

Southwest Fisheries Science Center, NOAA Fisheries  
Scripps Institution of Oceanography  
California Department of Fish and Game

**CALCOFI:  
IN CONJUNCTION WITH THE  
TRINATIONAL SARDINE FORUM**

Scripps Institution of Oceanography  
15 – 18 November 2004

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**Monday, 15 November**

12:00-13:00 Registration – Sumner Auditorium Portico

13:00-13:30 Welcome and Opening Remarks: William Fox and Anne Allen  
(*Southwest Fisheries Science Center*)

**SESSION I: Status of the Fisheries**

Moderator: Laura Rogers-Bennett

(*California Department of Fish and Game, Bodega Bay*)

Current status of California's marine resources and fisheries presented by biologists from the California Department of Fish and Game (CDFG).

13:30-13:45 Nearshore Live-Fish  
*David Osorio, CDFG Monterey*

13:45-14:00 Ocean Salmon  
*Matt Erickson, CDFG Santa Rosa*

14:00-14:15 Dungeness and Rock Crab  
*Eric Larson, CDFG Belmont*

14:15-14:30 Pacific Herring  
*Diana Watters, CDFG Belmont*

14:30-15:00 BREAK (Registration Continues)

15:00-15:15 Tunas  
*Michael Connell, CDFG Los Alamitos*

15:15-15:30 California Recreational Fishery Survey (CFRS)  
*Steve Crooke, CDFG Los Alamitos*

15:30-15:45            Market Squid  
                              *Travis Tanaka, CDFG Monterey*

**SESSION II: Status of Fisheries for Pacific Sardine**

Moderator: Kevin Hill (*Southwest Fisheries Science Center*)

15:45-17:00            CPS Finfish  
                              *Leeanne Laughlin, CDFG Los Alamitos*

Gulf of California  
                              *Manuel O. Nevárez Martínez, CRIP-INP, Guaymas*

Magdalena Bay  
                              *Roberto Félix-Uraga, CICIMAR-IPN, La Paz*

Ensenada  
                              *Celia Eva Cotero, CRIP-INP, Ensenada*

California  
                              *Leeanne Laughlin CDFG, Los Alamitos*

Oregon/Washington  
                              *Brian Culver WDFW, Montesano*

British Columbia  
                              *Jake Schweigert DFO, Nanaimo*

**DINNER**

17:15-19:15            Catered buffet on Pawka Green, just below Sumner Auditorium

**Tuesday, November 16, 2004**

8:00-8:30      Registration – Sumner Auditorium Portico

**SESSION III: Symposium of the Conference: “Pacific Sardine – Past, Present, and Future”** Moderator: Tim Baumgartner (*Centro de Investigación Científica y Educación Superior*)

8:30-8:40      Introduction to the symposium  
(**Kevin Hill** and **Tim Baumgartner**, *Symposium Conveners*)

- 8:40-9:15 A 1500-year history of the sardine population in the California Current  
(**Tim Baumgartner**, *Centro de Investigación Científica y Educación Superior*)
- 9:15-9:50 Long-term dynamics of sardines in the Humboldt, California, and Kuroshio currents  
(**Jürgen Alheit**, *Baltic Sea Research Institute*)
- 9:50-10:10 BREAK
- 10:10-10:45 A history of proposals for stock structure in the Pacific sardine populations off western North America  
(**Paul Smith**, *Southwest Fisheries Science Center and Scripps Institution of Oceanography*)
- 10:45-11:20 Relationship of California sardine (*Sardinops sagax*) landings to climate-scale ecological changes in the California Current system  
(**Jerrold G. Norton**, *Pacific Fisheries Environmental Laboratory, Southwest Fisheries Science Center*; and *Janet E. Mason*)
- 11:20-11:55 Sardine ecosystem model  
(**Richard H. Parrish**, *Pacific Fisheries Environmental Laboratory, Southwest Fisheries Science Center*)

#### **LUNCH**

- 11:55-13:00 Catered buffet lunch, Sumner Auditorium Portico

#### **SESSION III (continued)**

Moderator: Kevin Hill (*Southwest Fisheries Science Center*)

- 13:00-13:35 Pacific sardine stocks off the west coast of the Baja California peninsula and southern California  
(**Roberto Félix-Uraga**, *Centro Interdisciplinario de Ciencias Marinas; Casimiro Quiñónez-Velázquez, Felipe Neri Melo-Barrera, Víctor M. Gómez-Muñoz and Walterio García-Franco*)
- 13:35-13:55 Recruitment of the Pacific sardine (*Sardinops sagax*) in Baja California, Mexico  
(**Manuel O. Nevárez Martínez**, *Instituto Nacional de la Pesca, Centro Regional de Investigación Pesquera de Guaymas; Celia Eva Coteró Altamirano, Ma. de los Angeles Martínez Zavala, Roberto Félix Uraga, and Alfredo Cota Villavicencio*)

- 13:55-14:15 Measuring recruitment failures for Pacific sardine *Sardinops sagax caeruleus* in the Gulf of California, Mexico  
(Enrique Morales-Bojórquez, *Instituto Nacional de la Pesca, Laboratorio de Dinámica de Poblaciones del Pacífico Norte*; and **Manuel Nevárez-Martínez**)
- 14:15-14:50 Spawning biomass of Pacific sardine from 1994-2004 off California  
(**Nancy Lo**, *Southwest Fisheries Science Center*; and *Beverly Macewicz*)
- 14:50-15:10 Sardines in the ecosystem of the Pacific Northwest  
(*Robert L. Emmett*, **Richard D. Brodeur**, *Northwest Fisheries Science Center*; *Todd W. Miller*, *Paul J. Bentley* and *Suzan S. Pool*)
- 15:10-15:30 BREAK
- 15:30-15:50 Recent distribution and ecology of sardines off British Columbia, Canada  
(**Gordan A. McFarlane**, *Pacific Biological Station, Fisheries and Oceans Canada*; and *Jake. Schweigert*)
- 15:50-16:25 An optimal harvest policy for the recently renewed United States Pacific sardine fishery  
(**Sameul F. Herrick, Jr.**, *Southwest Fisheries Science Center*; *Kevin Hill*, and *Christian Reiss*)
- 16:25-17:00 Growth-optimal temperature for larval sardine vs. anchovy: A possible mechanism for sardine-anchovy regime shift?  
(**Akinori Takasuka**, *National Research Institute of Fisheries Science, Fisheries Research Agency*; *Yoshioki Oozeki*, *Ichiro Aoki*, *Ryo Kimura*, *Hiroshi Kubota*, *Hiroya Sugisaki*, *Takashi Yamakawa*)
- 17:00-17:35 The future of the sardine population of the California Current  
(**Tim Baumgartner**, *Centro de Investigación Científica y Educación Superior*)

## **Wednesday, 17 November 2004**

### **SESSION IV: Contributed Talks**

Moderator: Russ Vetter (*Southwest Fisheries Science Center*)

- 8:30-8:50 Abundances of planktonic foraminifera indicate decadal variability and 20th century warming in the California Current  
(**David B. Field**, *Southwest Fisheries Science Center*; *Tim R. Baumgartner*, *Vicente Ferriera-Bartrina*)

- 8:50-9:10 Parasitoid ciliates (Apostomatida: Colliniidae: *Collinia*) infecting the subtropical euphausiid *Nyctiphanes simplex* in the southern part off Baja California, México  
(**Jaime Gómez-Gutiérrez**, *Centro Interdisciplinario de Ciencias Marinas*; and *Carlos J. Robinson*)
- 9:10-9:30 Distribution and community structure of ichthyoplankton in 2000 and 2002 off the Oregon coast  
(**Toby D. Auth**, *Hatfield Marine Science Center*; and *Richard D. Brodeur*)
- 9:30-9:50 Selective predation of *Centropages furcatus* (COPEPODA: CALANOIDA) in La Paz Bay, B.C.S., México.  
(**Arturo Nava Torales**, *IPN-CICIMAR*; and *Sergio Hernández Trujillo*)
- 9:50-10:10 Preliminary results from the California purse seine fishery's pilot observer program  
(**Tonya L. Wick**, *NOAA Fisheries, Southwest Region*; *Don Petersen*, and *Lyle Enriquez*)
- 10:10-10:30 BREAK
- 10:30-10:50 Geographic and bathymetric changes in functional organization of demersal fish communities of the continental shelf and upper slope of California and Pacific Baja California  
(**M. James Allen**, *Southern California Coastal Water Research Project*)
- 10:50-11:10 Assessing the effects of temperature on otolith chemistry of Pacific sardine (*Sardinops sagax*)  
(**Emmanis Dorval**, *Southwest Fisheries Science Center*; *Barbara Javor*, *Kevin Piner*, *Christian Reiss*, *Russ Vetter*, and *Larry Robertson*)
- 11:10-11:30 Population dynamics and current stock status of Japanese sardine in the northwestern Pacific  
(**Hiroshi Nishida**, *National Research Institute of Fisheries Science*; *Akihiko Yatsu*, *Masayuki Noto*, and *Minoru Ishida*)
- 11:30-11:50 Historical reproductive cycle of sardine Monterrey *Sardinops caeruleus* in the western coast of Baja California  
(**Celia Eva Cotero A**; *Instituto Nacional de la Pesca* and *Héctor Valles Ríos*)
- LUNCH**
- 11:50-13:00 Catered buffet lunch, Sumner Auditorium Portico

#### **SESSION IV, Continued**

Moderator: Paul Smith (*Southwest Fisheries Science Center and Scripps Institution of Oceanography*)

- 13:00-13:20 Trophic structure of sardine (*Sardinops sagax*) and anchovy (*Engraulis mordax*) spawning areas in the California Current system  
(**Rafael Gonzalez-Quiros**, *Scripps Institution of Oceanography*; and *David Checkley*)
- 13:20-13:40 Possible mechanisms underlying latitudinal abundance changes of Pacific sardine in the California Current system during the last warming regime (1980-1997)  
(**Rubén Rodríguez-Sánchez**, *CICIMAR*; *Daniel Lluch-Belda and Sofía Ortega-García*)
- 13:40-14:00 Temporal and spatial patterns of *Sardinops sagax* fish larvae abundance in Bahía Magdalena  
(**René Funes**, *CICIMAR*; *Julián Leal Espinosa, Martín E. Hernández, Alejandro Hinojosa, Rogelio González, Gerardo Acéves and Raymundo Avendaño I.*)
- 14:00-14:20 Tidal front dynamics and Pacific sardine aggregations in Bahía Magdalena, southwest coast of Baja California, México  
(**Carlos J. Robinson**, *Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México*; *Jaime Gómez-Gutiérrez and Samuel Gómez-Aguirre*)
- 14:20-14:40 First study of the copepods predation on the microzooplankton in Bahía de la Paz, Mexico  
(**Javier Cruz-Hernández**; *Centro Interdisciplinario de Ciencias Marinas and Sergio Hernández-Trujillo*)
- 14:40-15:00 CalCOFI data management: Today and beyond  
(**Karen I. Stocks**, *San Diego Supercomputer Center* and **Karen S. Baker**, *Scripps Institution of Oceanography*)
- 15:30-17:30 Poster Presentations, Wine and Cheese Reception  
(*Munk Conference Room, in IGPP*)
- 16:30-18:00 Data Management Workshop  
(*Helen Raitt Room, 3<sup>rd</sup> floor SIO library*)

## **Thursday, November 18, 2004**

9:00-5:00      Trinational Sardine Forum Working Group Meetings

*To be held in the Large Conference Room of Southwest Fisheries Science Center.  
Morning food and refreshments will be provided. Lunch will be available for attendees  
to order.*