

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

Message from the President.....	1
Aquatic Sciences Meeting, 1992, Santa Fe, New Mexico.....	3
<i>Limnology and Oceanography</i> Editorial Changes.....	4
Business Office Changes.....	4
1991 Membership Directory.....	5
New ASLO Executive Director.....	5
New ASLO Bulletin.....	6
Special ASLO Symposium Planned.....	6
Committee Report on Under-Represented Minorities in L&O.....	8
ASLO Logo Contest.....	9
ASLO Award Recipients, 1990.....	9
ASLO Award Nomination and Application Procedures for 1991.....	11
ASLO News.....	12
ASLO Forum.....	13
Workshop Reports.....	13
ASLO Meeting Announcements.....	14
Calendar of Events.....	15

MESSAGE FROM THE PRESIDENT

Trevor Platt, Biological Oceanography Division, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, NS B2Y 4A2, Canada (Tel: 902-426-3793 Omnet: T.Platt)

In Dec. 1988, the Committee on the Future of ASLO made a report to the Board with many far-reaching recommendations for the Society. The Board has debated these recommendations at length. Some have already been implemented, some are still under review, others will be implemented during my tenure as President, and a few may require more time for full implementation.

As I begin my term, I thought it would be useful to draw up an Action Plan for the two years in which I have responsibility for the health and welfare of ASLO and for carrying forward the Society's goals. This should be useful as a basis for setting priorities and also to let the membership know what the officers of the Society are trying to do on their behalf. It is not cast in stone, and as always, the President and Board are anxious to hear from members concerning their aspirations for the Society.

To my mind, over the past few years the limnologists and oceanographers have grown further apart, yet critical applied and basic research issues increasingly require greater interactions between our two constituencies. I therefore plan that the **Principal Scientific Goals** of the Society will be to promote awareness of the essential unity of aquatic science, freshwater and salt, basic and applied, and to exploit the implied cross-fertilization to further understanding of aquatic systems in general.

In keeping with this theme, I will work with the ASLO membership to achieve the following **Societal Goals**: to foster a working environment for aquatic scientists everywhere that is conducive, in the broadest sense, to pursuit of the scientific goals stated above; to enable ASLO to speak with a louder voice for the aquatic science community; and to make available to the general public the collective expertise of the membership.

This new and more active role for the Society will not happen spontaneously. I therefore propose the following 10-point Action Plan:

1. Increase Society membership, so that the Society may speak for an even larger and broader aquatic science constituency. This will require a multifaceted approach. As an initial step, Susan Weiler, ASLO's new Executive Director, is developing a demographic survey, so that we can obtain necessary background information about

our membership and membership trends. Further activities to increase membership will be built on this foundation. In addition to enabling us to define member characteristics, survey results will enable ASLO to initiate actions to better meet the needs of individuals in the various aquatic science subdisciplines. Please support this effort by completing and returning the survey, which will be mailed out this spring.

2. Provide ASLO members with cutting-edge scientific meetings that meet the needs for both breadth and depth of disciplinary coverage on topics of current and abiding interest. To highlight ASLO's commitment to reunite the aquatic science community, an Aquatic Sciences meeting will be held in Santa Fe, New Mexico, Feb. 10-14, 1992. This meeting will address the need to emphasize the common ground between limnology and oceanography. In addition, an extremely active committee chaired by Sallie Chisholm is preparing a special symposium on "What controls phytoplankton production in nutrient-rich areas of the open sea?" This has significance in the context of recent proposals to fertilize the southern ocean with iron as a measure to reduce the rate of increase of carbon dioxide in the atmosphere. The symposium should therefore be of broad interest to both researchers and policymakers.

3. Consolidate and reinforce the excellence of the Society's publications, to underscore ASLO's authority in the aquatic science community and ensure that ASLO continues to hold its leadership position in the increasingly competitive field of aquatic science publication. As part of this effort, the number of *Limnology and Oceanography* issues has been increased from 6 to 8 per volume, so that more high-quality articles can be published in the Society's journal. Issues on specific topics such as the recent one on hydrologic optics will continue to be encouraged. The Board has also decided to broaden the editorial base of *Limnology and Oceanography*, and this step is presently being implemented.

4. Increase member services. This will be an ongoing effort over the next few years, but initial steps have been taken, such as the above-mentioned increase in the number of *Limnology and Oceanography* issues per year. In addition: the Membership Directory will be published on an annual basis rather than the previous biannual schedule; an Executive Director (Susan Weiler) has been hired for the Society in order to provide momentum and continuity for member services and activities; and an expanded Communication to Members (Bulletin) is being developed, to provide a forum for discussion by members as well as to serve as a consolidated source of Society information.

5. Expand education and human-resource initiatives. ASLO has for many years addressed educational issues through a variety of programs. Part of the rationale for the demographic survey planned by Susan Weiler is to obtain information to enable ASLO to better address human-resource issues specific to the aquatic sciences. Existing education and human-resource programs will be strengthened and new ones initiated as we identify areas where ASLO could exert strong leverage.

6. Support the fledgling movement aimed at improving the representation of minorities in aquatic science fields. ASLO will continue to support the effective initiatives started by Ben Cuker through the new Committee on Under-Represented Minorities in Limnology and Oceanography (CURMLO). All who saw the group he brought to Williamsburg, using grants he had written especially for the purpose, could not fail to be impressed with the value of what Ben is doing in this regard. We hope to have similar groups at other ASLO meetings, including the 1991 Halifax meeting.

7. Enter the public arena with informed opinion and establish ASLO's credibility to speak with professionalism on environmental issues. The Symposium on factors controlling phytoplankton production mentioned above is one step in this direction. In addition, ASLO has just joined the Council of Scientific Society Presidents (CSSP), an organization with representatives from 56 scientific societies whose combined membership numbers well over 1 million scientists and mathematicians. Through the CSSP and our own efforts, ASLO will become more involved in the development of public-policy positions on science research, education, and human-resource issues of national or international scope, facilitate cooperation among the various scientific disciplines, and develop ways by which scientific information can be made more readily available to the public. In keeping with this theme, I am in the process of establishing a committee to draft a Code of Ethics for the membership.

8. Become more active in the international arena. ASLO will initiate actions to expand our international membership and interactions. Due to the present composition of our membership (almost 23% of our members and 51% of our Journal subscribers are from outside the U.S.) and the fact that the scientific community is increasingly a global community, it seems appropriate that we develop a greater international profile and presence. As an initial effort, ASLO has responded positively to a request from the British Ecological Society that we co-sponsor their meeting "Aquatic Ecology: Scale, Pattern and Process", which will be held in Cork, Ireland, in April 1992. Apart from the commonality of aims, an ASLO presence at this meeting will allow us to address the strategic goals of broadening the membership base and expanding the horizons of ASLO beyond the North American continent.

9. Consolidate the financial base of the Society, so that the Society can plan and act from a position of strength. The above actions will require additional revenue. I am in the process of establishing a Committee on Financial Resources for this purpose. An interim \$10 dues increase for all member categories except students was approved by the members in Williamsburg as a partial offset against inflation, to defray the cost of the increased number of L&O issues published each year, and to cover the cost of initial steps to increase member services such as the annual Directory and start-up costs for the Executive Director's office. ASLO has in the past been successful in obtaining external funding for some activities. With careful planning, it should be possible to obtain more such funding. The Committee on Financial Resources will have as its mandate to recommend to the Board a Financial Plan for the Future, including means of raising revenue for the Society.

10. Identify and involve Society members willing to work hard and constructively for the Society. I am particularly interested in this initiative because all of the above items depend so heavily on it. We need volunteers who are motivated and energetic. ASLO is especially fortunate as a Society in that it has a large and highly skilled membership with a broad range of expertise to draw on. My goal is to utilize this resource pool more actively and fully than has been done in the past. I therefore hope to hear from members who are willing to translate their interest into action on behalf of the Society in any capacity. Please let me know if you are willing to become more involved in the Society, and your particular area of interest or expertise. If you have special knowledge (finance, law, popular writing, publishing, sociology or what have you), so much the better. If at this stage you have more interest than expertise, I hope you will consider working with other ASLO members on behalf of the Society as a means of gaining experience.

If you are interested in working toward any of the above goals, or identifying and working on others, please contact me or Susan Weiler. I look forward to hearing from members with an interest in or opinion (positive or negative) on any of the issues referred to in the above Action Plan. Please read the related articles immediately below for details.

ASLO AQUATIC SCIENCES MEETING, 1992, SANTA FE, NEW MEXICO

Trevor Platt, President

A substantial fraction of the membership believes that a divergence between limnology and oceanography, real or merely perceived, is the most critical problem facing ASLO today. As you read above, the principal scientific goals of ASLO over the next two years are therefore to promote awareness of the essential unity of aquatic science, freshwater and salt, basic and applied, and to exploit the implied cross fertilization to further understanding of aquatic systems in general.

With this in mind, the Board has decided to organize a major Aquatic Sciences meeting to address aquatic science in the most general sense. It will be held at the Sweeney Convention Center in Santa Fe, New Mexico, February 10-14, 1992. Polly Penhale is organizing the meeting, and Mary Jane Perry and David Schindler are co-chairing the Scientific Program Committee. Other Scientific Program Committee members are: Greg Brunskill, Steve Carpenter, David Checkley, Eric Hartwig, Polly Penhale (ex officio), Bruce Peterson, and Susan Weiler (ex officio).

Because of the importance that ASLO attaches to this meeting, it will be the only meeting that the Society organizes in 1992. That is, there will be no summer meeting in 1992. The Santa Fe meeting will be the annual meeting, and we hope that all

members will try to attend. So remember, in 1992, the annual ASLO meeting is in February, not June.

Another consequence is that, in 1992, we will not hold a joint meeting on Ocean Sciences with AGU as we have been accustomed to do every second year. This does not mean ASLO has decided to cease cooperating with AGU. It means simply that in 1992 we have decided to put the effort of the Society into addressing an issue of importance to ASLO itself (unity of aquatic science). Needless to say, AGU members who wish to participate in Santa Fe will be most welcome. In future years, ASLO will consider collaboration with other Societies in the organization of scientific meetings, just as it has in the past.

We hope to see you in Santa Fe.

LIMNOLOGY AND OCEANOGRAPHY EDITORIAL CHANGES

Peter Jumars, Editor, Dept. Oceanography, WB-10, University of Washington, Seattle, WA 98195

As per the recommendations of the Future of ASLO Committee, L&O is moving to a system of multiple editors. The intent is to avoid the impression or fact of one person's opinions controlling access to publication in the journal. All manuscripts will continue to be sent to the Seattle office and distributed from there to reviewers selected by the assigned associate editor. Manuscripts will not be assigned to editors by specialty when doing so causes delays or inequitable workloads, but requests for avoiding any one particular editor will be honored, in the spirit of the reason for having multiple editors. Current plans are to have six associates plus the overall editor, each handling about 50 manuscripts per year (instead of the 300+ now handled by one editor). Associate editors will have responsibility for making acceptance decisions on the manuscripts that they handle.

Of the initial slate of six associates, three will be limnologists, and three oceanographers, though review responsibility will not be split in this fashion. The primary criterion for selection of associates by the ASLO Board at their June meeting in Williamsburg was breadth (and stature!), and the following four associate editors are now in place: Kenneth L. Denman (Institute of Ocean Sciences, Sydney, B.C., Canada); Richard A. Jahnke (Skidaway Institute of Oceanography, Savannah, GA); David Kirchman (University of Delaware, Lewes); and John T. Lehman (University of Michigan, Ann Arbor).

The two remaining associates will be selected by the end of September, after the openings are more broadly advertised among limnologists. I have been extremely gratified by the interest in associate editorships and feel certain that many of the other highly qualified candidates will have an opportunity to rotate through a two-year term of service. Because overturn is anticipated, continued applications and nominations are welcomed.

Nominations and applications should be sent to: Limnology and Oceanography, WB-10, University of Washington, Seattle, WA 98195 (Tel: 206-543-0952; Omnet: L.O).

Lyn Cole remains in place as Managing Editor, with the able and extraordinarily conscientious part-time help of Susan Mish'alani. Some other part-time help is being used to keep up with the newly added paperwork of the associate-editor system. I have announced my plans to withdraw, at least for a few years, from editing at the end of my present term (June 1992), so keep your eyes on the bullpen.

BUSINESS OFFICE CHANGES

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

As of July 1, 1990 and after nearly 30 years of service, Mrs. Winifred Baumeister has retired from her position as ASLO's Business Manager. Winifred and her husband, Ernst, have provided exemplary business service to our Society. The ASLO Board hosted and toasted the Baumeisters at the Williamsburg meeting with a dinner and presentation of a Colonial Williamsburg pewter tray to Winnie and a pewter mug to Ernie. We thank the Baumeisters for their dedicated service and wish them good health and happiness in retirement.

On July 1, 1990, Ms. Karen Hickey became the new ASLO Business Manager. Karen is associated with Allen Press, Inc. and has been working in their Association Management Department for seven years. There will be a team of people at Allen Press working along with her to handle the membership and subscription renewals, back issue orders, and promotional affairs for the Society. Please keep her address handy: Ms. Karen J. Hickey, ASLO Business Manager, P.O. Box 1897, Lawrence, KS 66044-8897, USA (Tel: 913-843-1235; Fax: 913-843-1274; Omnet: Allen.Press).

1991 MEMBERSHIP DIRECTORY

Polly Penhale, Secretary, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA 23062.

As part of ASLO's effort to increase service to members, the Membership Directory will be published on an annual basis rather than the previous biannual schedule. Directory information is also being expanded. In the past, a special mailing has gone out for Directory information. Starting this year, information will be requested on the back and inside flap of the dues envelope. By now you should have gotten your dues notice. If you haven't yet paid, you will soon receive a reminder with another dues envelope. Be sure to fill out the Directory information when you pay your dues. To ensure inclusion of your most recent information in the Directory, be sure to return the dues and Directory information by Jan. 1. If you paid your dues but overlooked the Directory information request, contact Ms. Karen J. Hickey, ASLO Business Manager, P.O. Box 1897, Lawrence, KS 66044-8897, USA (Tel: 913-843-1235; Omnet: Allen.Press).

NEW ASLO EXECUTIVE DIRECTOR

Trevor Platt, President

In order for the Society to expand its services to members and revitalize its programs and purpose, the Board created a new half-time position of Executive Director to conduct scientific staff work under the direction of the Board's Executive Committee, and transform the Communication to Members into a quarterly Bulletin. A national search for an Executive Director began last fall and was completed this spring, and involved many outstanding candidates both from within and outside the Society. Dr. C. Susan Weiler was chosen by the Executive Committee, and on June 1, 1990 assumed duties as the first Executive Director for the Society and Editor of the Communication to members/Bulletin.

Susan received her Ph.D. from the Scripps Institution of Oceanography (1978), under the direction of R.W. Eppley. Her research has concentrated on phytoplankton physiological ecology, and her professional background includes: graduate work at the University of Michigan's School of Natural Resources (1972-73); postdoctoral research at the University of British Columbia, Canada (1978-79) and University of Oslo, Norway (1980-81); research and teaching at Whitman College (1981-present); program management at the National Science Foundation (1987-88); and associate editorship (biology) for *Oceanography* (1988-1990). Susan has been a member of ASLO since 1975, and looks forward to working with other ASLO members to develop and strengthen ASLO's initiatives.

The Society is extremely fortunate to have secured the services of a scientist of Susan's calibre. She knows the field, she knows the Society, she knows the agencies, she is aware of demographic and other human-resource trends in the sciences, she is sensitive to issues facing women and underrepresented minorities, and she knows how to write. She has plunged into her new job with a constructive vigor that leaves the Board breathless and we are already wondering how the Society managed without her. I am counting on all members to give her their best support.

Susan can be reached at: Dept. Biology, Whitman College, Walla Walla, WA 99362, USA (Tel: 509-527-5948; Fax: 509-527-5961; Omnet: S.Weiler).

NEW ASLO BULLETIN

Susan Weiler, Executive Director and Bulletin Editor

The 1988 Future of ASLO Committee recommended that ASLO establish a "Bulletin to be published quarterly, which would carry communication to members, and serve as a forum for discussion and news." The purpose of the new Bulletin is to promote cohesion of the Society by providing for more informal communication among members and a more uniform and information-rich format for the several periodic mailings of the society.

I have been charged with phasing out the Communication to Members, and replacing it with the Bulletin. In addition to keeping members informed about Society events, I hope the Bulletin will promote awareness and discussion of issues important to aquatic scientists. Contents will include: **letters** pertaining to issues raised in the Bulletin, in L&O, or "at large" by individual members; **short notes** on topics of very general interest, especially those pertaining to major controversies in any area of aquatic science; **ASLO news** items, incorporating and expanding on appropriate parts of the current Communication to Members (such as: ASLO meeting, workshop, and committee announcements and reports; calls for papers, programs, & abstracts; educational program material; ASLO awards, including the criteria for the various Society awards and scholarships, calls for nominations and announcement of laureates (addresses by the G.E. Hutchinson laureate are specifically reserved for L&O); and ASLO election materials, including ballots, biographical sketches, and results); **other news** or summaries of information and events relevant to members; **reviews**, particularly of software of instrumentation (book reviews are specifically reserved for L&O); and **whatever else** the membership might want to include as the Bulletin takes form.

During the transition period over the next year, the format will be evolving and I am particularly interested in receiving input from members concerning form and content, in addition to short articles, editorials, announcements, & etc. for inclusion.

Please write or call me (address etc. on masthead) if you have something you would like to submit or would like to see included on a regular basis. Submissions via Telemail/Omnet or on Macintosh computer disks are encouraged; disks will be returned to the sender.

SPECIAL ASLO SYMPOSIUM PLANNED

Susan Weiler, Executive Director and Symposium organizer

Contingent upon obtaining external funding, ASLO plans to hold a special symposium January 11-13, 1991 near San Diego, California, on the topic of "What controls phytoplankton production in nutrient-rich areas of the open sea?" Members of the Program Steering Committee are: Karl Banse, Sallie Chisholm (Chair) John Cullen, Bruce Frost, John Martin, Diane McKnight, Trevor Platt (ex officio), Claire Schelske, and Susan Weiler (ex officio). It will be modelled after the one held in 1971 on lake eutrophication, which resulted in a special issue of L&O (G.E. Likens, ed., 1972. *Nutrients and Eutrophication: The Limiting-Nutrient Controversy*, *Limnol. Oceanogr.* Special Symposia volume I, 328 pp.).

The format will consist of sessions with invited speakers during the day, with time set aside for panel and other discussions. There will be at least one evening session for contributed posters. The detailed proceedings will ultimately appear in a special symposium volume of L&O.

The Program Committee would like to hear from those interested in participating in the Symposium. We regret that there may not be room for everyone, however. We need to hear from all those interested in participating in the Symposium ASAP, so that we can finalize the program and endeavor to reserve sufficient facilities for all who express interest. Please distribute this announcement to colleagues who are not members of ASLO. ASLO is applying for funds to cover travel expenses for some participants, including students. If you are interested in participating, please send a letter describing your reasons to: Dr. Susan Weiler, Dept. Biology, Whitman College, Walla Walla, WA 99362, USA (Tel: 509-527-5948; Fax: 509-527-5961; Omnet: S.Weiler). Please indicate whether your attendance would be contingent on receiving travel support from ASLO.

Background. The oceans play a critical role in regulating the global carbon cycle. Deep ocean waters are roughly 200% supersaturated with CO₂ compared to surface waters which are in contact with the atmosphere. This difference is due to the flux of organic material from surface to deep waters, i.e. the "biological pump". The pump is a complex phytoplankton-based ecosystem, driven by sunlight, and fueled by the supply of inorganic nutrients from the deep ocean. In areas of the oceans where inorganic N and P are effectively exhausted by phytoplankton in surface waters during the growing season, the pump functions at maximal efficiency: The transport of CO₂ to depth is limited by the flux of N and P into the surface waters. In the Antarctic, near the equator, and in the Subarctic Pacific, however, relatively high concentrations of nitrate and phosphate are found in the surface waters throughout the year, and phytoplankton biomass and net production are much lower than would be expected based on the availability of major nutrients. Thus in these areas of the oceans the biological pump appears to be operating at less than maximal efficiency. Consequently, they are receiving increased attention, not only as they relate to global biogeochemical cycles, but also as potential sites for human-induced enhancement of CO₂ flux into the ocean.

The apparent paradox of high nutrients/low phytoplankton populations has challenged biological oceanographers for many years. Hypotheses to explain it include the regulation of productivity by light, temperature, zooplankton grazing, and trace metal limitation and/or toxicity in these regions. To date, none of the hypotheses, or combinations thereof, has emerged as a widely-accepted explanation for why the nitrogen and phosphorus are not depleted in these areas of the oceans. Recently, new evidence has supported the hypothesis that iron limitation regulates primary production in Subarctic and Antarctic waters (Martin et al. 1990: *Nature* 345: 156-158). This evidence has stimulated discussions of the feasibility of fertilizing parts of the oceans with iron, and thus sequestering additional atmospheric CO₂ in the deep oceans where it would be bound over the next few centuries. The economic, social, and ethical issues surrounding such a proposition, along with the outstanding scientific issues, justify rigorous discussion and debate on the regulation of productivity in these regions. To this end, ASLO is organizing a special symposium.

Symposium scope. The symposium will address the general question of the role of the "biological pump" in the global carbon cycle, and what regulates the pump in areas where N and P are in excess, i.e. the Subarctic Pacific, the Equatorial Pacific, and the Antarctic. Changes in the global CO₂ cycle over geological time scales, and hypothesized causes for the changes, will be discussed at the onset of the symposium to provide perspective and a foundation for discussions. A description of the physical and chemical properties of these areas of the oceans will also be presented. Existing uncertainties in the global carbon budget, and the role of the biota (or absence thereof) in models of the budget will be reviewed.

The evidence in support of the various hypotheses for the regulation of productivity in these N- and P-rich oceans will be presented and discussed. Particular attention will be given to the "iron hypothesis" because of the unique set of concerns surrounding it, but special efforts will be made to explore alternate hypotheses and interpretations. It is hoped that suggestions for future research will be presented and refined during open discussion.

The last half-day of the symposium will be devoted to the concept of the feasibility of fertilizing the oceans with iron to mitigate the increase of atmospheric CO₂. Iron will be assumed to be limiting for the sake of discussion. A detailed analysis of how much and what form of iron would be required to allow the phytoplankton to use the N and P will be presented, and the amount of carbon that could, in theory, be drawn out of the atmosphere as a result will be estimated. The discussion will explore the potential effects on the food web, the influence on other areas of the oceans and atmosphere, and analyze the time scale of change. Our ability to predict consequences of such intervention with our current understanding of the ecology of aquatic ecosystems will be discussed, and we will draw on the experience of the limnologists in studies of lake eutrophication and recovery for examples of ecological changes brought about through nutrient enrichment.

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

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

CURMLO was organized in spring, 1989 by then-President Claire Schelske, to promote the participation of under-represented minorities in aquatic science. Committee members include: Ben Cuker (Chair), Grant Gross, Cecil Jennings, Mark Morgan, Peter Starkweather, and Marc Zimmerman.

CURMLO's first effort was a successful NSF proposal through Hampton University and ASLO, entitled "Linking Under-Represented Minority Students to Careers in Aquatic Sciences Through a Scientific Society". The rationale for the proposal was the premise that shifting demographics could result in a future shortage of professionals in our field, such that traditionally under-represented sectors of the population must be actively recruited in order to develop an adequate human-resource base. The major thrust of the Hampton University/ASLO proposal was to tap the existing pool of minority students that have been exposed to aquatic sciences, and to encourage them to pursue further training and professional involvement in the field.

The NSF-funded program supported attendance at ASLO's June 1990 meeting of 38 minority students from more than 12 institutions, six of their professors, and five minority professionals. Participating students included African-Americans, Hispanics, and one Native American. Four students were already enrolled in graduate programs in aquatic science, and the rest were undergraduates. ASLO provided 2-year memberships to participating students.

Students participated in two special events, the first being a pre-conference workshop held at Hampton University on June 9 and 10, which included welcoming remarks and a brief history of ASLO by President Schelske. This was followed by presentations on the "form and function" of scientific meetings, and preparatory talks by eight speakers (Bradford Brown, JoAnn Burkholder, Dirk Frankenberg, Ambrose Jearld, Pernell Lewis, Keith Miles, Henry Williams, and John O'Brien) on some of the major themes to be covered in the ASLO meeting sessions. The hours of lecturing were punctuated by sampling cruises using Hampton University's RV Pirates Cove. The speakers and others from ASLO served as mentors and role models for the students throughout the ASLO meetings.

The second event, attended by nearly 100 individuals, was an evening session held during the ASLO meeting, which highlighted institutional programs for minority students. Presentations were given by representatives from several minority institutions with aquatic programs (George Burbanck & Errol Duplessis, Hampton University; Jonathan Wilson, Jackson State University; Mat Gilligan, Savannah State College; Melinda Davis, Fort Valley State College; Pernell Lewis, University of Maryland, Eastern Shore; and Harriet Phelps, University of District of Columbia). Dirk Frankenberg (University of North Carolina) and Maurice Lynch (Virginia Institute of Marine Science) described programs they have been running to involve minority students in aquatic research. Jonathan Wilson, Chair of the Minority Institutions Marine Science Association (MIMSA) spoke about that organization.

Results from the evaluation form distributed to participants at the conclusion of the meeting were overwhelmingly favorable. Corey Miller (Elizabeth City State University) summed up the feelings of many participants by saying "Thank you...for letting minority students like myself be exposed to a national meeting." Many of the students are looking forward to more active involvement in aquatic science and the Society. Buffy Turner, a senior at Duke University mentioned that she is "already excited about the possibility of presenting a poster at Halifax." Due to such enthusiasm on the part of participants and ASLO members, plans are under way to hold similar programs at Halifax and at other ASLO meetings.

The ultimate measure of success of the CURMLO efforts will be in the students who matriculate as aquatic professionals. In this context, I would like to particularly thank the many ASLO members present at the meeting who took the time to interact with the students and involve them as active meeting participants. Institutional efforts such as this one are good and necessary, but cannot replace the efforts of individuals. ASLO is fortunate to include in its membership motivated and sensitive aquatic

scientists willing to take the initiative to search out interested minority students. All the glossy brochures and special mailings are no match for a hand-full of individuals willing to be pro-active mentors and advisors. If you would like a list of workshop participants for use in recruiting potential graduate students or other purposes, or would like more information about the program, etc., please contact me.

ASLO LOGO CONTEST

With the recent changes at ASLO, it seems an auspicious time for the Society to develop a new logo. The Board is consequently holding a contest, to obtain a unique logo that will represent the full range of our constituency and be suitable for use on all official ASLO communications.

Contestants may submit more than one design, and each contribution should be limited in size to a single piece of standard typewriter paper. Each contribution must be an original design and signed by the artist. In keeping with the purpose of our Society, the logo should reflect the essential unity of the aquatic sciences, and be appropriate for all aquatic science fields.

Contributions in black-and-white or color will be considered, but entrants should keep in mind that some uses will require the logo to be reproduced using no more than one color of ink, and sometimes in black and white. The logo should maintain its integrity down to a size appropriate for use on stationary and envelopes. If your artistic inspiration outpaces your skill as a draftsman, you may submit a draft that could be "polished" by a professional if your contribution is selected for final consideration.

The winner will receive a commemorative certificate and: free registration at ASLO's 1992 Aquatic Sciences meeting in Santa Fe, plus 1 year of free membership in ASLO; or 3 years of free membership in the Society.

Contributions should be submitted to the ASLO Executive Director, Dr. Susan Weiler, Dept. Biology, Whitman College, Walla Walla, WA 99362. To receive full consideration, submissions must be received before April 15, 1991. Entries will be judged by a committee chaired by the President and drawn primarily or exclusively from the ASLO Board. The judges will have the right to reject all entries and continue the competition.

1990 ASLO AWARD RECIPIENTS

W. THOMAS EDMONDSON RECEIVES 1990 G. EVELYN HUTCHINSON MEDAL

The 1990 G. Evelyn Hutchinson Medal was awarded to W. Thomas Edmondson, emeritus professor of Zoology at the University of Washington, and charter member of ASLO. 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. Claire Schelske presented the Medal at the 53d Annual Meeting in Williamsburg, Virginia. The award was given in recognition of Edmondson's work on aquatic population dynamics and community structure.

Edmondson is the 9th 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); and Daniel A. Livingstone (1989). A brief summary of Dr. Edmondson's career and the text of his acceptance speech will appear later this year in L&O (35: 985-986 and 986-988). In the meantime, he provided us with the following thoughts:

On Prizes.

W.T. Edmondson, Dept. Zoology NJ-15, University of Washington, Seattle, WA 98195

The award of the Hutchinson medal has a special significance for me, for obvious reasons, but enough biographical detail has been published that I need not add more (Edmondson 1990, Hutchinson 1988, Lehman 1988, Schelske 1990). Limnologists work on fascinating systems and find out things that interest them intensely. While that is personally gratifying and worth much effort, it is even better when other people find the results interesting too. Sometimes that reaction is expressed by the award of a

prize or by election to something. It is a pleasure to have a signal that somebody else understands what you did and finds it good. But the prize or the election is secondary; they are symptoms of accomplishment, not accomplishment itself.

The real thing is the excitement felt by the investigator, and the fact that the excitement has been transmitted to colleagues. Unfortunately the number of prizes is so small relative to the amount of first-rate work being done that the awards are somewhat stochastic. An award to one person is not a judgment against another. There is a tendency to regard prizes as something to strive for. We hear of people who ask what they must do to be elected to a particular organization or to receive a particular prize. To me, for a scientist to work for one of those things is worse than for a student to work for grades.

My advice, when asked, is simply to work on the problems you find worth your attention and effort within the normal constraints of employment. Do not turn to less engaging but perhaps trendier ones that you think might lead to a prize. You could be surprised.

References:

- Edmondson, W. T. 1989. Rotifer study as a way of life. *Hydrobiologia* 186/187: 1-9.
Hutchinson, G. E. 1988. W. Thomas Edmondson. *Limnol. Oceanogr.* 33: 1231-1233.
Lehman, J. T. 1988. Good Professor Edmondson. *Limnol. Oceanogr.* 33: 1234-1244.
Schelske, C. L. 1990 in press. Hutchinson medal citation. *Limnol. Oceanogr.* 35: 985-986.

PETER KILHAM HONORED WITH ASLO CITATION FOR SCIENTIFIC EXCELLENCE

A posthumous Citation for Scientific Excellence was awarded to Peter Kilham "for his many and significant contributions to aquatic science in particular in the fields of biogeochemistry and African limnology, and in memory of intellectual enthusiasm and stimulation he always offered colleagues in the Society". The Citation for Scientific Excellence was initiated in 1987, to recognize members of the Society who could not fulfill their careers because of early death. The first citation was awarded posthumously to Carl J. Lorenzen "in recognition of innovative and imaginative studies of phytoplankton pigments in the ocean". Peter is the second recipient of this special tribute. During the Plenary Session of the 1990 annual meeting, Susan Kilham (Peter's wife) accepted the Citation and Daniel Livingstone (Peter's former Ph.D. advisor) reminisced about Peter. Susan provided a brief introduction to the Special Tribute Symposium, "Biology and Geology-Life at the Interface", organized by Robert Hecky and John Melack. The text of Dan's and Susan's remarks, and information about the Peter Kilham Memorial Fund (to endow lectures to honor Peter and promote and stimulate research in subjects that most interested him), will appear in the next issue.

JAMES J. ELSER RECEIVES 1990 LINDEMAN AWARD

The Lindeman Award for 1990 was presented to James J. Elser, University of California at Davis, for the 1988 paper entitled "Zooplankton-mediated transitions between N- and P-limited algal growth". *Limnol. Oceanogr.* 33(1): 1-14. This award is presented annually to recognize outstanding work by a young scientist. Jim's former Ph.D. advisor, Dr. Charles R. Goldman, provided the following background information on Jim:

Jim Elser was born in South Portland, Maine in 1959. From his earliest years he had an interest in the outdoors and particularly lakes, streams, and swamps, acquiring a collection of turtles, newts, and frogs that occasionally unnerved his family. This early interest took a quantitative turn when, in high school, he made measurements of stream flow and water chemistry in the same stream from which he had acquired his amphibian and reptile menagerie.

He entered the University of Notre Dame in 1977, majoring in biology, and got his first real taste of limnology when he took a summer field course at the Notre Dame field station. During that course, Jim not only learned how to key out Trichoptera, but also met Monica Mueller, who in the coming years was to become both his colleague and wife and who is a co-author of the Lindeman Award paper. Before leaving Notre Dame, Jim pursued undergraduate research on plant-sediment interactions in Steve Carpenter's lab.

After graduating in 1981 with high honors, he entered graduate school at the University of Tennessee with an NSF graduate fellowship. With Bruce Kimmel as his major professor, he completed a masters thesis in Ecology on aspects of the physiological ecology of planktonic algae in Tennessee reservoirs. This work led to three Journal articles and focused his interests in limnology. In 1984, he and wife Monica returned to Steve Carpenter's lab to help begin a three-year study of cascading trophic interactions in Peter, Paul and Tuesday lakes. This work eventually resulted in the Lindeman Award paper. This paper reported for the first time a qualitative effect of zooplankton on phytoplankton nutrient limitation in which grazers shifted limitation from N to P.

In 1986, Jim received a UC Davis four-year graduate fellowship to complete a Ph.D. degree working with the Castle and Tahoe research groups under my direction. In March 1990, Jim completed his doctoral dissertation, entitled "Nutrients, Algae and Grazers: Complex Interactions in Lake Ecosystems". He accepted an Assistant Professorship in the same year in the Zoology Department at Arizona State University. During the past summer, he began whole-lake manipulations at Castle Lake, California as part of an NSF grant together with myself, Peter Richerson, and Chris Luecke. During July he also participated in a National Geographic expedition to Lake Baikal in Soviet Siberia. When I last saw him, he was riding a tucker trawl into the mile-deep central basin of Baikal in search of the elusive *Macrohectopus branickii*, the mysterious pelagic amphipod. Charles R. Goldman, Lake Baikal, July 9, 1990.

SHERRI RUMER COOPER RECEIVES 1990 STUDENT POSTER AWARD

Sherri Rumer Cooper was the recipient of this year's Student Poster Award, for her contribution "The history of anoxia and eutrophication in Chesapeake Bay as documented in the stratigraphic record". This Award was instituted in 1988 at the ASLO/Boulder summer meeting with a check for \$100. A "tradition" of an award with local significance was initiated in 1989 at the Joint ASLO/Society of Canadian Limnologists Meeting, where the awardee received a brass goldminer's pan and a Canadian \$100 gold coin. This year, at the 1990 Annual Meeting, Sherri received a set of four pewter Jefferson cups and tray handcrafted in Colonial Williamsburg. What next, Halifax?

Sherri graduated cum laude from Duke University in 1978, with a degree in Botany. After graduation, she continued work at the Duke Marine Lab under an NSF student-originated-studies grant. She accepted a Research Assistant position with Grace Brush at Johns Hopkins University in the fall of 1978, to work on a feasibility study using biostratigraphic techniques to examine the history of water quality and submerged aquatic vegetation in the Chesapeake Bay. Sherri worked on another stratigraphy project in 1980 at the University of New York at Buffalo, this time looking at chemical components trapped in ice cores from Greenland. She earned her MS degree in Marine Biology from the University of Delaware, where she studied with John L. Gallagher and received the 1982 Academic Council Award in the Department for Marine Studies for her thesis entitled "A Comparison of Fluctuating vs Constant Salinity Stress on Plants". Following graduation, Sherri held research positions at the U.S. Dept. of Agriculture, the University of Maryland, and the Medical University of South Carolina. In 1988, Sherri returned to the Dept. of Geography and Environmental Engineering at Johns Hopkins University, where she is pursuing a Doctoral degree under the direction of Grace Brush. Her current research is a biostratigraphic study to recreate the history of anoxia and eutrophication in the mesohaline midsection of the Chesapeake Bay using diatom fossils, pollen, and sediment chemistry.

1991 ASLO AWARD APPLICATIONS AND NOMINATIONS

APPLICATIONS FOR STUDENT TRAVEL AWARDS, 1991 ANNUAL MEETING

The ASLO Board has approved 20 student travel stipends of \$300 each to be awarded to students presenting papers or posters at the annual summer meeting in

Halifax, Nova Scotia. Applications should include the student's name, address and university affiliation, a copy of the abstract for the meeting and a short curriculum vita. There are no restrictions on residence of applicants, but they must be ASLO members. **The deadline for applications is January 4, 1991.** Former student travel awardees are ineligible for a second award. Awardees will be selected by lottery. Applications should be sent to: Ms. Dana Booth, ASLO Student Travel (Halifax), Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA 23062.

NOMINATIONS FOR 1991 G. EVELYN HUTCHINSON MEDAL

Nominations for next year's G. Evelyn Hutchinson Medal are invited. Nominees must be an ASLO member, and be nominated for work, primarily in the last five years, which demonstrates the quality and innovation toward which the Society as a whole strives. The Award Committee is in the process of being formed, and the medal will be presented at the 1991 annual meeting in Halifax. To nominate a candidate, please send a brief statement of why the nominated individual merits the award to the ASLO Executive Director, Dr. Susan Weiler, Dept. Biology, Whitman College, Walla Walla, WA 99362 (Omnet: S.Weiler). **To ensure full consideration, nominations must be received by Feb. 1, 1991.**

NOMINATIONS FOR 1991 LINDEMAN AWARD

Nominations from all ASLO members are invited for the 1991 Lindeman Award, to be presented at the Halifax meeting. This award is presented for an outstanding paper written by a young scientist. Eligible papers must deal with the aquatic sciences, be written in English by an author who is no older than 35 years in 1989, and must be published in a 1989 volume of a reviewed journal. Dr. Karl Banse will serve as the Chair for the Lindeman Award Committee. 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 the ASLO Executive Director, Dr. Susan Weiler, Dept. Biology, Whitman College, Walla Walla, WA 99362 (Omnet: S.Weiler). **To ensure full consideration, nominations must be received by Feb. 1, 1991.**

ASLO NEWS

ELECTION OF OFFICERS

Polly Penhale, Secretary

John A. Stockner was re-elected as Treasurer for a third term. With agreement from the ASLO Board, the Nominations Committee proposed that Stockner run unopposed. Stockner played a major role in the negotiations of the new ASLO Business Office contract and his participation in the transition period was considered essential to the welfare of ASLO. New Members-at-Large are Nancy Marcus (Florida State University) and Kenneth L. Webb (College of William and Mary). The following Editorial Board Members were elected: Carol Kelly (University of Manitoba), Leonard Muscatine (University of California, Los Angeles), Bess Ward (University of California, Santa Cruz), and Henry A. Vanderploeg (NOAA Great Lakes Environmental Laboratory). Tellers C. Susan Weiler and Paul H. Yancey reported that 583 ballots were cast; this represented a 7% increase in ballots over that of the last three years.

ASLO TO PROVIDE TESTIMONY TO NSF/BBS TASK FORCE

Susan Weiler, Executive Director

The National Science Foundation's Directorate for Biological, Behavioral, and Social Sciences (BBS) has established an external task force to undertake a structural review of BBS. The Task Force has been charged with examining the organizational structure of BBS, evaluating its adequacy and effectiveness in meeting the current and future needs of the areas of science it supports, and recommending options for a structure which could effectively respond to new opportunities and challenges in the areas of science under BBS. This fall, the Task Force will hold hearings to seek advice

and recommendations from the science community on its mission. Along with other Societies and organizations, ASLO has been invited to provide testimony.

The BBS directorate funds some of NSF's oceanographic research, and most of its limnological research. The BBS hearing should therefore provide a good opportunity for aquatic scientists to express opinions concerning whether aquatic science is well served by the present BBS structure, whether the present structure adequately accommodates interdisciplinary research such as that conducted by aquatic scientists, whether BBS can respond to new and emerging areas, and how it might be modified to improve its effectiveness.

ASLO will officially provide testimony at the hearing. I have been charged with drafting ASLO's response, and would like it to represent a broad cross section of our membership. If you have an opinion you would like to express, please write or call me (Dr. Susan Weiler, Dept. Biology, Whitman College, Walla Walla, WA 99362 (Tel: 509-527-5948; Fax: 509-527-5961; Omnet: S.Weiler). Please respond before the end of October, 1990.

ASLO FORUM

LIMNOLOGY FUNDING AND THE NATIONAL SCIENCE FOUNDATION

Karl Banse, School of Oceanography, WB-10, University of Washington, Seattle, WA 98195

I am writing out of concern as an oceanographer for academic limnology in the United States. While academic limnology has grown appreciably at, e.g., Alabama and Mississippi, my impression now is that our academic limnology is not doing as well as it used to be. For example, W. T. Edmondson at Washington, D.G. Fry at Indiana, and G. E. Hutchinson at Yale have not been replaced in kind. Also, while there is a great deal of applied work being done in this country, basic research has suffered. Limnology at the National Science Foundation does not have its own address, as it were, since it is being funded principally by the Ecology Program. For decades, physical and chemical limnology largely have not been strong branches of freshwater research--perhaps as a consequence of the funding situation.

Especially during the last two decades, I have benefited greatly from approaches and results of limnologists in my teaching and in zooplankton-related work, e.g. in regard to species and size composition of communities, population dynamics, and production. With these subjects, hydrobiological problems are being addressed, but the biologists among the limnologists have done so much better than their marine colleagues because they can revisit their water and organisms and manipulate them. I am sure that other branches of marine science have likewise profited from the freshwater experience. Both limnology and oceanography will suffer greatly if basic limnological research languishes.

Those of you, who are also concerned, will now have an opportunity to help effect a change or to support the present organization by expressing your opinion to those responsible for evaluating and making recommendations to the Directorate responsible for most of the limnology funding at NSF (see above article by Susan Weiler). If, as an oceanographer or a limnologist, you have an opinion about the current status of limnology funding at NSF, please express it to Susan so that she may in turn respond to NSF/BBS on behalf of ASLO.

WORKSHOP REPORTS

EUTROPHICATION OF ESTUARIES: COUPLING RESEARCH AND MANAGEMENT. Synopsis of symposium held at ASLO's June 1990 Annual Meeting.

J.W. Bishop, Dept. of Biology, University of Richmond, VA 23173, and B.J. Neilson, College of William and Mary, Gloucester Point, VA 23062.

This symposium dealt with relationships between management and research, and ways in which the two might be coupled more effectively. The subject was timely in light of the plenary talk suggesting that ASLO become more proactive in addressing environmental concerns. Presentations of eleven contributed papers and four invited papers were followed by a panel discussion. Participants included managers, scientists,

regulators, and lawyers from North America and Europe. This synopsis focuses on the invited papers by Richard Batiuk (environmental program manager), G. David Waltrip (wastewater treatment plant manager), Donald Harleman (scientist) and Patrick McSweeney (lawyer), which were not included in the meeting abstracts.

Batiuk illustrated the need for clearly defined goals from managers and applicable results from scientists. He stressed the value of program reevaluation and the importance of redirecting efforts on the basis of "new" information. Waltrip described the need to weigh environmental and financial considerations and reminded participants that managers rely on scientists to provide evidence that changes to accomplish environmental objectives will justify added costs. Harleman provided examples of how legislation has impeded improvements in environmental quality. Concern was expressed that the 1972 Clean Water Act, by mandating uniform treatment, has stifled innovative research on alternatives to biological treatment processes in the United States. For instance, methods have been developed in other countries that could make treatment more cost effective than those required by legislation in the United States. McSweeney described the use of law in environmental advocacy. He stressed the importance of early involvement in legislation and actions of agencies because most environmental cases are "record of review" cases that preclude introduction of new evidence once an agency makes its decision. The point that scientists must do a better job of persuading non-scientists during legal proceedings was underscored.

ASLO MEETING ANNOUNCEMENTS

ASLO 1991 SUMMER MEETING, HALIFAX, NOVA SCOTIA.

ASLO will be returning to Canada for the 1991 Summer Meeting which will be held in Halifax, Nova Scotia on the St Mary's University campus, from Monday June 10 to Thursday, June 13. The programme is now being arranged by Glen Harrison, assisted by Stephen Threlkeld, Bernard Boudreau, John Loder, Michael Keen, Michael Sinclair, Trevor Platt and Gary Sprules. The Special Sessions are being planned especially to bring together the common interests of oceanographers and limnologists, and mutuality between the two disciplines is to be the theme of the meeting. Field excursions are planned to take advantage of the extremely varied ecology of Nova Scotia, which matches the theme of the conference: world-class high tides in the Bay of Fundy, the Atlantic coastline with endless inlets and salt marshes, a multitude of lakes set in boreal forest, and the sub-arctic barrens of Cape Breton. Please send general enquiries about this meeting to Alan Longhurst, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, NS B2Y 4A2, Canada (Tel: 902-426-3686; Fax: 902-426-7827; Omnet: Bedford.Inst).

ASLO 1992 AQUATIC SCIENCES MEETING, SANTA FE, NEW MEXICO

As mentioned earlier in this newsletter, ASLO will sponsor a major Aquatic Sciences meeting to address aquatic science in the most general sense. The meeting is being organized by Polly Penhale and the scientific program is being planned by a committee co-chaired by Mary Jane Perry and David Schindler. It will be held at the Sweeney Convention Center in Santa Fe, New Mexico February 10-14, 1992. Because of the importance that ASLO attaches to this meeting, it will be the only meeting that the Society organizes in 1992. That is, there will be no summer meeting in 1992 and we will not hold a joint meeting on Ocean Sciences with AGU as we have been accustomed to do every second year. There will be a special mailing to all ASLO members and those who have already inquired about the meeting later this fall. General inquiries should be directed to: Dr. Polly A. Penhale, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, VA 23062 (Omnet: P.Penhale)

BRITISH ECOLOGICAL SOCIETY AND ASLO JOINT SYMPOSIUM, 1992, CORK, IRELAND

The British Ecological Society and ASLO will co-sponsor a symposium on "Aquatic Ecology: Scale, Pattern and Process", to be held April 5-8, 1992 at

University College, Cork, Ireland. This Symposium will be the first joint venture between the BES and ASLO, and also the first time a BES symposium will be held outside of the U.K. The programme will be structured around the water cycle (from the headwaters to the deep sea). The main theme will be an examination of the roles of temporal and spatial scales and patchiness in aquatic communities and in ecosystem patterns, structures and processes. An invited panel of international speakers will review those patterns, scales, and processes that are important at the community or ecosystem level in their particular system. Emphasis will be placed on identifying similarities and differences across freshwater and marine habitats. There will be Poster Sessions for papers dealing with all aspects of aquatic ecology within the programme. Excursions are also planned. It is hoped that pre- and post-conference tours can also be arranged. Full details of the programme and conference arrangements will appear in later Bulletins/Newsletters. For further information, please contact Dr. Paul Giller, Dept. of Zoology, University College, Lee Maltings, Prospect Row, Cork, Ireland (Tel: 353-21-276871 ext. 4137; Fax: 353-21-274034).

CALENDAR OF EVENTS, 1990-1991

AMERICAN GEOPHYSICAL UNION FALL MEETING

Dates: Dec. 3-7, 1990

Location: San Francisco, CA

Topics: Atmospheric sciences, geodesy, geomagnetism & paleomagnetism, hydrology, ocean sciences, planetology, seismology, solar planetary relationships, tectonophysics, volcanology, geochemistry, and petrology.

Contact: AGU Meetings Dept., 2000 Florida Ave. N.E., Washington, D.C. 20009.

5th INTERNATIONAL SYMPOSIUM ON INLAND SALINE LAKES

Dates: March 17-22, 1991

Location: Hotel Titicaca on the Bolivian shoreline of Lake Titicaca

Topics: Biology of saline lakes, and physical, chemical, and geological phenomena relevant to the biota of saline lakes. Post-symposium excursion to saline lakes of Bolivian altiplano and puna planned for Mar. 23-29.

Participation: Participation restricted to persons who present papers on the above topics.

Support: Some funds may be available on a competitive basis to partially defray costs for Latin American Scientists.

Contact: Stuart H. Hurlbert, Dept. of Biology, San Diego State University, San Diego, CA USA 92182-0057.

2d SCIENTIFIC MEETING OF THE OCEANOGRAPHY SOCIETY

Dates: March 24-28, 1991

Location: St. Petersburg, Florida

Format: Three days will feature a half-day plenary session of invited talks and a half-day session of contributed posters focusing on one of the themes below; a fourth day will have only a plenary session.

Topics: Sessions will include: The Ocean and Global Climate; CO₂ Transport and Transformation in the Ocean; and The Influence of Mid-Ocean Ridge Processes on the Ocean.

Deadline for Poster Abstracts: Jan. 11, 1991.

Contact: The Oceanography Society, 1755 Massachusetts Avenue, N.W. #700, Washington, D. C. 20036 (Tel: 202-234-2109) or review the "Ocean" bulletin board on Omnet/Telemail.

37th BROOKHAVEN SYMPOSIUM IN BIOLOGY, Dedicated to Dr. R. W. Eppley

Dates: June 2-6, 1991

Location: Brookhaven National Laboratory

Topics: Theme will be: Primary Productivity and Biogeochemical Cycles in the Sea

Contact: Dr. Paul Falkowski, Dept. Applied Science, or Dr. Avril Woodhead, Biology Dept., Brookhaven National Laboratory, Upton, NY 11973.

54th ANNUAL MEETING, ASLO

Dates: June 10-13, 1991

Location: Halifax, Nova Scotia on the St Mary's University campus

Topics: Sessions are being planned especially to bring together the common interests of oceanographers and limnologists. Field excursions are planned to take advantage of the extremely varied ecology of Nova Scotia, which matches the theme of the conference: world-class high tides in the Bay of

Fundy, the Atlantic coastline with endless inlets and salt marshes, a multitude of lakes set in boreal forest, and the sub-arctic barrens of Cape Breton.

Scientific Program Organizers: Glen Harrison, Stephen Threlkeld, Bernard Boudreau, John Loder, Michael Keen, Michael Sinclair, Trevor Platt and Gary Sprules.

Contact: Alan Longhurst, Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, NS B2Y 4A2, Canada (Tel: 902-426-3686; Fax: 902-426-7827; Omnet: Bedford.Inst).

ANNUAL MEETING, ASSOCIATION FOR BIOLOGY LABORATORY EDUCATION

Dates: June 12-14, 1991

Location: University of Wyoming

Topics: Presentations of reliable, innovative hands-on workshops suitable for undergraduate biology laboratory courses. All disciplines and levels within biology, ranging from exercises aimed at non-majors to ones appropriate for advanced upper-division undergraduate courses, are appropriate.

Deadline for expression of interest: November 15, 1990

Contact: Dr. Jon Glase, Section of Neurobiology and Behavior, 1130 Comstock Hall, Cornell University, Ithaca, NY 14853 (Tel: 607-255-3007).

CONFERENCE ON LIMNOLOGY OF MOUNTAIN LAKES

Dates: July 1-7, 1991

Location: Proposed site is the Tatranská Lomnica tourist resort, in the High Tatra Mountains in Slovakia

Topics: The objective is to increase knowledge in virtually all aspects of limnology of mountain lakes. Recommended topics to date include: Physical and chemical limnology, life strategies of planktonic and benthic species, production and decomposition, sedimentation, paleolimnology, and acidification. Both oral and poster sessions will be possible.

Response Date: November 30, 1990; please indicate title of paper or poster to be presented.

Contact: Dr. Evzen Stuchlík or Dr. Jan Fott, Dept. of Hydrobiology, Charles University, Vinicná 7, CS-128 44 Prague 2, Czechoslovakia (Tel: 29 79 41-9).

ZOOPLANKTON ECOLOGY MEETING

Dates: August 24-29, 1991

Location: Milwaukee, Wisconsin

Topics: Zooplankton as predators, prey, and community members; Zooplankton ontogeny and phylogeny

Organizers: J.R. Strickler, Organizer; S. Richman, Treasurer; G.-A. Paffenhofer, Editor in Chief

Contact: J. Rudi Strickler, Center for Great Lakes Studies, 600 E. Greenfield Ave., Milwaukee, WI 53204 (Tel: 414-649-3000).

5th INTERNATIONAL CONFERENCE ON TOXIC MARINE PHYTOPLANKTON

Dates: October 28- November 1, 1991

Location: Newport, Rhode Island, U.S.A.

Topics: Taxonomy, cellular and molecular biology, physiology, biochemistry, toxicology, ecology, environmental regulation, public health, aquaculture and mariculture issues of toxic, harmful and nuisance blooms and species of marine phytoplankton. Peer-reviewed conference proceedings will be published.

Contact: Dr. Theodore J. Smayda, Conference Convenor, 5th Int. Conf. on Toxic Marine Phytoplankton, University of Rhode Island, Graduate School of Oceanography, Narragansett, Rhode Island 02882-1197, USA.

2d ARGENTINIAN ASSOCIATION OF LIMNOLOGY MEETING (RAL'91)

Dates: November 4-8, 1991

Location: La Plata City (Buenos Aires Province, Argentina)

Format: Symposia, conferences, oral presentations and poster displays

Topics: Paleolimnology, lacustrine environments, estuarine environments, fluvial systems, biogeography, environmental policy

Paper deadline: Papers will be edited as "notes" which, rather than traditional abstracts, will have the characteristics of a valid scientific publication. Deadline for submission of notes is November 30, 1990

Contact: Organizing Committee President of RAL'91, Instituto de Limnología "Dr. Raúl A. Ringuelet", UNLP, C.C. 712-1900 La Plata, Argentina (Tel: 021-3-9125).