

MESSAGE FROM THE PRESIDENT

Aquatic Science Matters

Linda E. Duguay

Once again as I am writing my President's column for the 2017 May Bulletin I am preparing for the Aquatic Sciences Meeting in Honolulu themed as from the Mountains to the Sea (M2C). I love that acronym. I am also working on my opening plenary talk to welcome and inspire the participants at the meeting. I am also working on a myriad of other duties I have at the upcoming meeting as your President. One was writing a letter to a US embassy in Europe requesting that one of our members be granted a VISA. I found out that it seems since he traveled to one of the country's on the list banned by the Executive Order (to attend a scientific meeting sponsored by his country's science agency) he will not be able to get an interview or a visa in time to attend the Honolulu meeting. I heard from him during the meeting that he has finally obtained a new 10 yr. visa—so he will be able to join us in Portland, OR and Victoria, British Columbia for our 2018 meetings.

It has been a very busy few weeks. When I was asked a few weeks back if I would give the opening plenary on Sunday—I needed to provide a title and description of the talk. This was just as Adrienne Sponberg our Director of Communications and Science and the Public Policy Committee were putting together their January 20th letter to the members on "in politics the facts don't always matter." Likewise, there were various comments circulating from members of the new Administration that there are such things as "alternative facts." All this commentary made me think about the Aquatic Sciences—that they really do matter not just to us as scientists and science educators as something that we study and teach about—but they matter and are essential—to the very life of our planet, to most communities around the world (many directly dependent on aquatic resources), to individuals in terms of human health (in terms of clean water) and happiness issues (such as all the ways we recreate in our aquatic systems—boating, swimming, fishing). I have a mantra—that although we can develop the best medicine in the world to cure every cancer, every disease, however if we finally go too far and harm the earth irreparably it won't

matter how good our medicine is—we will all be doomed.

I am from Southern California, Los Angeles to be specific, and it is certainly a place that makes you well aware of the challenges and issues around the continuum of the watery world from the amazingly beautiful snow covered mountains, from which fresh water washes down through streams and rivers through, unfortunately very few wetlands, directly into the ocean. For the last 5–6 yr, we have not had enough fresh water. We have been in a terrible drought with drastic water rationing, declining, or dried up lake beds. However, this year, it is hard to believe, but we now have too much water—the same reservoirs, lakes, streams, rivers are now filled to capacity and overflowing their banks and threatening the human populations that surround them with destruction of homes and businesses. Heavy rainfall likewise brings stormwater runoff filled with the bits and pieces of the large population of 30 million people and the heavily urbanized/concretized landscape of Southern Cal pouring into and polluting the adjacent ocean with a vast variety of chemicals and debris that also litters the beaches.

So Aquatic Science Does matter very much—as I said not just to us but to everyone on the planet and we need to be more pro-active and communicate how important the Aquatic Sciences are to our local, state and in these particular times to our national Leaders.

Rather than being anxious, uncertain or even fearful about the future of our sciences we need to be proactive. ASLO represents a large collective voice and we can use it to promote our important scientific research aimed at understanding how our aquatic systems work and all of the interconnections of the water cycle. We are in fact an International organization with a global reach and the aquatic world has no fixed national boundaries. It is important to have international interdisciplinary science to understand how aquatic systems work.

A lot of Science organizations and individual scientists are becoming energized and addressing the facts "not the alternative facts" about our changing climate and the actual need for environmental regulation to protect the earth's systems and indeed human health. We don't need more Flint Michigan's with lead tainted drinking water (just this past year-2016), Hinkley, California's with hexavalent chromium contaminated ground

water (1990s), or homes built over toxic waste dumps like Love Canal in NY (exposed in 1970s). We cannot go backward with regard to clean air and clean water. Human health and the health of our aquatic ecosystems must be protected.

Many science organizations are writing letters to their members to reassure them that their voices will be heard. They are also writing letters to Congress and to the Administration on the importance of a strong science base and strong STEM education programs for the advancement of not just science but pointing out to government leaders as well as the public how important scientific knowledge is to advance businesses and the economy.

It is more important than ever that we as individuals are better able to communicate our science to the public and to our elected officials. We should be open to reaching out to our local communities, as well as school groups about the aquatic ecosystems we work on and how important they are. Mike Pace, our President-elect has suggested that "perhaps we need a day of local engagement where ASLO members everywhere get out in their communities and make efforts to communicate with our fellow citizens"—perhaps a National Water Day.

ASLO's Director of Communications and Science, Adrienne Sponberg, has been working with Randy Olson (a former marine biologist turned movie maker), Jon Sharp and Randy's colleague Brian Palermo from Hollywood to provide some special communication approaches and outreach training for our members. They have hosted programs on communicating your sciences at our meetings since 2008. At the meeting in Honolulu under "ASLO meets Hollywood at the 2017 Aquatic Sciences Meeting" Jon, Adrienne and Brian held three workshops. Two workshops took place on Sunday before the meeting (which were oversubscribed), "Science Communication Lab. Yes Lab." There was a lunch workshop on how best to communicate interdisciplinary science and then on Tuesday evening there was a workshop on "Science Videos that Engage"—where folks that have made short science videos were invited to present them and have a panel critique them. Finally on Wednesday, there was a lunch workshop "Sharing Science through Storytelling" presented by Kylla Marie Benes, ASLO Science Communications Intern and ASLO Outreach Committee member Elisha Wood-Charlson.

There is a great list of communication resources/products—videos, article, and books from past conferences that you can review that were associated with those programs (<http://aslo.org/news/aslo-meets-hollywood-at-the-2017-aquatic-sciences-meeting/>). I also know many of your Universities have developed both formal and informal programs to help you better communicate your science to your peers and the public and you should when possible take advantage of these opportunities and resources.

In addition to providing opportunities to improve communication skills, Adrienne Sponberg, Director of Communications and Science—also works with the ASLO Public Policy Committee to keep ASLO Board and its members apprised of various policy issues that might impact our members. They are expecting a **very busy year** responding to potential actions by the Administration. You have already had two letters in January and February—the one I started with on facts matter and the other last week with regard to the travel ban. We do sign on to letters on various policy issues with other societies; for instance, we signed on to a letter on 27 January—entitled “Multi-society Letter on Immigration” initiated by American Institute of Biological Societies (AIBS) with 152 other organizations addressing the Travel Ban. We are engaged and working with other science organizations that we are members of like the Council of Scientific Society Presidents (CSSP) and the Consortium of Aquatic Science Societies (CASS) to potentially issue policy statements. ASLO does focus its policy statements primarily in the arena of science policy issues that affect “research funding, regulations on scientific publishing, and policies affecting members ability to collaborate internationally.”

There was a contributed session on policy at the Honolulu meeting. The Policy committee also hosted sessions in 2016 at both the Ocean Sciences Meeting (OSM) in New Orleans and Aquatic Science Meeting in Santa Fe. We will be having several policy related articles in the *Bulletin*. The February 2017 *Bulletin* has an article on “Overcoming Barriers to Engaging in Science Communication: An Interview with Science Communicator Paige Brown Jarreau.” There is also a news item entitled “All Hands on Deck: Engaging in Science Policy in the New Political Climate.” We also have a relatively new science communication intern program for graduate students to work with

Adrienne in the DC area in both fall and spring. So if you are interested in science communication opportunities keep an eye out for the call for applications for these positions. You might also look at the NOAA Sea Grant John A. Knauss Marine Policy Fellowship (<http://sea-grant.noaa.gov/FundingFellowships/Knauss-Fellowship/ProspectiveFellows.aspx>) which support both Masters and Doctoral students of any citizenship enrolled at US Universities and Colleges to spend a year in the DC area in either a legislative or executive branch office often directly involved in setting federal policies and even drafting legislation. There were 53 Fellows in 2016. Likewise, a number of Sea Grant programs have started State Fellowship programs for MS and PhD students to spend a year or so in various State Agencies.

We are definitely seeing a shift in how Science is viewed by the current Administration and I think we all need to be engaged. All of us from graduate students to senior scientists need to have our voices heard. We do need to get the “true facts” out based on sound science and not the “alternative facts.” But first and foremost we need to focus on the science and avoid being political or partisan.

Be certain that your ASLO Board and Committees are working on your behalf to get out the word on the value and importance of the Aquatic Sciences and its global importance. So join us—volunteer for our various committees, attend communications and policy workshops and stay in touch. I am always open to hearing from our members on the issues so just send a note to President@aslo.org. We want to hear your thoughts and help you become engaged. We are working on finding the best routes to do that. We are certainly not alone. Many of our Science Societies seems to be as fully energized as we are. We will come through this current situation where we are concerned about how our science is valued. I am ever the optimist. (This article is excerpted from my plenary address in Honolulu, Hawaii on 26 February 2017.)



Linda E. Duguay, PhD, ASLO President, University of Southern California, Director, USC Sea Grant Program, Director of Research, USC Wrigley Institute for Environmental Studies, 3454 Trousdale Parkway, CAS 200, Los Angeles, CA 90089-0153.

MESSAGE FROM THE EXECUTIVE DIRECTOR

Interview with Britta Voss and Kylla Marie Benes, ASLO 2016 Science Communication Interns

Teresa Curto

In April 2015, ASLO launched a new science communication internship (<http://aslo.org/news/2015-aslo-science-communication-internship/>). This initiative was led by ASLO Director of Communications and Science, Adrienne Sponberg. The selected interns work with Adrienne on a variety of communication, social media, policy, education, and public outreach projects designed to provide direct experience in how science is communicated to a variety of audiences.

Britta Voss and Kylla Marie Benes were selected as the 2016 ASLO Science Communication Interns. Both worked with Adrienne last year, as well as at the February 2017 ASLO ASM meeting in Hawaii. I sat down with both Britta and Kylla at the conclusion of their internships to talk with them about their experience.

ED: WELCOME, KYLLA AND BRITTA. TELL US ABOUT YOUR BACKGROUND AND WHAT PROMPTED YOU TO APPLY FOR THE INTERNSHIP LAST SPRING.

BV: I've been interested in pivoting my career towards science policy and communication for many years, and this internship was a great opportunity to see what actual work in those areas is like. My background is in biogeochemistry (mostly in rivers, but also some oceanography). My research has focused on transport and biological modification of carbon in the Fraser and Upper Mississippi River systems. In graduate school I participated in a lot of science outreach and communication on a mostly ad hoc basis, such as judging science fairs and writing articles for lay audiences here and there. During my postdoc, I have become increasingly drawn towards learning more about science policy and career paths that are centered on policy and communication. The ASLO internship is a relatively short time investment that allowed me to explore my interests and build my skills in communication and policy full-time.