

ASLO BULLETIN

American Society of Limnology and Oceanography

Volume 7(1)

WINTER, 1998

CONTENTS

MESSAGE FROM THE PRESIDENT		ASLO FORUM	
Reflections on My Tenure as President	1	Coastal GOOS: What Is It and Why Do It?.....	12
HAPPY 50th ANNIVERSARY, ASLO!		Polly A. Penhale Receives AGU's Ocean Sciences Award	13
ASLO'S 50th Anniversary	3	Sound Science Initiative	13
The Merger of Limnology and Oceanography within ASLO: A Historical Perspective.....	3	BIOGRAPHICAL SKETCHES, 1998 ASLO CANDIDATES	15
ASLO NEWS		PROPOSED CHANGES TO CONSTITUTION AND BYLAWS	20
ASLO Creates a New Award to Honor Ruth Patrick	7	EDUCATION	
1999 ASLO Award Nominations	8	Wanted Articles about Aquatic Science Education	21
The Role of Students in ASLO Continues to Evolve	9	Riparian Environments	21
Message from the Editor-in-Chief: Parting Thoughts	9	Environmental Education Outreach for Aquatic Resources: Workshop to be held at June, 1998 Meeting in St. Louis	21
ASLO Student E-Mail List: Sign Up Now!.....	10	National Science and Technology Week: April 26 - May 2, 1998.....	22
Congratulations Recent Ph.D. Recipients!	11	JOBS	24
DIALOG III Program	11	ASLO MEETINGS	
Message from the Business Office	11	1998 Joint ASLO/ESA Meeting: The Land-Water Interface	25
What Are the Top Papers In Your Field?	22	Student Poster Awards: Judges Needed	25
		ASLO 1999 Aquatic Sciences Meeting.....	25
		CALENDAR OF EVENTS.....	28

Remember to Vote!

See pp. 15 - 20 and use enclosed ballot

ASLO web page: www.aslo.org/

MESSAGE FROM THE PRESIDENT

REFLECTIONS ON MY TENURE AS PRESIDENT

Diane M. McKnight, ASLO President, Institute of Arctic and Alpine Research, University of Colorado, 1500 30th St., Boulder, CO 80309-0450 (Tel: 303-492-4687; Fax:303-492-6388; mcknight@stripe.colorado.edu)



It has been a privilege to serve as ASLO president during the past two years and I am optimistic about the directions that the society is taking. I have come to appreciate the dedication of the many ASLO members who contribute to the activities of the society. In addition to the ASLO officers, Board members, committee chairs and mem-

bers, I want to particularly thank Karla Heidelberg and Christina Takacs, ASLO's first student representatives to the

ASLO Board, for their efforts in establishing the ASLO student web page and promoting interactions among ASLO student members. As a result of their dedication, the Board is asking the membership to change the bylaws so that two elected student members will be full members of the Board of Directors, with voting privileges. Please vote on this important issue using the enclosed ballot. I would also like to thank the Future of ASLO committee for providing an excellent report, which has served as a valuable guide to the ASLO Board during the past year and a half. Based on the committee's recommendation, the Board is asking the membership to approve a change in the ASLO purpose statement to include "link knowledge and understanding in the aquatic sciences to the identification and solution of problems generated by human interactions with the environment" (please vote using the enclosed ballot). I would encourage other ASLO members to become involved in ASLO activi-

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

EDITOR: C. Susan Weiler, ASLO Executive Director, Whitman College, Walla Walla, WA 99362, USA

Tel: 509-527-5948; Fax: 509-527-5961; Internet: weiler@whitman.edu

TARGET DATES for submissions: February 10, July 10, & October 10

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

For-Profit advertisers: Camera-ready copy only; send to **ASLO Business Office:** (address below).

MOVING?

Send your change of address to: **ASLO Business Office**, 5400 Bosque Blvd. Suite 680, Waco, TX 76710-4446

Tel: 800-929-ASLO (U.S., Canada and Carib.) or 254-399-9635; Fax: 254-776-3767; Internet: business@aslo.org

ties, and to bring ideas for new undertakings to the ASLO Board. We are especially interested in ideas for special symposia to follow on the success of the 1992 Fe hypothesis and the 1995 Climate Change symposia.

Looking back, there are a few areas in which we have moved forward at a more deliberate pace than I had anticipated. One of these is in ASLO's involvement in public policy and I am glad to report that at our recent meeting in San Diego the ASLO Board decided to establish a committee on public policy. There are many complex aspects of ASLO's involvement in public policy and the deliberate pace is certainly warranted. I think that this is a very important direction for ASLO and want to use this last "message from the president" to address this topic.

We should be careful to clearly identify our goals in becoming involved in public policy. I think that we should realize that it is not the role of scientific societies to make policy, and that we should not gauge our success based on particular legislative outcomes, but rather we should have a goal of having input, bringing knowledge of our science in a comprehensible manner, to the decision making process. I believe that if we do this well, we will also benefit from better support of the disciplines of limnology and oceanography in the future. However, we should not necessarily gauge the success of our activities in terms of improvements in funding.

One reason ASLO would benefit from having a means to have input into policy is that the context of science is continually changing, and the pace of change has been rapid during the past five years. In addition to providing guidance to influence the direction of change, it is also in our interest to maintain some research directions through periods of change. One example of this is the benefits to be gained by maintaining the long-term records necessary to understand aquatic systems. For our scientific community, this is a timely concern. We may need to learn how to clearly convey the advantages of continuing field studies to a broad audience in order to maintain support for critical monitoring programs. There are several examples of long-term data collection programs suffering under tight federal budgets. The network of stream gauging stations of the U. S. Geological Survey has been shrinking steadily over the past decade, and the network of stations gauging river outflow to estuaries has experienced a dramatic decline over the past 2 years. Discontinuing these stations occurred at time of great public concern over water quality and the health of estuaries, and the connections between addressing these problems and maintaining records were not convincingly presented. As ASLO moves in the direction of becoming more involved in public policy this is one of several issues which our society could choose to emphasize.

It is not easy to explain to non-scientists the advantages of maintaining research and monitoring at a site. Sometimes, I am asked by my nonscientist friends "Are you still working on acid mine drainage near Leadville?" with the implicit question that surely after more than a decade we must have figured it out by now. As scientists, the prior data and results from previous scientists who have studied a site can be like a

valuable inheritance, especially if it has been well documented, organized, and its significance explained in publications. We are able to ask more probing questions based upon understanding of some of a site's key features and processes. In using past results to plan new research, current investigators accept a responsibility to also document, organize, and explain in publications their results. Gaining better understanding of processes at one site can also allow us to "regionalize" in a more quantitative way. Outside of the broad fields of earth and environmental science, explaining this idea of scaling up is a challenge and moving on to new sites may be more readily seen as "progress".

The need to be better able to articulate the benefits of long-term research was made clear to me this January while I was at our field site in the McMurdo Dry Valleys in Antarctica. A group of six senators from the Appropriations Committee visited our camp at Lake Hoare in Taylor Valley. Half way through the brief tour of our research site, after the explanation of how the forward advance of the alpine glacier near the camp is balanced by the ablation of ice at the glacier face, Montana's Senator Burns asked the thoughtful question: if our goal is to understand change, why do we need to come to our site every year instead of every 3 or 4 years. We did our best to provide a convincing explanation. It is a question that we should be prepared to answer in terms more clearly understood by the public and policy makers.

In our own research in the dry valleys, we have benefited from becoming involved in the changing context for research in Antarctica. In 1994, shortly after the 1992 Environmental Protocols of the Antarctic Treaty System were put forward, Warwick Vincent and Bob Wharton led an international workshop on environmental management in the McMurdo Dry Valleys. In this workshop a new code of environmental conduct was developed and the value of protecting the scientific integrity of long-term research sites was emphasized. This discussion and the report from this workshop have had an influence on subsequent policies and developments in the dry valleys. In 1995, the New Zealand Antarctic Research Program at Vanda Station was closed for renovations, after having operated with a 3-person summer support staff from about 1968 to 1995. The complex of small light green buildings that had comprised the station were completely dismantled, and the contaminated soils and painted rocks were removed. A smaller hut was placed at a new shore site. Also, the Vanda Weir was renovated. Together with Peter Mason, a hydrologist from the New Zealand program who originally installed the weir, we removed the old structure in the stream, upgraded the weir itself and installed new instrumentation. The flow record from the Vanda Weir began in 1972 and provides a potential tool to understand future responses to changing climate in the dry valleys. Both the new hut and the weir renovation will support the ongoing research by the New Zealand program at Lake Vanda.

I would like to close with one more anecdote from the Antarctic which illustrates the continuity of field research. Last month I gave a Sunday science lecture in McMurdo

Station, the main U.S. research base in Antarctica with a summertime population of about 1000 support personnel and scientists. These weekly public lectures are given by scientists stationed in McMurdo or in route to a field camp or South Pole Station and are one of the regular events during the main body of the field season. In introducing me, Roberta Marinelli, who was there as the NSF science representative, mentioned that I was president of the American Society of Limnology and Oceanography and a member of the Vanda Swim Club. Although there has always been much oceanographic and limnological research taking place

based from McMurdo Station, my guess was that for most of the audience ASLO was not as well recognized as the Vanda Swim Club, one of several traditions of the old Vanda Station. The extent of the previous limnological research in the dry valleys which serves as a foundation for our current research is illustrated by the fact that I am actually the fourth ASLO president who has conducted research at Lake Vanda.

REMEMBER TO VOTE! See pp. 15 - 20

***** CELEBRATING 50 YEARS OF ASLO *****

ASLO'S 50TH ANNIVERSARY

C. Susan Weiler, ASLO Executive Director, ASLO Office, Whitman College, Walla Walla, WA 99362 (weiler@whitman.edu)

This year represents a milestone in the history of ASLO, for it was 50 years ago that the Limnological Society of America changed its name and became the American Society of Limnology and Oceanography. ASLO member Dan Conley researched and wrote the following article in celebration of this occasion. Dan, as we ponder our past and debate our future, we thank you for this historical perspective!!

THE MERGER OF LIMNOLOGY AND OCEANOGRAPHY WITHIN ASLO: A HISTORICAL PERSPECTIVE

Daniel J. Conley, National Environmental Research Institute, P.O. Box 358, Frederiksborgvej 399, DK-4000, Roskilde, Denmark (conley@hamil.dmu.dk)

"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." (Trevor Platt, 1990)

Many limnologists believe there is a crisis in limnology in North America (Wetzel 1991). Although the causes of the problems currently facing North American limnology are complex (Lewis et al. 1992), the woes of limnological research are at least partially related to a lack of funding. Basic research in oceanography benefited greatly from substantial financial support by the Office of Naval Research after World War II. Subsequent funding for oceanography by the National Science Foundation has continued to provide significant funding opportunities. By contrast, there has been a general lack of support for basic research in limnology (Banse 1990; Jumars 1990). The frustration of limnologists over the present state of the science has led to the Freshwater Initiative (now called the Freshwater Imperative), whose goals are to coordinate the efforts of U.S. Federal agencies to support freshwater studies (Threlkeld 1991). More recently, a special committee of the American Society of Limnology and Oceanography has examined the "Challenges for Limnology in North America" and has offered some strategies to face those challenges (Lewis et al. 1992).

The perceived schism between limnology and oceanography may be partially related to differences in their historical

development. Although most agree that limnology and oceanography are fundamentally similar, the sciences have evolved for the most part independently of each other (Mills 1991). In 1948, the Limnological Society of America (LSA) expanded its breadth in order to reflect and include the growth of the Society's marine interests resulting in its present name, the American Society of Limnology and Oceanography (ASLO). The Pacific Section of ASLO was also established in that year with the amalgamation of the Oceanographic Society of Pacific (OSP) into the Society. The opinions and attitudes of both limnologists and oceanographers voiced during this transition period are relevant to today's discussions on the health of limnology and the interaction between the two closely related disciplines. The purpose of this comment is to provide a historical perspective on the events that led to the modern day ASLO and to focus on the debate surrounding the merger of the two societies.

The early history of the formation of ASLO has been documented in some detail by Lauff (1966). Briefly, the LSA was formally established on 2 January 1936 as an outgrowth of the Committee on Aquiculture of the National Research Council's Division of Biology and Agriculture (Lauff 1966). Concurrently, oceanographers in the Pacific region of the United States were organizing to form the OSP. The first meeting of the OSP was on 28 June 1935, and it soon became an affiliated society of the American Association for the Advancement of Science. Both the LSA and OSP essentially became inactive during the later part of World War II, and were reactivated following the war in 1946. During and following the war, there were informal discussions concerning the formation of a society for oceanographers, and many oceanographers believed they should affiliate with the LSA (N. Marshall, personal communication). Some details of the merger can also be found in Lauff (1966), however there are no other published materials that document the formation of the Society. The majority of the information presented here has been taken from documents contained in the ASLO Archives located at the University of Wisconsin Library.

The formal inclusion of oceanographers into the LSA and its subsequent expansion into ASLO are not entirely clear. From the documents contained in the Archives, the inclusion

of oceanographers into the Society was initiated in 1946 by a series of letters sent by A. G. Huntsman, then editor of the *Journal Fisheries Research Board of Canada* and a professor at the University of Toronto, to G. L. Clarke, then Secretary-Treasurer of the LSA. Huntsman thought it was time for there to be an organization for oceanographers. Clarke and Huntsman agreed that it would be a mistake for oceanographers to form a separate organization and that it seemed far preferable to combine oceanographers and limnologists into one large strong organization (Clarke 1946). Clarke sent copies of his correspondence with Huntsman to P. S. Welch, LSA president, and to A. D. Hasler, LSA vice-president, for discussion. Welch was troubled with the idea of formally including oceanographers into the society (Welch 1946a, b). Hasler (1946) envisioned the LSA as a mother organization, with its distinct identity retained. The discussion was brought before the Executive Committee meeting of the LSA in Boston on 29 December 1946. The Committee voted to

“request that the President appoint a committee of five consisting of three limnologists and two oceanographers including the President and Secretary-Treasurer as *ex officio* members to canvas opinion to the desirability of (a) expanding the marine interests of the society to the same extent as the fresh-water interests, and (b) of modifying the name and stated purposes of the Society to conform, should favorable action be taken on (a)” (Executive Committee 1946).

In March 1947 the Committee on Expansion of Marine Interests was formed to investigate the desirability of the LSA expanding to include the marine field. The committee was composed of A. D. Hasler, Chairman, F. E. Eggleton, A. G. Huntsman, and *ex-officio* members G. L. Clarke, LSA Secretary/Treasurer and D. S. Rawson, LSA President. Welch suggested Hasler as a representative of limnologists. Hasler was a limnologist with marine experience who had completed part of his dissertation at the Marine Biological Laboratories at Woods Hole and had held a position for two years at Yorktown, VA for the U. S. Fisheries Service Laboratory investigating oyster mortality from pulp effluents on the Chesapeake Bay (Beckel 1987). It was important for the older members and founders of the LSA to have confidence in the make up of the committee and Hasler had that confidence.

As a preliminary move, the Committee began to draw up a questionnaire that would list the pros and cons from which they could then solicit opinions from the society membership to determine if they were sympathetic to broadening the scope of the society (Hasler 1947). Although Huntsman favored broadening the society, he felt as did many, that there should be no change unless an overwhelming majority of the members desired it. Huntsman felt that

“We should keep faith with those who wanted a fresh-water society, which the name has meant on this continent” (Huntsman 1947).

The initial list of cons then pros compiled by Hasler contained few objections to the expansion. He noted that the original founder’s intent was to be a small society restricted to limnology, a separate discipline for students of freshwater

biology, and that there were distinct advantages to having a small society. The pros noted that a larger society could publish a journal; give freshwater and marine scientists a chance to enlarge the scope of their fields; expedite and facilitate the exchange of important information and ideas between the disciplines; provide better training; and allow the group to meet independently from other societies. The list also contained many instances where the two groups had similar interests.

The initial reaction of some important limnologists within the LSA was not favorable. Welch was troubled by the idea of formally including oceanographers into the society and changing the Society’s name. He had never felt the intent was to exclude oceanographers, in fact many of the members of LSA were oceanographers, but Welch thought the Society should represent the interests of limnologists only (Welch 1946a, b). Eggleton (1947a) voiced another concern in that he was

“unable to recognize either the desirability or necessity of reorganizing an already well-established and prosperous society in order to incorporate within its membership a smaller number of our colleagues whose interests lie in a similar and related but not identical phase of biology, but who do not have a large and effective organization of their own.”

R. W. Pennak believed it was an exaggeration to say that limnologists and oceanographers have many fundamental research problems in common; he thought it was more reasonable to say that there were few common problems between the fields (Pennak 1947).

During the summer of 1947, Clarke visited the marine laboratories along the West Coast and met with other key and interested individuals whose support was essential to expand the Society’s focus to cover oceanography. With but one exception, everyone Clarke talked with not only approved the idea, but was also enthusiastic (Clarke 1947a). Clarke discussed the potential merger during a faculty meeting at the Scripps Institution of Oceanography (SIO) during which the idea of a western division of a new society was first proposed. The faculty at SIO voted in favor of amalgamation and in a formal letter to Clarke, H. U. Sverdrup, SIO Director, stated that

“The expansion of the Limnological Society would give us a nation-wide society and at the same time the Oceanographic Society of the Pacific could be expanded to include the limnologists which would give us a stronger regional group” (Sverdrup 1947).

This letter caused much consternation among several prominent limnologists because of the implication that the OSP could be expanded to include limnologists versus the possible desirability of inviting oceanographers to join the LSA (Eggleton 1947b). Clarke tried to play down the notion of who might absorb whom. Because of his dealings with a wide range of both limnologists and oceanographers, Clarke agreed to prepare a draft report during the fall of 1947. Clarke noted the necessity of drawing up a proposal that would be endorsed by the great majority of the active members of the LSA and would not divide the society by offering

a proposal that might have the tendency to split the ranks (Clarke 1947b).

The draft prepared by Clarke was accepted by the Committee on 21 November 1947 and was presented to the LSA Executive Committee on 28 December 1947 in Chicago, IL. After a lengthy debate from the floor, the LSA Executive Committee approved the report and voted in favor of enlarging the Society to include oceanography with only one dissenting vote: R.C. Miller of the California Academy of Sciences was not actively opposed, but wished to “reserve judgement”. According to Clarke (1947a), everyone else was enthusiastic. However, the Executive Committee also felt the matter was so important that the final decision should be made by the entire membership via a mail ballot (Communication to Members 1948).

A statement was condensed from the report prepared by the Committee on the Expansion of Marine Interests and was sent with a ballot (Table 1) to all members of the LSA on 17 January 1948 (Communication to Members 1948). The statement outlined five major points to be considered in the proposed expansion to include marine interests, some of which were present in the original list of cons and pros mentioned earlier. (1) Progress would be faster if the two sciences exchanged ideas so that everyone knew of developments in both fields, especially since the two fields were similar and they shared fundamental problems common to both fields; (2) the development of common ground between limnologists and oceanographers was important because of circumstances such as when large and deep lakes required techniques usually associated with oceanography, while many shallow marine areas required many techniques commonly associated with limnology, and the overlap being already considerable, both subjects would gain if resources were more closely pooled; (3) a broader training of scientists in the aquatic fields would encourage the scope of the two fields to expand; (4) the Society would be strengthened by enlargement; and (5) most of members consulted during the report process were in favor of an enlarged society. The condensed statement also noted that there were too many societies and that consolidation was a good idea; there was no organization for oceanographers east of the Rockies; a western division of the new, expanded group would form and strengthen the society; an enlarged society would be in a stronger position as a national voice and could publish its own journal; and an enlarged society would be large enough to hold independent meetings. The statement noted that there was no logical line of distinction between the two fields - the Greek word “limne” means a lake or a salt-water marsh. Finally, the Committee’s report recommended that the name of the Society be modified to the American Society of Limnology and Oceanography to indicate clearly its new scope.

The final vote by the LSA was overwhelmingly in favor of the expansion to include marine interests and changing the name of the Society (Table 1).

Table 1. Results of the ballot of the Limnological Society of America.

1. Do you favor expanding the marine interests of our society to the same extent as the freshwater interests?
Yes 361 No 12
2. Do you favor modifying the name of our Society to “American Society of Limnology and Oceanography”?
Yes 353 No 20

However, there was still the matter of the OSP to be considered. After the expansion, the Executive Committee voted to establish a Western Division and to invite the OSP to amalgamate into the Western Division. C. L. Hubbs, the OSP President, was in favor of the OSP joining the new ASLO, however, he thought it best that the whole of OSP consider the measure. Therefore, the OSP waited until their Annual Meeting on 24 June 1948 to address the merger and a lively debate ensued (Oceanographic Society of the Pacific 1948). Hubbs began by outlining the problem of affiliating the OSP with ASLO. Hubbs suggested that if the OSP joined ASLO it could be called the Pacific Section of ASLO. It was established that a certain percentage of dues would come back from the parent organization to the Pacific Section to fund their activities. OSP members expressed concern that oceanographers could become lost in ASLO since there were so many more limnologists than oceanographers, and since a large percentage of new people entering the field were physical oceanographers who would not be so apt to join a society if it were tied to limnology. It was proposed that a ballot outlining three options for the future of the OSP be distributed to its members (Table 2).

Of the 106 ballots sent, 74 were returned. The majority of members voted for proposition 2 (Table 2), which proposed that the OSP disband as such to become the Western Division of ASLO.

Table 2. Results of the ballot of the Oceanographic Society of the Pacific.

1. The Oceanographic Society of the Pacific to remain as it is now, without becoming formally associated with the American Society of Limnology and Oceanography. (6 voted for proposition)
2. The Oceanographic Society of the Pacific should disband as such, to become the western division of the national society. (43 voted for proposition)
3. The Oceanographic Society of the Pacific to maintain its name, organization and activities, but to become closely and officially affiliated with the American Society of Limnology and Oceanography in accordance with arrangements to be made by the officers of the two societies. (25 voted for proposition)

REMEMBER TO VOTE! Ballot Enclosed

After the vote, negotiations continued for about a year on the name of the new division that the old OSP would occupy, the structure and composition of the ASLO Executive Committee, dues, and the wording of the new ASLO constitution. After lengthy discussion, it was decided that the "Pacific Section" was most appropriate name for the new section. The Pacific Section of the Society continued to meet annually generally in association with the Pacific Division of AAAS, until 1984 when the Pacific Section was officially disbanded (Schelske 1984).

Although a few prominent members of both societies were opposed to the merger, most did accept the vote of the membership. E. A. Birge, the famous pioneering Wisconsin limnologist, at age 95 wrote a letter to Clarke supporting the new society, although he foresaw some future difficulties.

"I agree in general with the proposal for union in lake study contained in your circular letter of Nov. 21. Specifically, I approve the name proposed on page 9: "American Society of Limnology and Oceanography." My age and deafness make discussions and consultations difficult or impossible. So I should prefer to be left out of any formal list of members approving the change. A society like the one which is proposed will undoubtedly have subdivisions. ... So our large organization will necessarily divide as time and freedom bring changes" (Birge 1947).

Some scientists continued to voice their discontent with the merger.

"This matter of the Pacific Section is a rather touchy issue. Confidentially, there are several influential members, who are engaged exclusively in marine science research, who were opposed to the affiliation." (ZoBell 1949).

Although the merger sparked a lively debate, the motivation was a sincere concern for the well-being and healthy growth of the two societies. Eggleton, an initial opponent of the merger wrote

"When different opinions exist and there is little opportunity to hear the other sides of the subject presented by other members of the committee around a conference table, differences of opinion often take on a significance and force which is more apparent than real." (Eggleton 1947b).

Although oceanography in North America was becoming an organized discipline unto itself by the 1930's (Bigelow 1931), there was still no national organization that represented oceanographers. Prior to 1940, probably less than 200 individuals in the United States were actively working in the field of oceanography. By 1958, it was estimated that there were 1200 scientists employed in oceanographic research and teaching (Redfield et al. 1960). The formation of the new society was heartily supported by the vast majority of oceanographers.

"I consider that this is a most desirable event because many of us have recognized the need for a national organization with broader interests than those of the American Geophysical Union. As the number of oceanographers is very small, I have not felt that we were strong enough to form an independent society and I have also felt that it is more important to main-

tain contact with workers in related fields so as to avoid isolation and the tendency for oceanographers to become ingrown." (Fleming 1948).

The merger of limnology and oceanography into one society has been only partially successful. The American Society of Limnology and Oceanography has not been able to meet all the needs of North American limnologists and oceanographers. For example, the society has focused almost exclusively on scientific issues (Lewis et al. 1992), and has not been at the forefront of representing the needs of limnologists and oceanographers in regard to practical matters, especially related to the basic support of research. Oceanographers' frustration over the need to be represented has led to the formation of a separate organization, *The Oceanography Society* (Baker 1988), and there has been a call for ASLO to play an expanded role in providing leadership in changing the present status of limnology (Lewis et al. 1992).

The merger of North American limnologists and oceanographers into one society has been immensely successful in aiding the communication of scientific advances. It has long been recognized that both limnology and oceanography are collaborative sciences that are synthetic in nature. Both are disciplines that embrace the *integrated* physical, chemical, and biological facets of ecosystems (Wetzel 1991), which requires instruction from disciplines not normally combined into a single department. This simple fact has been recognized since the beginnings of both disciplines. A 1932 report "Research Problems in Freshwater Hydrobiology" to the National Research Council discussed "the interdisciplinary nature of hydrobiology, including the geological, physical, chemical, and biological aspects" (Lauff 1966).

H. B. Bigelow (1931) in the pioneering appraisal of oceanography to the U. S. National Academy of Sciences stated

"In further development of sea science the keynote must be physical, chemical and biological unity, not diversity, for everything takes place in the sea within the realm of any one of these artificially divorced sciences impinges upon all the rest of them."

The art of scientific inquiry has become increasingly compartmentalized, with its practitioners becoming specialized and even isolated in their pursuit. Limnology and oceanography require individuals to transcend traditional boundaries of science.

References

- Baker, D. J. 1988. How The Oceanographic Society came to be: Its background and its future. *Oceanogr. Magazine* 1:3-6.
- Banse, K. 1990. Limnology funding and the National Science Foundation. American Society of Limnology and Oceanography, Communication to Members, Fall 1990.
- Beckel, A. L. 1987. Breaking New Waters. *Trans. Wis. Acad. Sci. Arts Lett.* Special Issue, 122 p.
- Bigelow, H. B. 1931. Oceanography, its scope, problems, and economic importance. Houghton-Mifflin, Boston, vi + 263 p.
- Birge, E. A. 1947. Letter to G. L. Clarke, 27 December 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Clarke, G. L. 1946. Letter to A. G. Huntsman, 7 October 1946,

- American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Clarke, G. L. 1947a. Letter to A. D. Hasler, 18 September 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Clarke, G. L. 1947b. Letter to A. D. Hasler, 17 October 1947, ASLO Archives, University of Wisconsin Library, Madison, WI.
- Communication to Members. 1948. Limnological Society of America, 17 January 1948, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Eggleton, F. E. 1947a. Letter to A. D. Hasler, 23 July 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Eggleton, F. E. 1947b. Letter to A. D. Hasler, 18 November 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Executive Committee. 1946. Minutes of meetings, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Fleming, R. H. 1948. Letter to G. L. Clarke, 8 April 1948, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Hasler, A. D. 1946. Letter to P. S. Welch, 19 October 1946, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Hasler, A. D. 1947. Letter to members of Committee on the Expansion of Marine Interests, 24 April 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Huntsman, A. G. 1947. Letter to A. D. Hasler, 29 April 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Jumars, P. A. 1990. W(h)ither limnology? *Limnol. Oceanogr.* 35:1216-1218.
- Lauff, G. H. 1966. A history of the American Society of Limnology and Oceanography. In D. G. Frey [ed.], *Limnology in North America*. Univ. Wisconsin Press, p. 667-682.
- Lewis, W. M. Jr., and others. 1992. Challenges for Limnology in North America. An Assessment of the Discipline in the 1990's. Report to the Board, American Society of Limnology and Oceanography.
- Mills, E. L. 1991. Why haven't limnologists and oceanographers read each other more? American Society of Limnology and Oceanography, Communication to Members, Fall 1991, p. 11.
- Oceanographic Society of the Pacific. 1948. Minutes of the Annual Meeting of the Oceanographic Society of the Pacific, 24 June 1948, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Pennak, R. W. 1947. Letter to A. D. Hasler, 20 September 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Platt, T. 1990. ASLO Aquatic Sciences Meeting, 1992, Santa Fe, New Mexico. American Society of Limnology and Oceanography, Communication to Members, Fall 1990, p. 3.
- Redfield, A. C., and others. 1960. Education and recruitment of oceanographers in the United States. *Limnol. Oceanogr.* Supplement to Volume VI. p. xxiii.
- Scheske, C. L. 1984. Proceedings of the American Society of Limnology and Oceanography, Inc. 46th Annual Meeting, 15 June 1983, St. John's, Newfoundland. *Limnol. Oceanogr.* 29:217-218.
- Sverdrup, H. U. 1947. Letter to G. L. Clarke, 8 July 1947, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Threlkeld, S. T. 1991. The Freshwater Initiative: An opportunity to enhance limnology at the National Science Foundation. *Limnol. Oceanogr.* 36:1062-1065.
- Welch, P. S. 1946a. Letter to A. D. Hasler, 19 October 1946, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Welch, P. S. 1946b. Letter to G. L. Clarke, 12 November 1946, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.
- Wetzel, R. G. 1991. On the teaching of limnology: Need for a national initiative. *Limnol. Oceanogr.* 36:213-215.
- Zobell, C. 1949. Letter to A. Hasler, 25 August 1949, American Society of Limnology and Oceanography Archives, University of Wisconsin Library, Madison, WI.

Acknowledgments

This research was partially supported by a travel grant from the American Society of Limnology and Oceanography. I am grateful to C. S. Weiler for her support and encouragement. Interviews with D. C. Chandler, W. T. Edmondson, A. D. Hasler, N. Marshall and J. G. Stockner contributed to my understanding of the development of the society. I am indebted to B. Schermetzler, archivist at the University of Wisconsin libraries for his undivided attention. I thank H. M. Ducklow, J. A. Lee, and N. Marshall for comments on an earlier version of this manuscript.

ASLO CREATES A NEW AWARD TO HONOR RUTH PATRICK AND OTHER ENVIRONMENTAL PROBLEM SOLVERS

Saran Twombly, Awards Committee Chair, Department of Biological Sciences, University of Rhode Island, Kingston, RI 02881-0816 (plb101@uriacc.uri.edu)

At its February 1998 meeting, ASLO's Board of Directors created the Ruth Patrick Award for Environmental Problem Solving in the Aquatic Sciences. The award was created to honor outstanding research by scientists in the application of basic principles of aquatic science to the identification, analysis, and/or solution of important environmental problems. The award is intended to recognize an individual who has made a sustained contribution to environmental problems or one who has made a single, but critical, study of a very important environmental problem. The award will be offered every two years; nominations are accepted at any time.

Patrick was honored with ASLO's Lifetime Achievement Award in 1996 for her outstanding contributions to aquatic ecology and environmental problem solving, her pioneering work on algae as indicators of water quality, and her leadership as an educator within and outside academe.

The first award will be presented at the February, 1999 meeting in Santa Fe. Details on the nomination process are presented on the following page.

HONOR YOUR COLLEAGUES!
Nominations procedures for ASLO awards on
p. 8

1999 ASLO AWARD NOMINATIONS

ASLO recognizes its most outstanding scientists with the presentation of four awards:

- **Raymond L. Lindeman Award**, recognizing a young scientist for publication in a peer-reviewed journal;
- **G. Evelyn Hutchinson Award**, recognizing a mid-career scientist who has contributed significantly to the field of aquatic sciences in the preceding 5-10 years;
- **Lifetime Achievement Award**, recognizing an aquatic scientist who has made extraordinary, long-term contributions to the field, and, the newly created
- **Ruth Patrick Award** for environmental problem solving in the aquatic sciences, recognizing outstanding research by a scientist in the application of basic principles of aquatic science to the identification, analysis, and/or solution of important environmental problems.

Awards will be presented at the Aquatic Sciences meeting in Santa Fe, New Mexico (February 1-5, 1999).

Please send nominations to:

C. Susan Weiler
ASLO Office
Whitman College
Walla Walla, WA 99362
weiler@whitman.edu

Details are published on pp. vi-viii of the 1997/98 Directory

Nomination Deadline: November 15, 1998

Raymond L. Lindeman Award

Eligible papers must deal with aquatic sciences, be written in English by an author who is no older than 35 years in 1997, and must be published in a 1997 volume of a peer-reviewed journal. Nominations should include a copy of the paper and a brief letter describing the impact of the paper on the field. The nominee must be first author if there is more than one; nominees by close colleagues, including advisors and co-authors, are permitted.

G. Evelyn Hutchinson Award

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

Lifetime Achievement Award

This award recognizes contributions of any aquatic scientist whose work continues to be recognized for its importance and long-term influence. Each nomination must be supported by a letter (not to exceed two pages) on qualifications. Ideally this letter should include statements that would form the basis of the presentation speech at the ASLO meeting. The nomination package may also include a list of important publications and other pertinent information, but in total this package shall be no more than 3 pages. The nomination should also be supported by 3 letters of endorsement of no more than 1 page each. These may be mailed separately or be included in the nomination package. The supporting letters should indicate the breadth of support for the nominees and the perspectives of different individuals to clearly indicate the extent of contributions made by the nominee.

Ruth Patrick Award

This award recognizes an individual who has made a sustained contribution to environmental problem solving or one who has made a single, but critical, study of a very important environmental problem. The award will be offered every two years; nominations are accepted at any time. Each nomination must be supported by a letter (not to exceed two pages) on qualifications. Ideally this letter should include statements that would form the basis of the presentation speech at the ASLO meeting. The nomination package may also include a list of important publications and other pertinent information, but in total this package shall be no more than 3 pages. The nomination should also be supported by 3 letters of endorsement of no more than 1 page each. These may be mailed separately or be included in the nomination package. The supporting letters should indicate the breadth of support for the nominees and the perspectives of different individuals to clearly indicate the extent of contributions made by the nominee.

ASLO NEWS

THE ROLE OF STUDENTS IN ASLO CONTINUES TO EVOLVE

Cristina Takacs, Student Representative to the ASLO Board of Directors, Department of Biology, Montana State University, Bozeman, MT 59717 (aslorep@montana.edu)

February's ASLO/AGU Ocean Sciences meeting was the beginning of many new roles and activities for ASLO students. Foremost were the recommended changes to the Bylaws that would allow student members to become full Board members. These changes, which will be voted on by the membership using the enclosed ballot, would afford us the privilege of voting on Board issues. If passed, there would be two student representatives on the Board, with overlapping 3-year terms. The student representatives would be elected to the board, similar to Members at Large. Please vote on this important issue.

Karla Heidelberg and I began a program at the Ocean Sciences meeting to help reduce the cost of attending meetings by providing a roommate service and a detailed list of alternative, less costly housing options. This proved to be useful to many and we are pleased to continue to provide this service for upcoming meetings. Information regarding alternative housing and the roommate service for the St. Louis meeting will be e-mailed to you early April. Follow the directions provided below if you have not already subscribed to the listserv, so that you may receive this information.

Besides being a forum to present your latest research, ASLO meetings have a tradition of being a place where collaborations are forged. Karla and I would like to facilitate this by initiating a number of student activities at ASLO meetings. We are planning student breakfasts, mixers, and a ski trip before the Santa Fe meeting in 1999. Additionally, we will provide a Job Board at meetings with a compilation of the latest technician, graduate, and postdoctoral positions and we hope to include a student report at the annual ASLO Business meetings held at every summer meeting. We hope that through these activities we will get to know each other better as we become the next generation of ASLO.

We sincerely would like to meet you and hear any ideas that you may have about ASLO or aquatic science in general. Please contact us by e-mail or come up to us at the newly instituted student corner at the first poster session of future meetings. If you have not received e-mail from us in the past, then you have not subscribed to the listserv. We shall notify you about future activities primarily by e-mail, so please take a moment to subscribe by sending a message to listserv@listserv.montana.edu. On the first and only line of text, type: subscribe aslostud firstname lastname. Do not include any other text in the message or subject heading. If your e-mail messages include a signature, it must be deleted or suppressed. Don't forget to check out the new student web page at <http://aslo.org/studentinfo>. Furthermore, please don't hesitate to contact either Karla (karla@hpl.umces.edu) or myself with any of your concerns or ideas.

MESSAGE FROM THE L&O EDITOR IN CHIEF: PARTING THOUGHTS

David L. Kirchman, Editor-in-Chief, L&O, College of Marine Studies, University of Delaware, Lewes, DE 19958

By the time this article appears the new editor for *Limnology and Oceanography* will probably have been selected and I will be counting down my last days as editor-in-chief. As is natural for leaving any job, I have been thinking about this experience and about what I would say to those of you considering something similar in the near future. Here are a few thoughts—and some words of thanks.

I suppose being an editor is like giving blood, perhaps more accurately giving lots of blood frequently. As with blood donations, we are expected to review papers and proposals or accept an editor job in order to maintain our standing as good citizens in our scientific community. Although perhaps this sense of obligation is sufficient motivation for giving blood or serving on an NSF panel, it's not enough to last eight years, which will be my time with L&O, both in the associate editor ranks and in the top job.

Also, just as you shouldn't give blood for the free cookies and soda, you shouldn't take on an editorial position because of what perks and prestige the job may bring. Yes, I do have to admit to liking the wisdom apparently conveyed upon me by others, a wisdom that I know I will lose with my name disappearing from the L&O masthead. People assume that the editor will know the proper procedure for dealing with conflicting reviews, injured authors, and miffed readers, even though each problem is often unique and with little precedent. And I suppose my job description must include answering the question "is my paper appropriate for L&O", as any consistent answer is probably better than no answer. Sure, I give my opinion about whether or not a paper is the right L&O stuff, but my answer also usually includes, "why don't you just look at the journal and see for yourself?" Yes, editors must ultimately decide a paper's fate, but this power is not particularly gratifying. In spite of what some authors may assume, it is usually very difficult to reject a paper submitted to this journal.

More rewarding than the decision itself is the process of reaching it. I enjoy trying to solve the various puzzles posed by each step of the review process, from agonizing over possible reviewers to marking up manuscripts for English and science. I like working on papers outside of my field (microbial ecology), as it helps me appreciate the overall importance of our science. Especially with the good papers and even more important for an editor, good reviews, it is rewarding to help nudge papers into a better shape. But new editors shouldn't be so naive as to expect authors to welcome your help (who likes to be criticized?), at least not until after the paper is published. Perhaps I am too cynical to appreciate fully any positive feedback from authors as I suspect that their kind words are perfunctory or forced at best. But it really doesn't matter. There is much satisfaction both in giving blood and in helping authors improve their papers.

Of course the editor-in-chief must think about issues affecting the entire journal—the “big picture”, not just the fate of individual papers. To many the big picture probably means musing about the type of paper appearing in the journal and whether or not some aspect of aquatic sciences is being adequately represented in L&O. Of course, one challenge of the job is try to push the journal in a direction you think best—but you need to be realistic. At the end of his term, my predecessor, Pete Jumars, analyzed how the journal changed during his tenure as editor-in-chief. He did find that more benthic papers had been published, but rather than some change in editorial policy, I suspect Pete’s own reputation in benthic oceanography explains the increased submissions and ultimate publication of papers in that field. I suspect I’ve had less impact on what topics are submitted to the journal as L&O probably would have received many papers in microbial ecology regardless of my presence. We can encourage colleagues to consider L&O, but what policy an editor effects is puny compared to the worldwide, teeming mass of potential authors. They consider submitting to a journal, not based on what an editor says or does, but mainly by what they see already published there—and by its real or perceived publication speed. In short, we cannot accept a paper never submitted.

The “big picture” for me has consisted of lots of nuts and bolts. Much of my time and energy has been spent working on the mechanisms of how we process papers, reviews, and decision letters. This tinkering was necessary in part because I am the first L&O editor since Kenneth M. Rae (1959-1963) who has not lived in Seattle, Washington and because the associate editor system has grown from its original four (which include me) to the current 13 (including Selected Topic Editors), in response to the increased submissions over the years (from 316 in 1993 to nearly 400 in 1997). When I considered this job I thought the biggest challenge facing the journal was getting papers out in a timely fashion. That challenge is still there. We lose too many good papers because we are slow, although I would argue that L&O is faster than many assume. Since much of the processing time is out of our control (e.g. papers sit on the desks of reviewers and authors), I have worked on those parts of the process that we do have some control over. I admire the “vision thing” and the new ideas that my successor will surely bring to the journal, but much of the new person’s time will be spent shuffling papers and making sure files are in order. I guarantee that authors will much rather hear an editor talk about improving publication speed than about editorial philosophy and future directions of the journal. The reward of an efficient bureaucracy is that it goes unnoticed.

I often get asked about how much time the job takes, which is harder to answer than it may seem. Since most assume that the editorship must consume my day, I usually reply that it’s not so bad. I have had a scientific life outside of L&O, made possible by the associate editor system and the great staff in Seattle and in my office in Lewes. The other answer I give is something similar to how Dave Thistle answered my question about how much of his time was

consumed by being head of the oceanography department at Florida State. He replied that it took 25% of his time, but 40% of his energy. I expected the hours going over manuscripts and writing decision letters, but I did not expect musing about querulous authors or growth of the journal, for example, while showering in the morning or eating dinner at night. Fortunately, there have been extremely few problem authors and papers that have disturbed my sleep, although I remember every one. I won’t miss this aspect of being editor.

I will miss meeting people from outside my own areas of research, especially people outside of science that I have gotten to know because of being editor. Most of the people I’ve met, however, are the many reviewers, authors and readers of L&O, nearly all of whom have been a pleasure to deal with. Although I feared otherwise, I have gotten extremely few angry phone calls, letters or e-mails from authors. Now I almost relish these as they are different from the usual. Authors occasionally contact me to ask about journal policy or content (see above), but generally not to complain. Although I don’t particularly like being introduced as the editor of L&O (especially when it’s clear the other person hasn’t heard of the journal), it is one effective conversation starter at ASLO meetings and elsewhere. I am always amused that people I had known casually before my association with L&O often begin conversations with something related to the journal. I suppose it is better than talking about the weather.

In this brief space, I am not sure that I have said much about what the editor job is like, nor have I convinced others to consider it or similar positions. I suppose I’d have a similar problem convincing you that giving blood is really not that bad, that it has its rewards. I hope I am more effective at expressing my appreciation to ASLO and to authors, reviewers and readers of L&O for giving me this opportunity to serve as the L&O editor. I consider being the L&O editor a great honor and privilege. Thank you.

ASLO STUDENT E-MAIL LIST: SIGN UP NOW!

ASLO Student Representatives Karla Heidelberg, Horn Point Laboratory, University of Maryland, Cambridge, MD 21613 (karla@hpl.umces.edu) and Cristina Takacs, Biology Department, Montana State University, Bozeman, MT 59717 (takacs@montana.edu)

Contribute to ASLO’s Future!! Contact your student representatives, Karla Heidelberg and Cristina Takacs, with your comments, concerns, or ideas. **Subscribe to the student mailing list** so that we may contact you for your input regarding upcoming issues to be presented to the ASLO Board of Directors.

To subscribe to the mailing list, send an e-mail message to: **listserv@listserv.montana.edu**. On the first (and only) line of the message, type:

subscribe aslostud <firstname lastname>.

Do not include any other text in the message. If you have an e-mail signature, it must be suppressed or deleted. If you have any problems, contact Cristina Takacs (address above).

We look forward to hearing from you!

CONGRATULATIONS RECENT PH.D RECIPIENTS!

C. Susan Weiler, ASLO Office, Whitman College, Walla Walla, WA 99362 (Tel: 509-527-5948; Fax: 509-527-3767; weiler@whitman.edu)

This column is the first of what I hope will become a regular feature, to recognize our newest entrants to the aquatic science community. Below are Ph.D. dissertation citations registered on the ASLO web page since October 1997. You may register your dissertation on the ASLO web page, <http://aslo.org/dialog2a.html>, at any time. All dissertation citations registered in this way will be published in the following issue of the *ASLO Bulletin* and citations and abstracts will be posted on the ASLO web page (same address as above). Be sure to avoid the use of special characters.

- Chen, Zhen.** 1997. The bioavailability of heavy metals in sediments. University of Maine (USA), 103 pp.
- Culver, Mary E.** 1996. Applications of chlorophyll a fluorescence to bio-optical models of phytoplankton biomass and productivity. University of Washington (USA), 158 pp.
- De La Rocha, Christina L.** 1997. Measurement of silicon isotope ratio variations in dissolved silicon and in biogenic silica: Demonstration of isotopic fractionation by marine diatoms and utility as a tracer of silicic acid utilization. University of California Santa Barbara (USA), 104 pp.
- Finelli, Christopher, M.** 1997. The influence of behavior and physics on ecological processes. University of South Carolina (USA), 217 pp.
- Fradkin, Steven C.** 1997. Asexual diapause in the rotifer *Synchaeta pectinata*: Fitness costs and trade-offs associated with phenotypic variation in a natural population. Dartmouth College (USA), 132 pp.
- Jonsson, Anders.** 1997. Whole lake metabolism of allochthonous organic material and the limiting nutrient concept in Lake Ortraesket, a large humic lake in northern Sweden. Umea University (Sweden), 95 pp.
- Larned, Scott T.** 1997. Nutrient-limited growth and sources of nutrients for coral reef macroalgae. University of Hawaii (USA), 200 pp.
- Lucas, Lisa V.** 1997. A numerical investigation of coupled hydrodynamics and phytoplankton dynamics in shallow estuaries. Stanford University (USA), 314 pp.
- Reckermann, Marcus.** 1996. Ultraphytoplankton and protozoan communities and their trophic interactions in different marine pelagic ecosystems (Arabian Sea and Baltic Sea). University of Rostock (Germany), 139pp.
- Roelke, Daniel L.** 1997. Managing phytoplankton community composition: Can we do it? Texas A&M University (USA), 298 pp.
- Varela, Diana E.** 1997. Nitrogenous nutrition of phytoplankton from the northeastern subarctic Pacific Ocean. University of British Columbia (Canada), 198 pp.
- Wang, Wen-Xiong.** 1996. Accumulation and Retention of Trace Elements in the Mussel, *Mytilus edulis*. State University of New York at Stony Brook (USA), 324 pp.

DIALOG III PROGRAM

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

The DIALOG (Dissertations Initiative for the Advancement of Limnology and Oceanography) program was developed to facilitate the development of collegial ties and catalyze the exchange of knowledge across the aquatic sciences (see *ASLO Bulletin* 3(1) and 6(2)). It includes collection of demographic information and Ph.D. dissertation citations and abstracts and a symposium to bring together 40 recent Ph.D. recipients to foster collegial interactions across the range of aquatic science disciplines.

DIALOG III is in the planning stage, with another symposium planned for October, 1999. If funded, this would put the symposium on a 2-year cycle. Individuals completing their last Ph.D. requirement between April 1, 1997 and March 31, 1991 would be eligible for the symposium.

Updates on the DIALOG program will be provided in the *ASLO Bulletin*. If all goes according to plan, application forms will be available on the ASLO web page by September, 1998, with a deadline for completed applications of May 1, 1999. In the interim, be sure to

register your dissertation on the ASLO web page:
<http://aslo.org/dialog2b.html>

MESSAGE FROM THE BUSINESS OFFICE

Helen Schneider Lemay, ASLO Business Manager, 5400 Bosque Blvd, Suite 680, Waco, TX 76710 (Tel: 1-800-929-ASLO; Fax: 254-776-3767; business@aslo.org)

It was truly a pleasure meeting many of you during the AGU meeting in San Diego. Thanks so much for coming by the ASLO booth and introducing yourself to me. It's great putting faces with the names of ASLO members.

1998 is starting out on a very fast pace for the ASLO business office. We are finishing up the final mailings of the 1997 L&O (Volume 42) as well as publishing the 1997-98 Membership Directory and Handbook.

We appreciate your attention to renewing your dues for 1998 – and, of course, a very special welcome to all of our new members. If you haven't sent in your 1998 renewal yet, we urge you to do so very soon. Following the publication of issue number 8 of the L&O, your name will be dropped from the membership roster, and you will no longer receive your ASLO benefits. To assist you further, if you have a question about your membership, you can now contact Lynda West directly at lyndaw@sgmeet.com or at business@aslo.org. Lynda is ASLO's membership director. All other ASLO inquiries and business matters should still be directed to Helen Schneider Lemay, ASLO Business Manager, business@aslo.org.

We also have a new membership brochure available for recruiting new members. Contact the business office if you would like a brochure or know of someone to whom we should send one.

Let us know how we can be of service to you – and we hope to see you in St. Louis in June at the ASLO/ESA meeting. We look forward to continuing to serve your needs.

ASLO FORUM

COASTAL GOOS: WHAT IS IT AND WHY DO IT?

Thomas C. Malone, Chair of the IOC/UNEP GOOS Coastal Panel and Director of the U.S. Coastal GOOS Office, Horn Point Laboratory, University of Maryland, Center for Environmental Science, Cambridge, MD 21613 (Tel: 410-221-8406; Fax: 410-221-8473; malone@hpl.umces.edu)

The roles of the ocean in climate change and in the dynamics of coastal ecosystems are among the highest priorities for the ocean sciences. Nutrient and contaminant inputs to estuaries and coastal seas, the exploitation of living resources, loss of habitat and biodiversity, and translocation of nonindigenous species are globally ubiquitous problems that have caused, and are continuing to cause, fundamental changes in the structure and function of coastal ecosystems. These changes are confounded by natural, longer-term variability as well as by event-scale weather. The Global Ocean Observing System (GOOS) is an international attempt to determine how these changes, and the compounding effects of local- to regional-scale expressions of global climate change, will play out in terms of basin-scale circulation and ecology and the effects of human activities in the coastal zone.

The goals of GOOS are to promote coordinated, long-term observations of the oceans on global to local scales as a means of improving predictions of climate change, the health of the oceans, and living resources. The importance of GOOS to the development of such a predictive understanding was recognized by the Intergovernmental Oceanographic Commission (IOC) in the 1970's and GOOS was formally agreed to and endorsed by the United Nations Conference on Environment and Development in 1992 and by the U.S. Ocean Studies Board in 1994 (National Research Council, 1994). As currently conceived by the IOC and by the U.S. National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF), GOOS consists of two related components: (1) a basin-scale component that is primarily concerned with large-scale circulation and global climate change; and (2) a coastal-scale component primarily concerned with local- to regional-scale changes that are occurring in all coastal ecosystems that support human populations. Thus, in addition to global climate change, Coastal GOOS must be concerned with local- to regional-scale anthropogenic effects on coastal ecosystems where human populations are most concentrated, where inputs from land, sea and air converge, and where the value of ecosystem services are highest (Costanza et al., 1997).

Although the importance of local to global networks that link observation and analysis in more effective and timely ways is obvious, the specific goals and the means of implementation of GOOS have been subject to much debate. Progress has been slow, largely because implementing the concept of GOOS in the coastal zone requires major changes in the way we do business. With some important exceptions (cf., Powell, 1989; Levin, 1992; Nixon, 1996), efforts to

document patterns in marine ecology have been dominated by observations and experiments on small (local) scales. For logistic reasons, experiments and observations are generally too limited in time and space to provide synoptic information on ecological phenomena across the range of scales that characterize biological and physical variability in coastal ecosystems and their adjacent watersheds and oceans. Even in the age of satellites, we remain stuck in our parochial local ecosystems muddling with the dilemma of whether changes reflect the spatial scale of observation or time-dependent changes in situ. This problem is especially acute in coastal ecosystems, which are characterized by significant biological variability at the high-frequency end of the spectrum and where the notion that every system is unique often dominates the conduct of research and monitoring programs.

The scarcity of observations on coastal ecosystems of sufficient duration, spatial extent, and resolution and the lack of knowledge (theoretical and empirical) on the propagation of variability across scales through and among coastal ecosystems are major barriers to the goals of predicting environmental changes and their ecological consequences. The challenge to coastal GOOS is to promote: (1) the development of high-resolution time series and spatially synoptic observations, and real-time data acquisition and analysis; (2) the design and implementation of integrated monitoring and research networks from global to regional and local scales; and (3) the formulation of robust, generic models that link terrestrial, coastal and oceanic ecosystems across scales. As called for by Nixon (1996), it is time to expand the science of marine ecology beyond descriptions of current and past states ("story telling"). We need to emphasize prediction as a tool for building and testing robust theories of ecosystem structure-function and as a means of interpolating across scales and extrapolating beyond the time and space scales of observation.

References

- Costanza, R. et al. 1997. The value of the world's ecosystem services and natural capital. *Nature* 387:253-260.
- Levin, S.A. 1992. The problem of pattern and scale in ecology. *Ecology* 73:1943-1967.
- Nixon, S.W. 1996. Regional coastal research — What is it? Why do it? What role should NAML play? *Biol. Bull.* 190:252-259.
- National Research Council. 1994. Review of the U.S. planning for the Global Ocean Observing System. National Academy Press, Washington, D.C., 25 pp.
- Powell, T. 1989. Physical and biological scales of variability in lakes, estuaries, and the coastal ocean. Pp. 157-180 in *Perspectives in Theoretical Ecology*, J. Roughgarden, R.M. May and S.A. Levin (eds.), Princeton University Press, Princeton, N.J.

RECENT PH.D. RECIPIENTS

Register your dissertation on the
ASLO web page
www.aslo.org/dialog2a.html

POLLY A. PENHALE RECEIVES AGU'S OCEAN SCIENCES AWARD

Adapted from "Penhale to receive 1998 Ocean Sciences Award", EOS Transactions 78(50):585, copyright 1997, the American Geophysical Union

Polly A. Penhale, who served 12 years as ASLO's Secretary and is currently serving a final year as Past Secretary, was presented with the American Geophysical Union's 1998 Ocean Sciences Award at the recent AGU/ASLO Ocean Sciences Meeting in San Diego. The award recognizes excellence and long-standing service contributions to the Ocean Sciences.

The award recognizes Penhale's accomplishments as program manager of polar biology and medicine at the National Science Foundation's Office of Polar Programs (1987-present). She was hailed for her dedication and success in building and maintaining a high-quality and balanced U.S. scientific program in polar research. This one program handles proposals that would otherwise be distributed among 31 different programs within NSF. Penhale also took actions to include large, interdisciplinary programs as well as single-investigator projects in polar regions. As a member of the U.S. Delegation to the Committee on Conservation of Antarctic Marine Living Resources, she has been instrumental in writing and reviewing Antarctic protected area management plans. These are just a few examples of her accomplishments.

Last year Penhale received ASLO's Outstanding Service Award for her "valuable ideas, insights and advice concerning society operations and programs, for fostering collaborations with other societies, and especially for developing annual and other meetings to bring together the full range of aquatic sciences." Congratulations again, Polly!

SOUND SCIENCE INITIATIVE

Union of Concerned Scientists, Two Brattle Square, Cambridge, MA, 02238-9105 (ssi@ucsusa.org)

The Sound Science Initiative (SSI) is a national, quick-response network on the Internet that allows participants to respond to and influence fast-breaking political and media developments on four global environmental issues — biodiversity, climate change, ozone depletion, and population growth. The SSI was created to help scientists present accurate, credible information about the science of these issues to the media and policy makers, and to counter misinformation put out by those who oppose governmental or private sector action. Currently 1,500 scientists are enrolled in this network. The SSI is a project of the Union of Concerned Scientists (UCS). UCS is a national nonprofit organization dedicated to advancing responsible public policies in areas where science and technology play a critical role.

SSI's primary modus operandi is the "action alert" — where the SSI team at UCS identifies a media or policy opportunity, alerts appropriate network members via e-mail, and suggests what the scientists can do in response. Since the project started in mid-August, 1995, more than 75 alerts have been sent to various segments of the network.

Alerts often focus on poor or inaccurate coverage in the

news media, for example, when facts from major scientific reports on climate change are misrepresented or when the views of industry-backed skeptics are given too much weight. Some alerts may target upcoming congressional hearings that have been designed to present a distorted view of the scientific consensus on any of the project's four main issues. Others may respond to editorials or guest columns by special interests seeking to discredit reputable science or scientists. Generally, members of the SSI are asked to write the editor of the publication involved and/or contact key members of Congress to set the record straight.

In addition to the alerts, the SSI team also produces "updates" that provide timely information on controversial topics or scientific developments on each of the four SSI issues. These proactive updates have covered such topics, for example, as the differences between ground Vs. satellite temperature records of climate change, and the third annual Conference of the Parties (COP-3) to the Convention on Biological Diversity. Updates also provide reports on the outcome of previous action alerts, so that SSI members can be kept informed about the impact of their efforts.

A final SSI component is direct collaboration with individual SSI members to support their efforts in building relationships with the news media and/or policy makers. This may include training in media outreach or lobbying, developing joint strategies to combat "junk science," mobilizing scientists to participate in town meetings or public hearings, and similar such activities. As an example, UCS recently worked very closely with several prominent members of the Intergovernmental Panel on Climate Change (IPCC) to help counter attacks on the IPCC in various publications.

Given the breadth and activity of the SSI network, we can proudly say that SSI has secured better coverage in major media markets for environmental issues. The SSI network, combined with other factors, has helped bring climate change back to the front pages, and media interest in the issue is at a four-year high. Officials inside the Clinton administration, as well as members of Congress and their aides, have all told us that they are finally hearing from scientists, and that the dynamic we have created is having a powerful impact.

The Sound Science Initiative is off to a good start, but there is much still to be done. Your voice is greatly needed in policy and media debates over environmental issues of global significance. To join the SSI network, contact <ssi@ucsusa.org>.

REMEMBER TO VOTE!

This year members will elect a new President Elect and 2 Members-at-Large and consider three changes to the Bylaws:

1. Addition of two students as elected, voting members of the Board;
2. Change in ASLO's purpose statement; and
3. Change in the term length for committee members.

See pp. 15-20 and the enclosed ballot

Sea-BirdAd

BIOGRAPHICAL SKETCHES, 1998 ASLO CANDIDATES

ASLO is governed by a Board of Directors consisting of five elected officers (President, President-Elect, Past President, Secretary and Treasurer) and seven Members-at-Large, one for every 500 members of the Society.

This year we will elect: a **President-Elect**, to succeed Thomas C. Malone in the Presidential succession; and two **Members-at-Large**, to succeed Mark E. Hay and Catherine M. Pringle when they complete their terms this June. Continuing Members-at-Large are James J. Elser (Arizona State University), Louis Legendre (Laval University), Saran Twombly (University of Rhode Island), Michael J. Vanni (Miami University) and Karen F. Wishner (University of Rhode Island).

We are grateful to those of you who submitted nominations. We thank this year's nominations Committee (John J. Magnuson, Thomas M. Frost, Lynda P. Shapiro, Donald M. Anderson and Sally MacIntyre) handling the difficult job of selecting among the many outstanding individuals who were nominated. Their charge was to put forward an outstanding slate of candidates. In addition to excellence in research and community service, the committee considered such things as the present composition of the ASLO Board and the need for broad representation of regions and specialties.

In addition to the candidates, members are asked to vote on three proposed amendments to the ASLO constitution and bylaws:

1. **Add a phrase to the purpose statement** (*link knowledge and understanding in the aquatic sciences to the identification and solution of problems generated by human interactions with the environment*);
2. **Add two elected, voting student representatives to the ASLO Board of Directors**; and
3. **Change the term of committee membership from 2 to three years.** Details are presented on the enclosed ballot.

Next year members will elect a Treasurer and two Members-at-Large. Nominations, including self nominations, are always welcome. Please send nominations to ASLO's Executive Director, Susan Weiler (weiler@whitman.edu).

**Please vote using the enclosed ballot.
Ballots must be postmarked by May 15, 1998**

PRESIDENT-ELECT

William M. Lewis, Jr. B.S. 1967 (*University of North Carolina*); Ph.D. 1973 (*Indiana University*)



Lewis began his career as a postdoctoral associate at University of Georgia's Savannah River Ecology Laboratory. In 1974, he became an assistant professor at the University of Colorado, Boulder, where he is now professor and director of the Center for Limnology.

He has studied tropical inland waters since 1970 when he began his doctoral work on Lake Lanao, Philippines. A consistent objective of Lewis's tropical research has been to characterize the structure and function of tropical aquatic ecosystems, and to make comparisons between these and the more familiar environments of temperate latitudes. In addition, Lewis and his graduate students have worked extensively in Colorado, where the major present research emphasis of Lewis's laboratory is on the use of stable isotopes to quantify the relative contribution of terrestrial and algal carbon to the support of stream food webs over a range of stream orders and canopy covers.

Lewis has served two terms on the ASLO Board of Directors as a Member at Large (1981-1984 and 1989-1992), and recently chaired the ASLO Challenges Committee, which produced a report on the present status of limnology. He is currently a member of the National Academy of Sci-

ences/National Research Council's (NAS/NRC) Water Science and Technology Board, and recently chaired NRC committees on wetlands and on research in the Grand Canyon. Dr. Lewis also has served as a panel member for the NSF Ecosystems Program and for the NSF Ecology Program, and is currently a member of the new NAS/NRC Ecosystems Panel.

Representative Publications

- Hamilton, S.K. and W.M. Lewis, Jr. 1992. Stable carbon and nitrogen isotopes in algae and detritus from the Orinoco River floodplain, Venezuela. *Geochimica et Cosmochimica Acta* 56:4237-4246.
- Lewis, W.M. Jr. et al. (12 authors; National Research Council). 1995. *Wetlands: Characteristics and Boundaries*. National Academy Press, Washington, DC. 306 pp.
- Lewis, W.M. Jr., S.K. Hamilton, and J.F. Saunders, III. 1995. Rivers of Northern South America. Pp. 219-256 in: C. Cushing and K. Cummins (eds.), *Ecosystems of the World: Rivers*. Elsevier, NY.
- Lewis, W.M. Jr. 1996. Tropical lakes: How latitude makes a difference. Pp. 43-64 in: F. Schiemer and K.T. Boland (eds.), *Perspectives in Tropical Limnology*. SPB Academic Publishers, Amsterdam, the Netherlands.
- Morris, D.P. and W.M. Lewis, Jr. 1992. Nutrient limitation of bacterioplankton growth in Lake Dillon, Colorado. *Limnol. Oceanogr.* 37:1179-1192.

Candidate Statement

ASLO has long been secure in the success of its journal, *Limnology and Oceanography*, and in the quality of its meetings. In addition, ASLO has made significant contributions to the advancement of selected research topics through the sponsorship and publication of symposia. Even so, ASLO Boards have consistently been inclined to try to diversify and expand ASLO's work. Significant steps in this direction have already occurred through the creation of a staff position, publication of the *Bulletin*, and individual initiatives such as the minority recruitment program. ASLO has also studied itself and its membership several times over the last few years (e.g., Challenges for Limnology Committee and ASLO Futures Committee). There seems little justification for still more study. Therefore, the work of the ASLO Board over the next several years must be to select recommendations from the recent studies for action by the society.

Commitment of the society to new initiatives, which inevitably involve commitment of effort and money, must be made by the entire Board, following meaningful consultation with the membership, and not solely by the president or officers. With this caveat in mind, I can give three examples of initiatives that seem to be timely and feasible for ASLO over the next several years. First would be an extension and broadening of ASLO's current attempts to bring greater unification to aquatic sciences that are either limnological or closely allied to limnology. This is potentially an important counterweight to the unfortunate tendency of limnology to

become fractionated into more specialized subdisciplines served by specific societies. While individual societies form naturally around mutual interests, there is a strong need in this case for more unity among societies, and ASLO can take a leading role.

Also of interest would be an initiative designed to enhance the activity and scope of the oceanographic component of ASLO. While always present in considerable strength, the oceanographic component of ASLO may have faded in some degree over the last couple of decades.

A third initiative that I would find attractive would involve formulation of an action plan for revamping education programs in limnology. There seems to be a consensus that education in limnology is inadequate and is disconnected from appropriate outlets for limnological expertise. Both the ASLO Challenges Committee and a recent NRC committee have featured this problem and have made recommendations. It seems that only a scientific society, or cluster of societies with related interests, could press effectively for solutions to this general problem.

In summary, my general feeling is that ASLO can and should continue to expand its work, and that the time may be right for ASLO to pass from a period of introspection to a period of change, some of which already has been nicely started.

PRESIDENT- ELECT

Jack A. Stanford, B.S. 1969 and M.S. 1971 (Colorado State University); Ph.D. 1975 (University of Utah)



Stanford began his career as Assistant Professor at the University of North Texas. In 1979 he resigned his Associate Professorship at UNT to work full time on the Flathead system. Stanford is the Jessie M. Bierman Professor of Ecology at The University of Montana and became Director of the University's Flathead Lake

Biological Station (FLBS) in 1980.

He has published in many areas of limnology, including plankton ecology and physical processes in Flathead Lake and other large glacial lakes; but, he is perhaps best known for his discovery of the speciose food webs contained in the alluvial floodplain aquifers of the Flathead and other gravel-bed river systems and his seminal contributions to the rapidly expanding field of groundwater (hyporheic) ecology. He has collaborated for over 20 years with Prof. Dr. J. V. Ward (ETH, Zurich) on river ecosystem ecology and theory and they were instrumental in initiating international focus on ecological problems associated with stream regulation by

dams and diversions with their early research papers and the 1979 book, *Ecology of Regulated Streams* (Plenum). Stanford has continued his long-term studies on environmental change and biophysical responses in the Flathead system, but also has become active in conservation biology and restoration of Pacific salmonid fishes and other declining native vertebrates.

Stanford is past president of the North American Benthological Society and the Organization of Biological Field Stations. He has served on many NSF panels, several National Research Council (NRC) panels and currently is a member of two scientific advisory and review boards of the National Marine Fisheries Service and the Northwest Power Planning Council. He was a co-editor of *The Freshwater Imperative* (Island Press). He has served on the Public Affairs Committee of the Ecological Society of America and continues to assist ASLO and other societies with the implementation of the Council of Aquatic Sciences. Stanford has served on a variety of editorial boards and currently is Editor (Americas) of *Regulated Rivers: Research and Management* (Wiley) and serves on the editorial board of *Ecological Applications*. He is regularly called upon to provide expert

testimony on freshwater issues in the USA and abroad and has formally testified before the U.S. Senate on 3 occasions with regard to the Clean Water and Endangered Species Acts.

Representative publications

- Stanford, J. A. and A. R. Gauvin. 1974. Hyporheic communities of two Montana rivers. *Science* 185:700-702.
- Ellis, B. K. and J. A. Stanford. 1982. Comparative photoheterotrophy, chemoheterotrophy and photolithotrophy in a eutrophic reservoir and an oligotrophic lake. *Limnol. Oceanogr.* 27(3):440-454.
- Lorang, M. S. and J. A. Stanford. 1993. Variability of shoreline erosion and accretion within a beach compartment of Flathead Lake, Montana. *Limnol. Oceanogr.* 38(8):1783-1795.
- Stanford, J. A. and J. V. Ward. 1993. An ecosystem perspective of alluvial rivers: connectivity and the hyporheic corridor. *Journal of the North American Benthological Society* 12(1):48-60.
- Stanford, J. A., J. V. Ward, W. J. Liss, C. A. Frissell, R. N. Williams, J. A. Lichatowich and C. C. Coutant. 1996. A general protocol for restoration of regulated rivers. *Regulated Rivers: Research and Management* 12:391-413.

Candidate Statement:

Limnology and oceanography are high-tech and multidisciplinary sciences and the enormous wealth of talent represented by the members of ASLO is providing basic research results that are of strategic importance to governments worldwide. Although we have produced documents that articulate the importance of our science to human well-being (e.g., The Sustainable Biosphere Initiative; The Freshwater Imperative), I believe our science remains vastly under-appreciated and under-valued by the majority of our fellow citizens. We have not been very good at public affairs because in the rigor of our work we tend to forget that elected and appointed officials and the public generally are not well educated or interested in limnology and oceanography, at least until some water crisis hypes an aspect of our science.

I believe we must increase our involvement in government and public affairs. The goal should be to increase funding for competitive research and to insure that the results and implications of our research are fully understood and used. I agree fully with the recommendations of the 1996 Committee to Consider the Future of ASLO, which emphasize not only continued dedication to excellence in our sciences, but also much greater attention to linking ASLO's "strong basic science and solution of problems relevant to humans and their environment." Success involves proactive partnerships with journalists, decision-makers and educators at all levels.

We should set objectives for public affairs annually, prepare hard-hitting issue papers and make sure they are picked up by the national and international press, constantly examine and improve environmental curricula and make sure that ASLO members frequently present strong, reasoned, credible and understandable statements in government and public forums. We must remain committed to an inclusive society involving all aspects of freshwater and marine science and we must foster collaborative statements with other professional groups on key national (e.g., reauthorization of the Clean Water Act) and international (e.g., coral reef deterioration; ocean disposal of urban trash) issues. The new Council of Aquatic Sciences is dedicated to such collaborations and ASLO should continue in a leadership role in its development.

I think I can effectively contribute to the momentum that Diane McKnight, Tom Malone and ASLO board members have initiated to enhance our credibility in the arena of public affairs while also maintaining the scientific purposes of ASLO. I believe that strategic environmental issues such as global warming, dwindling biodiversity, aquatic pollution and other pervasive effects of human-mediated environmental change in freshwater and marine ecosystems can be substantially moderated through application of our science. Leadership begins with effective communication of reasoned actions and ASLO must assume that role to an even greater extent.

MEMBER-AT-LARGE

John J. Cullen

A.B. 1974 (University of California at Santa Cruz);
Ph.D. 1980 (University of California at San Diego/Scripps
Institution of Oceanography)



Cullen began his professional career in 1980 as a Visiting Fellow in the Bedford Institute of Oceanography, Nova Scotia. In 1982, he moved to Texas as an Assistant Professor of Marine Studies and Zoology and a Research Scientist with the University of Texas Marine Science Institute. Four years later, Dr. Cullen moved on to

the position of Research Scientist with the Bigelow Laboratory for Ocean Sciences in Maine. He returned to Nova Scotia in 1990, first as a Visiting Scientist at Dalhousie University (1990 - 1991), then as an Adjunct Professor, still working for Bigelow. In 1995, he assumed his present position, Professor of Oceanography and Chair of Environmental Observation Technology.

His research interests include the physiology and ecology of marine phytoplankton, biological interpretations of optical measurements in aquatic systems, harmful algal blooms, relationships between physiology, nutrition and vertical migration of phytoplankton, effects of ultraviolet radiation on aquatic processes (particularly marine photosynthesis), assessment of photochemical processes from remote sensing, and effects of iron on marine ecosystems. He directs the Center for Environmental Observation Technology and Research (CEOTR) at Dalhousie.

Cullen was co-chair of the ASLO Symposium on the "Iron hypothesis" in 1991 and has served as guest speaker or rapporteur for numerous workshops considering topics such as iron, harmful algal blooms, effects of ultraviolet radiation, modeling of phytoplankton processes, and aquatic optics. He is on the editorial board of the *Journal of Plankton Research* and was a member of the SCOR Working Group on the physiological ecology of harmful algal blooms. Cullen has served on the ASLO Nominations Committee, the Oceanography Society Meetings Committee, and the Ocean Optics XIII Planning Committee. He has reviewed manuscripts or proposals for over 50 journals or agencies.

Representative publications

- Cullen, J.J. and M.R. Lewis. 1988. The kinetics of algal photoadaptation in the context of vertical mixing. *J. Plankton Res.* 10:1039-1063.
- Cullen, J.J. 1990. On models of growth and photosynthesis in phytoplankton. *Deep-Sea Res.* 37:667-683.
- Cullen, J.J. 1991. Hypotheses to explain high-nutrient conditions in the open sea. *Limnol. Oceanogr.* 36:1578-1599.
- Cullen, J.J., P.J. Neale, and M.P. Lesser. 1992. Biological weighting function for the inhibition of phytoplankton photosynthesis by ultraviolet radiation. *Science* 258:646-650.
- Cullen, J.J., A.M. Ciotti, R.F. Davis, and M.R. Lewis. 1997. Optical detection and assessment of algal blooms. *Limnol. Oceanogr.* 42:1223-1239.

Candidate Statement

I entered this profession believing that one could pursue knowledge honestly, maintain high scientific standards and keep up with the literature while serving the public good, making a living and having time for a life. Experience has shown that this ideal is difficult if not impossible to achieve, particularly for new scientists entering our field. For many years, the leadership of ASLO and numerous committee members have addressed the challenges that confront aquatic scientists, particularly the structural problems that hamper our effectiveness. If elected to the Board of Directors, I would join this effort actively, applying common sense, experience and imagination to the best of my ability.

MEMBER-AT-LARGE

Carol A. Kelly

B.A. 1969 (Denison University); M.S. 1972 and Ph.D. 1978 (University of Michigan)



Kelly is a professor in the Department of Microbiology at the University of Manitoba. She has also worked at the Experimental Lakes Area (in northwestern Ontario, Department of Fisheries and Oceans) for the past 20 years.

Her research has centered on natural microbial activities in aquatic systems, especially activi-

ties that are important in the cycling of carbon, sulfur, nitrogen, and mercury. She has considerable experience in carrying out whole ecosystem manipulation experiments. Her early work was in the areas of sediment decomposition activities, and neutralization of acid rain inputs through the activities of the sulfate reducing and denitrifying bacteria. Her current research is on the effects of reservoir construction on greenhouse gas fluxes and on mercury methylation, and on furthering our understanding of the carbon cycle in lakes linked to both forested and wetland surroundings. She has taught Microbial Ecology, Microbial Diversity, and Biogeochemistry.

Kelly has served on the Editorial Board of *Limnology and Oceanography*, and has served as a reviewer for numerous aquatic publications and for granting agencies in both the U.S. and Canada. She was a key person in developing the Environmental Science Program at the University of Manitoba, and has been active as a speaker and University committee member in promoting solutions to problems faced by women in science. She has also made radio and TV appearances for the purpose of public education on issues related to both the environment and to scientific ethics in providing advice to politicians.

Representative Publications

- Kelly, C.A. and 12 others. 1997. Increases in fluxes of greenhouse gases and methyl mercury following flooding of an experimental reservoir. *Env. Sci. Tech.* 31:1334-1344.
- Kelly, C.A., J.A. Amaral, M.A. Turner, J.W.M. Rudd, D.W. Schindler and M.P. Stainton. 1995. Disruption of sulfur cycling and acid neutralization in lakes at low pH. *Biogeochemistry* 28: 115-130.
- Kelly, C.A. 1994. Biological processes that affect water chemistry. In, Dahlem Workshop Report ES14, Acidification of Freshwater Ecosystems: Implications for the Future. J. Wiley & Sons, pp. 201-215.
- Hamilton, J.D., C.A. Kelly, J.W.M. Rudd, R.H. Hesslein and N.T. Roulet. 1994. Flux to the atmosphere of CH₄ and CO₂ from wetland ponds on the Hudson Bay Lowlands. *J. Geophys. Res.* 99(D1):1495-1510.
- Kelly, C.A., J.W.M. Rudd, R.B. Cook and D.W. Schindler. 1982. The potential importance of bacterial processes in regulating rate of lake acidification. *Limnol. Oceanogr.* 27:868-882.

Candidate Statement

I think that the most important mission of ASLO is the dissemination of high-quality and timely scientific information among its members, and the utilization of this information to further understanding of already identified environmental issues as well as to identify new issues that require our attention. Towards these ends, the activities that most directly affect our members are the annual meetings and the publication of *Limnology and Oceanography*. As a member-at-large I would put most of my energies into gathering input from other members as to how best to organize both scientific and social aspects of the annual meeting. These meetings are already very good, but continued support and enthusiasm, and a few new ideas, are always needed. Especially, students need to feel welcome, and to receive both financial

and non-material support to encourage their participation. Older members should be encouraged to use their expertise to organize sessions that are well rounded enough to serve as educational for members not so well acquainted with a topic, as well as interesting to those directly involved in that area. On the public side, I would continue to support ASLO's efforts to promote understanding of the importance of our aquatic resources and to improve funding available for research and education in the aquatic sciences.

MEMBER-AT-LARGE

Anthony F. Michaels

B.S. 1982, M.S. 1983 (University of Arizona);
Ph.D. 1988 (University of California at Santa Cruz)



Michaels is currently the Director of the USC Wrigley Institute for Environmental Studies and an Associate Professor of Biology at the University of Southern California. From 1989 to 1996 he was a resident research scientist at the Bermuda Biological Station for Research and coordinator of the JGOFS Bermuda Atlantic Time-

series Study. He was also a postdoctoral fellow at Woods Hole Oceanographic Institution, in 1988-1989.

His research concerns the role of biological community structure in the biogeochemical cycles of the upper ocean. Projects include the controls of the export of organic matter from the surface ocean, the use of remote sensing to expand the time and space resolution of biogeochemical flux estimates, the biological dynamics of radiatively important gases (CO₂, DMS) in the surface ocean, nitrogen fixation and the potential for biological feedback mechanisms to the global climate system. In recent years, Michaels helped start a novel program to build connections between the academic climate science and global business communities through a program on hurricanes and insurance. In his new role as Director of the USC Wrigley Institute for Environmental Studies, he is expanding the scope of the marine lab on Catalina Island and initiating programs in regional environmental quality, K-12 education and the connections between environmental science and the decision processes in business.

Michaels serves on the U.S. Joint Global Ocean Flux Study Steering Committee and the planning committee for the U.S.JGOFS Synthesis and Modeling Program. He is a member of the ASLO endowment committee and served on the ASLO ad hoc committee on electronic publishing. He is an Associate Editor for the journal *Biogeochemistry* and was Co-editor of a special edition of *Deep-Sea Research on Ocean Time-series*. He is President of the Board of Directors of the Southern California Marine Institute and a member of an education advisory board for the new Long Beach Aquarium of the Pacific.

Representative Publications

- Michaels, A.F., D. Malmquist, A.H. Knap and A. Close. 1997. Climate Science and Insurance Risk. *Nature* 389:225-227
- Michaels, A.F., D. Olson, J. Sarmiento, J. Ammerman, K. Fanning, R. Jahnke, A.H. Knap, F. Lipschultz and J. Prospero. 1996. Inputs, Losses and Transformations of Nitrogen and Phosphorus in the Pelagic North Atlantic Ocean. *Biogeochemistry* 35:181-226.
- Michaels, A.F. and A.H. Knap. 1996. Overview of the U.S. JGOFS Bermuda Atlantic Time-series Study and the Hydrostation S Program. *Deep-Sea Research* 43:157-198.
- Siegel, D.A. and A.F. Michaels. 1996. Quantification of Non-Algal Light Attenuation in the Sargasso Sea: Implications for Biogeochemistry and Remote Sensing. *Deep-Sea Research* 43:321-345
- Michaels, A.F., N.R. Bates, K.O. Buesseler, C.A. Carlson and A.H. Knap. 1994. Carbon System Imbalances in the Sargasso Sea. *Nature* 372:537-540

Candidate Statement

I believe that the community of scientists must expand our perception of our role in society. We must continue to conduct research of the highest quality, but increasingly, this research must be done in a broader interdisciplinary context and with true collaborations across disciplines. We must continue to teach and train students, but expand this part of our lives to include students of all ages and walks of life. On top of this, we must make a concerted, organized effort to take our strengths in science and education and make them more directly relevant to the concerns of the society in which we live. As scientists who study freshwater and marine systems we are in a unique position to play these new roles when we choose to take the challenge. ASLO can and should play a central role in influencing the interdisciplinary context of our science, the educational outreach to wider communities and in helping make our science relevant to decision-makers in society and business. ASLO can fulfill this role through its own ability to organize our community in novel ways and towards new goals. ASLO can create new educational venues and distribute information on successful strategies from among its membership. ASLO can organize its membership to address important topics in society and coordinate the interaction between scientists and decision-makers. ASLO has already shown leadership in many of these areas and I feel that we should actively build on our past successes. As the academic community goes through the evolutionary changes that we all see occurring, ASLO will also evolve and we need to guide the society so that it continues to fill its valuable role.

Continued, next page

MEMBER-AT-LARGE

Heidi M. Nepf

*B.S. 1987 (Bucknell University); M.S. 1988 and
Ph.D 1992 (Stanford University)*



Since September 1993 Nepf has been an Assistant Professor in the Parsons Laboratory in the Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology (MIT). Prior to this she was a Post-Doctoral Scholar at the Woods Hole Oceanographic Institution.

As an environmental hydrodynamicist her research goals are to understand physical processes which control turbulence generation and affect the transport of contaminants, nutrients, and heat in natural aquatic systems. Current research projects are investigating transport and turbulence structure within aquatic canopies; river-wetland-lake exchange processes; internal wave dynamics in lakes; and the dynamics of wave breaking.

Nepf has served the scientific community as a reviewer for academic journals, including *Limnology and Oceanography*, as a panelist and ad hoc reviewer for NSF, and as special session organizer for both AGU and ASLO. Dr. Nepf has also been active in community outreach through 1) public lectures on her research in a local watershed, 2) visits to local congressman and representatives to solicit support for basic research funding, and 3) a six-part series designed to promote awareness of environmental research in grades 9-12 which aired on interactive, satellite television.

Representative Publications

- Nepf, H., E. Cowen, S. Kimmel and S. Monismith. 1995. Longitudinal vortices beneath breaking waves. *J. Geophys. Res.* 100:16,211-16,221.
- Nepf, H. and W.R. Geyer. 1996. Intra-tidal variations in stratification and mixing in the Hudson Estuary. *J. Geophys. Res.* 101:12,079-12,086.
- Nepf, H., C. Mugnier and R. Zavistoski. 1997. The effects of vegetation on longitudinal dispersion. *Estuarine, Coastal & Shelf Science* 44:675-684.
- Nepf, H. and C. Oldham. 1997. Exchange dynamics of a shallow contaminated wetland. *Aquatic Sciences* 59:193-213.
- Nepf, H., J. Sullivan and R. Zavistoski. 1998. A model for diffusion within emergent vegetation. *Limnology & Oceanography*, in press.

Candidate Statement

The work conducted by ASLO scientists is crucial for protecting freshwater and marine ecosystems against the stresses of increasing population and development. To empower our work and enable it to positively impact environmental health I endorse activities which would 1) create and nurture links to policy and management, 2) strengthen the funding base for aquatic sciences, and 3) renew our dedication to an interdisciplinary perspective. The first two goals can be addressed through community outreach, as public awareness is a necessary precursor to public support of better environmental policies and sustained scientific research. Avenues for this should include increased exposure in the press, and the extension of student outreach to K-12. Support for existing ASLO programs which promote the inclusion of minorities and support young scientists should also be maintained. As part of the effort to re-emphasize the society's support for interdisciplinary research, I would like to see physical limnology become a stronger presence in ASLO. Towards this end I have already organized a 1 1/2 day session for the February 98 meeting to show-case advances in physical limnology and to promote links with chemical and biological researchers.

CHANGES TO ASLO CONSTITUTION AND BYLAWS

Please use the enclosed ballot and envelope to vote on the following initiatives:

Change the ASLO Purpose Statement: The phrase in italics was recommended by the 1996 Future of ASLO Committee:

The purposes for which the Corporation is organized are: To promote the interests of limnology and oceanography and related sciences, to foster the exchange of information across the range of aquatic sciences, ~~and~~ to further investigations dealing with these subjects, *and to link knowledge and understanding in the aquatic sciences to the identification and solution of problems generated by human interactions with the environment.*

Add two students to the ASLO Board of Directors as elected, voting members. Students were added to the Board last year as non-voting members. The Board of Directors recommends adding two students as voting members, to be elected by the ASLO membership.

Increase the term of ASLO committee membership from 2 years to 3 years to provide greater continuity and to make terms consistent with other positions within the Society. The term for members of the Nominations Committee would be 1 year; this is the norm in most organizations

EDUCATION

WANTED: ARTICLES ABOUT AQUATIC SCIENCE EDUCATION

Ray P. Gerber, Education Section Editor, Dept. of Biology, Saint Joseph's College, 278 Whites Bridge Rd., Standish, ME, 04084, (Tel: 207-729-5828 h, 207-893-7906 w; Fax: 207-892-2574; rgerber@sjcme.edu)

The contributions to this education column have been excellent as has been the feedback. It is clear that ASLO members view this new column as important and significant to their own professional growth. There is certainly the desire and need to share our education initiatives and experiences. To assure that this success continues we must continue to receive your articles. So please take the time to share your activities and thoughts by sending them to me. As space is limited, try to keep the length under one page single spaced, and no more than 1.5 pages. We strongly encourage articles that can provide new insight and methods in teaching aquatic sciences to K-12 and college students, that provide the rationale for existing programs and that indicate perceived future changes needed to attract students to the field. These are just suggestions, so, please feel free to contact Sue Weiler or me with your ideas for an article.

RIPARIAN ENVIRONMENTS: VALUES, THREATS, MANAGEMENT AND RESTORATION

Cathy Pringle, Institute of Ecology, 711 Biological Sciences, University of Georgia, Athens, Georgia 30602 (Tel: 706-542-1120; Fax 706-542-3344; pringle@sparrow.ecology.uga.edu)

"Riparian Environments: Values, Threats, Management And Restoration" is a slide show about riparian environments developed by Ronald Bjorkland, Charles Shreves and Cathy Pringle. Now available for purchase, it is a visually oriented educational tool designed to facilitate the understanding and appreciation of the ecological, economic and societal roles and values of riparian environments. The presentation incorporates slides from many regions of the U.S. and addresses five themes: 1) definition of riparian zones; 2) their ecological, social and economic importance; 3) major threats; 4) current policies and other tools for their protection; and 5) examples of recent restoration efforts. Each of the 80 slides is referenced in the 35-page booklet which provides useful current information and data on the aforementioned themes and documents sources of information and photos. The slide show can be used for a variety of audiences, from high school to undergraduate college level to community organizations. Copies for purchase are available through the North American Benthological Society (NABS). Price, including shipping and handling, is: \$160.00 (\$100.00 for NABS members). Purchases may be made by check, money order or purchase orders. To place an order or for additional information, contact Cathy Pringle at the above address.

ENVIRONMENTAL EDUCATION OUTREACH FOR AQUATIC RESOURCES: WORKSHOP TO BE HELD AT JUNE, 1998 MEETING IN ST. LOUIS

Ronald Bjorkland, Dept. of Geography, G.G. S. Building, University of Georgia, Athens, GA 30602 (Tel: 706-542-2356; Fax: 706-542-2388; rbjorkland@ggy.uga.edu)

Educational outreach efforts aid communities in understanding environmental issues and in shaping attitudes and values. While research is a critical link in developing the knowledge base and may provide information to address environmental problems, effective communication of this information is equally important and no less challenging. This challenge lies, in part, with the very dynamic and complex nature of environmental issues, particularly those that involve land-water connections.

A half-day workshop, organized by Catherine Pringle and me, is planned to explore the dimensions of environmental outreach of water resource issues and to stimulate discussion on how to improve its effectiveness and utility.

The goal of this workshop is to provide a forum for the exchange of information on effective strategies of environmental education outreach programs for protection and conservation of aquatic resources. Our objectives are to: 1) highlight the need for more aggressive and sophisticated environmental education outreach endeavors in water resource issues; and, 2) demonstrate how organizations (academic, professional societies, governmental agencies, businesses, etc.) can provide technical and resource support or take a lead in effective environmental education outreach efforts.

The emphasis of the workshop will be on the mechanics and logistics of environmental education outreach rather than experimental design or research efforts. It is hoped that the workshop will generate enthusiasm among professionals for greater involvement in education outreach and will enhance appreciation for the importance of such efforts. It will also provide some concrete examples of the "how to" nature.

The workshop will consist of oral and poster presentations and a panel discussion. Invited speakers will present papers that examine the role and need for environmental education outreach from nine different perspectives: **1) academia** - "Using resources to reach beyond the classroom"; **2) news media** (printed, electronic, cyberspace) - "Responsibilities and opportunities of the media to accurately report environmental challenges"; **3) business** - "Using investments, the market and experience to educate and motivate environmental problem solving"; **4) international organizations** (e.g. World Bank, IMF, U.N.) - "Capitalizing on the role, resources and mission to promote environmental awareness and action"; **5) government agencies** - "Using the government's power to effect change through education and outreach programs"; **6) professional societies**, (e.g. American Society of Limnology and Oceanography, Ecological Society of America, and the North American Benthological

Society) - "Channeling enthusiasm and expertise toward environmental problem solving"; **7) national environmental non-governmental organizations** (NGO's) - "Elements of effective outreach environmental programs"; **8) local community action groups** (e.g. Adopt-A-Stream, Inc.) - "Working at the grassroots level to promote environmental protection", and **9) concerned scientists** - "Imperatives for the scientist to speak out on environmental issues".

A one-hour panel discussion will follow these presentations. Panelists will share their views about the responsibilities and opportunities that they/we have in assuming an active role in promoting conservation and protection of aquatic resources. They will discuss how and why professionals should be involved in environmental education outreach to foster change in policies and public attitudes. They will also identify resources that can be tapped to help promote aquatic resource protection.

The final element of the workshop is a poster session that will highlight examples of successful outreach programs. Posters will identify specific water resource problem areas and focus on strategies and resources employed to educate and involve the community to address the issues. This portion of the workshop is an important nexus for networking between successful outreach programs and interested parties seeking ideas, direction or support.

In order to further stimulate interest, provide guidance and to stress the importance of this emerging component of applied environmental science, portions of the workshop will be published as a supplement to a professional journal. The publication will include papers presented during the workshop, summary descriptions of the posters and a distillation of the panel discussion. This publication can serve as a guide for those interested in expanding or initiating environmental education outreach programs. One of the motivations behind this workshop is the need to move conservation science from the realm of the classroom or logo or catchy phrase to policy and practice for improved protection of our aquatic resources. This workshop is an initial step in this direction; it will help by answering some of the basic questions of environmental education outreach: why, its role in science, policy and social values; how is it done and who is doing it. We are hopeful that this workshop will appeal to a wide range of audiences and will offer a unique contribution to the joint ASLO/ESA 1998 meeting.

Please contact me at the address above if you are interested in presenting a poster or otherwise participating in the workshop. Additional information may be obtained on the ASLO web site at www.aslo.org/ or by contacting Ron Bjorkland via e-mail at RBJORKLAND@GGY.UGA.EDU or via phone at (706)542-2356. There is no fee for attending this workshop but you MUST pre-register with me in order to attend.

NATIONAL SCIENCE AND TECHNOLOGY WEEK: APRIL 26 - MAY 2, 1998

National Science and Technology Week, National Science Foundation, 4201 Wilson Boulevard, Room 1245, Arlington, VA 22230 (nstw@nsf.gov; <http://www.nsf.gov/od/lpa/nstw/start.htm>)

In its 14th year, National Science and Technology Week (NSTW) is a major public outreach program produced by the National Science Foundation and supported by its corporate and associate sponsors. Its mission is to engage the American public in the spirit of learning and adventure that is the hallmark of science and engineering. NSTW pursues this mission through a wide variety of initiatives, including education activities; a "community innovations" competition for middle school students; media coverage of relevant issues during NSTW; lecture series at sites around the country; and special events in the nation's capital, as well as in local areas throughout the U.S. This year's theme is "Polar Connections: Exploring the World's Natural Laboratories." To learn more about NSTW events nationally or in your area, contact NSF at the address above.

What Are the Top Papers in Your Field? Help Us Develop the Definitive List

Sybil Seitzinger, ASLO Journal Committee Chair

You know the top 5-10 papers in your particular area of expertise. However, have you ever had trouble developing that "must read" list of papers outside your field? The ASLO Journal Committee plans to make this easier. But to do this we need your help. Please send us the complete citation of what you consider to be the top 5 papers in your field with a few words about why each is essential reading. We will collate this information and publish the results in an upcoming issue of the *Bulletin* and/or on the ASLO web page.

We will start the process with the subject areas listed below. Future issues of the *Bulletin* will call for papers in other areas (Please tell us what areas you want identified in the future).

phytoplankton ecology
wetland biogeochemistry
fish ecology
stream biogeochemistry
microbial food webs

Send the citations to Susan Weiler
(weiler@whitman.edu) with the header
"Hot Papers!"

Be sure to indicate to which category your list
corresponds.

Hydrolab AD

Turner Designs Ad

JOBS

See job listings on the ASLO web page at
www.aslo.org/jobs.html

or

Submit job advertisements via the new interactive form at
www.aslo.org/jobform.htm.

What Are the Top Papers in Your Field? Help Us Develop the Definitive List

Sybil Seitzinger, ASLO Journal Committee Chair

You know the top 5-10 papers in your particular area of expertise. However, have you ever had trouble developing that "must read" list of papers outside your field? The ASLO Journal Committee plans to make this easier. But to do this we need your help. Please send us the complete citation of what you consider to be the top 5 papers in your field with a few words about why each is essential reading. We will collate this information and publish the results in an upcoming issue of the *Bulletin* and/or on the ASLO web page.

We will start the process with the subject areas listed below. Future issues of the *Bulletin* will call for papers in other areas (Please tell us what areas you want identified in the future).

phytoplankton ecology
wetland biogeochemistry
fish ecology
stream biogeochemistry
microbial food webs

Send the citations to Susan Weiler (weiler@whitman.edu)
with the header
"Hot Papers!"

Be sure to indicate to which category your list corresponds.

ASLO MEETINGS

1998 JOINT ASLO/ESA MEETING: THE LAND-WATER INTERFACE: SCIENCE FOR A SUSTAINABLE BIOSPHERE

Cathy Pringle, *Institute of Ecology, University of Georgia, Athens, GA 30602-2602 (Tel: 706-542-4289; pringle@sparrow.ecology.uga.edu)* and **Mary Barber**, *Ecological Society of America, 2010 Massachusetts Ave. Suite 400, Washington, DC 20036 (Tel: 202-833-8773; mary@esa.org)*

The Program for ASLO's 1998 annual meeting, which will be jointly sponsored by the Ecological Society of America (June 7-11, 1998 in St. Louis, Missouri) should be on the ASLO web page by the time you read this announcement (www.aslo.org/) and a printed version will be mailed to you shortly. Interactive registration forms are on the web.

You won't want to miss this exciting meeting, which will focus on science (basic and applied) at the land-water interface of both fresh- and salt-water systems. The meeting will include daily plenaries, invited and contributed oral and poster presentations, and roundtable discussion and synthesis.

We are particularly excited about our stellar cast of plenary speakers which include **Joanne Burkholder** ("The Land-water interface: Aquatic ecosystems in the increasingly urbanized coastal setting"), **Theo Colburn** (author of 'Our Stolen Future'; "Aquatic ecosystems: Harbingers of endocrine disruptions"), **Jane Lubchenco** ("Science and Society: A new social contract"), **Robert Naiman** ("Fresh water and ecosystems: A future perspective"), **David Pimentel** ("Water resources, agriculture and ecological systems"), **Sandra Postel** (author of 'Last Oasis'; "Water and sustainability: The challenges ahead"), **Garth Redfield** ("Ecological science, land-water interactions and aquatic ecosystem management") and **Ivan Valiela** ("Integrating ecosystem concepts across terrestrial, marine and freshwater systems: New paradigms for sustainability").

Oral and poster sessions include:

- Air-land-water interactions
- Aquatic ecosystems in the urban landscape: Into the foreseeable future
- Arctic contamination: Levels, transport, and human and ecological impacts
- Autotrophic and heterotrophic bases for freshwater and marine food webs
- Benthos
- Biogeochemistry
- Biological Invasions
- Carbon cycling in boreal ecosystems
- Climate and climate change
- Conservation Biology
- Continental, estuarine and near-shore processes
- Disturbance ecology
- Ecological indicators in ecosystem assessment and environmental monitoring
- Ecosystem impacts from harmful algal blooms
- Fish

- Fisheries ecology: From lakes to oceans
- Global scale effects of hydrological alterations: What we know and what we need to know
- Linkages between ecosystems: The South Florida hydroscape
- Linking coastal ecosystems and watershed health: The Mississippi River Basin and hypoxia in the Gulf of Mexico.
- Macrophytes
- Modeling
- Nutrients
- Particulate and dissolved organics
- Phytoplankton/primary production
- Resource ratio approaches to understanding ecological processes in freshwater, marine, and terrestrial ecosystems
- Restoration ecology
- Science-management connections at the land-water interface
- Streams and riparian zones
- Temporary aquatic habitats: constraints and opportunities
- Trophic dynamics
- Vascular plants as littoral links
- Watersheds
- Zooplankton/secondary production

In addition to an exciting list of plenary speakers and concurrent sessions, this meeting will include panel discussions each afternoon. This is a new venture for ASLO and for ESA annual meetings. These panels were added to the schedule in order to maximize the amount of discourse on the various meeting topics. We look forward to seeing you in St. Louis!

STUDENT POSTER AWARDS: JUDGES NEEDED

If you haven't already served as an ASLO student poster award judge, you are missing a real treat! It's an educational experience that gives you a chance to learn about work on the cutting edge, within and outside your primary area of expertise. You will be asked to judge no more than 10 posters, so there will be plenty of time to view the others and catch up with your colleagues. Posters are judged on their scientific significance and innovation, quality of the experimental design and methods, and visual quality and impact.

Please join the fun by contacting either of this year's committee co-chairs:

Samantha B. Joye (mjoye@arches.uga.edu) or
Deborah A. Bronk (dbronk@uga.cc.uga.edu).

STUDENT POSTER AWARDS: JUDGES NEEDED

Please contact
Samantha B. Joye (mjoye@arches.uga.edu) or
Deborah A. Bronk (dbronk@uga.cc.uga.edu).

ASLO 1999 AQUATIC SCIENCES MEETING: Join us in Santa Fe

John A. Downing, ASLO '99 Co-Chair, Iowa State University (Tel: 515-294-2734; downing@iastate.edu) and **Karen F. Wishner**, ASLO '99 Co-Chair, University of Rhode Island (Tel: 401-874-6402; kwishner@gsosun1.gso.uri.edu)

The ASLO 99 Aquatic Sciences Meeting is scheduled for **Feb. 1 - 5, 1999** in Santa Fe. This is ASLO's closest scheduled meeting to the year 2000 and is also the 51st year of ASLO, so a celebration of ASLO and a discussion about where we have been and what the future holds for limnology and oceanography is in order. The co-chairs John Downing (Iowa State) and Karen Wishner (University of Rhode Island), along with an active and enthusiastic Meeting Committee (Stephen B. Brandt (NOAA—Great Lakes); Carlos M. Duarte (Centro de Estudios Avanzados de Blanes, Spain); Mary I. Scranton (SUNY, Stony Brook); Val H. Smith (University of Kansas), Amelia K. Ward (University of Alabama); and Bess B. Ward (University of California at Santa Cruz) are pleased to announce the theme of the meeting will be: **Limnology and Oceanography: Navigating Into the Next Century**, and to invite you to participate.

The formal call for papers will occur in spring 1998, with an abstract deadline in mid-September 1998. The meeting will be centered in the Hilton and Eldorado Hotels and the Sweeney Center. These 3 venues are no farther apart than a large convention center, allowing us to move smoothly among sessions. The new ASLO Business Manager, Helen Schneider-Lemay, will handle all the logistics, including registration, accommodations, and meeting facilities. We hope everyone will come!

The Committee is planning an introductory plenary session, in which several speakers will provide their perspectives on the past, present, and future of aquatic science. We will also be arranging a special historical plenary session during which some of those at the center of important developments in aquatic science in the last 50 years will give their personal story of how these came about.

Other topics for special sessions include: • 50 years of Aquatic Science: Where have we been and where are we going? • Changes in the "Waterscape" Ahead • Flexible Approaches to a Rapidly Changing World • Climate Vari-

ability Advances in and from Remote Sensing • 25 Years of the Microbial Loop • Linking Ecological Theories and Societal Needs • Biodiversity, Conservation and Restoration • Exotic Species • Ecological Consequences of Episodic Events • Toxic Blooms and Water-Associated Health Risks • Physical / Biological Interactions • Suboxic and Anoxic Environments • Ecological Stoichiometry and Biochemistry • Nutrients, Food Webs, and Ecotoxicology • Environmental Biogeochemistry • Extreme and Unusual Environments • Spatial Patterns and Processes • Long-Term and Historical Analyses: View to the Future. We will be seeking chairs and leaders for sessions in these areas, as well as other areas of interest to ASLO members.

The Committee is also working on developing special workshops. These may include workshops dealing with education and outreach, hands-on instruction in the use of new equipment, the federal agency outlook, and career workshops. People with ideas for workshops should contact the workshop coordinator, Steve Brandt (brandt@glrl.noaa.gov). We also hope to have several unique special events to add some southwest flavor to the meeting. The ski van will also be in operation again.

Members of the Committee and their special responsibilities are: **John A. Downing** (Co-Chair, Iowa State Univ., downing@iastate.edu); **Karen F. Wishner** (Co-Chair, Univ. of Rhode Island, kwishner@gsosun1.gso.uri.edu); **Stephen B. Brandt** (Workshop Coordinator, NOAA—Great Lakes, brandt@glrl.noaa.gov); **Carlos M. Duarte** (International Coordinator, CEAB, Spain, duarte@ceab.es); **Mary I. Scranton** (Contributed Session Coordinator, SUNY, Stony Brook, mscranton@notes.cc.sunysb.edu); **Val H. Smith** (Historical/Breakthrough Session Coordinator, Univ. of Kansas, valsmith@falcon.cc.ukans.edu); **Amelia K. Ward** (Special Sessions Co-Coordinator, Univ. of Alabama, award@biology.as.ua.edu); **Bess B. Ward** (Special Sessions Co-Coordinator and point of contact for special sessions, Univ. of Calif., Santa Cruz, bbw@cats.ucsc.edu).

Ex-officio members are: **Asit Mazumder** (ASLO Secretary, Univ. Montreal, mazumdea@ere.umontreal.ca); **Helen Schneider-Lemay** (ASLO Business Manager, sgmeet@mail.airmail.net); **C. Susan Weiler** (ASLO Executive Director, Whitman College, weiler@whitman.edu).

50 years since the founding of ASLO

Did you ever wonder how ASLO got its start?

See pp. 3 - 7

CALENDAR OF EVENTS

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

Northwest Algal Symposium/Pacific Estuarine Research Society Joint Meeting

Dates: May 29 - 31, 1998

Location: Whidbey Island, Washington

Topics: Pacific Coast estuaries and Pacific Northwest algae.

Contact: Suzanne Strom, Shannon Point Marine Center, Western Washington University, 1900 Shannon Point Road, Anacortes, WA 98221 (Tel: 360-293-2188; Fax: 360-293-1083; stroms@cc.wvu.edu).

ASLO/ESA Joint Meeting

The Land-Water Interface: Science for a Sustainable Biosphere

Dates: June 8 - 13, 1998

Location: St. Louis, Missouri

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

Registration: ASLO Business Office & Meetings Management, 5400 Bosque Blvd. Suite 680, Waco, TX 76710-4446 (Tel: 800-929-ASLO; 817-399-9635; Fax: 817-776-3767; business@aslo.org) or visit the ASLO web page, www.aslo.org/. You may register using interactive forms on the ASLO web page, www.aslo.org/ (or go straight to the registration forms at www.aslo.org/meeting/ae98sub1.html; please note that it is "sub1" (number 1) . See p. 25 this Bulletin for details.

Bigelow Laboratory for Ocean Sciences 1998 Courses

1) Ocean Optics and Radiative Transport in Atmosphere and Ocean (May 4-15)

Andre Morel, Laboratoire de Physique et Chimie Marines, Villefranche-sur-mer, France; 2) **Marine Phytoplankton Culture Techniques (Jun 1-5)** Robert Andersen and Robert Guillard, Bigelow Laboratory for Ocean Sciences; 3) **Modeling and Observing Physical-Biological Interactions in the Plankton (Jun 8-19)** Lewis S. Incze, Bigelow Laboratory for Ocean Sciences and Dr. Francisco E. Werner, University of North Carolina, Chapel Hill; 4) **Methods in Underwater Ecology (Aug 3-7)** Richard Wahle, Bigelow Laboratory for Ocean Sciences; 5) **Satellite Imagery as a Resource for Learning: A course for teachers and students (August 10-21)** Cynthia Erickson, Bigelow Laboratory for Ocean Sciences; 6) **Flow and Imaging Cytometry for the Aquatic Sciences (Sep 21-Oct 2)** Michael Sieracki, Bigelow Laboratory for Ocean Sciences and Gunter Valet Max-Planck Institute for Biochemistry; 7) **Marine Microbial Ecology (Oct 5-16)** Bess Ward, University of California at Santa Cruz.

Contact: William M. Balch, Bigelow Laboratory for Ocean Sciences, P.O.B. 475; 180 McKown Point Rd., W. Boothbay Harbor, ME 04575 (Tel: 207-633-9600; Fax: 207-633-9641; bbalch@bigelow.org). For further information about these courses, or for copies of application materials, see <http://www.bigelow.org/>.

The Oceanography Society and Intergovernmental Oceanographic Commission Meeting "Coastal and Marginal Seas"

Date: June 1-4, 1998

Location: UNESCO Headquarters, Paris, France

Topics: 1. Small scale processes: turbulence, particles and transformations; 2. Medium scale processes: transports, physical structures and plankton distributions; 3. GOOS; 4. Regional scale processes: circulation, budgets and population dynamics.

Contacts: Abstract Submission: The Oceanography Society, 4052 Timber Ridge Drive, Virginia Beach, VA 23455 (Tel: 757-464-0131; Fax 757-464-1759; J.Rhodes@tos.org); Registration: E. H. Pechan & Associates, 5537-C Hempstead Way, Springfield, VA 22151 (Tel: 703-813-6700, ext 131; Fax: 703-813-6729; tos98reg@tos.org); Hotel Booking: A.T.I. Congres & Salons, 1 Villa Boissiere, 75116 Paris, France (Tel 33-(0)1-47-27-15-15; Fax: 33-(0)1-47-27-05-87; 106101-1543@compuserve.com); web site: <http://www.tos.org>.

XI Brazilian Week of Oceanography: Oceanography and its Interfaces

Dates: October 18-24, 1998

Location: Rio Grande, RS, Brazil

Topics: The Brazilian Week of Oceanography is an event that, since 1984, has brought together researchers, professionals and students of oceanography and related fields, as well as society representatives. The following issues will be addressed: 1. Research (ocean-atmosphere interface; ocean-sediment interface; environmental and biological interfaces; coastal transitional environments); 2. Society and Oceanography (society and environment; education and society; university and society); and 3. Coastal Management and Governmental Policies.

Contact: Centro Academico Livre de Oceanologia, Fundacao Universidade do Rio Grande, Cx. Postal, 474, 96201-900 Rio Grande RS Brazil (Tel: 55 (532) 30-1400 ext. 118; Fax: 55 (532) 32-9716; oceans@super.furg.br; url: <http://www.furg.br/eventos>)

North American Lake Management Society (NALMS)

Dates: November 11 - 13, 1998

Location: Banff, Alberta, Canada

Theme: Cooperative Lake and Watershed Management: Linking Communities, Industry and Government. Abstract Deadline: May 1, 1998. Oral and poster presentations are invited that deal with the symposium theme, as well as all other aspects of the management, protection, and restoration of lakes, reservoirs, and watersheds. More than 30 sessions have already been planned and more are being developed. Workshops include introductory and advanced water quality modeling; field sampling, analysis, and instrumentation; design of water quality monitoring networks; benthic monitoring for environmental quality; phosphorus inactivation and interception.

Contact: Brian G. Kotak, Alberta-Pacific Forest Industries Inc. (Tel: 403 525-8431; kotak@compusmart.ab.ca; www.biology.ualberta.ca/alms/1998.htm).

Ocean Community Conference '98: Celebrating International Year of the Ocean

Dates: November 16-19, 1998

Location: Baltimore, Maryland

Topics: Technical Topics: Applied Ocean Sciences; Ocean Measurement Systems and Acoustics; Marine Resources; Ocean and Coastal Engineering; Data Processing and Management; Communications; Maritime Commerce and Charting; Vehicles, Platforms and Advanced Technology; Marine Police, Education and Recreation. Theme-Related Topics: Exploration in the Sea; Energy, Transportation and Communications; Sustainable Use of the Coastal Ocean; Ocean's Influence on Weather and Climate.

Contact: ITCMS, Attn: Vita Feuerstein, 445 Hoes Lane, Piscataway, NJ 08855 (Tel: 1-800-810-4333 or 732-562-6826; Fax: 732-981-1203; mts-occ98@ieee.org; www.noaa.gov/public-affairs/MTS98.html)

ASLO 1999 Aquatic Sciences Meeting:

Limnology and Oceanography: Navigating into the Next Century

Dates: February 1 - 5, 1999

Location: Santa Fe, New Mexico

Topics: As we enter the next millennium, this meeting will celebrate the 51st year of ASLO and the unity of the aquatic sciences, and will serve as a forum for discussion of progress in the aquatic sciences, emerging trends, and future challenges. As with the previous aquatic sciences meeting, this one will include sessions covering a full range of topics. Whenever possible, sessions will include a mixture of both marine and freshwater contributions. A full day of education and other workshops is planned for Sunday, January 31.

Abstract Deadline: September 18, 1998. Meeting materials, including interactive registration forms, will be posted on the ASLO web page www.aslo.org/

Contact: Meeting co-chairs **John A. Downing**, Iowa State University (downing@iastate.edu) and **Karen F. Wishner**, University of Rhode Island (kwishner@gsosun1.gso.uri.edu) for program information; **Helen Schneider Lemay**, ASLO Business Office, 5400 Bosque Blvd. Suite 680, Waco, TX 76710-4446, USA (Tel: 800-929-ASLO (within the U.S, Canada and Caribbean; Fax: 254-776-3767; business@aslo.org), or visit the ASLO web site at www.aslo.org/

1998 Joint Meeting of ASLO and the Ecological Society of America Land-Water Interface: Science for a Sustainable Biosphere

June 7-12, 1998 marks the date for the first joint meeting of ASLO and ESA since 1985.

The meeting theme is "**The Land-Water Interface: Science for a Sustainable Biosphere**" and will focus on research at the land-water interface of both freshwater and saltwater systems with a goal of strengthening ties between research and management. There will be a full day of plenaries on Monday, and 6 concurrent oral sessions and poster sessions will be held on Tuesday, Wednesday and Thursday. Panel discussions on each day's themes will make this a unique and exciting event.

The meeting will be held exclusively at the Adam's Mark Hotel, St. Louis, Missouri, and those planning on participating are encouraged to make their reservations early.

Key dates to remember are **May 1, 1998** for preregistration and discounted fee and **May 12, 1998** as the final day to make hotel reservations at the reduced ASLO rate. To make hotel reservations, call the Adam's Mark at 314-241-7400.

Complete meeting information including registration forms, workshop and field trip descriptions and session schedules can be accessed on the ASLO web site directly at www.aslo.org/meeting or by contacting the ASLO Business Office.

See **p. 25 of this Bulletin** for more information about this innovative meeting.