
American Society of Limnology and Oceanography
Distinguished Service Award
Presented to
C. Susan Weiler
February, 2007 ASLO Aquatic Sciences Meeting, Santa Fe, New Mexico
For Outstanding Leadership in the
Professional Development and Mentoring
of the Next Generation of Aquatic Scientists….
Continue on for annotated version of award acceptance speech,
Earth System Science: The Ultimate Team Sport!

Earth System Science: The Ultimate Team Sport

C. Susan Weiler

ASLO Distinguished Service Award presentation

February 10, 2007, Santa Fe, New Mexico

Expanding research frontiers is the gold standard by which we measure accomplishment. While education and service are central to the research enterprise, accomplishments in these areas often go unnoticed.

So I thank ASLO for establishing this very special award to specifically recognize and honor distinguished service in support of the research enterprise. I also thank John Dower, Rob Campbell and others involved in my nomination.

As or more important than honoring an individual, our awards serve **to recognize and record what we collectively value and define what we should strive for.**

The award this year spotlights the **growing importance of interdisciplinary research and the critically important transition from advanced graduate student to independent researcher.**

http://disccrs.org

Interdisciplinary Understanding, Perspectives, and Collaborative Research

Collegial Networking

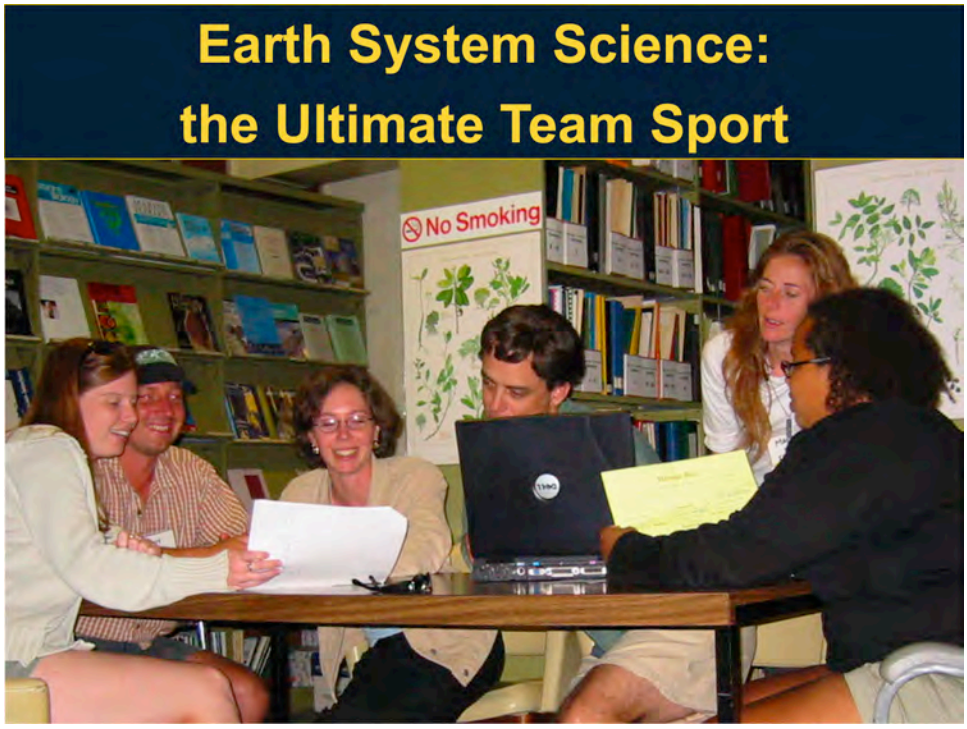
The need for specialization has not changed; what is new is that it is increasingly important for young researchers to connect across disciplines

-- Connections must now be made across the full spectrum of disciplines involving the Earth System, including the human dimension.

No one person can master this much. Integrative interdisciplinary research requires teamwork.

As anyone who has ever played a team sport knows, teams work best when members are friends as well as colleagues.

This is the special niche for DIALOG, DISCCRS, DISO, PODS and other symposia for recent graduates. The week-long, retreat style location combined with research presentations, an introduction to leadership and teambuilding, and informal interactions results in lasting collegial bonds that transcend institutional and national boundaries. These new recruits gain valuable skills, connections and insights. They are prepared to serve as inspirations and catalysts for change.



In a nutshell, they are ready to be major players on the Earth System Science team.

For a seat-grabbing, awe-inspiring game, Earth System Science has got to be the ultimate!

The goal is nothing less than to Save the Planet (work to develop an ecologically and socially sustainable Earth system)….The players will be among the best and brightest from around on Earth. It will involve people from all walks of life. But members of this new generation of aquatic science researchers are central to this mission.

Humanity has faced many perils in the past, both natural and human generated.

The last century could be summed up as the century of physics and the atom.

The coming years will be the century for the environment, as Jane Lubchenco put it -- and Earth System Science will be the heart of it.

I am hopeful for the future.

The future is calling to us. Everyone in this room is engaged in this adventure, in one way or another. Our future is truly up to this Next Generation.

With this central role come new responsibilities –

As Jane Lubchenco* put it, we need a

New Social Contract for Science

* Lubchenco, J. 1999 Entering the century of the environment: A new social contract for science. Science 279: 491-497.

This is a tall order for anyone, let alone a newly minted PhD.

We more senior players can't sit this one out on the sidelines. Disciplinary expertise is necessary, but not sufficient.

These new players require new skill sets and a greater level of mentoring than previous generations.

In the past, interdisciplinary skills and collegial networks were generally developed slowly, and largely serendipitously, over a professional lifetime. The stakes are too high to have these skills develop so slowly and we cannot leave so much to chance.

We need to jump-start these careers, get these new recruits off the bench and in to the front line.

Above all we must provide opportunities to broaden knowledge and for interdisciplinary, collaborative team research. We need to transmit basic skills such as effective communication. We must train our students to work effectively in collaborative, team settings. We must be positive role models and show this work is rewarding as well as challenging.

Interpersonal, facilitation, and team training programs have become standard practice in industry, where efficiency is valued, and in sports where the importance of teamwork is recognized. More of this should be transferred to academic settings.

Effective communication is the cornerstone of interdisciplinary work. Success begins with establishment of a common language, not the discipline-specific jargon used for communicating with our fellow specialists. This slide illustrates how one of the past symposium scholars translated his Ph.D. dissertation title for a more interdisciplinary audience.

Our interdisciplinary research relies so much on collaboration and there are skill sets that can facilitate the process.

Leadership, teambuilding skills are needed to productively involve players from multiple institutions, disciplines, cultures, and, yes, personality types.

Anyone who has ever sat in on a faculty meeting knows that interpersonal communication skills are not always part of the academic professional toolbox. We tend to consider personality traits and “typing” as a negative, something that places individuals in boxes they cannot escape. We could and should learn more from the body of knowledge that has accumulated since Hippocrates. Let’s use personality traits intelligently, to better understand ourselves and others in order to work more productively.

It's worth repeating….

Time is wasting. Let's get this new Earth System Science team on the field!

Together we *can* do this!

In conclusion

Transition from student to independent researcher is challenging. It can profoundly shape research directions and long-term professional goals.

Interdisciplinary research on complex environmental systems is not an easy. This new generation is ready for the challenge. We must be ready to coach them.

All in all I am absolutely in awe of today's graduates. I see a great future and am honored to be part of their team.

Interdisciplinary programs are difficult to put together, and it is often hard to get funding. I thank the many program officers at NSF, NOAA, ONR, and NASA who have so far supported DIALOG, DIACES and DISCCRS symposia, and who are now supporting a new symposium for students and PhD graduates conducting research during the IPY. I especially thank Jim Eckman (ONR), Phil Taylor (NSF) and John Wickham (NOAA) for their long-term commitment to the program goals as well as funding.

For information on future symposia, see

DISCCRS: Interdisciplinary symposia for early career researchers involved with climate change and impacts:

http://disco.org

IPY NGPR: Interdisciplinary symposium for early career researchers conducting polar research during the 2007 - 2009 International Polar Year

http://ccar.colorado.edu/ngpr/

DIALOG: Interdisciplinary symposia for early career researchers across the aquatic sciences

Contingent on new funding: See http://aslo.org/phd.html for updates

Aquatic scientists are involved in many professional societies, but no one society captures the full range of aquatic scientists in their membership. This makes it difficult to recruit the full diversity of aquatic scientists..

In order to reach as many early career researchers as possible, fourteen societies with large aquatic-science membership now sponsor DIALOG. ASLO was the first society to sponsor the program and still plays a lead role. ASLO has provided full-page announcements in its bulletin, sends e-mail announcements to its members, provides space for the website on its server, and has recently agreed to provide $3,000 per year to provide travel subsidies for invited participants coming from outside the U.S. AFS, SCL and ASLO provided travel supplements for past symposia to enhance international participation. All co-sponsoring societies advertise the program to their members through e-mail, newsletter announcements, and/or distribution of fliers at their annual meetings.

Symposium participants return to their institutions with new perspectives on their research. Through their interdisciplinary perspectives, they are extending research frontiers. In addition, they are more aware of their responsibility to the scientific community. Many of the past symposium participants are now serving in leadership positions or are otherwise committed to being effective catalysts for change in order to mentor the next generation and build a more international and interdisciplinary research community.

I especially thank DIALOG I symposium participants

Maarten Boersma, who was able to raise travel funds for international participation through grants from the European Commission and served as symposium co-organizer and international mentor for DIALOG II, III and IV

and

W. Monty Graham, who served as co-organizer of DIALOG VI and VII at the Dauphin Island Sea Lab and served as mentor for DIALOG V, VI and VII.

There are many others too numerous to name. This has truly been a team effort with many essential players!