasonal dynamics of seston transport in a lake-outlet stream. In 1992, she was awarded a Luce fellowship and began her dissertation research under David Lodge at the University of Notre Dame. She is involved in the cascading trophic interactions project directed by Stephen Carpenter and James Kitchell at the University of Wisconsin, Madison. She is examining the influence of substrate type, nutrients, light and grazing on the distribution and production of benthic algae in five small, oligotrophic lakes. As demonstrated in her poster, nearly half of whole-lake epilimnetic algal biomass and production in the study lakes is benthic. However, phytoplankton and periphyton respond differently to water-column fertilization. If the response of periphyton is not considered, the whole-lake response of primary producers to enrichment is overestimated, because of the negative effect of phytoplankton blooms on epipelagic algae. Further research will focus on benthic algae as a resource for benthic and pelagic organisms.

Judging:

Special thanks go to the this year's judges: Michael T. Arts, David A. Culver, James J. Elser, Johan F. Gottgens, Angeline K.-Y. Lam, Diane M. McKnight, Marianne Moore, Maureen Keller, Polly A. Penhale, Robert H. Peters, Richard D. Robarts, and Brian E. Rood.

JUDGES NEEDED: ASLO '95 MEETING IN RENO

Identifying outstanding posters by students is a good way to contribute to the aquatic science community, and is also good fun! Each poster is examined by at least two judges, and the top 20% or so are evaluated by a team of four or more judges. To avoid judge burn-out, no one judge is asked to evaluate more than 10 posters. Posters are 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. One learns a great deal about how to put together a good poster by concentrating on these outstanding student efforts. And, it's a great way to keep up with interesting work outside your primary subject area. So, whether your motivation is community service, new insights, or collegial interactions, please join your colleagues on the next Student Poster Award Committee! Just send your name, address, phone, and fax to Susan Weiler (address on page 1).

ASLO DIRECTORY: PLEASE COMPLETE AND RETURN YOUR UPDATE FORM!

This year's Directory will be expanded to include a brief "membership handbook". This section will contain the ASLO constitution, by-laws, committee membership, descriptions and nomination procedures for ASLO awards, and other miscellaneous information about the society.

By now you should have received an update form, with a complete listing of their present ASLO Directory and data base information. We'd like to get entries updated before publication of the Directory. So, when you receive your computer-generated form, complete with spaces for entering corrections and additions, please fill it in and return it ASAP. We're up to around 90% response for most categories, and are hoping for a 100% response rate this year, 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). If you've misplaced your form, ask Karen for another.

The deadline for changes to the Directory is October 1, 1994. We are hoping the Directory will be mailed out in December.

ASLO MEETING ANNOUNCEMENTS

UPCOMING ASLO MEETINGS

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

ASLO's next summer meeting is being organized by Robert A. Wharton, and will take place June 11-15 at the University of Nevada in Reno. Bob is in the process of developing an exciting selection of sessions (please see his article, this page).

Rudy Strickler presented a proposal at the June Board meeting to hold the 1996 meeting in Milwaukee, Wisconsin. Those of you who attended or heard about the 1981 meeting in Milwaukee will be especially pleased to learn that this proposal was enthusiastically accepted. Dates have not yet been set, but it is tentatively planned for June.

Both AGU and ASLO have agreed to return to San Diego in 1996 for another joint AGU/ASLO Ocean Sciences Meeting. Dates have not yet been set, but it is expected to take place in February, 1996. Despite some problems, both societies have agreed to use the same conference facilities. Changes will be made to increase efficiency and enjoyment. For example: A shuttle bus will be available to serve regional attractions such as the gaslight district and restaurants; new technologies will be used to facilitate hotel registrations; and larger meeting rooms will be used. If you would be interested in chairing a session, or contributing to the meeting planning in some other way, please let me know.

The location of future meetings is largely up to the membership. If you would be willing to host a future meeting, or have a location in mind, contact me for details.

1995 ASLO ANNUAL MEETING

Bob Wharton, Desert Research Institute, P.O. Box 60220, Reno, NV 89506 (Tel: 702-673-7492; Fax: 702-673-7397; Internet: wharton@maxey.unr.edu)

Start planning now for the ASLO '95 summer meeting, June 11-15, 1995 at the University of Nevada, Reno. To ensure a meeting with broad freshwater and oceanic appeal, David Garrison (Inst. Marine Sciences, University of California, Santa Cruz, CA 95064) and I will co-chair the Program Committee.

We are planning this meeting around the theme of "extreme environments", taken in its broadest sense. In addition to the usual variety of ASLO sessions, there will be special sessions on topics such as: high-nutrient and low-nutrient environments; high-and low-temperature environments; hypersaline environments, polluted and pristine environments, tropical, Arctic and Antarctic environments, & etc. We are in the initial planning stages, and welcome your suggestions for topics.

The University of Nevada, Reno campus is located near the Truckee River and commands spectacular views of the Washoe Mountains to the east and the Sierra Nevada to the west. June weather in Reno is ideal with warm, sunny days and cool nights. The Reno-Canon International Airport is readily accessible from all major airline hubs. Accommodations will be available in campus dormitories or nearby hotels. Several exciting field trips will be organized to Lake Tahoe, and Pyramid and Mono Lakes.

Individuals interested in proposing Special Sessions should contact me or Dave. If you have other questions concerning ASLO'95, please let me know.

JOBS

International Postdoctoral Fellows Program: The International Division of the U.S. National Science Foundation administers a program to introduce scientists and engineers in the early stages of their careers to research and opportunities abroad. The program provides support to carry out research at science and engineering establishments in foreign countries for periods of three to twenty-four months. Support for short-term visits, in order to plan research abroad, is also available. **Eligibility:** Eligible applicants, in addition to being citizens or permanent residents of the United States, must have earned a doctoral degree within six years of the date of application or expect to receive their degree by the award date. **Accepted Fields:** Any field of science and engineering supported by the NSF is acceptable. **Financial Support:** Awards will consist of round-trip economy airfare, in-country travel, a modest living allowance, health insurance, and dependent allowance for visits of 6 months or more. Support for language training is also

available. **Contact:** Interested persons should contact the National Science Foundation, Division of International Programs, 4201 Wilson Blvd., Arlington, VA 22230 (Tel: 703-3006-1706; Fax: 703-306-0474; Internet: sparris@nsf.gov) for details and application materials. Applications must include a letter of invitation from the host institution. Next deadline date is September 15, 1995.

JOB ADVERTISEMENTS WANTED!

ASLO has over 3,800 members, more than 600 of which are students....This Bulletin is therefore be a great place to advertise positions!! The cost is only \$14/line of 80 characters/spaces—what a deal! If you or your Department has a position available, please send an ad to Susan Weiler (address on masthead)

CALENDAR OF EVENTS, 1994-1995

The first time an event is listed, it will include the name, dates, location, topics and contact person. In subsequent issues, the topics category will be deleted to save space; in such cases, consult previous issues for details.

13th Symposium, International Society for Diatom Research

Dates: September 1 - 7, 1994

Location: Acquafredda di Maratea (Potenza), Italy

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).

Royal Society Discussion Meeting on The Role of the North Atlantic in the Global Carbon Cycle

Dates: September 21-22, 1994

Location: London, England, U.K.

Topics: This meeting will bring together speakers from both sides of the Atlantic to address, through formal presentations and discussion, questions such as: Does the North Atlantic play a significant role in the global carbon cycle? What active contributions does the biologically driven carbon cycle make? How variable has the system been in the past-and what have been the controlling processes?

Contact: Scientific Meetings Dept., The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, UNITED KINGDOM (Tel: 071-839-5561 ext. 278; Fax: 071-839-2891).

Joint ASLO/NABS Symposium

Freshwater Ecosystems and Climate Change in North America: A Regional Approach

Dates: October 24 - 26, 1994

Location: Washington, D.C.

Topics: In several areas of North America there are indications that inland waters are being altered in complex ways by warming trends in climate, and that responses vary among regions. The goals of the symposium are to: 1) evaluate current evidence for directional change in inland waters; 2) examine potentially important responses to climatic changes resulting from a hypothetical doubling of atmospheric carbon dioxide (or its radiative equivalent); and 3) develop recommendations for experimental studies or augmentation of monitoring programs. A regional approach will be taken, with eight regions identified to encompass the North American continent. After overview presentations by invited speakers and a session of contributed posters, participants will break into 8 working groups to consider potential responses of aquatic systems to global climate change on a regional basis.

Abstract deadline: July 1, 1994

Registration deadline: August 29, 1994

Contact: Office of Conference Services, Freshwater Ecosystems Symposium, Colorado State University, Fort Collins, CO 80523 (Tel: 303-491-6222; Fax 303-491-0667) or Diane McKnight, USGS, 3215 Marine St., Boulder, CO 80303 (Tel: 303-541-3015; Fax: 303-447-2505; Internet: dmmcknig@mcknight.cr.usgs.gov).

14th International Symposium of the North American Lake Management Society

Dates: October 31 - November 5, 1994

Location: Orlando, Florida

Topics: Theme is "Managing Water Resources in the 21st Century: Finding Workable Solutions".

Contact: Marty Kelly, SW Florida Water Mgt. District, 7601 Hwy 301 N., Tampa, FL 33637

AAAS DIRECTORY OF SCIENTISTS AND ENGINEERS WITH DISABILITIES

The American Association for the Advancement of Science is developing a Resource Directory of Scientists and Engineers with Disabilities. To be included, individuals must hold, or be working toward, a degree in a scientific, engineering, or medical discipline, or currently be employed in a scientific field. The directory will list discipline, degrees and disabilities as well as the usual directory information. Persons listed in the directory are also asked to consult for academia, government agencies, and industry as well as serve on peer review panels and symposia. To be included in the Directory or for more information, contact Lauren Summers or Patricia A. Thompson, AAAS Project on Science, Technology and Disability, AAAS, 1333 H St. NW, Washington, DC 20005 (Tel: 202-326-6645; Fax: 202-371-9849).

7th International Biennial Conference on Physics of Estuaries and Coastal Seas

Dates: November 28-30, 1994

Location: Woods Hole, Massachusetts

Contact: David G. Aubrey, Dept. Geol. and Geophysics, Woods Hole Oceanographic Institution, Woods Hole, MA 02543 (Tel: 508-548-1400; Fax: 508-457-2187; Omnet: d.aubrey; Internet: aubrey@mud.whoi.edu).

National Estuary Program, coastal Technology Transfer Conference

Dates: February 13 - 16, 1995

Location: New Orleans, Louisiana

Topics: The National Estuary Program has identified four major environmental problems which are common to most estuaries: nutrients, pathogens, toxic substances, and habitat loss. The conference will be designed to share new approaches for identifying characterizing, and correcting or preventing these problems, as well as assessing progress in estuarine and coastal management. Attendance will be limited to selected speakers and NEP representatives.

Contact: Betsy Tam (4504F), Oceans and Coastal Protection Division, U.S. Environmental Protection Agency, Washington, DC 20460 (Tel: 202-260-6466; Fax: 202-260-9960).

Post-Graduate Training Course in Limnology

Dates: Early March - Early December, 1995

Location: Mondsee and Lunz/Australia

Participants: 12, from different developing countries, up to 35 years old.

Aims of Course: To give an overall insight into the various problems of limnology, to familiarize with different techniques of field measurements, sampling, laboratory analyses and data evaluation, as well as to encourage a critical approach to limnology problems and to methods and results of research work—thus to make fellow limnologists better equipped for implementing necessary research in their home countries in order to find themselves solutions for their practical problems.

Deadline for Applications: October 31, 1994

Contact: Dr. Franz Neidl, Institute of Limnology, Gaisberg 116, A-5310 Mondsee, AUSTRIA (Tel: 06232-40-79-31-25; Fax: 06232-35-78).

6th International Workshop on Aquatic Microbial Ecology

Dates: April 17-22, 1995

Location: Konstanz, Germany

Topics: This is the 6th workshop in the series on the Measurement of Microbial Activities in the Cycling of Matter in Aquatic Environments. The workshop will focus on pelagic processes and sediment-water interactions. The Call for Papers will be ready for mailing in September.

Contact: Dr. Meinhard Simon, Limnological Institute, University of Constance, P.O. Box 5560, D-78434 Konstanz, Germany (Fax: 49-7531-883533).

This workshop is co-sponsored by ASLO.

ASLO '95 ANNUAL MEETING

Dates: June 11 - 15, 1995

Location: Reno, Nevada

Topics: The meeting is planned around the theme of "extreme environments", taken in its broadest sense. In addition to the usual variety of ASLO sessions, there will be special sessions on topics such as: high- and low-nutrient environments; high- and low-temperature environments, hypersaline environments, polluted and pristine environments, etc. Suggestions for special sessions are welcome.

Contact: Dr. Robert Wharton, ASLO '95 Meeting Chair, Desert Research Institute, P.O. Box 60220, Reno, NV 89506 (Tel: 702-673-7492; Fax: 702-673-7397; Internet: wharton@maxey.unr.edu).

2d International Conference on Pelagic Biography

Dates: July 10 - 14, 1995

Location: Amsterdam, The Netherlands

Contact: S. van der Spoel, Institute of Taxonomic Zoology, P.O. Box 4766, 1009AT Amsterdam, The Netherlands (Fax: +31-20-5255402).

DIRECTOR OF INTERIOR DEPARTMENT'S NEW NATIONAL BIOLOGICAL SURVEY NAMED

University of Georgia professor H. Ronald Pulliam has been appointed Director of the Dept. of Interior's new agency, the National Biological Survey (NBS). The NBS will "gather, analyze and disseminate biological information helpful for good stewardship of natural resources".

The report of the National Research Council's Committee and Commission on the Formation of the National Biological Survey has been published in book form. Copies of "A Biological Survey for the Nation", National Academy Press, 205 pp, may be ordered from the National Academy Press, 2101 Constitution Ave. NW, Box 285, Washington, DC 20055 (800-624-6242).

Interdisciplinary Conference on Animal Waste and the Land-Water Interface

Dates: July 16 - 19, 1995

Location: Fayetteville, Arkansas

Contact: Patti Snodgrass, Arkansas Water Resources Center, University of Arkansas, 113 Ozark Hall, Fayetteville, AR 72701
(Fax: 501-575-3846)

6th International Conference on Coelenterate Biology

Dates: July 17 - 21, 1995

Location: Amsterdam, The Netherlands

Contact: S. van der Spoel, Institute of Taxonomic Zoology, P.O. Box 4766, 1009AT
Amsterdam, The Netherlands (Fax: +31-20-5255402)

2d European Congress of Protistology and Eighth European Conference on Ciliate Biology

When: July 21 - 27, 1995

Where: Clermont-Ferrand, France

Topics: All aspects of protistology (cellular and molecular biology, genetics, parasitology, ecology, systematics, evolution, etc...).
Program will include plenary lectures, symposia, contributed papers and poster sessions.

Contact: C.A. Groliere or G. Brugerolle, Laboratoire de Biologie des Protistes, Universite Blaise Pascal de Clermont-Ferrand,
63177 AUBIERE Cedex, France (Tel: 33-73-40-74-54 or -70; Fax: 33-73-40-76-70).

XXVI Congress, International Association of Theoretical and Applied Limnology

Dates: July 23 - 29, 1995

Location: Sao paulo, Brazil

Topics: Theme will be "Water as a limiting resource: conservation and management". The Congress will include plenary sessions,
thematic oral and poster sessions, symposia, workshops, mid- and post-congress field excursions, and pre-congress short courses.

Contact: R. Henry, General Secretary, University of Sao Paulo State - UNESP, Depto. Zoology-Institute of Biosciences, C.P. 502,
CEP 18618-000-Botucatu-SP, BRAZIL

ICES 1995 Statutory Meeting: Special Theme Session on Intermediate-Scale Physical Processes and their Influence on the Transport and Food Environment of Fish

Dates: September 21-26, 1995

Location: Copenhagen, Denmark

Topics: Intermediate-scale physical processes (e.g., fronts, upwellings, eddies, jets, thermoclines, Langmuir circulation, internal
waves) affecting transport, production, aggregation, and dispersion of various life stages of fish and their prey.

Abstract Deadline: March 15, 1995 (250-word max; short version (3-5 p) of paper expected for distr. at meeting.

Contacts: Brian R. MacKenzie, Danish Institute for Fisheries and Marine Research, Charlottenlund Castle, DK-2920
Charlottenlund, Denmark (Tel: 45-3396-3403; Fax: 45-3396-3434; Internet: brm@fimdth.fim.dk) and Fransisco E. Werner, Marine
Sciences Program, 12-7 Venable Hall, CB#3300, University of North Carolina, Chapel Hill, NC 27599-3300, USA (Tel: 919-962-
0269; Fax: 919-962-1254; Internet: cisco@hydra.chem.unc.edu).

US DOE DISTINGUISHED POSTDOCTORAL FELLOWSHIPS PROGRAM

The United States Department of Energy has established Global Change Distinguished Postdoctoral Fellowships to support research on projects related to the U.S. Global Change Research Program (USGCRP). These fellowships address the nation's global change activities that are carried out by DOE and other federal departments and agencies represented on the Subcommittee on Global Change Research of the Committee on Earth and Environmental Sciences. Fellowships are tenable at any DOE or other USGCRP-agency laboratory, as well as at any university laboratory having a department with annual funding of more than \$250,000 from USGCRP agencies. Fellows will conduct research in technical areas related to the strategic priorities of the USGCRP: establishment of a long-term program of observation and data management on a global scale; increasing knowledge of the physical, geological, chemical, biological, and social processes that affect Earth system behavior and impact human health; the development and application of integrated conceptual and predictive Earth system models; and integrated assessments of the state of scientific knowledge and their implications on policy-making decisions. For further information, contact Global Change Distinguished Postdoctoral Fellowships, Science/Engineering Education Division, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, TN 37831-0117 (Tel: 615-576-9934).

AD SPACE

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