

# AGENDA FOR THE TWENTY-THIRD PACIFIC CLIMATE WORKSHOP

**Asilomar State Conference Grounds, Pacific Grove, California  
13-16 May 2007**

PACLIM is a multidisciplinary workshop that broadly addresses the climatic phenomena occurring in the eastern Pacific Ocean and western North America. The purpose of the workshop is to understand climate effects in this region by bringing together specialists from diverse fields including physical, social, and biological sciences. Time scales from weather to the Quaternary are addressed in oral and poster presentations.

The theme of the 2007 PACLIM workshop addresses the impact of abrupt climate change on ecosystems. The remainder of the meeting is devoted to a wide range of climate-related topics.

The atmosphere of the workshop is intentionally informal, and room and board are provided for many of the participants. This year, the workshop was organized by representatives of the U.S. Geological Survey and U.S. Forest Service. The funding and other sources of support come from several agencies both public and private:

The CALFED Bay-Delta Science Program: **Ron Ott and Steve Culberson**

The Desert Research Institute: **Chris Maples**

The U.S. Geological Survey Geologic Discipline: **Tom Armstrong**

The U.S. Geological Survey Global Change Coordinating Committee: **Virginia Burkett**

The U.S. Naval Postgraduate School: **Tom Murphree**

All oral presentations will be in the Fred Farr Forum and posters will be in the Kiln Room.

---

**SUNDAY NIGHT, May 13<sup>th</sup>**

**Moderator: Scott Starratt**

---

## CURRENT EVENTS

---

### SUNDAY AFTERNOON REGISTRATION

600-700	DINNER
700-715	OPENING REMARKS Scott Starratt (USGS, Menlo Park)
715-745	WESTERN CLIMATE UPDATE: PACLIM YEAR 2006-2007 Kelly Redmond (WRCC)

- 745-815 WY 2007: ARE THE GOOD YEARS OVER?  
Maurice Roos (California Department of Water Resources)
- 815-845 THE 20,000 YEAR LAKE RECORD OF THE SALTON BASIN:  
APPLICATIONS OF AMS  $^{14}\text{C}$ ,  $\delta^{18}\text{O}$ ,  $\delta^{13}\text{C}$  AND  $\delta^{87}\text{Sr}$  ON THE LAKE  
TUFA DEPOSITS  
Hong-Chun Li (National Cheng-Kung University and University of  
Southern California)
- 845-1000 POSTERS AND SOCIALIZING

---

**MONDAY MORNING, May 14<sup>th</sup>**

**Moderator: Scott Starratt**

---

**SPECIAL SESSION: ABRUPT CLIMATE CHANGE – MODERN TO PAST**

---

- 730-830 BREAKFAST
- 845-900 INTRODUCTORY REMARKS  
Scott Starratt (USGS, Menlo Park)
- 900-925 RAIN-FED FLOOD RISKS IN A WARMING WEST  
Michael Dettinger (U.S. Geological Survey), Daniel Cayan (U.S.  
Geological Survey), and Jessica Lundquist (University of Washington)
- 925-950 FLOOD VARIABILITY IN RESPONSE TO CLIMATE VARIABILITY,  
SACRAMENTO-SAN JOAQUIN RIVER SYSTEM, CALIFORNIA  
Joan L. Florsheim (U.C. Davis) and Michael Dettinger (U.S. Geological  
Survey)
- 950-1015 CLIMATE CHANGE AND WILDFIRE  
Anthony L. Westerling (Sierra Nevada Research Institute), Hugo Hidalgo  
(UCSD-SIO), Daniel R. Cayan (UCSD-SIO and U.S. Geological Survey)  
and Thomas W. Swetnam LTRR, University of Arizona)
- 1015-1035 BREAK
- 1035-1100 ELEVATIONAL AND TEMPORAL TRENDS IN *SALIX*-FEEDING  
BEETLES AND ASSOCIATED INSECTS ALONG THREE SIERRA  
NEVADA, CALIFORNIA DRAINAGES  
John T. Smiley (White Mountain Research Station), Nathan E. Rank  
(Sonoma State University), Elizabeth P. Dahlhoff (Santa Clara University)
- 1100-1125 AN EXTREME TURN-OF-THE-CENTURY HYDROLOGIC EVENT  
RECORDED IN  $\delta^{18}\text{O}$  FROM BRISTLECONE PINE TREE-RING

CELLULOSE

Max B. Berkelhammer and Lowell D. Stott (both USC)

- 1125-1150 ON TELECONNECTIONS OF THE TREE RING RECORD IN THE TORREY PINE: ENSO, NAO, AND DROUGHT IN THE SOUTHWEST  
W. H. Berger (SIO-U.C. San Diego)
- 1200-100 LUNCH

---

MONDAY AFTERNOON, May 14<sup>th</sup>

Moderator: John Barron

---

**SPECIAL SESSION: ABRUPT CLIMATE CHANGE – PAST**

---

- 130-155 VEGETATION RESPONSES TO CLIMATE CHANGE: 11,000 YEARS AGO, 6,000 YEARS AGO, AND 21<sup>ST</sup> CENTURY VEGETATION SIMULATIONS FOR BERINGIA  
Sarah L. Shafer (U.S. Geological Survey), Patrick J. Bartlein (University of Oregon), Mary E. Edwards (University of Southampton and University of Alaska-Fairbanks), and Steven W. Hostetler (U.S. Geological Survey)
- 155-220 A POSSIBLE COSMOCLIMATOLOGICAL DRIVER OF OBSERVED CYCLIC HOLOCENE CLIMATE CHANGE AND MARINE PRODUCTIVITY IN THE NORTHEASTERN PACIFIC  
R. Timothy Patterson (Carleton University), Andreas Prokoph (SPEEDSTAT), Alice Chang (University of Victoria), Helen M. Roe (Queen's University of Belfast), Natalia Vazquez Riveiros (Carleton University), and Andrew Wigston (Carleton University)
- 220-245 POSTGLACIAL RELATIVE SEA-LEVEL AND CLIMATIC HISTORY OF THE SEYMOUR-BELIZE INLET COMPLEX, BRITISH COLUMBIA: BIOSTRATIGRAPHIC EVIDENCE FROM ISOLATION BASINS  
Helen M. Roe (Queen's University Belfast), Christine T. Doherty (Queen's University Belfast), R. Timothy Patterson (Carleton University), and Glenn A. Milne (Durham University)
- 245-310 THE COLD EVENT 8,200 YEARS AGO: COSMOPOLITAN CONSEQUENCES OF A PROVINCIAL PERTURBATION  
Don Barber (Bryn Mawr College)
- 310-330 BREAK
- 330-355 THE RELATION OF GREAT BASIN LATE QUATERNARY HYDROLOGIC AND CRYOLOGIC VARIABILITY TO NORTH

ATLANTIC CLIMATE OSCILLATIONS

L.V. Benson (U. S. Geological Survey), R.J. Spencer (University of Calgary), D. Rhode (DRI), L. Louderback (University of Nevada), and R. Rye (U.S. Geological Survey)

355-420 MONO BASIN CLIMATE CHANGES CORRELATIVE WITH NORTH ATLANTIC DANSGAARD-OESCHGER OSCILLATIONS  
Susan Zimmerman (LLNL), Corinne Hartin (RSMAS), Crystal Pearl (Queen's College, CUNY), Stephanie Searle (LDEO), Sidney Hemming (LDEO), and N. Gary Hemming (LDEO)

420-445 THE RESPONSE OF THE CALIFORNIA MARGIN TO RAPID CLIMATE CHANGE: INFLUENCES OF CHANGING ATMOSPHERE AND OCEAN CIRCULATION ON THE MARINE ENVIRONMENT  
Ingrid L. Hendy (University of Michigan)

445-510 TIMING AND SPATIAL EXTENT OF MID-HOLOCENE ABRUPT CLIMATE CHANGE  
Carrie Morrill (NOAA)

600-700 DINNER

---

**MONDAY EVENING, May 14<sup>th</sup>**

**Moderator: John Barron**

---

700-800 TBA  
James Zachos (U.C. Santa Cruz)

800-1000 POSTERS AND SOCIALIZING

---

**TUESDAY MORNING, May 15<sup>th</sup>**

**Moderator: Connie Millar**

---

**SPECIAL SESSION: ABRUPT (AND NOT SO ABRUPT) CLIMATE CHANGE – PAST**

730-830 BREAKFAST

900-925 SIERRA NEVADA SPELEOTHEMS: POTENTIAL FOR HIGH-RESOLUTION ARCHIVES OF CHANGES IN ATMOSPHERIC CIRCULATION OVER WESTERN NORTH AMERICA  
Jessica L. Oster (U.C. Davis), Isabel P. Montañez (U.C. Davis), and Warren D. Sharp (Berkeley Geochronology Center)

925-950 RAPID BUT VARIABLE RESPONSES OF SIERRA NEVADA GLACIERS TO ABRUPT CLIMATE CHANGE  
Douglas H. Clark (Western Washington University) Nicole D. Bowerman

(North Cascades National Park)

- 950-1015 EVIDENCE OF THE DIFFERENTIAL RESPONSE OF LAKES IN THE SIERRA NEVADA, CALIFORNIA DURING THE YOUNGER DRYAS CHRONOZONE  
David F. Porinchu (Ohio State University), Glen M. MacDonald (UCLA), Katrina A. Moser (University of Western Ontario), Aaron P. Potito (NUIG), and Amy M. Bloom (Illinois State University)
- 1015-1035 BREAK
- 1035-1100 ABRUPT CLIMATE CHANGE AND ECOSYSTEM RESPONSE: A 2,000 YEAR HISTORY OF SEVERE DROUGHTS, EXTREME TEMPERATURES, AND STAND-REPLACING FIRES IN THE SIERRA NEVADA IN RESPONSE TO ABRUPT CLIMATE CHANGE  
Stephen F. Wathen (U.C. Davis)
- 1100-1125 HOLOCENE FIRE HISTORY OF CONIFER FORESTS IN THE SIERRA NEVADA OF CALIFORNIA, SOUTHERN BRITISH COLUMBIA, AND COASTAL ALASKA, AND ITS CONNECTION TO ABRUPT CLIMATE CHANGE  
Douglas J. Hallett (Queen's University), R. Scott Anderson (Northern Arizona University), and Daniel G. Gavin (University of Oregon)
- 1125-1150 SANTA BARBARA BASIN DIATOM RECORD SUGGESTS COINCIDENCE OF COOLER SST WITH WIDESPREAD OCCURENCE OF DROUGHT IN THE WEST DURING THE PAST 2,200 YEARS  
John A. Barron (U.S. Geological Survey)
- 1200-100 LUNCH

---

**TUESDAY AFTERNOON, May 15<sup>th</sup>**

**Moderator: John Dracup**

---

**POTPOURRI – PAST TO THE PRESENT**

---

- 130-155 TOO CUNNING TO BE UNDERSTOOD: THE RECORD OF LATE HOLOCENE CENTRAL CALIFORNIA CLIMATE FROM SAN FRANCISCO BAY MARSH SEDIMENTS  
Scott W. Starratt (U.S. Geological Survey)
- 155-220 CHANGES IN SEDIMENT SOURCE AND CLIMATE IN THE NORTHERN REACH OF SAN FRANCISCO BAY OVER THE PAST

MILLENNIUM

Frances Malamud-Roam and B. Lynn Ingram (both U.C. Berkeley)

- 220-245 THE MAAR LAKES OF GUANAJUATO, MEXICO: HIGH RESOLUTION ARCHIVES OF HOLOCENE CLIMATE CHANGE  
Roger Byrne (U.C. Berkeley), Jungjae Park (U.C. Berkeley), James Johnston (U.C. Berkeley), Harald Bohnel (UNAM Juriquilla) Lynn Ingram (U.C. Berkeley), Wenbow Park (U.C. Berkeley), and Ulrike Kienel (GFZ Potsdam)
- 245-310 POST-YOUNGER DRYAS WARMING: AN ANALOG FOR THE NEXT 100 YEARS?  
Kenneth L. Cole (U.S. Geological Survey)
- 310-330 BREAK
- 330-355 IMPACTS OF CLIMATE CHANGE AND LAND USE ON THE NAVAJO NATION IN THE SOUTHWESTERN UNITED STATES  
Margaret Hiza Redsteer (U.S. Geological Survey)
- 355-420 EPISODIC 20<sup>TH</sup> CENTURY RECRUITMENT OF LIMBER AND BRISTLECONE PINES IN THE WHITE MOUNTAINS, CALIFORNIA  
Connie Millar, Bob Westfall, and Diane Delany (all USDA Forest Service)
- 420-445 CLIMATE CHANGE'S INFLUENCE ON SUDDEN OAK DEATH  
Susan J. Frankel (USDA Forest Service)
- 445-510 CHARACTERIZING REGIONAL MODES OF CLIMATE VARIABILITY IN CALIFORNIA  
John T. Abatzoglou, Kelly T. Redmond, and Laura M. Edwards (all WRCC-DRI)
- 600-700 DINNER

---

**TUESDAY EVENING, May 15<sup>th</sup>**

**Moderator: Scott Starratt**

- 700-800 TBA  
Charles Goldman (U.C. Davis)
- 800-1000 POSTERS AND SOCIALIZING

---

**WEDNESDAY MORNING, May 16<sup>th</sup>**

**Moderator: Scott Starratt**

## **POTPOURRI – PRESENT AND FUTURE**

---

- 730-830                    BREAKFAST
- 900-925                    A HYPOTHESIS FOR THE 1976-1977 WESTERN DROUGHT  
James Johnstone (U.C.Berkeley)
- 925-950                    OCEANS AND CLIMATE, AND THEIR EFFECT ON FOREST-  
INSECT INTERACTIONS  
Alan J. Thomson (Pacific Forestry Centre)
- 950-1015                   DYNAMIC SIMULATION MODELING OF MOSQUITO  
POPULATIONS WITH CLIMATE DATA  
Andrew C. Comrie and Cory Morin (both University of Arizona)
- 1015-1035                   BREAK
- 1035-1100                   SEA SURFACE TEMPERATURE, DROUGHT, AND DROUGHT  
PREDICTION IN CALIFORNIA  
Ian Ferguson and John Dracup (both U.C. Berkeley)
- 1100-1125                   CALIFORNIA FISHERIES AND ECOLOGICAL RESPONSES TO  
ABRUPT OCEAN CLIMATE CHANGES  
Jerrold G. Norton, Janet E. Mason, and Samuel F. Herrick (NOAA)
- 1125-1150                   PROJECTING CLIMATE CHANGES AND ECOLOGICAL  
RESPONSES  
Gary D. Sharp (Center for Climate/Ocean Resources Study), Leonid  
Klyashtorin (VNIRO), and Douglas McLain (Center for Climate/Ocean  
Resources Study)
- 1150-1200                   FINAL WORDS
- 1200-100                   LUNCH

## **POSTERS**

AIR TEMPERATURE, COLD AIR DRAINAGE, AND TOPOCLIMATIC EFFECTS IN THE  
LAKE TAHOE BASIN

Solomon Z. Dobrowski, Jonathan Greenberg, Geoff Schladow (all U.C. Davis)

ANALYSIS AND SUMMARY OF JULY 2006 RECORD-BREAKING  
HEAT WAVE IN CALIFORNIA

Laura M. Edwards (WRCC-DRI) and Daniel R. Kozlowski (California-Nevada River Forecast Center)

CHANGES IN RAINFALL AND WATER AVAILABILITY ON ISLA ISABELA, GULF OF CALIFORNIA

Amy Englebrecht (U.C. Berkeley), Lynn Ingram (U.C. Berkeley), Roger Byrne (U.C. Berkeley), Ulrike Kienel (GFZ Potsdam), Harald Boehnel (UNAM Juraquilla), and Gerald Haug (GFZ Potsdam)

CAN HYDROGEN ISOTOPE RATIOS IN PLANT LIPIDS PROVIDE A QUANTITATIVE PROXY FOR ARIDITY?

Sarah J. Feakins and Alex L. Sessions (both California Institute of Technology)

DROUGHT AND FAILURE OF PACIFIC-NORTH AMERICAN MONSOON DURING THE HOLOCENE FROM VARVED SEDIMENTS AT DSDP SITE 480 IN THE GULF OF CALIFORNIA

Ann Marie Harris and Robert E. Karlin (both University of Nevada)

CHANGING PERIODIC BEHAVIOR OF THE HOLOCENE NORTH AMERICAN MONSOON FROM VARVED SEDIMENTS IN THE GULF OF CALIFORNIA

Ann Marie Harris and Robert E. Karlin (both University of Nevada)

JOINT VARIABILITY OF GLOBAL RUNOFF AND GLOBAL SEA-SURFACE TEMPERATURES

Gregory J. McCabe and David M. Wolock (both U.S. Geological Survey)

HOLOCENE LANDSCAPE RESPONSE TO SEASONALITY OF STORMS IN THE MOJAVE DESERT

David M. Miller (U.S. Geological Survey), Shannon A. Mahan (U.S. Geological Survey), John P. McGeehin (U.S. Geological Survey), John A. Barron (U.S. Geological Survey) and Lewis Owen (University of Cincinnati)

HISTORICAL TRENDS IN MOSQUITO POPULATIONS IN RESPONSE TO CLIMATE DATA IN THE WESTERN UNITED STATES

Cory Morin and Andrew C. Comrie (both University of Arizona)

EXAMINATION OF DROUGHT TOLERANCE IN PINYON PINE USING ANCIENT DNA

Bethany Riggins (Northern Arizona University), Amy Whipple (Northern Arizona University), Kris Haskins (Northern Arizona University), and Kenneth Cole (U. S. Geological Survey)

HIGH RESOLUTION STUDY OF PYRITE FRAMBOID DISTRIBUTION IN SANTA BARBARA BASIN SEDIMENTS AND IMPLICATIONS FOR WATER-COLUMN OXYGENATION



Juergen Schieber and Arndt Schimmelmann (Indiana University)

CORRELATING LATE GLACIAL AND HOLOCENE MARINE AND LACUSTRINE  
CLIMATE RECORDS IN NORTHERN CALIFORNIA

Scott W. Starratt and John A. Barron (both U.S. Geological Survey)

EVALUATING ISOTOPE TRACERS OF PALEOSALINITY, FRESHWATER INPUT, AND  
ENVIRONMENTAL CHANGE AT CELESTUN LAGOON, YUCATAN

Joseph H. Street (Stanford University), Megan B. Young (U.S. Geological Survey), Michelle Goman (Cornell University), Jorge Herrera-Silveria (CINVESTAV) and Adina Paytan (Stanford University)

TREE RINGS INDICATE SUMMERTIME STRATUS CLOUDS AS IMPORTANT SOURCES  
OF PRE-DAWN WATER AND AFTERNOON SHADE FOR COASTAL VEGETATION IN  
CALIFORNIA

A. Park Williams (U.C. Santa Barbara), Christopher J. Still (U.C. Santa Barbara), Douglas T. Fischer (U.C. Santa Barbara) and Steven W. Leavitt (LTRR, University of Arizona)