

MESSAGE FROM THE PRESIDENT

First Message to Members with Some Thoughts on Graduate Student and Early Career Scientist Professional Development

Linda E. Duguay

As I become your 63rd President and write my first column for the *L&O Bulletin*, I am on a major road trip to our summer meeting this June in Santa Fe, NM taking in the phenomenal sights of the southwestern U.S. The trip has renewed my passion for the beauty and value of the natural environment and the responsibility we have of environmental stewardship for its watery assets as fostered by ASLO.

WOW!! These last 2 yrs as President-Elect have flown by quickly. Indeed, I have felt like a time traveler trying to keep up with my two incredible predecessors. John Downing and Jim Elser have revitalized ASLO with the ASLO 2.0 initiative. Their enthusiasm and dedication to ASLO has been energizing for me and I look forward to continue to work closely with them. John rotated off the ASLO Board on July 01 but I hope to keep him as a close mentor. Not only has he served as Past-President of ASLO for the last 2 yrs but he has simultaneously been President of the Council of Scientific Society Presidents (CSSP) where he has learned a great deal with regard to common problems and best practices from many other scientific organizations. Over the last year he has also transitioned to a new position as Director of Minnesota Sea Grant at the U Minnesota, Duluth becoming a member of my other great network, the Sea Grant Family of Directors and their wonderful staffs.

Jim will now become Past-President and I plan on engaging his many talents in ASLO activities, as well as serving as my mentor and councilor. He too has not only led the ASLO 2.0 movement as “El Presidente” for the last 2 yrs but has also taken on a new position as Director of the U Montana’s Flathead Lake Biological Station while maintaining an appointment at Arizona State University. Again Jim has become a part of another one of my main passions, the great family of Marine Laboratories and Field

Station Directors (I have spent substantial time at marine laboratories since my student days taking classes at URI’s GSO campus to my current position at USC as Research Director for the Wrigley Institute and its Catalina Island Laboratory).

These two guys are hard acts to follow as President of ASLO. But I will do my very best to keep our organization moving forward, its publications and membership strong and maintaining it as the premier society for bringing together scientists from across the globe that span the freshwater marine continuum from mountain streams to the open ocean.

I am very fortunate to have this *Bulletin* issue and my column feature the topic of graduate education and early career professional development—a fourth thing near and dear to my heart. I hold an equal and high level of passion for the four things I have listed above: ASLO, Sea Grant, Field Stations and Marine Labs, Student and Early Career Development (How lucky can one gal get with such overlapping passions?). As I noted in my candidate statement 2 yrs ago—“*One of my true passions is working with the next generation of Aquatic Scientists—graduate students, postdocs and young faculty members—to advance their careers and provide them with the information they need to be successful either in academe or in all the alternative aquatic careers that are available.*”

ASLO as a Scientific Society is very dedicated to serving our graduate student and early career members not just as a venue for presenting and publishing their scientific research but also by providing information, tools and opportunities for their professional development. We want to help prepare them for the diverse suite of potential careers in the aquatic sciences as well as creating the next generation of aquatic problem solvers. Indeed one of the three goals of ASLO’s Strategic Plan finalized in Granada in 2015 is:

“Goal 2: “Professionalization: (definition: the social process whereby people come to engage in an activity as a means of livelihood)

Enhance the preparation of a diverse new generation of international scientists to meet the dynamic needs of society for aquatic science expertise.

Under this goal, ASLO seeks to meet diverse societal demands for advanced expertise in limnology and oceanography.

Strategies to be used:

- A. Explore, assess, and implement formalized procedures to increase involvement of students and early career members in society programs.

- B. Support entry into comprehensive suite of postgraduate career paths via programs at ASLO meetings for students and early career members on topical areas not generally covered in graduate training.
- C. Support entry into comprehensive suite of postgraduate career paths via programs at ASLO meetings for students and early career members to develop policy literacy.
- D. Design and implement a program to develop manuscript/proposal reviewing expertise of graduate student and early career scientists.
- E. Sustain and enhance programs and activities that contribute to career-long professional development of members.
- F. Sustain and enhance interactions and networking mechanisms at meetings for all members to enhance communication between generations and scientific fields within the aquatic sciences.
- G. Envision, develop, and implement programs to highlight and communicate contributions of aquatic scientists to science and to aquatic stewardship.
- H. Increase awareness across ASLO of different foci, priorities, and demands for aquatic scientists in different countries and economic zones.”

We began implementing the plan at the Granada meeting in 2015 and continued at the February 2016 Ocean Sciences Meeting in New Orleans. As I pen this column, I am at the ASLO meeting in Santa Fe and participated in the Early Career Workshop “*Tips for writing a successful proposal*” organized by Chris Filstrup, U Minnesota, Duluth and Kevin Rose, Rensselaer Polytechnic Institute—two members of ASLO’s Early Career Committee. We had a great audience (and free lunch for participants of course) with a lot of interesting questions and concerns and hopefully a lot of good advice from myself and several program officers and directors from NSF’s Division of Environmental Biology. I expect the discussions will serve the participants well in writing and submitting their next proposal. We had a number of other professional development events as well, organized by our two student board members, Grace Wilkinson, U Virginia, and Tiarra Moore, U California Los Angeles—a lunch workshop on dealing with “*Ethical Dilemmas in publications*” and another on “*Scientific Speed Dating—communicating effectively with other scientists.*” There was also a mentoring program for any attendees interested in having an experienced ASLO member help them navigate the

meeting and advise them on scientific or professional issues they might have. And there were the now regular ASLO evening mixers for early career and student members to network.

We have also established two new programs to assist graduate students and early career members in developing their skills beyond research. The first is an internship to work in the science communication realm with Adrienne Sponberg, Director of Communications and Science, and she has already hosted two graduate student interns—Kelsey Ellis, UNC Chapel Hill, and Emily Tyner, U Wisconsin, Milwaukee. This coming year through the support of the Raelyn Cole Endowment we are seeking early career editorial fellows to work with Patricia Sorzano, Michigan State U, editor of our newly launched Journal, *L&O Letters*.

A number of recent articles have been written about the fact that Universities for the most part are still focused on preparing graduate students to be the next generation of Professors. However the reality and the landscape at Universities has changed pretty dramatically with careers in academia as a tenured professor now frankly becoming the “alternative” career for the majority of doctoral graduates. This was discussed in a recent article in the *Bulletin* back in February 2015 by Hansen et al., which noted currently only about 20% of PhDs in ecology have a tenured academic appointment within 5 yr of their Ph.D. In March, The Oceanography Society (TOS) released a special issue on Graduate Education in the Ocean Sciences (*Oceanography* 29 (1):1–110). In an article by Briscoe et al., they note a decline in the number of ocean science PhD’s (reported by their institutions) entering academia including post-docs dropping from 63% to 43% over the period 2011–2014. They did not provide data on how many of those postdoc positions translated into tenure track positions. The TOS volume covers a wide range of issues in Ocean Sciences Education with a major focus on the changing landscape of careers in ocean sciences, and needs for changes in the classic oceanography curriculum and programs. It also recognizes the need for increased professional development opportunities to enhance skills for both academic and non-academic careers as researchers, educators, communicators etc. in government (local to national), NGO’s, foundations and various aquatic-environment related businesses. Some of the skills identified beyond problem solving and data analysis include: (1) better preparation in oral communications both for teaching as well as presentations to the general public and public officials; (2) better written communication skills—writing

and reviewing papers and proposals, position papers, prospectuses; (3) management skills, best practices for managing a laboratory, educational enterprise, government program, NGO office, consulting company, or a private business; (4) developing and managing budgets and best practices in fiscal reporting; (5) best collaborative practices (to name a few). Some institutions have started to develop programs to meet these additional needs. This February, ASLO organized a career panel at the Ocean Sciences Meeting for attendees to hear more about careers outside academia; ASLO Communications Intern Kelsey Ellis has a report on that panel in this issue in the *Meeting Highlights* section.

An article in the *Bulletin* in August 2015 about a professional development course initiated by the Center for Microbial Oceanography (C-MORE) at the U Hawaii Manoa—“Oceanography 750: Professional Development Skills Training” focused on two themes: broader impacts of science and job application skills. They expected a small class of 6 students but instead took in 19 students from a variety of UH Departments, a clear indication of current student’s interest cross-training beyond their specialized research skills and fields. At my own institution, USC, we have two courses for graduate students—a proposal reviewing and writing course as well as a course in Communicating Ocean Sciences to Informal Audiences (COSIA). This and another program Communicating Ocean Sciences (COS) were developed through the NSF COSEE programs and are currently being taught at some 20 plus institutions. The articles in the Oceanography issue are important reads for all of our society members, not just ocean scientists, as I think there is knowledge to be gained and lessons learned for all aquatic scientists. They can inspire tenure-track faculty to think about revisions and additions to their academic curricula and for graduate students and early career scientist to think about what professional development activities and skills they need and want to acquire to increase their own success. Lastly, these career and professional development issues are not unique to the aquatic sciences and other scientific societies, for instance, AAAS (<https://careerdevelopment.aaas.org>) and AGU (<https://careers.agu.org/>) have developed diverse resources and training programs to address these emergent issues for young researchers.

Please let us know what types of professional development programs you would like to see

featured at our upcoming ASLO—Aquatic Science, Ocean Science, ASLO Summer, and other joint meetings such as Joint Aquatic Sciences Meeting (JASM). We are also exploring ways to provide professional development opportunities online; if this is something you believe ASLO should offer, let us know! I encourage you to write directly to me or to our graduate student and early career committee representatives with your ideas. Also if you have *Bulletin* articles on these or other topics, Adrienne Sponberg, our *Bulletin* editor would be delighted to discuss them with you. Finally, if you have any other issues or concerns you have about our society please feel free to write to me as president@aslo.org or simply duguay@usc.edu. It is only through your active participation and keeping us informed that I and the excellent ASLO Board you have elected can serve you and advance ASLO 2.0 and beyond.



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ASLO JUNE 2016 BOARD MEETING HIGHLIGHTS

Lisa Campbell

Your ASLO Board met 04–05 June 2016, prior to the Summer Meeting in Santa Fe, to conduct business for the society. The Board heard reports from our journal editors and many of the ASLO committees and discussed our continued efforts to implement the many goals of our Strategic Plan.

President James Elser reported on all the progress we have achieved during his term of office and highlighted future goals. Our journal Editors-in-Chiefs reported that the times to first decision and to publication continue to decrease. Our membership at the close of 2015 was 4267. Student renewal is most variable segment of the membership and is an area we hope to improve.

Major topics of discussion at the February Board meeting included:

- Ways to improve membership renewals