

Conference for Early Career Scientists: An unqualified success

by Franz Mueter

Jointly sponsored by ICES and PICES, with generous support from NOAA/Fisheries and the North Pacific Research Board, the “*New Frontiers in Marine Science*” Conference for Early Career Scientists was held from June 26–29, 2007, near Baltimore, Maryland, U.S.A. Its objective was to encourage new scientists to share knowledge and to begin to build networks across disciplines and international borders. The University of Maryland Center for Environmental Science (UMCES) was host to nearly 100 early career scientists from 20 nations.

The conference featured six theme sessions, each with a keynote speaker, for a total of 65 oral and 33 poster presentations. Two workshops on “*Effective Science Communication*” and “*Integrated Environmental Assessment*” were led by staff from the UMCES Integration and Application Network. A mini-symposium on “*International and Interdisciplinary Collaboration*” included invitees from seven international oceanographic programs and organizations (SCOR, ICES, PICES, EUR-OCEANS, GLOBEC, IMBER, and EAST-1).

Presentations spanned all of the marine science disciplines in their consideration of ecosystem topics ranging from estuaries to the deep ocean, and from bacteria and phytoplankton to whales and humans. The six “New Frontiers” included (keynote speakers are shown in brackets):

- Biodiversity and productivity of marine organisms from pole to pole (Hyung Chul Shin);
- Processes at ocean margins (John H. Simpson);
- The last frontier: Processes in the deep sea (S. Kim Juniper);
- The role of behavior in marine biological processes (Mark Baumgartner);
- The effect of climate on basin-scale processes and ecosystems (Emanuele Di Lorenzo); and

- Humans and the marine environment (Philippe Cury).

Session descriptions and abstracts can be found at <http://www.pices.int/newfrontiers.aspx>.

Reflecting the conference’s international character, theme sessions were introduced by six keynote speakers from six nations, with a mixture of senior scientists and accomplished early career scientists. Speakers not only shared their perspectives and research relating to the topic at hand, but also peppered their presentations with practical advice for early career development based on personal experience, common sense, or a lifetime of mentoring. Useful bits of advice included: “Do (and publish) good work”, “Do it now (rather than waiting for more data, more analyses, improved models, *etc.*)”, “Take risks and be innovative”, and “Develop (and stick to) a well thought-out, long-term research plan”. While the latter is sound advice for any young scientist, personal anecdotes from participants in the mini-symposium suggested that the path to success is often circuitous and may be marked by a focused pursuit of research goals as well as chance events and opportunities that can lead to entirely new and unforeseen pursuits. One of the major “lessons” may thus be summed up as: *Define your goals and stay focused, but be prepared for the unexpected!*

Considering the diverse background of the participants and judging by the lively discussions in each session, as well as during breaks, at meal time, and in the pub, the next generation of marine scientists seems well positioned to achieve a strong integration of marine research across disciplines and across national boundaries. Although there was much new knowledge to be gained from many excellent presentations, the contacts and friendships that developed over the course of four packed days are likely the most immediate and long-lasting benefit for most participants.



Conference organizers, invited guests, and a new generation of marine scientists assembled for one last smile before heading into the future.



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Although the challenges facing early career scientists, not least the need to procure research funds, are undeniable, a sense of optimism and enthusiasm prevailed. Several speakers highlighted the progress achieved over the last several decades through integrated research programs. These accomplishments not only led to a greatly improved understanding of key ecosystem processes, but also to better integration and diversification of the marine research community itself. For example, several senior researchers noted a gender balance among the participants (~40% women) that did not exist in their early careers.



Participants engaged at the workshop on “Effective Science Communication”.



Scientific Steering Committee: Franz Mueter, Sukyung Kang, Julie Keister, Elizabeth North, Angel Lopez-Urrutia. Jens Floeter, who is missing from this photo, was unable to attend the conference.

Both the participants and organizers agreed that the conference was a resounding success! Together, we accomplished our goals and more. Contacts that will undoubtedly persist for decades were developed and the seeds of new personal and institutional networks were planted. The conference represents a small but significant step towards solving the many challenges faced by our blue planet and by those who will study it in the 21st century.

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Dr. Franz Mueter (fmueter@alaska.net) is “relatively” early in his career, having received an M.S. in Biostatistics (1998) and a Ph.D. in Fisheries Oceanography (1999) from the University of Alaska Fairbanks (UAF). He works as a fisheries and statistical consultant in Fairbanks and lectures occasionally at UAF. His research is focused on applied problems in the emerging field of ‘ecosystem oceanography’, in particular the effect of oceanographic variability on fish populations, and the effects of fishing and other human activities on marine ecosystems.