

CCCC Paper Session

Co-Convenors: Harold P. Batchelder (U.S.A.) and Michio J. Kishi (Japan)

North Pacific ecosystems and their response to climate variability have experienced intense study through GLOBEC and similar programs over the past 10 years. The PICES Climate Change and Carrying Capacity (CCCC) Program addressed the question of “how do interannual and decadal variations in ocean conditions affect the species dominance, biomass and productivity of the key zooplankton and fish species in North Pacific ecosystems?”. Ultimately, a goal of the CCCC Program was to forecast possible consequences of climate variability on the North Pacific ecosystem. As the CCCC Program nears completion, it is worthwhile to examine the program’s successes on addressing the key elements: climate change, carrying capacity, and forecasting. This evaluation will provide useful information for moving forward with successor PICES integrative programs like FUTURE: *Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Ecosystems*. We invite abstracts that infer processes from patterns and link climate, ocean physics, populations and ecosystems. Provocative abstracts that retrospectively examine the successes and shortcomings of the CCCC Program are welcome, as are more traditional presentations on climate, ecosystems and forecasting.

Wednesday, October 31, 2007 9:00 – 15:40

- 09:00 **George D. Jackson, B.R. Ward, R.S. McKinley and D.W. Welch**
Application of the POST acoustic array to a critical marine conservation problem for juvenile steelhead trout (*Oncorhynchus mykiss*) in British Columbia (CCCC_P-4383)
- 09:20 **Richard D. Brodeur, William T. Peterson, Toby D. Auth, Heather L. Soulen, Maria M. Parnel and Ashley A. Emerson**
Abundance and diversity of coastal fish larvae as indicators of recent changes in ocean and climate conditions in the Oregon upwelling zone (CCCC_P-4394)
- 09:40 **William T. Peterson, Thomas C. Wainwright and James J. Ruzicka**
Climate change scenarios for continental shelf waters of the Northern California Current: Potential impacts of changes in upwelling, stratification, seasonal cycles of production and the PDO on pelagic ecosystems (CCCC_P-4419)
- 10:00 **James J. Ruzicka, Thomas C. Wainwright and William T. Peterson**
A simple production model for the Oregon upwelling ecosystem: Investigating the effect of interannual variability in copepod community composition (CCCC_P-4412)
- 10:20 **Hao Wei and Zhenyong Wang**
Simulation on ecosystem evolution of Jiaozhou Bay for recent 40 years by modified NEMURO (CCCC_P-4499)
- 10:40 **Coffee / tea break**
- 11:00 **David L. Mackas and Jackie King**
Multivariate classification of zooplankton life history strategies (CCCC_P-4384)
- 11:20 **Sachihiko Itoh, Ichiro Yasuda, Haruka Nishikawa, Hideharu Sasaki and Yoshikazu Sasai**
Modelling the transport and environmental variability of larval Japanese sardine (*Sardinops melanostictus*) and Japanese anchovy (*Engraulis japonicus*) in the western North Pacific (CCCC_P-4346)

- 11:40 **Tadanori Fujino, Kazushi Miyashita, Yasuma Hiroki, Tsuyoshi Shimura, Shinya Masuda and Tsuneo Goto**
Regime shift of mesopelagic fish – Long-term biomass index change of *Maurolicus japonicus* in the Japan/East Sea (CCCC_P-4338)
- 12:00 **Nandita Sarkar, Thomas C. Royer and Chester E. Grosch**
Seasonal and interannual variability of mixed layer depths along the Seward Line in the Northern Gulf of Alaska (CCCC_P-4204)
- 12:20 **Suam Kim, Sukyung Kang, Hyunju Seo, Eunjung Kim and Minho Kang**
Climate variability and chum salmon production and survival in the North Pacific (CCCC_P-4058)
- 12:40 **Lunch**
- 14:00 **Harold P. Batchelder, Brie J. Lindsey and Brendan Reser**
Retentive structures, transport and connectivity in coastal ecosystems: Using a quantitative particle tracking metric to describe spatio-temporal patterns (CCCC_P-4414)
- 14:20 **Julie E. Keister, William T. Peterson and P. Ted Strub**
Zooplankton populations and circulation vary interannually to effect cross-shelf advection of biomass in the northern California Current (CCCC_P-4302)
- 14:40 **C. Tracy Shaw, Leah R. Feinberg and William T. Peterson**
Interannual variability in abundance, growth and spawning of the euphausiids *Euphausia pacifica* and *Thysanoessa spinifera* off Newport, OR, USA (CCCC_P-4405)
- 15:00 **Jennifer L. Menkel, William T. Peterson, Jesse F. Lamb, Julie E. Keister and T. O'Higgins**
Northern California Current (WA, OR, northern CA) hot spots of abundance for *Euphausia pacifica* and *Thysanoessa spinifera* (CCCC_P-4416)
- 15:20 **Brigitte Dorner, Randall M. Peterman, Cindy Bessey and Franz J. Mueter**
North-south location of the North Pacific Current and its influence on temporal variation in recruits per spawner in northeastern Pacific salmon (*Oncorhynchus*) populations (CCCC_P-4227)

CCCC Paper Posters

- CCCC_P-4327 **Young-Shil Kang, In-Seong Han and Donghyun Lim**
Climate-related variations in oceanographic condition and mesozooplankton in the southwestern East China Sea after the mid 1990s
- CCCC_P-4413 **Xan Augerot, Ray Hilborn, Nathan Mantua, Kate Myers, Randall Peterman, Dave Preikshot, Peter Rand, Greg Ruggione, Daniel Schindler, Jack Stanford, Nathan Taylor, Trey Walker and Carl Walters**
The salmon MALBEC project: A North Pacific scale study to support salmon conservation planning