

2012 PICES Awards

The presentation ceremony for two prestigious PICES awards took place on October 15, 2012, during the Opening Session at the 2012 PICES Annual Meeting in Hiroshima, Japan.

Wooster Award

In 2000, PICES established an annual award for scientists who have made significant contributions to North Pacific marine science; have achieved sustained excellence in research, teaching, administration, or a combination of these in the area of the North Pacific; have worked to integrate the various disciplines of the marine sciences; and preferably, all of these in association with PICES. The award was named in honour of Professor Warren S. Wooster, a principal founder and the first Chairman of PICES, a world-renowned researcher of climate variability and fisheries production. He was not only a distinguished scientist, but also an ambassador of international scientific cooperation. Though Professor Wooster passed away in October 2008, his spirit will live in our minds through this award. Award description, nomination process and selection criteria are posted on the PICES website at http://www.pices.int/Wooster_Award/default.aspx. Prior recipients of the Wooster Award were Michael Mullin (2001), Yutaka Nagata (2002), William Percy (2003), Paul LeBlond (2004), Daniel Ware (2005), Makoto Kashiwai (2006), Kenneth Denman (2007), Charles Miller (2008), Kuh Kim (2009), Jeffrey Polovina (2010) and Bernard Megrey (2011).

The presentation ceremony was conducted by Drs. Lev Bocharov (Chairman of PICES) and Sinjae Yoo (Chairman of Science Board). Dr. Yoo introduced the award and read the following Science Board citation:

The Wooster Award is given annually to an individual who has made significant scientific contributions to North Pacific marine science. In particular, the Award recognizes sustained excellence in research, teaching, administration or a combination of the three in the area of North Pacific marine science. It is my great pleasure to announce that Dr. Richard Beamish is the recipient of the 2012 Wooster Award.

Dick was born and raised in Ontario, a region of Canada well known for its large number of lakes. Accordingly, he decided after his undergraduate degree in Biology, to undertake graduate studies in freshwater research at the University of Toronto. Dick started his career with the Department of Fisheries and Oceans in Winnipeg, where he studied the impacts of airborne pollution on fishes, before moving to the Pacific Biological Station in Nanaimo, British Columbia, to work in the Groundfish Section. There, he recognized the importance of accurate fish age estimates and set up an Ageing Lab at the Station. With his own research, he discovered that fish were much older than previously thought, and revolutionized the age determination

methods of fish, resulting in a complete rethinking of stock assessment and management.

In the 1990s, Dick decided to tackle research on Pacific salmon. He was the first to provide evidence of the synchrony between Pacific salmon production and climate, specifically atmospheric processes. In addition, he was one of the first scientists to write about North Pacific climate regimes and regime shifts. Recognizing a lifetime of outstanding achievement, dedication to the community and service to the nation, the Canadian Government awarded him with the prestigious Order of Canada in 1999, for his discovery of the effects of acid rain on fishes in Ontario lakes, his contributions to the age determination of fishes, and to the understanding of climate impacts on fishes.

Along with receiving other numerous national and provincial awards, Dick has also been recognized internationally, such as by the American Fisheries Society for the sustained excellence in marine fisheries biology, by the International Panel on Climate Change for his significant contributions that helped the Panel receive the Nobel Peace Prize for 2007, and by the Sea Fisheries Institute in Gdynia, Poland, for outstanding scientific achievements.

Dick has also made substantial contributions to the administration of science, both within Canada and in international committees. He served as Director of the Pacific Biological Station for 13 years, on the International North Pacific Fisheries Commission, was the Canadian Commissioner of the International Pacific Halibut Commission, and Chairman of the Scientific Research and Statistics in the North Pacific Anadromous Fish Commission.

In 1985, he was the President of IRIS, an organization that provided focus for international recruitment studies in the subarctic Pacific. In this capacity, he was instrumental in the formative meetings leading to the development of the North Pacific Marine Science Organization (PICES). In fact, the first formal PICES Annual Meeting (Victoria, B.C., 1992) was held in conjunction with the international symposium on "Climate Change and Northern Fish Populations" which was organized by Dick. All of us in the PICES community are aware of Dick's involvement with PICES. Dick has also brought enthusiasm and mentoring to academia. From 1996 until 2011, Dick was an Affiliate Professor at Vancouver Island University in Nanaimo. For recognition of his contribution to teaching and fundraising, and for his achievements in science, he was awarded an Honorary Doctorate of Science degree from Vancouver Island University in 2009.

Dick retired in 2011 but continues research on lampreys and the factors affecting Pacific salmon production, and is

currently editing a book on all aspects of the Strait of Georgia. He has had a career as a leader in marine research, with innovative approaches to ecosystem science, age determination, taxonomy, and climate change impacts on marine resources. He has published over 200 peer-reviewed journal papers, with senior authorship on 123 of these. From his publication list, there are 7 that are considered to be fisheries science 'citation classics'. It is no wonder that even in retirement he is still travelling the globe, giving keynote addresses, providing advice and winning awards.

Please join me in congratulating Dr. Dick Beamish!



Dr. Richard Beamish (right) posing with Dr. Sinjae Yoo (left, PICES Science Board Chairman) and Dr. Lev Bocharov (Chairman of PICES) after receiving the 2012 Wooster Award.

Reading of the Science Board citation was accompanied by a slide show dedicated to Dr. Beamish (http://www.pices.int/Wooster_Award/Wooster_recipients/2012_Beamish/Beamish-album.pdf). A commemorative plaque was presented to Dr. Beamish (a permanent plaque identifying all Wooster Award recipients resides at the PICES Secretariat), who accepted the award with the following remarks of thanks:

I very much appreciate receiving the Wooster Award from PICES because it is recognition from my colleagues and it is named after a person that I worked closely with for many years. I think that Warren Wooster first talked to me in the late 1970s about the need to relate fish population dynamics

to climate and ocean conditions. This was a time when many in fisheries science considered that climate and the ocean effects on fish would be mostly random. For example, it was believed that fishing and freshwater habitat were the most important factors regulating the abundance of Pacific salmon. Warren had a friendly and unrelenting way of recruiting people into his way of thinking. This was not a problem for me as I found it refreshing that there was someone else who believed that trends in climate and the ocean strongly affected fish abundance. Together we ran an organization called IRIS, which was a "Woosterism" for "International Recruitment Studies in the Subarctic." IRIS was formed to demonstrate to Canada and the United States that a PICES-type of organization was an efficient way of improving the understanding of the mechanisms that regulated fish abundance. Warren Wooster was not as enthusiastic about fish as I was, but this never got in the way of our vision of PICES. Once PICES was formed, we continued to work together as he assigned me and colleagues to the various groups and tasks.

If Warren Wooster was still with us, I would try to talk him into supporting an "International Year of the Salmon." A few days ago, I was at the North Pacific Anadromous Fish Commission meeting in St. Petersburg, Russia, and presented a paper on the value of forming an integrated group of researchers to determine how Pacific salmon populations are regulated, and to develop models that will use climate and ocean parameters to forecast production trends of the various species of salmon. I think we are close to being able to do this if we can get the support to build teams of researchers. I suggested that participants in PICES would be essential to the success of the effort. I have the feeling that Warren Wooster would even be pleased with this idea.

I always tell people that there is very little that I do all by myself. There is a list of collaborators and people that influence what I do that is much too long to report. So let me simply say, "Colleagues, thank you for your help and thank you for all the years of fascinating science that I have enjoyed at PICES."

POMA Award

Progress in many aspects of marine science is based on ocean observations, monitoring, and management and dissemination of data provided by these activities. However, these activities are often behind the scenes and so inconspicuous that they are seldom evaluated appropriately. To remedy this, a PICES Ocean Monitoring Service Award (POMA) was established in 2007 to recognize the sustained accomplishments of those engaged in monitoring, data management, and communication. This award aims to acknowledge organizations, groups or outstanding individuals who have contributed significantly to the advancement of marine science in the North Pacific through long-term ocean monitoring and data management (http://www.pices.int/awards/POMA_award/POMA_award.aspx). Prior recipients of the award were the training ship T/S *Oshoro-maru*

(Japan) in 2008, Dr. Bernard Megrey and Mr. Allen Macklin (NOAA, USA) in 2009, the Station P/Line-P (Canada) monitoring program in 2010, and the Network of Serial Oceanographic Observations (Korea) in 2011.

Drs. Bocharov and Yoo conducted the POMA presentation ceremony. Dr. Yoo introduced the award and read the following Science Board citation:

Long-term monitoring observations are particularly critical to detecting and understanding ecosystem changes. The PICES Ocean Monitoring Service Award (POMA) was established to acknowledge monitoring and data management activities that contribute to the progress of marine science in the North Pacific. It is my great pleasure to announce that the 2012 POMA goes to the California Cooperative Fisheries Investigations (CalCOFI).

CalCOFI can trace its origins to the pioneering work on fisheries oceanography by Harald Sverdrup and Oscar Sette in the 1930s. By the time the sardine fishery was rapidly declining in the late 1940s, it was well recognized that the population dynamics of pelagic fish could not be understood without considering the effects of their environment. When the sardine industry voluntarily imposed a tax on its landings in order to answer the immediate questions of where had the fish gone and when were they coming back, it also recognized that meaningful answers would depend on a broad set of ecological observations. Thus, CalCOFI was born as a unique partnership between the fishing industry, resource management agencies and academic institutions.

A grid of CalCOFI stations that encompasses the length and breadth of the California Current was established. The geographic extent and temporal density of observations has waxed and waned over the decades depending on resources, but the commitment to CalCOFI by participating institutions, particularly the US Government, has never wavered since 1949. CalCOFI researchers have described the bio-geographic patterns of a broad range of zooplankton and ichthyoplankton taxa, explored the effects of coastal upwelling and advection on biological productivity, described the coupling between the environment and survival of young fish, and advanced the field of fishery oceanography.

Over time, the length of CalCOFI data sets has allowed the resolution of ecological variability over a range of scales from seasonal to decadal to long-term secular change. CalCOFI has also evolved with the addition of new instrumentation and sampling protocols. Hundreds of student theses and thousands of scientific articles have used CalCOFI data sets and have built on the scientific foundation set by CalCOFI.

Over the years, other marine observation programs sponsored by the National Science Foundation, the Office of Naval Research, the Integrated Ocean Observation System, and private foundations have built on, and leveraged, the strength of the CalCOFI program. This has improved our ability to document processes in the California Current and has established the region as a model for assessing the health of marine ecosystems.

The CalCOFI Committee guides the fieldwork and publications of the program and is currently composed of representatives from Scripps Institution of Oceanography, Southwest Fisheries Science Center and California Department of Fish and Game. Please join me in congratulating Drs. Anthony Koslow and Steven Bograd, receiving the award on behalf of the hundreds of people, past and present, who have contributed to the CalCOFI for the past seven decades.

Reading of the Science Board citation was accompanied by a slide show dedicated to CalCOFI (http://www.pices.int/awards/POMA_award/2012-POMA/CalCOFI-album.pdf). A commemorative plaque (a permanent plaque identifying

all POMA recipients resides at the PICES Secretariat) and a certificate were presented to Drs. Anthony Koslow (Scripps Institution of Oceanography, UCSD, USA) and Steven Bograd (Southwest Fisheries Science Center, NMFS, USA).



Drs. Anthony Koslow (second from right) and Steven Bograd (right) posing with Dr. Sinjae Yoo (PICES Science Board Chairman) and Dr. Lev Bocharov (Chairman of PICES) after receiving the 2012 PICES Ocean Monitoring Service Award.

Dr. Koslow provided the following remarks of appreciation:

I am both proud and humble to accept the PICES Ocean Monitoring Service Award on behalf of Scripps Institution of Oceanography and NOAA. CalCOFI is a unique partnership of government and academic institutions: NOAA, the California Department of Fish and Game, and Scripps Institution of Oceanography. As such, its mission since its inception in 1949 has been to study and manage the living marine resources of the California Current within an ecosystem context. Key achievements of an earlier generation of CalCOFI scientists included development of the daily egg production to assess the northern anchovy and Pacific sardine fisheries, descriptions of the pelagic communities of the California Current, and the first understanding of the impact of ENSO on that ecosystem. The program continued to evolve through the years, adopting new instruments, and making new measurements as that became possible, while building on the old. Today, it is one of the few truly end-to-end observation programs in the world, carrying out observations from winds to whales on its quarterly cruises. In recent years, CalCOFI data have been instrumental in defining the impacts of decadal-scale Pacific variability and exploring the possible influence of climate change, developing new fishery-independent time series for key species, such as market squid and spiny lobster, and describing and modeling changes in deep-water oxygen concentrations and their impacts on mid-water fish communities.

CalCOFI is now more than 60 years old and is the fruit of several generations of scientists at Scripps Institution of Oceanography and NOAA. We are both humble and grateful to receive the award on behalf of all those, past and present, who built this program. If we see further than those who went before us, it is because (as Isaac Newton once said) we stand on the shoulders of giants.