

PICES Press



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International symposium on *North Pacific transitional areas*

A scientific symposium focusing on *Transitional areas in the North Pacific* was held in La Paz, Baja, Mexico, April 23-25, 2002. The meeting was sponsored by the North Pacific Marine Science Organization (PICES), Centro de Investigaciones Biológicas del Noroeste, SC (CIBNOR), and Centro Interdisciplinario de Ciencias Marinas del IPN (CICMAR-IPN). Drs. Daniel Lluch-Belda (CICMAR-IPN, Mexico), William T. Peterson, Jeffrey J. Polovina (National Marine Fisheries Service, U.S.A.), and Takashige Sugimoto (University of Tokyo, Japan) served as scientific co-convenors.

92 scientists from Canada, Japan, Mexico and U.S.A. registered for the symposium. There were 34 oral presentations and over 30 posters covering the broad geographic region of the western transitional areas off Japan, the central North Pacific Transition Zone, and the eastern transitional areas off the coast of the United States and Mexico.

The presentations on the *western transitional areas* considered the transitions between coastal waters and the Kuroshio and Oyashio Currents, the transitions between these currents and offshore waters, and the north-south

transition between these two currents. Several talks presented overviews of this region. It was noted that since the Kuroshio and Oyashio are strong boundary currents, they produce strong horizontal physical and biological gradients and eddies and fronts in this region. The western transitional area is the most physically energetic of the three transitional areas. It is also an area that exhibits considerable decadal variability in the strength and spatial pattern of the Oyashio, Kuroshio and Kuroshio Extension Currents, and other physical features such as the mixed layer depth.

Warm-core rings are one example of a mesoscale feature frequently observed in the western transitional area, and this was the focus of one paper. It was noted that warm-core rings are formed when a meander of the Kuroshio Extension Current breaks off and travels northwest to Japan. These rings transport oceanic water and species northwest into cooler coastal waters. They have strong sea surface temperature and sea surface height signatures and hence are easily monitored with both satellite temperature and altimetry sensors. Warm-core rings typically have a life of about one year but some have persisted for up to 5 years. Simulation studies found that the movement and life of these



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|---|--|
| 1 International symposium on <i>North Pacific transitional areas</i> | 18 Status and future plans for SOLAS-Japan |
| 5 PICES Volunteer Observing Ship (VOS) Workshop | 21 China-Korea Joint Ocean Research Center: A bridge across the Yellow Sea to connect Chinese and Korean oceanographic institutes and scientists |
| 8 Joint meeting on <i>Causes of marine mortality of salmon</i> | 23 Persistent changes in the California Current ecosystem |
| 10 The state of the western North Pacific in the second half of 2001 | 25 The <i>Hokusei Maru</i> : 53 years of research in the Pacific |
| 12 State of the eastern North Pacific in spring 2002 | 29 First meeting of the CLIVAR Pacific Panel |
| 14 The status of the Bering Sea in the second half of 2001 | 31 Call for contributions to the North Pacific Ecosystem Status Report |
| 16 PICES Workshop on "Perturbation analysis" on subarctic Pacific gyre ecosystem models | 32 PICES announcements |