

NEWSLETTER

Number 53

3 April 2009



iStockPhoto.com

90th ANNUAL MEETING of the PACIFIC DIVISION

jointly sponsored by

California Academy of Sciences

San Francisco State University

San Francisco, CA

14 – 19 August 2009

MEETING UPDATE

"Sustainability in an Evolving World"

AAAS, Pacific Division 90th Annual Meeting

The AAAS, Pacific Division and its affiliated societies and sections will hold its 90th annual meeting this August at the newly reopened California Academy of Sciences and on the campus of San Francisco State University. The theme of this year's meeting is "Sustainability in an Evolving World." To this end, the Division's Program and Special Events Committee has assembled a program of exceptional scientific merit and interest, which includes sessions celebrating the 150th anniversary of the Publication of Charles Darwin's seminal publication, *On the Origin of Species* and also the 200th anniversary of Darwin's birth. Other sessions deal with topics

of sustainability and, of course, a variety of other issues of current interest to the scientific community.

All scientists and graduate and undergraduate students are invited to present the results of their research, either orally or as posters. All registrants for the meeting may attend the technical sessions as well as participate in the many other activities that are being planned. Some activities, notably field trips and selected workshops, require advance registration and payment of additional fees. Dr. John Hafernik, Department of Biology, San Francisco State University and President-elect of the Pacific Division, is chair of the Division's organizing committee for this year's annual meeting. Dr. Terry Gosliner, Department of Invertebrate Zoology and Geology, California

continued on page 9, left column

CONTENTS

AAAS, Pacific Division Newsletter

Number 53

2009 Meeting Announcement.....	1
San Francisco State University	2
Report on AAAS 175 th National Meeting.....	3
Approaching Deadlines	3
Erratum	4
Omission.....	4
California Academy of Sciences.....	5
Reminders.....	5
Judges for Student Presentations	6
Galapagos Cruise Announcement	7
Annual Meeting Information	
Accommodations and Food Services.....	9
Advance Registration Form.....	35
Call for Papers and Abstracts.....	14
Call for Symposia and Workshop Proposals, 2010	34
Computers and PowerPoint.....	14
Contributed Papers	30
Dates, Times and Locations of Presentations	14
Field Trips.....	16
Final Call for Papers and Abstracts, 2009.....	33
Local Hotels and Motels.....	10
Meeting Rooms.....	14
Poster Sessions.....	30
Program Organizers.....	31
Public Lectures.....	16
Refunds	9, 16
Registration	9
Registration Center.....	14
Societies and Sections Sponsoring Sessions.....	9
Special Events.....	15
Student Awards for Excellence	15
Symposia.....	21
Travel to the Meeting.....	10
Workshops.....	18
Book Sale.....	38
Map of Golden Gate Park	13
Map of San Francisco State University.....	39



ADVANCING SCIENCE. SERVING SOCIETY

This Newsletter © 2009 by the AAAS, Pacific Division
All rights reserved.

Editor: Roger G. Christianson
Co-Editor: Angela R. Christianson

Photos, unless otherwise credited, provided by Roger G. Christianson.
Cover: Golden Gate Bridge (used with permission: iStockPhoto.com).

Published biannually in January and April.
Circulation of January 2009 issue: 23,252.

For information on advertising or to submit articles for inclusion,
please contact Roger Christianson by e-mail: rchristi@sou.edu
or by phone: 541-552-6747.

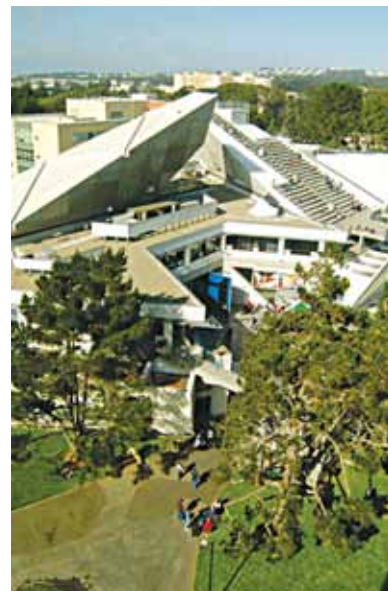
Printed in the U.S.A. by Valley Web Printing, Medford, OR 97504.

SAN FRANCISCO STATE UNIVERSITY

The forerunner of San Francisco State University, the California State Normal School, was founded in 1862 in San Francisco. Two subsequent name changes and three changes of location within the city brought the institution to its present 130-acre campus in southwest San Francisco in 1954. It received University status in 1972.

San Francisco State University is part of the 23-campus California State University—the largest system of public higher education in the country—and is a multipurpose coeducational institution with more than 30,000 students and 1800 faculty members. More than 93 percent of the students come from within the State of California, 22 percent of whom are from the San Francisco Bay Area. Through its eight schools, Behavioral and Social Sciences, Business, Creative Arts, Education, Ethnic Studies, Health and Human Services, Humanities, and Science and Engineering, the University offers undergraduate and graduate instruction for professional and occupational goals as well as liberal arts education. Bachelor's degrees are offered in 115 academic areas, master's degrees in 95 areas, and doctorate degrees in special education (in cooperation with UC Berkeley) and Educational Leadership (Ed.D.). Also offered is an M.S. in physical therapy leading to a clinical doctoral degree (D.P.T.) and a joint research doctorate with UC San Francisco for licensed physical therapists (D.P.T.Sc.).

The focal point of the campus is the Student Union. With its two dramatic leaning pyramids, it is a campus landmark. The Union houses a number of restaurants, a pub-coffee shop, meeting rooms, and a game center. The major academic buildings cluster around the Union, on the edges of a grassy quadrangle. The Creative Arts complex is the largest



Cesar Chavez Student Center on the SFSU Campus.

San Francisco State University

continues on page 4, right column

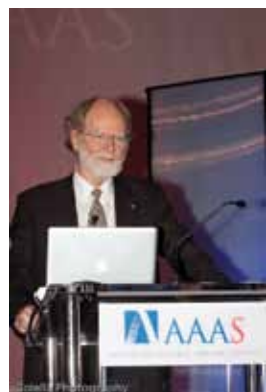


Copyright © 2009 Collela Photography. colellaphoto.com

Executive Director's Report on the 175th National Meeting of AAAS Chicago, IL

The 175th national meeting of AAAS occurred this past February 12 – 16 in downtown Chicago, IL. The meeting was held jointly with the Winter Meeting of the American Association of Physics Teachers. Programs were held at both the Hyatt Regency and Fairmont hotels.

The public portion of the meeting began Thursday evening with James J. McCarthy, AAAS President and Agassiz Professor of Biological Oceanography, Harvard University, Cambridge, MA giving the Presidential Address. Immediately following was a lavish Presidential Reception, a great opportunity for attendees to network with many of the scientists present. The meeting included several plenary and topical lectures, as well as numerous symposia, two general poster sessions, and other sessions and events. A highlight of the meeting was a special invited address on global warming by former Vice President and Nobel Peace Prize winner Al Gore, who spoke to a double overflow crowd of



Dr. James J. McCarthy, 2008/2009 President of AAAS.

Copyright © 2009 Collela Photography. colellaphoto.com



Honorable Albert A. Gore, Jr. speaking at the AAAS National Meeting.

Copyright © 2009 Collela Photography. colellaphoto.com

continues on page 6, left column

APPROACHING DEADLINES

Mark your calendar!!!

MAY 1.....Proposals for student travel grants to help defray costs for students traveling to the annual meeting to present their research, either orally or as posters, due into the Pacific Division office. More information can be found at <http://www.sou.edu/aaaspd/Students/TravelGrants08-09.html>.

MAY 1.....Proposals for student research awards from the AAAS, Pacific Division Alan E. Leviton Student Research Award Fund due into the Pacific Division office. More information is at <http://www.sou.edu/aaaspd/Students/StudentResearchGrants.html>.

MAY 15.....Abstracts for presentations at the 90th Annual Meeting must be received by the appropriate section chair(s) and the AAASPD office. See pages 33 and 31 of this *Newsletter* for more information.

JUNE 15.....Last day to receive the best discounts on registration fees. See pages 9 and 35 of this *Newsletter* for more information.

JULY 15.....Last day to request a refund of registration, field trip, etc., fees already paid. See pages 9 and 16 of this *Newsletter* for additional information.

AUGUST 3.....Early registration ends. All registrations beyond this date will be handled on-site and at the on-site rate. See pages 9 and 35 of this *Newsletter* for more information.

OHMYGOSH!

Are you serious?

ERRATUM

An unfortunate error occurred in the 5 January 2009 Newsletter with the reversal of the names of the first and second place winners of awards in the combined Anthropology/Archaeology and General/Interdisciplinary Studies Sections at our 89th Annual Meeting. The correct reading should be:

First Place: Oona Thommes Paredes (Department of Anthropology, University of Missouri – Columbia, Columbia, MO) “Colonial Exemplaries: Parsing the Birth of Evil in Philippine Colonial Ethnography.”

Second Place: Andres Rodriguez (University of Oxford) “Nation–Building and Anthropology During the Republican Period: David Crockett Graham and the Missionary Anthropological Enterprise in Western Sichuan (1922 – 1945).”

We apologize for any inconvenience this error might have caused.

OMISSION

The 5 January *Newsletter* reported that Dr. John Ha-



Photo courtesy himself.

Dr. John Hafernik, President-elect, AAAS, Pacific Division.

fernik, San Francisco State University, was elected President-elect of the Pacific Division at the June 2008 Council meeting. We had intended to include his photo with the article, but failed to do so. Here it is!

continued from page 2, right column

facility of its kind in San Francisco. It contains four theaters, a concert hall, music and drama rehearsal areas, and one of the largest television and radio production facilities in northern California. The Science complex features a modern planetarium, marine biology research facilities, herbarium, vertebrate museum, bioacoustic laboratory, greenhouses, extensively equipped physics and chemistry laboratories, and computer science facilities.

The University Library houses more than 1.1 million titles and subscribes to almost 5,000 print periodicals and scholarly journals and 22,000 electronic journals. It also houses the Frank V. de Bellis Collection of Italian culture. The Sutro Library, with its special collections of historical materials, is situated in a modern building on the north edge of campus.

In addition to the Romberg and Tiburon Centers, the University has two other off-campus field centers for special study; Moss Landing Marine Laboratory, on Monterey Bay, 100 miles south of San Francisco, and the Sierra Nevada Field Campus in the foothills of the Sierra Nevada. The San Francisco State University downtown center, located in the heart of the city, offers classes for personal and professional development, as well as meeting and conference facilities.

San Francisco State University is a multipurpose institution of higher education located in a large, diverse urban setting. Excellence in teaching is the University's primary mission and distinguishing feature, although commitments to research and service to the community are high priorities.

The University enjoys the advantage of being in one of the most exciting and cosmopolitan cities in the world. It is just minutes away from the San Francisco Zoo, Ocean Beach and Cliff House, Golden Gate Park, California Academy of Sciences and Steinhart Aquarium, De Young Museum of Fine Arts, Strybing Arboretum, Japanese Tea Garden, Exploratorium, and many other nearby museums. It is also less than 20 minutes away from downtown San Francisco, with its numerous fine shops, Fisherman's Wharf, Telegraph Hill (and its spectacular view of the Bay and the Golden Gate Bridge), and numerous other points of interest.

The San Francisco climate during June should be mild, with temperatures not much above 73°F (23°C)

or below 50°F (10°C). Fog is always a possibility and participants should be prepared for cool as well as warm weather.

CALIFORNIA ACADEMY OF SCIENCES¹

Three years after the state of California was admitted into the Union, several men met on the evening of 4 April 1853 to discuss “the founding of an Academy for the development and study of natural phenomena.”¹ On the following 16 May a constitution was adopted, bringing into being what was then called the Academy of Natural Sciences. In 1868

the institution’s name was changed to the Academy of Sciences, later renamed the California Academy of Sciences.

The Academy was first located in a small building at 174 Clay Street, but soon moved to an abandoned Baptist church on the southwest corner of California and Dupont Streets, where their meetings and lectures soon attracted public interest.

Drawing on donations of land and money from James Lick (of Lick Observatory fame), a six story stone building was constructed at 819 Market Street, with occupancy occurring in 1891. By this time the Academy had become one of the West’s most popular destinations, hosting 80,000 visitors a year.

The 1906 earthquake and fire proved disastrous for the Academy. Fortunately, the fire didn’t reach the Academy’s building until the second day, which provided time for the removal of limited numbers of books, some old records, a complete set of publications, a very limited number of specimens. Everything else was lost in the fire. Just prior to the fire, a group



California Academy of Sciences, circa 1895.



California Academy of Sciences following 1906 earthquake.

continues on page 8, left column

DON'T FORGET!!

TEACHERS K - 14

The first twenty K – 14 teachers to register *in advance* (meeting registration received no later than 3 August 2009) for this meeting will receive a **\$75 stipend** to help defray their costs to attend! This stipend is not available to those who register on-site for the meeting. A \$75 check will be waiting for you with your registration materials at the Pacific Division Meeting Registration Center.

DARWIN SYMPOSIUM

In order to commemorate the 150th anniversary of the publication of Charles Darwin’s tome, *On the Origin of Species*, and also the 200th birthday of Darwin, the Pacific Division is pleased to announce in conjunction with the California Academy of Sciences a special two-day program “Darwin and the Galapagos,” organized by Michael Ghiselin, a foremost scholar and author with many publications about Charles Darwin. A distinguished list of presenters has been assembled to make this a very auspicious and must-attend event, which kicks off the 90th annual meeting of the Pacific Division. Taking place at the newly opened facilities of the California Academy of Sciences, space is limited and admission will be by ticket only. Tickets may be obtained at no additional expense by advance registration for this meeting (see page 35 of this *Newsletter*). Any remaining tickets will be available at the door with on-site registration for this meeting.

DARWIN CONTRIBUTED PAPER SESSION

A follow-up to the Darwin Symposium will be a contributed paper session, “Working on Darwin,” which is scheduled to take place Monday, 17 August on the campus of San Francisco State University. Please turn to page 30 of this *Newsletter* for additional information.

YES!!!

See page 7!

PACIFIC DIVISION SEEKS JUDGES FOR STUDENT PRESENTATIONS

Student presentation judges are being sought to help judge student presentations (both oral and poster) at the Pacific Division's annual meeting. Except in exceptional circumstances, previous experience with evaluating student presentations is required. Judges must be available for a judges meeting Sunday evening, 16 August, and be able to judge presentations Monday and/or Tuesday, 17 and 18 August. For additional information, please contact Roger Christianson, 541-552-6747 or rchristi@sou.edu. If you are interested in helping with this very important aspect of the annual meeting, be sure to mark the appropriate box on the Advance Registration Form (page 35 of this Newsletter) and you will be sent an application form.

continued from page 3, left column

thousands. More information about the meeting can be found by clicking on "2009 highlights" at <http://www.aaas.org/meetings/>.

Several events of special interest to Pacific Division members occurred during the National Meeting and are reported on in no particular order.

First, Carl A. Maida and Robert Pynoos (UCLA School of Dentistry and Medicine) organized a very successful symposium, "Expression of Emotions: Biocultural Perspectives." Attended by about 100 people, three well-known researchers in this area presented very interesting papers: "Ape Emotion and the Evolution of Human Behavior" (Barbara J. King, College of William and



Symposium speakers and discussant, L to R: Matthew D. Lieberman, Carl A. Maida, Paul Ekman, and Barbara J. King.

Mary, Williamsburg, VA); "Why Putting Feeling into Words Can Dampen the Feelings, (Matthew D. Lieberman, University of California, Los Angeles); and "Darwin and Compassion" (Paul Ekman, University of California, San Francisco). Dr. Maida ended the session with the unenviable task of discussant, summarizing the diverse materials presented, which he did very well. The Pacific Division co-sponsored this symposium.

Second, the Pacific Division was very ably represented by Ms. Hillary Young, a Ph.D. candidate at Stanford University and winner of our AAAS-Robert I. Larus Travel Award at our Hawaii meeting last June. Ms. Young converted her award-winning oral presentation, "*Cocos nu-*



Hillary Young with her poster at the National Meeting.

cifera Drives Nutrient Depletion via Changes in Seabird Density at Palmyra Atoll," into a poster for this meeting. Unfortunately, due to a mix-up in the AAAS Meetings Office, her poster was scheduled for the general session rather than the student session, so she was unable to compete for awards at the National Meeting. Regardless, her poster was well-received and Ms. Young represented the Pacific Division with aplomb.

Third, the Pacific Division again sponsored a booth in the exhibit hall. The exhibit hall has taken on more importance over the past few years as an increasing number of companies and organizations are purchasing exhibit space. In fact, this year AAAS oversold its allotment of booths but was able to capitalize on AAPT unsold space, so all exhibitors were accommodated. Additionally Family Science Days (Saturday and Sunday this year) bring a large number of parents and their children into the exhibit hall, which makes the place literally buzz with activity. The Pacific

continues on page 8, right column

AAAS PACIFIC DIVISION GALAPAGOS EXPEDITION

August 25-September 1, 2009

You are cordially invited to join the AAAS Pacific Division Expedition to Quito, Ecuador, and the Galapagos Islands on board the 100-passenger *M/V Galapagos Legend*, August 25-September 1, 2009.

In 2009 is the 200th Anniversary of Charles Darwin's birthday, the 150th Anniversary of the publication of *Origin of Species*, and the 50th Anniversary of the founding of Galapagos National Park. It is truly a year of celebration in Galapagos.

Please invite your friends and colleagues to join you on this trip of a lifetime! The itinerary will take you throughout the islands, with excellent Galapagos naturalist guides.

Day 1 USA TO QUITO, ECUADOR

Day 2 QUITO, ECUADOR

Day 3 QUITO TO GALAPAGOS - BARTOLOME ISLAND

Day 4 GALAPAGOS - URBINA BAY & PUNTA ESPINOSA

Day 5 GALAPAGOS - SANTIAGO ISLAND (JAMES BAY) & RABIDA

Day 6 GALAPAGOS - SANTA CRUZ ISLAND (Porto Ayora) & N. SEYMOUR

Day 7 GALAPAGOS (BACHAS BEACH) TO QUITO

Day 8 QUITO TO USA

For the fully detailed itinerary go to: www.betchartexpeditions.com/cen-sa_galap_aaas09.htm

TOTAL PACKAGE COST PER EXPEDITION MEMBER (based on twin share):
Superior Twin Cabin \$3,225 per person + air USA/Quito* + \$330 air Quito/Galapagos.
Junior Suite \$3,625 per person + air USA/Quito* + \$330 air Quito/Galapagos.
Legend Suite \$3,995 per person + air USA/Quito* + \$330 air Quito/Galapagos.
Balcony Suites \$4,295 + air USA/Quito* + \$330 air Quito/Galapagos.

Space Is Limited, so please contact us right away for cabin selection.
Please call Marisa Eide at Betchart Expeditions Inc.
17050 Montebello Road, Cupertino, CA 95014-5435
Tel: (800) 252-4910, (408) 252-4910
Fax: (408) 252-1444
Email: marisa@betchartexpeditions.com



continued from page 5, left column



San Francisco burns following the great earthquake in 1906.

Public Domain

of seven scientists set sail for the Galapagos aboard the Schooner *Academy*. The materials they returned with became the core of the Academy's post-fire collections.

In 1910 the citizens of San Francisco voted to allow the Academy to relocate into Golden Gate Park. The new building was completed and opened to the public in September 1916. Over the decades, the facility grew to include the Steinhart Aquarium (1923), Simson African Hall (1934), Science Hall (1951), the Morrison Planetarium (1952), the Swamp (1963), the Fish Roundabout (1977) and more.

The 1989 Loma Prieta earthquake caused major structural damage to the building, leaving the Academy in need of a new beginning. The Academy took advantage of this unique opportunity and rethought the Academy and the entire museum-going experience. The result was the closure of the Academy in 2003 and the moving of many exhibits to a temporary location at 875 Howard Street to allow for the razing and construction of an entirely new facility designed for the 21st century. After razing all but two walls of the African Hall, construction on the new, almost \$500,000,000 structure began in September, 2005. The grand reopening of the Academy was 27 September 2008.

The California Academy of Sciences is now a cutting-edge research and museum facility residing in the largest LEED (Leadership in Energy and Environmental Design) Platinum-rated (the highest rating) building in the world. It is also the largest green museum in the world. Although the Academy is now a single structure, it contains multiple venues, including a 500,000 gallon aquarium, an all-digital planetarium, the Kimball Natural History Museum and a 4-story rainforest. In addition, there's a new 3-D theater, a lecture hall, a Naturalist Center, two restaurants, an adjacent garden and aviary, a roof terrace, and an Academy store.

The Academy is home to more than 40,000 animals, more than six times the number calling the Academy home in the previous collection of buildings. The new

building also houses the Academy science labs and administrative offices, including an extensive library and scientific archive consisting of more than 20 million specimens.

A little-known fact outside of scientific circles (perhaps even within scientific circles?) is that the Pacific Division of AAAS has had a long-standing relationship with the California Academy of Sciences. Staff scientists at the Academy have served as Executive Directors (previously called Secretary-Treasurers) of the Pacific Division for 72 of the 94 years that the Pacific Division has existed (1919 – 1927, Winthrop W. Sargeant, Administration; 1946 – 1973, Robert C. Miller, Zoology; 1973 – 1975, Robert T. Orr, Mammology/Ornithology; 1975 – 1998 and 2001, Alan E. Leviton, Herpetology/Biogeography). That honor has been shared by only four other institutions: University of California, Berkeley (1916 – 1918, Albert L. Barrows, Zoology), Stanford University (1928 – 1929, Arthur G. Vestal, Biology; 1930 – 1942, James M. Luck, Biochemistry), University of Montana (1998 – 2001, David E. Bilderback, Plant Physiology) and Southern Oregon University (2002 – present, Roger G. Christianson, Biology) over the lifetime of the Division. Thus, it's no surprise that, as the Pacific Division meets again in San Francisco, the California Academy is alongside the endeavor and contributing substantially to the program. 🏠

¹Information for this section was excerpted from a) an article by J. D. Gunder, "North American Institutions Featuring *Lepidoptera*," *Entomological News*, Vol. 40, April, 1929 No. 4 and b) the following web site of the California Academy of Sciences: <http://www.calacademy.org/academy/about/timeline.php>.



Front entrance to the newly rebuilt California Academy of Sciences.

Tim Griffith, California Academy of Sciences

continued from page 1, right column

Academy of Sciences, and Past-president of the Pacific Division, is the Division's liaison with the California Academy of Sciences for this meeting.

This *Newsletter* contains a preliminary description of the scientific program, a call for abstracts, directions for preparation of abstracts, and information about early registration, housing, transportation, special events, and field trips.

Following is a list of the Pacific Division's sections that will sponsor a variety of sessions at the meeting. The names and addresses of session chairs are found on page 31 of this *Newsletter*.

PACIFIC DIVISION SECTIONS SPONSORING SESSIONS AT THE SAN FRANCISCO MEETING

Agriculture and Horticultural Sciences
Anthropology and Archaeology
Atmospheric and Oceanographic Sciences
Cell and Molecular Biology
Chemistry and Biochemistry
Computer and Information Sciences
Earth Sciences
Ecology, Organismal Biology and Environmental Sciences
Education
General and Interdisciplinary
Health Sciences
History and Philosophy of Science
Industrial Sciences and Technology
Physics and Materials Science
Psychology
Social, Economic and Political Sciences

REGISTRATION

All persons planning to attend the meeting should use the Advance Registration Form on page 35 in this *Newsletter* to pre-register in order to receive the best registration rate. On-site registration will be available, but with higher fees. Early advance registration fees (through 15 June) for the full meeting are \$80 for professionals, \$45 for retirees/emeritus and current post-docs, and \$30 for current students and spouses of registrants. K-12 and community college teachers are encouraged to attend the meeting for a reduced professional registration fee of \$45. Advance one-day professional registration is available for \$60. After 15 June, higher registration fees will be charged: professional, \$95; K-12, community college teachers, post-docs and retirees/emeritus, \$52.50; and students and participating spouses, \$37.50. One-day professional registration during this period is \$70. Advance registration closes on 3 August. All requests for advance registration must be received in the Pacific Division office by this

date to ensure proper processing. Beyond 3 August, on-site registration fees will be in effect. On-site registration will begin starting 14 August at the California Academy of Sciences and moving to San Francisco State University on 16 August. On-site registration fees for the full meeting will be: professional, \$110; K-12, community college teachers, post-docs, and retirees/emeritus, \$60; and student and participating spouses, \$45. One-day on-site professional registration will be \$80. Note that If you attend more than one day, you must pay the full registration fee. Program organizers and presenters registering in the professional category may purchase a full-meeting professional registration at the reduced, one-day rate. To be eligible for this discount, the individual must be listed as an organizer/co-organizer of a program or have submitted an abstract for presentation at the meeting.

The first twenty K-12 and community college instructors that register in advance for this meeting will receive a \$75 stipend to help defray their expenses to attend the meeting. The stipend is not available to teachers who register on-site. See page 5 for additional details.

Students have the opportunity to apply for travel awards to help defray their costs for the meeting. See page 3 for additional details.

Field trips: Pre-registration for all field trips is required due to limited seating in the vehicles and the need to inform some destinations of the number of people arriving. If you are interested in one or more of the excursions, it is recommended that you register early. At least one member of a family group requesting field trip reservations must be a paid meeting registrant. Participants who are not registered for the meeting will be charged a one-time \$10 field trip registration fee in addition to the fee for the field trip.

Please send your Advance Registration Form and accompanying payment to AAAS, Pacific Division, Southern Oregon University, 1250 Siskiyou Blvd., Ashland, OR 97520. Alternatively and with a credit card, you may phone (541-552-6869) or fax the information (541-552-8457 – a dedicated fax line).

PLEASE NOTE: Requests for refunds must be in writing and postmarked or date-stamped no later than 15 July 2009. A \$10 handling fee will be applied. An additional 3.5% deduction will be applied to the total amount for credit card refunds. No refunds will be granted after 15 July.

ACCOMMODATIONS AND FOOD SERVICE

Because of the timing of this meeting, San Francisco State University (SFSU) was not able to offer any on-campus housing. Please see "Local Hotels" below for information about hotels which are offering meeting attendees special rates.

Both the California Academy of Sciences (CAS) and SFSU have a variety of eating establishments located close to the meeting rooms. At the CAS, the Academy Cafe offers

a variety of choices in the \$3 – \$11 price range, while the Moss Room offers more of an upscale atmosphere and selection ranging from \$8 – \$14 for appetizers and \$18 – \$29 for entrees. At SFSU, the Cesar Chavez Student Center offers a wide selection of eateries, each with their unique cuisine. Prices range from \$1 – \$12.50, with many items under \$5. As an added bonus, a variety of food items are sold out of the SFSU Biology Department stockroom on the fifth floor of Hensill Hall. It is anticipated that the stockroom folks will also have a table set up near the Registration Center in the lobby area of the main entrance to Hensill Hall with limited snack items for sale.

LOCAL HOTELS AND MOTELS

As you might imagine, there are many hotels in all price ranges in the San Francisco area. Unfortunately, not many of them are close to SFSU or CAS. The following two hotels, located in the vicinity of San Francisco International Airport, are offering special rates for meeting attendees. If you'd rather stay downtown or in some other part of the Bay Area, we suggest you take advantage of hotel search engines such as Hotels.com or Expedia.com in order to find the best deals.

Please make your reservations for housing directly with the hotel/motel of your choice. Note that the AAAS, Pacific Division lists the following hotels for information only, not as an endorsement for any specific commercial enterprise.

Radisson Hotel SFO Bayfront. 5000 Sierra Point Parkway, Brisbane, CA 94005. Telephone: 415-467-4400; Fax: 415-467-4440.

Rate: \$115/night for one or two persons; \$125/night for three or four persons (depending on room). Be sure to mention that you are attending the AAAS Pacific Division meeting when making the reservation.

Dates available: nights of 13 – 20 August 2009.

Reservation deadline: 23 July 2009.

Cancellation: in writing, not later than three days prior to arrival for no penalty.

Amenities: Free parking, airport shuttle, high speed internet, indoor swimming pool, and fitness center. There is a cafe and bar on the premises.

Proximity to meeting: approximately 10 miles from SFSU (14 minutes drive time) and 10.5 miles from CAS (19 minutes drive time).

Hampton Inn San Francisco–Airport. 300 Gateway Boulevard, South San Francisco, CA 94080. Telephone: 650-876-0200; FAX: 650-876-0600. Web site for this meeting: <http://hamptoninn.hilton.com/en/hp/groups/personalized/SFOHHX-AAP-20090812/index.jhtml;jsessionid=FDXU3LPHFSMVACSGBIU2VCQ>. A link for this web site can be found on the Pacific Division Housing web page (<http://www.sou.edu/aaaspd/2009SANFRANCISCO/Housing09.html>).

Rate: \$129/night for one to four persons in a room (depending on room). Attendees must reserve at least three nights for

this rate. Be sure to mention that you are attending the AAAS Pacific Division meeting when making the reservation.

Dates available: nights of 12 – 21 August 2009.

Reservation deadline: 12 July 2009.

Cancellation: by 1 August with no penalty; after 1 August there is a charge equal to one night's stay.

Amenities: Free parking, local calls, free airport shuttle, breakfast buffet, high speed internet, fully equipped business center, guest laundry room, indoor swimming pool, and fitness center. Additionally, there is a manager's reception every Monday – Wednesday from 5:00 – 6:30 p.m.

Proximity to meeting: approximately 11 miles from SFSU (15 minutes drive time) and 12 miles from CAS (21 minutes drive time).

TRAVEL TO THE MEETING

San Francisco is served by all major airlines and many commuter airlines through San Francisco and Oakland International Airports, by Amtrak (through Oakland), by the Greyhound Bus Line, or by automobile via U.S. 101 and Interstate Highway 280. San Francisco State University (SFSU) is located at 1600 Holloway Avenue and the California Academy of Sciences (CAS) is located at 55 Music Concourse Drive in Golden Gate Park.

Travel to CAS by automobile:

From the North Bay/Golden Gate Bridge toll plaza, merge onto CA-1 S toward 19th avenue/Golden Gate Park. Drive two miles to Cabrillo Street. Turn right on Cabrillo, then right again on 14th Avenue. Proceed one block north to Balboa Street and turn right. Cross Park Presidio Boulevard and turn right onto 8th Avenue. Continue on 8th into Golden Gate Park. Once in the park make a right turn onto John F. Kennedy Drive and then an immediate left onto Hagiwara Tea Garden Drive (a one-way street). The Academy will be to your left. For direct access to the Concourse Parking Facility, follow the above directions except turn right onto 10th Avenue rather than 8th Avenue. Follow 10th Avenue into the parking structure.

From the East Bay/I-80 West, after exiting the Bay Bridge, merge onto US-101 N/Central FWY toward the Golden Gate Bridge. US-101 N/Central FWY becomes Octavia Blvd. Continue on Octavia Blvd. and turn left onto Fell Street (about 0.3 miles). Stay straight to go onto Kezar Drive, which becomes Lincoln Way. Turn right off of Lincoln Way onto 9th Avenue. 9th Avenue becomes Martin Luther King, Jr. Drive. From MLK, Jr. Drive, turn right onto Music Concourse Drive. The CAS will be on the right. For access to the Concourse Parking Facility, continue past the CAS on Music Concourse Drive and follow signs to the parking facility, whose entrance is on Fulton Street at 10th Avenue.

From the South Bay, merge onto I-380 W toward I-280/
continues on page 12, right column

continued from page 8, right column



Pacific Division booth at the AAAS National Meeting. L to R: Alan E. Leviton, Tom Dutro, Michele Aldrich and Angie Christianson.

Division booth generally has two purposes: raise awareness about and advertise all of the Divisions (Pacific, Arctic, Southwest and Rocky Mountain, and Caribbean) and advertise up-coming events in the Pacific Division. Angie Christianson, Pacific Division Executive Assistant, excels at both of these objectives. It's always surprising to see how many AAAS members are unaware of the existence of the Divisions. And Angie loves to talk about our up-coming meetings!

This year Angie spent much time talking about the newly rebuilt California Academy of Sciences, a meeting co-sponsor, as well as handing out *Newsletters* and talking about our August meeting.

Family Science Days are always a madhouse of activity. The following photographs to the right give only a taste of what really goes on.

One of the responsibilities of the Executive Director of the Pacific Division at the National Meeting is to attend the meeting of the AAAS Board of Directors to make a presentation of the activities of the Division for the past year and plans for the new year. Another responsibility is to attend the AAAS Council meeting.

At the Council meeting, Dr. David Baltimore, Chairman of the Board of Directors, reported on activities of the Board over the past year, mentioning such things as participation in a January memorial to William Golden, long-time treasurer, treasurer-emeritus, and benefactor for AAAS, the March ascension of Bruce Alberts to Editor in Chief of Science, the emergence of new AAAS-published journals in areas of the science of signalling and translational medicine, the weekly

publication of the e-mailed Weekly Policy Alert, the continuing participation of AAAS in the fight against creationist forces, participation in Science Debate 2008, the election web site, etc.

Dr. Alan Leshner, CEO of AAAS, followed Dr. Baltimore with a report on the state of AAAS. He noted that because of the conservative budgeting policies of the Association, it is in better shape than many other such associations. In his report he also touched on such subjects as the share of the federal stimulus package designated for science; the election web site that tracked candidates positions on various scientific issues; the Science and Technology Fellows program; the dual use dilemma; science and human rights; the presence of two career social networking portals, MySciNet aimed at minorities in science and CTSciNet aimed at clinical and translational researchers; Science, Ethics and Religion, a joint project with the National School Boards Association to help school board members to better understand the nature of science; the translation of Project 2061, Volume 1 into Chinese; and the launching of the Center for Science Diplomacy.



Collage of photographs from Family Science Days. All individual photographs copyright © 2009 by Colella Photography, colellaphoto.com.

Next, Dr. Bruce Alberts reported on *Science* magazine, briefly discussing the recent changes in format to include more education-related articles, news, and commentary in addition to research reports and efforts to improve standards in scientific publishing. On the latter issue, the editorial board of *Science* is seeking to discourage “honorary” participation in research reports by requiring all authors to identify their part(s) in the report, reduce unethical data manipulation by identifying a senior faculty member for each part of a report, and generating unique author identifications to better track authors.

Kai Kazumi followed with a report primarily directed to the science portion of the federal stimulus package. He noted that there would be approximately \$18 billion for research and development and \$3.5 billion for infrastructure and that the money would be added to the agencies’ (NSF, NIH, DOE, NASA, etc.) 2009 budgets but that the money can be obligated through September 2010. Kai noted that there will be lots of political pressure to spend the money quickly, which may be problematic the way dollars for science are actually committed for projects. A concern is that the money be spent well. Another concern is what happens after this huge infusion of money ends in 2010; how permanent will the stimulus funding be?

Following Kai, Vaughn Turekian made a presentation on the Center for Science Diplomacy, which provides a forum for scientists, policy analysts and policy makers to come together to discuss various issues.

The Committee on Council Affairs brought forward a proposal to modify the wording on the information form for nominating a Fellow via the “Three AAAS Fellow” procedure. The most significant changes, approved by members of the Council, was to replace submission of a curriculum vitae with a publications list and the requirement that page 2 of the form be filled out for every nominee.

A second bit of excitement involved a resolution from the floor to allow each section to put

forward one symposium each year that, except under unusual circumstances, would be accepted into the program. After much debate, the proposal was passed by the members of the Council. And that was enough fun for one day. 🍷

continued from page 10, right column

San Bruno. Then merge onto I-280 N toward San Francisco. Keep left to take CA-1 N via Exit 49B toward 19th Avenue/Golden Gate Bridge. Then turn slightly left onto 19th Ave/CA-1 N. Continue to follow CA-1 N (about 3.4 miles). Turn right onto Martin Luther King, Jr. Drive, then left onto Music Concourse Drive. The CAS will be on the right. To access the Concourse Parking Facility, continue past the CAS on Music Concourse Drive and follow the signs to the facility, which has an entrance off of Fulton Street at 10th Avenue.

Parking at the CAS:

Street parking is located throughout Golden Gate Park and the neighboring areas. If coming from the north, the Concourse Parking Facility is located on Fulton Street and 10th Avenue. From the south, enter the park from 9th Avenue and Lincoln Street then take a right on Music Concourse Drive to enter the garage. Please note that on weekends and holidays, the garage often fills to capacity early in the day. Public transportation is highly encouraged during these times.

Accessible parking is available in the Music Concourse Parking Facility. There are 15 wheelchair accessible spots near the elevator. The front entrance to the museum can be accessed from the garage by elevator.

Travel to the CAS by Public Transit:

Muni to Golden Gate Park

The #44-*O’Shaughnessy* bus stops across from the Academy at the Music Concourse on Tea Garden Drive (southbound) and in front of the Academy on Music Concourse Drive (northbound).

The #5-*Fulton* and the #21-*Hayes* stop at 8th and Fulton Streets, just outside the park. From 8th Avenue, go into the park and turn right on John F. Kennedy Drive. Then turn left onto Music Concourse Drive.

The *N-Judah Muni Metro streetcar*, which is wheelchair-accessible, stops at 9th Avenue and Irving Street. To reach the Academy, travel north on 9th Avenue into the park. 9th Avenue becomes Martin Luther King, Jr. Boulevard. Continue on MLK, Jr. Blvd. until Music Concourse Drive, where you should turn right and continue to the Academy entrance.

From City Hall/Civic Center (Living Bus Shelter)

There are four options:

Take the *N-Judah* from Muni Metro station at Van Ness

Avenue and Market Street.

Take the *Muni #5-Fulton bus* at McAllister and Polk Streets.

Take the *Muni #21-Hayes bus* at Hayes and Larkin Streets.

Take the *#74X-CultureBus* at McAllister and Larkin Streets.

From Fisherman's Wharf

Take the *Muni F trolley* to Market Street. Transfer to the N-Judah at Embarcadero Station.

From Union Square/Downtown

Take the *N-Judah* from the underground Muni Metro station at Powell and Market Streets.

Take the *#74X-CultureBus* at Geary and Powell Streets.

From CalTrain Depot

Take the *N-Judah* from 4th and King station.

From BART

Transfer from any downtown BART station (Embarcadero, Montgomery, Powell, or Civic Center) to the Muni N-Judah OR transfer from Glen Park station to Muni bus #44-O'Shaughnessy.

If you are staying at an airport hotel, you can take the hotel shuttle to San Francisco International Airport and then ride the BART to any downtown BART station (Embarcadero, Montgomery, Powell, or Civic Center) and transfer to the Muni N-Judah OR transfer from Glen Park station to Muni bus #44-O'Shaughnessy.

Travel to SFSU by automobile:

Coming from the North Bay on US-101 S, cross the Golden Gate Bridge and then take the 19th Avenue/Highway 1 S exit. Follow 19th Avenue to campus, located to the right at Holloway Ave. To drive to the campus parking structure, turn right onto Holloway Ave. Bear right onto Font Blvd. and then turn right onto Lake Merced Blvd. Almost immediately turn right onto State Drive, which is the entrance to the parking garage. Please refer to the map on page 39 of this *Newsletter*

for directions to the science complex (Hensill Hall and Science), where the meeting rooms are.

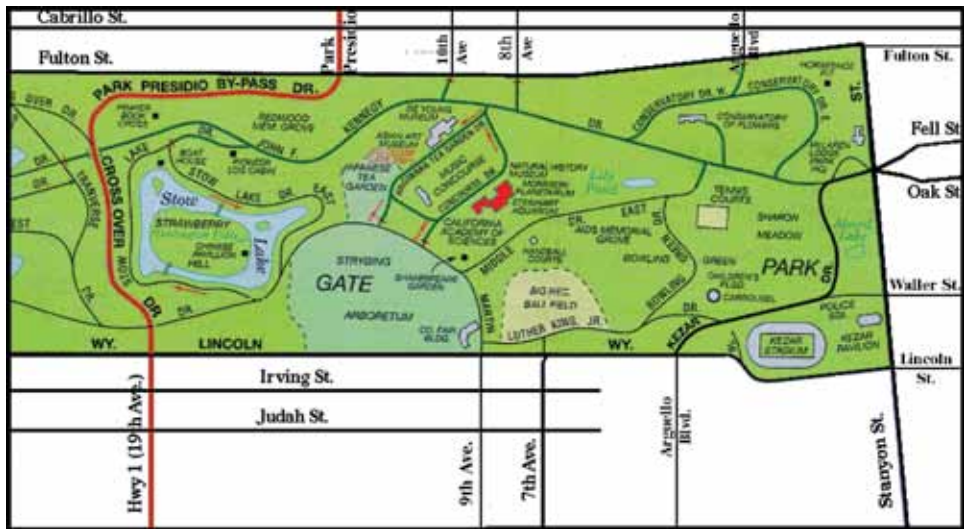
Coming from the East Bay on I-80 W, take I-80 West across the Bay Bridge to Highway 101 South. Take 101 South to I-280 toward Daly City. Take the San Jose Avenue/Mission St. exit (second Mission St. exit, which immediately follows the Ocean Avenue exit), bearing right onto Sagamore Street to Brotherhood Way to Junipero Serra Boulevard North. Take Junipero Serra Boulevard to Holloway Avenue, turn left on Holloway Avenue to campus at 19th Avenue.

To get directly to the parking garage stay on Brotherhood Way and turn right onto Lake Merced Blvd. Turn right onto State Drive which is the third light after turning onto Lake Merced Blvd. and leads directly to the parking garage. Please refer to the map on page 39 of this *Newsletter* for directions to the science complex (Hensill Hall and Science), where the meeting rooms are.

Coming from the South Bay on US-101 N, take I-280 N and exit at 19th Avenue. Take Junipero Serra Boulevard to Holloway Avenue, turn left on Holloway Avenue to campus at 19th Avenue. To drive to the parking structure, continue on Holloway Ave. and bear right onto Font Blvd. Then turn right onto Lake Merced Blvd and almost immediately turn right onto State Drive, which is the entrance to the parking garage. Please refer to the map on page 39 of this *Newsletter* for directions to the science complex (Hensill Hall and Science), where the meeting rooms are.

Parking at SFSU

Visitor parking at San Francisco State University is in the large Lot 20 Parking Garage, located central to the campus (please refer to map on page 39 of this *Newsletter*). Note that Level 4i Orange to 4n Orange and the roof level is restricted to staff and faculty between 7a.m. and 5p.m. Monday - Friday. The garage is open 24 hours a day, seven days a week. Cost as of March 2009 is \$1.00 per hour with a \$5.00 maximum. Pay stations will accept quarters, \$1, \$5 and \$10 bills. To enter the parking garage, turn east onto State Drive from Lake Merced Boulevard.



Map of Golden Gate Park. Not all streets surrounding the park are shown. The California Academy of Sciences is colored red. The footprint shown is for the previous structure, not the current one.

Travel to SFSU by Public Transit:
By MUNI:

The following MUNI bus lines service the SFSU campus.

M – Oceanview- streetcar from downtown and Balboa Park Station.

17 – Park Merced to West Portal Station.

18 – 46th Avenue/Zoo, Sunset and Richmond Districts, Palace of the Legion of Honor.

26 – Valencia to Ocean View, Balboa Park BART station, Glen

Park Station, Mission District to 5th & Mission.

28 – 19th Avenue to Daly City BART station, Sunset and Richmond Districts, Golden Gate Bridge, Fort Mason. (28L-limited service Monday-Friday only).

29 – Sunset to Ingleside, Excelsior, Bayview districts and Candlestick Park.

By BART:

Take any San Francisco bound BART train to the Daly City BART station. From the Daly City BART station take MUNI's 28 line. Be sure to obtain a transfer (good for one ride to and from BART) from the machine in the lobby before exiting the station. Exit at the 19th Ave. and Holloway Avenue stop. SamTrans' 3B line also serves the campus from the Daly City BART station.

If you are staying at an airport hotel, you can take the hotel shuttle to San Francisco International Airport and then ride the BART to the Daly City station to pick up the MUNI 28 line to campus.

REGISTRATION CENTER

The Registration Center will be set up as follows:

14 and 15 August at the California Academy of Sciences, near the entrance to the Forum.

16 – 19 August at San Francisco State University in the main entrance lobby (third floor, which is street level for 19th Avenue) of Hensill Hall. Hours are planned to be Sunday, 3:00 p.m. – 7:00 p.m.; Monday, 7:30 a.m. – 4:30 p.m.; Tuesday, 7:30 a.m. – 4:00 p.m.; Wednesday, 7:30 a.m. – 2:30 p.m.

MEETING ROOMS

This year's technical sessions will meet in various classrooms and other facilities of San Francisco State University

and also in the Theatre (Forum) at the California Academy of Sciences. Meeting rooms at SFSU will be equipped with Macintosh computers running PowerPoint 2008, and standard computer projectors. Speakers requiring other specialized equipment such as slide or overhead projectors must make their requests when they submit their abstracts. If available, specialized equipment will be provided. If



Hensill Hall, site of most of the meeting rooms and the Registration Center on the SFSU campus.

rental costs are incurred, payment will be the responsibility of the requestor.

DATES, TIMES AND LOCATIONS OF PRESENTATIONS

The meeting rooms, dates and times of presentations for the program will be published in the "Program with Abstracts" issue of the Proceedings (Vol. 28, part 1), which will be given to those who register for the meeting. Speakers may obtain final confirmation of the time and place of their presentation by clicking on the appropriate link on the Pacific Division web site (pacific.aaas.org) starting 24 July 2009.

COMPUTERS AND POWERPOINT PRESENTATIONS

Meeting rooms at San Francisco State University will be outfitted with Macintosh computers running OS 10.4 and PowerPoint 2008 and standard data projectors. If you are planning to use PowerPoint for your presentation, you must make sure that it will run on the Macintosh platform. Only CD-ROMs and thumb/USB/flash drives may be used to load presentations onto the computers. If you are preparing your presentation on a Windows computer, make sure it will load to a Macintosh running OS 10.4.

CALL FOR PAPERS AND ABSTRACTS

Members of AAAS and its affiliated societies, students, teachers, and other scientists are encouraged to participate in the annual meeting and present papers. Those wishing to present an oral or poster paper at one of the sessions must follow the instructions on page 33 of this *Newsletter* (Call for Papers and Abstracts) and submit their abstracts via e-mail to the chair (and co-chair) of the appropriate Pacific Division Affiliated Society or Section and also to the Pacific Division office (rchristi@sou.edu). See page 31 of this *Newsletter* for the list of sections and their chairs/co-chairs. *Be sure to include the word ABSTRACT and your last name in the subject line of the e-mail submission.* Doing this will assure that you will receive an automatic e-mail reply confirming your submission. Please note: ***the deadline for receipt of abstracts is 15 May 2009.*** Submissions will be reviewed by section chairs, with decisions regarding acceptance being sent via e-mail shortly thereafter. If you would like to discuss your submission with the chair of the section to which you are submitting it, please refer to page 31 of this *Newsletter* for the list of sections, chairs, and contact information. If your abstract contains special characters, fax a printed copy with the special characters clearly marked and notations indicating the font used to the Pacific Division office, 541-552-8457, in addition to submitting it via e-mail.

STUDENT AWARDS FOR EXCELLENCE

The AAAS, Pacific Division offers each affiliated society and section participating in the annual meeting the opportunity to recognize outstanding student participants through the presentation of Awards of Excellence and cash prizes of \$150 for first place and \$75 for second place. Additionally, each winner receives a one-year student membership in AAAS, which includes weekly issues of Science magazine. Societies often supplement these awards with their own cash prizes.

In 2009, seven Division-wide awards are available: Laurence M. Klauber Award for Excellence (unrestricted); Geraldine K. Lindsay Award for Excellence in the Natural Sciences; J. Thomas Dutro, Jr. Award for Excellence in the Geosciences; Presidents' Award for Excellence (unrestricted); Rita W. Peterson Award for Excellence in Science Education; Best Poster Award (for posters only but otherwise unrestricted); and the AAAS Robert I. Larus Travel Award, which provides travel and other expenses for the awardee to attend the 2010 national meeting of AAAS in San Diego, CA, 18 – 22 February 2010 for the purpose of presenting their winning presentation as a poster. The Klauber, Lindsay, Dutro, Presidents', Peterson, Best Poster, and Larus awards are given to those students whose presentations are judged the most significant in the advancement or understanding of science.

To be eligible for a sectional award or one of the Divisional awards, a student must register for the meeting, present the paper or poster, and be the principal research investigator. Student presentations, oral and poster, are judged on their abstracts, content, style of delivery or presentation, and audiovisual aids and/or handouts (if used). The evaluation forms for both oral and poster presentations are posted on the Division's meeting web page. Students who are competing for Awards of Excellence are invited to be the Division's guests at the annual Banquet Tuesday evening, 18 August. Festivities that evening include the presentation of student awards. If you are one of these students and plan to attend the banquet, please be sure to fill in the appropriate box on the Advance Registration form.

IMPORTANT NOTE: All judging for student awards ends by 3:00 p.m. on Tuesday, at which time the judges go into closed session to determine the winners. If you are a student wishing to compete for an Award of Excellence and your oral symposium presentation is scheduled later Tuesday afternoon or Wednesday, you must, in addition to presenting orally as part of the symposium, prepare a poster for presentation at one of the poster sessions earlier in the week. That way your presentation will be judged and you will be in the pool of potential prize winners. Double presentations (both poster and oral) may only occur if your presentation is part of a symposium. All oral contributed paper sessions are scheduled to ensure that student presenters are judged prior to the cut-off on Tuesday afternoon.

SPECIAL EVENTS

The following special events are planned for the meeting.

Friday and Saturday, 14 and 15 August: Darwin and the Galapagos Symposium. Please refer to page 21 of this *Newsletter* for information regarding this symposium, which commemorates the anniversaries of both the birth of Charles Darwin and the publication of his most famous book, On the Origin of Species. Meeting registration is required to attend this program, which is at the California Academy of Sciences.

Sunday Evening Plenary Lecture. 16 August, 7:00 p.m. in the Science Building at San Francisco State University. Dr. Robert Chianese (Professor Emeritus, Department of English, California State University, Northridge, CA) will present his popular lecture, "Ecological Awareness in American Landscape Art: Depicting and Repairing the American Wasteland."

Sunday Evening Welcome Wagon and Cracker Barrel Reception. 16 August, 7:45 p.m. in the main entrance lobby (third floor, which is at street level for 19th Avenue) of Hensill Hall, San Francisco State University. This reception, hosted by the San Francisco State University Biology Department, begins immediately following Dr. Chianese's lecture and continues to about 9:15 p.m. All registrants and their families are invited to enjoy the conviviality of this event, which will include a selection of soft drinks, chips, pretzels and good conversation. Please wear your registration badge.

Monday Evening Plenary Lecture. 17 August, 7:00 p.m. at the Seven Hills Center at San Francisco State University. Dr. Cathryn Newton (Dean Emerita and Professor of Interdisciplinary Sciences, Syracuse University, Syracuse, NY) will present her talk, "Shipwrecks as Fossils."

Monday Evening President's Reception. 17 August, 7:45 p.m. at the Seven Hills Center, San Francisco University. Dr. Robert A. Corrigan, President of San Francisco State University, will welcome conference attendees at an informal hosted reception from 7:45 p.m. – 9:15 p.m. All registrants and their families are invited to enjoy this relaxed occasion. Non-registered family members are welcome, but must be accompanied by a registrant. Please wear your registration badge.

Tuesday Evening Student Awards Banquet. 18 August, 6:00 p.m. in the Seven Hills Center at San Francisco State University. Tuesday evening will be an exciting time for students as Division representatives will announce the names of student winners of Awards of Excellence and also winners of the Division's Laurence M. Klauber Award for Excellence (unrestricted), Geraldine K. Lindsay Award for Excellence in the Natural Sciences, J. Thomas Dutro, Jr. Award for Excellence in the Geosciences, Rita W. Peterson Award for Excellence in Science Education, the President's Award for Excellence (unrestricted), the Best Poster Award (for poster presentations only but otherwise unrestricted), and the AAAS Robert I. Larus Travel Award, which provides for travel and

other expenses for the awardee to attend the 2010 annual meeting of AAAS in San Diego, CA 18 – 22 February, in order to present his/her winning presentation as a poster.

The Klauber, Lindsay, Dutro, Presidents', Best Poster, Peterson, and AAAS Larus awards are given to those students whose presentations are judged the most significant in the advancement or understanding of science. Eligible students must: (1) register for the meeting, (2) present the paper or poster being judged, and (3) be the principal research investigator. Student presentations, oral and poster, are judged on their abstracts, content, style of delivery or presentation, and audiovisual aids and/or handouts (if used). The evaluation forms (oral and poster) are posted on the Division's web site.

The evening's events will take place in the Seven Hills Center on the San Francisco State University campus (see map on page 39 of this *Newsletter*). A hosted reception (non-alcoholic drinks only) will begin at 6:00 p.m., followed by dinner service at about 6:45 p.m. Three entrees are available for dinner: *Vegetarian Moussaka* (roasted eggplant layered with lentils, potatoes and feta cheese, topped with a creamy bechamel sauce and parmesan cheese, baked until golden brown and bubbling and served with an oregano and pine nut pilaf); *Shrimp Strudel Chardonnay* (flaky phyllo dough wrapped around a mixture of pink shrimp, onions, mushrooms, roasted red peppers, and herbs, baked until golden brown and served with a Chardonnay cream sauce); and *Prime Rib of Beef* (prime rib of beef roasts coated with garlic and herb crust, slowly roasted to medium-rare, carved, served with Cabernet jus, creamy horseradish sauce, a buttery mini popover, and sour cream and chive mashed potatoes). All entrees include fresh seasonal vegetables, a green salad, dinner rolls and butter, and dessert. The cost is \$35 per person and there are a limited number of tickets available. Please be sure to indicate on the registration form (see page 35 of this *Newsletter*) how many of each entree you wish to purchase! See the note below regarding students in competition for Awards of Excellence.

After dinner will be the announcement of student presentation awards, followed by the Presidential Lecture, presented by Dr. Anne A. Sturz (Department of Marine Science and Environmental Studies, University of San Diego, CA and President of the Pacific Division). Please note that student award winners are expected to stay to the end of the evening's activities in order to participate in a group photograph. The evening should end by 9:30 p.m.

Students in competition for Awards of Excellence are invited to be guests of the Division for this event. Be sure to check the appropriate box on the Early Registration Form (see page 35 of this *Newsletter*) indicating your plans to attend and you will be provided a ticket at no cost!

Wednesday Morning Business Meeting of the Council of the Pacific Division. The Council of the AAAS, Pacific Division will hold its annual breakfast and business meeting in the Blakeslee Room on top of Thornton Hall on the San

Francisco State University campus starting at 7:00 a.m. on Wednesday, 19 August. The Council will elect officers, Executive Committee and Council members, discuss programs for the 2010 and 2011 annual meetings, and transact such other business as is required by the Division's By-Laws. This is an open meeting and Pacific Division members with an interest in the governance of the Division are welcome to attend.

PUBLIC LECTURES

The following public lectures are planned. Additional ones may be scheduled as time permits. All members of the public are invited to attend these lecture at no charge (except for the Presidential Lecture, for which there is a charge \$35 to attend the banquet.

Sunday Evening Plenary Lecture. 16 August, 7:00 p.m. in the Science Building at San Francisco State University. Dr. Robert Chianese (Professor Emeritus, Department of English, California State University, Northridge, CA) will present his popular lecture, "Ecological Awareness in American Landscape Art: Depicting and Repairing the American Wasteland." Dr. Chianese has published an artist's book of photographs with poems, chap books, and individual poems. As an academic, he has published essays in the humanities and American art history, an anthology of utopian literature, and numerous critical articles about the humanities and their relations to science and technology. He is currently chair of the General and Interdisciplinary Education Section of the AAAS, Pacific Division.

Monday Evening Plenary Lecture. 17 August, 7:00 p.m. in the Science Building at San Francisco State University. Dr. Cathryn Newton (Dean Emerita and Professor of Interdisciplinary Sciences, Syracuse University, Syracuse, NY) will present her talk, "Shipwrecks as Fossils." Dr. Newton is known for her research in paleobiology and paleoecology, including work on ancient biogeography. Her research emphasizes interdisciplinary approaches to marine mass extinction and environmental change. She has published widely in leading scientific publications, and has served as editor-in-chief of *Paleogeography, Paleoclimatology and Paleoecology*.

Tuesday Evening AAAS, Pacific Division Presidential Lecture. Following the presentation of student awards at the Student Awards Banquet, Dr. Anne A. Sturz (Department of Marine Science and Environmental Studies, University of San Diego, CA and President of the Pacific Division) will present the Presidential Lecture.

Please watch the Pacific Division web site for updates on these and other lectures as they are added.

FIELD TRIPS

All field trips are open to meeting registrants and their families. At least one member of a family must be registered for the meeting. Unregistered family members will be charged

an additional one-time-only \$10 field trip registration fee. This fee is paid only once for this meeting, regardless of how many field trips in which a non-registrant participates.

Due to limited space, advance registration is required for all field trips. Reservation and payment of field trip fee(s) are included on the Advance Registration Form (see page 35 of this *Newsletter*).

A full refund will be granted if a trip is cancelled by the Division. If a registrant cancels via e-mail or written notification received in the Pacific Division office no later than 15 July 2009, the registrant will receive a refund of the fee(s) paid less a \$10 processing fee. If paid by credit card, an additional 3.5% of the original charge will be deducted from the amount being refunded to help pay for fees charged to the Division by credit card companies. With the exception of the Division cancelling a field trip, no refunds will be granted after 15 July.


Please note that departure times are absolute and return times are approximate. Also, all excursions depart from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this *Newsletter*).

Sunday, 16 June: 9:00 a.m. – 4:00 p.m. Field Trip #1: Presidio Field Excursion. This excursion departs from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this *Newsletter*) promptly at 9:00 a.m. A Pacific Division representative will be present to provide participants with meeting materials, so please arrive early! Includes transportation, lunch and applicable fees. Limited to 28 participants. Cost: \$25 per person.

The Presidio of San Francisco was in constant use as a military post for two centuries, beginning in 1776 when Spanish soldiers established a fort in the vicinity of El Polin springs in the Tennessee Hollow watershed. After a brief occupation by the Mexican army, the U. S. Army occupied the site in 1846. Some San Francisco citizens camped in the Presidio after their homes had been destroyed in the 1906 earthquake. Today, the Presidio is the nation's largest urban national park. The U. S. Army transferred it to the National Park Service in 1994. A number of major environmental restoration projects are underway within the Presidio as well as archeological sites that have unearthed elements of the past history of the area.

Led by William B.N. Berry (Department of Earth and Planetary Sciences, University of California, Berkeley, CA) and Mark Frey (Presidio Trust, San Francisco, CA), this excursion will visit El Polin Springs, significant restoration sites, and sites that address park programs in issues of sustainability.

CAUTION: there will be about a ten minute walk on paved streets at one point along the way.

 **Sunday, 16 June: 8:30 a.m. – 2:30 p.m. Field Trip #4: San Andreas Fault on the San Francisco Peninsula.** This excursion departs from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this

Newsletter) promptly at 8:30 a.m. A Pacific Division representative will be present to provide participants with meeting materials, so please arrive early! Includes transportation, applicable fees, and box lunch. Limited to 23 participants. Cost: \$50 per person.

The coastal region south of San Francisco is both the boundary between land and sea and also the North American and Pacific plates of the Earth's crust. As such, it is an area of distinctive geologic features ranging from interesting landforms to major Earth structures. Dominant among these is the San Andreas Fault, an active crustal break that has been the source of major earthquakes since its origin millions of years ago. On this field trip, led by Ray Pestrong (Department of Geosciences, San Francisco State University), participants will visit the Fault in a number of locations that display some of its many surficial expressions, and study other geologic sites that owe their uniqueness to its presence. These include natural geologic features like landslides and coastal erosion, and examples of major man-made structures built within the fault zone.

Wednesday, 19 August: 12:30 p.m. – 5:00 p.m. Field Trip #2: Pigments, Perfumes and Poisons at the San Francisco Botanical Garden. This excursion departs from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this *Newsletter*) promptly at 12:30 p.m. Includes transportation, applicable fees, and box lunch. Limited to 21 participants. Cost: \$25 per person.

The San Francisco Botanical Garden (<http://www.sfbotanicalgarden.org>), located in Golden Gate Park, is a most scenic place that contains an extensive collection of plants from all over the world. Led by Dr. Margareta Séquin (Department of Chemistry, San Francisco State University, San Francisco, CA) our half-day plant chemistry field trip on "Pigments, Perfumes and Poisons" will take us to some of the Botanical Garden's sections where we'll explore really interesting plants and their chemistry. The Garden of Fragrance will provide us with many smells (and their molecules) from flowers and leaves. The Redwood Trail will lead us through a unique plant community to the large section on California native plants. There we will get acquainted with some of the rich plant diversity of California, and we'll investigate plant pigments (and some related chemistry of color) and extensive plant defenses. At the conclusion of the tour there will be time to explore more of the Botanical Garden or to shop for plant books and nature-related items at the excellent San Francisco Botanical Garden Bookstore.

CAUTION: this excursion will include about two miles of walking on possibly muddy trails. Wear comfortable walking shoes and clothing appropriate for potentially chilly, foggy weather.

Thursday, 20 August 2009: 7:30 a.m. – 2:30 p.m. Field Trip #3: Jasper Ridge Biological Preserve. This excursion departs from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this *Newsletter*)

promptly at 7:30 a.m. Includes transportation, applicable fees, and box lunch. Limited to 21 participants. Cost: \$40 per person.

This field trip, led by Philippe Cohen (Administrative Director, Jasper Ridge Biological Preserve) and Cindy Wilber (Education Coordinator, Jasper Ridge Biological Preserve) will include some or all of the following components.


- *Research taking place at the Preserve.* The research ranges from invasive species ecology to the Jasper Ridge Global Change Experiment. The Jasper Ridge Global Change Experiment is a ten-year experiment that has exposed grassland plots to four global environmental changes, including elevated carbon dioxide, warming, nitrogen deposition, and precipitation. Stanford Researchers are also studying the affects of invasive ants on Jasper Ridge ecosystems. In particular, they are studying the spread of Argentine ants through Jasper Ridge, and how they are affecting important mutualisms between native ant and blue butterflies. In addition, they are exploring ways to control for Argentine ants in plant nurseries and in open space preserves.

- *Searsville Dam and surrounding environs* and the cornucopia of issues associated with trying to decide the future of a 120+ year old dam. Searsville Dam is a prototype for the challenges of managing old dams in sensitive environments. We will meet on the dam for an overview of the dam, its reservoir, and the complex web of issues surrounding its operation and future.

- *Hike through some of the richest habitat in the Santa Cruz mountains.* Although the Preserve is a little less than 1,200 acres, its habitats represent over 10% of the California flora. This remarkable biological diversity will be readily visible as we hike through a broad range of habitats, from riparian woodland to serpentine grassland, from wetlands to oak savanna and chaparral.

- *Brief tour of Jasper Ridge's award winning green building,* the Leslie Sun Field Station. Learn about the many energy and material saving strategies used in Stanford's first green building - the Leslie Shao-ming Sun Field Station. In 2005, the American Institute of Architects Committee on the Environment honored the building as one of the nation's eight most sustainable projects in 2005.

CAUTION: This excursion includes about two hours/four miles of hiking, with a couple of steep sections over which a person in reasonably good shape should have no problem. Be sure to wear appropriate hiking shoes and bring a hat and sunscreen. There is some occasional poison oak along the trails and roads so long pants rather than shorts are recommended.

 **Thursday, 20 August: 8:30 a.m. – 4:00 p.m. Field Trip #5: Natural History of Marin County.** This excursion departs from the lower (State Drive) entrance to the SFSU parking structure (see map on page 39 of this *Newsletter*) promptly at 8:30 a.m. Includes transportation, applicable fees, brief habitat descriptions and species lists of dominant organisms, and

box lunch. Limited to 23 participants. Cost: \$50 per person.

Marin County has a rich diversity of habitats and an especially diverse assemblage of plant communities. Led by Terry Gosliner, Curator of Invertebrate Zoology, California Academy of Sciences, this full-day excursion will take you to many of these diverse areas spanning both the North American and Pacific Plates.

The trip will depart from San Francisco State University campus, crossing the Golden Gate Bridge and stopping at Bootjack Picnic Area at Mount Tamalpais State Park. Here we will hike about 1.5 miles each way through mixed evergreen, chaparral and serpentine habitats to observe the profoundly different habitats and abrupt changes depending on soil types.

From Mt. Tamalpais we will travel to Pt. Reyes National Seashore, stopping at several key locations along the way. The differences between plant communities as we transition from the North American Plate to the Pacific Plate will be evident as we enter Bishop Pine forests, coastal scrub and strand communities, ending at the Point Reyes Lighthouse. We return via Sir Francis Drake Boulevard, passing by Samuel P. Taylor State Park and returning back across the Golden Gate Bridge.

CAUTION: Coastal California can be hot (in the 90's) and may also include fog and strong winds and temperatures in the 50's at Pt. Reyes. It is important to have sun block, hats and protective clothing. It is advisable to dress in layers depending on the weather. Also, be sure to wear hiking shoes or boots suitable for the three mile hike. Be prepared for moderately steep portions of trails and then more level walks along a fire road.

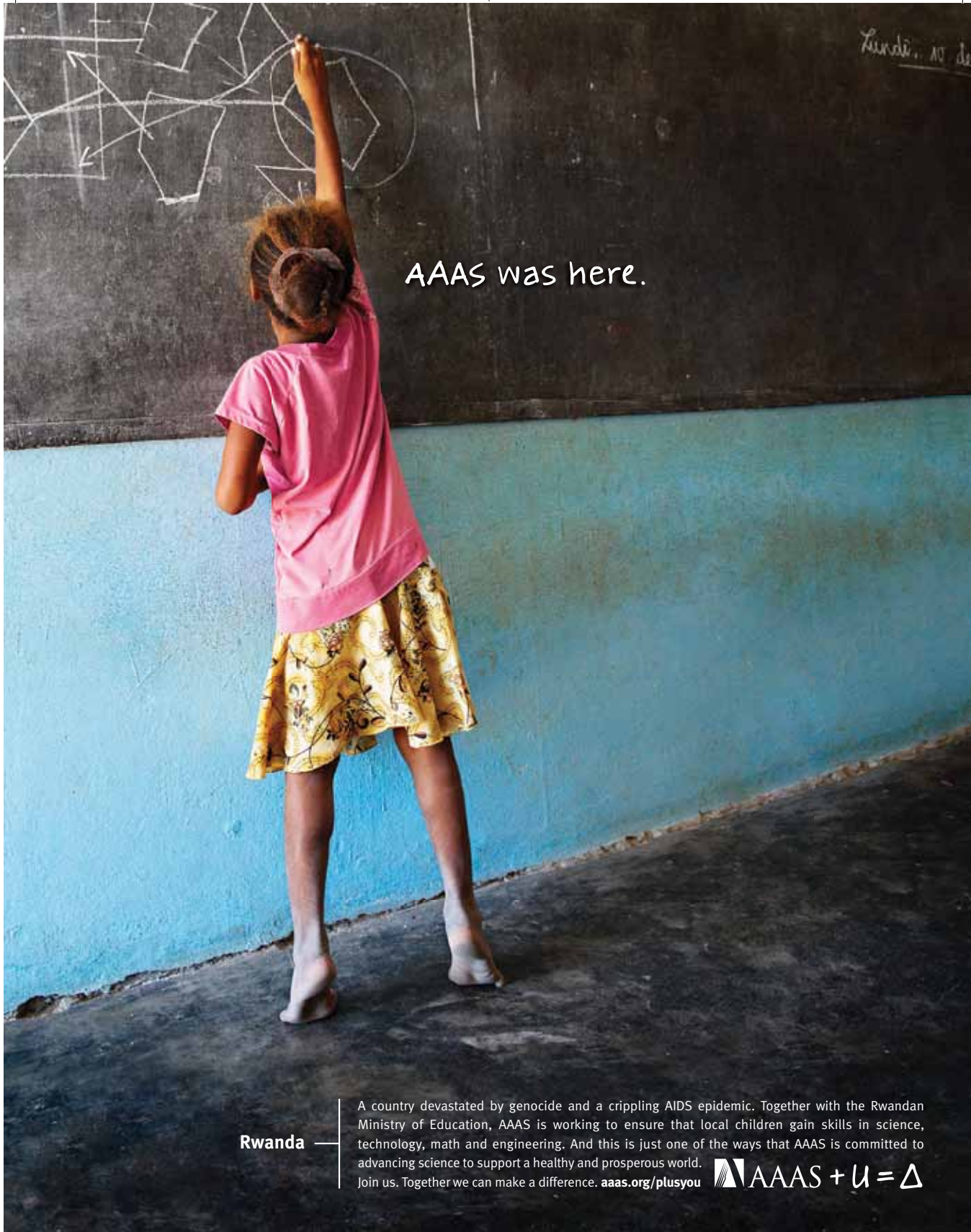
WORKSHOPS

MONDAY, 17 AUGUST

Discovering Darwin

Organized by Leó Laporte (Professor Emeritus, Department of Earth and Planetary Sciences, University of California, Santa Cruz; 650-364-3386, laporte@ucsc.edu). *Scheduled for Monday, 17 August, at San Francisco State University.*

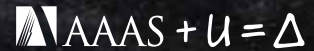
The purpose of this workshop is to provide college instructors a basis for offering their own course on Charles Darwin. The presentation will use as a model a web-based course (<http://campus.digication.com/darwin/Home/>) that examines the life and chief work of Darwin. This course was designed and offered by Dr. Laporte for many years for non-majors, both at Brown and at the University of California, Santa Cruz. The web site will be reviewed page by page to describe the content, purpose, and logic of each page/topic, and answer questions on the way. The presentation will not be a reading of each page, line by line, but will instead be a kind of "voice over" as we go through it together. There will be enough time for the presenter's explication, participants sharing their own possible experiences about teaching some



AAAS was here.

Rwanda

A country devastated by genocide and a crippling AIDS epidemic. Together with the Rwandan Ministry of Education, AAAS is working to ensure that local children gain skills in science, technology, math and engineering. And this is just one of the ways that AAAS is committed to advancing science to support a healthy and prosperous world. Join us. Together we can make a difference. aaas.org/plusyou



aspect of Darwin, questions about pedagogy, and what in fact happens in the classroom, etc. The overall goal is to enable others to develop their own course. A CD copy of the web site will be made available to all participants at no charge.

MONDAY/TUESDAY, 17/18 AUGUST

Hands-on With Bio-Rad Molecular Biology Kits for Teachers

Bio-Rad Corporation of Hercules, CA, is presenting the following lecture/discussions and hands-on workshops to give middle school, high school and university instructors the opportunity to train in molecular techniques and also to try out some of the molecular biology kits they offer to educators. There is no additional charge for these workshops. However, participants must be registered for the meeting. A special "Bio-Rad Workshop Only" meeting registration is available at the reduced fee of \$10.00 (see page 35 of this *Newsletter*). Be sure to wear your meeting badge to each session. Space is on an "as available" basis and preregistration is required. Please indicate your interest in these workshops on the Advance Registration Form. Upon request, Bio-Rad representatives will provide certificates of attendance for those desiring to utilize these workshops for professional development credits. *Scheduled for Monday and Tuesday, 17 and 18 August at San Francisco State University.*

MONDAY, 17 AUGUST

Using Bio-Rad Kits to Start a Biotech Program (morning for one hour) Biotechnology impacts multiple subject areas and engages students in the rapidly changing scientific landscape. Looking for inquiry-based lab activities that are easy to set up, guaranteed to work, and come with complete curriculum? Join us for an overview of the Biotechnology Explorer program and learn how our kits and research-quality equipment combine to bring relevant real-world lab experiences to your students. The kits can be used individually to enhance your life science, agricultural or health science courses or in series as a complete biotechnology course.

Cloning and Sequencing Explorer Series (morning for one hour) In this unique modular lab series, students are guided through an innovative research workflow identical to those performed in genomics labs worldwide. Learn about this multiple-week lab course, where students combine traditional and cutting edge molecular biology techniques and bioinformatics to clone, sequence, and analyze a housekeeping gene from a plant of your choice ensuring each class produces unique and novel data.

Characterize a Novel Gene with GAPDH PCR (afternoon for two and a half hours) How do you clone a gene when you don't know the DNA sequence? Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) is a vital metabolic enzyme involved in one of the most basic of biological processes – glycolysis in respiration. In this workshop you will use degenerate and nested PCR primers from this highly conserved gene

to amplify GAPDH genes from uncharacterized organisms as the first step towards cloning.

TUESDAY, 18 AUGUST

Genes in a Bottle™ Kit (morning for one hour) Can I see your DNA? Introduce your students to molecular biology with their own DNA. In this hands-on workshop you will extract the DNA from your own cheek cells then watch it precipitate. Bring only your imagination and take home your own DNA — in a necklace!

pGLO™ Bacterial Transformation Kit (morning for one hour) Genetic engineering has led to a phenomenal explosion of new health treatments, agricultural applications, and environmental solutions. In this hands-on workshop, you will create your own genetically modified organisms and designer proteins and explore the mechanisms of gene expression and genetic selection. You will transform bacteria with a bioluminescent jellyfish gene that codes for Green Fluorescent Protein (GFP)! AP Biology Lab 6. *All participants will receive a free UV lamp and lab prep DVD!*

What's Next after pGLO™ Bacterial Transformation? (afternoon for two hours) Don't stop at cloning the gene — identify the protein responsible for the green fluorescence! Take white and green colonies from your transformed plates, prepare sample lysates and identify the pGLO protein using polyacrylamide gel electrophoresis. The bacterial proteome contains thousands of proteins, but only the cloned GFP protein glows! Use the phenotypic trait of this protein to quickly identify the protein within the complex mix. DNA > RNA > PROTEIN > TRAIT — Green Fluorescence!

TUESDAY, 18 AUGUST

Science Education for New Civic Engagements and Responsibilities (SENCER)

Organized by Amy Schacter (Associate Provost, Office of Research Initiatives, Santa Clara University, Santa Clara, CA; 408-551-7041, ashacter@scu.edu), co-organized by Steve Bachofer (Department of Chemistry, Saint Mary's College); 925-631-4694, bachofer@stmarys-ca.edu). *Scheduled for Tuesday, 18 August at San Francisco State University.*

Initiated in 2001, Science Education for New Civic Engagements and Responsibilities (SENCER) is a national dissemination project funded by the National Science Foundation. SENCER has established and supported an ever-growing community of faculty, students, academic leaders, and others to improve undergraduate STEM (science, technology, engineering and mathematics) education for non-science majors by connecting learning to critical civic questions. In 2007, the SENCER project established five regional SENCER Centers of Innovation (SCI). The SCIs expand the work of SENCER by organizing regional workshops designed to foster a multi- and interdisciplinary approach to science education with a focus on civic engagement. SCI-West is organizing this workshop to provide opportunities for AAAS members to engage

SENCER faculty, discuss SENCER approaches, and consider developing regional collaborations. The AAAS Pacific Division SENCER workshop will have four one-hour segments:

- *SENCER Overview and Model Courses* (Amy Shachter, Santa Clara University) A dynamic introduction to the SENCER project including an overview of an interdisciplinary set of SENCER Model courses.
- *Designing a SENCER course* (Amy Shachter, Santa Clara University) An interactive workshop that takes participants through a nine step program to design a SENCER science course.
- *SCI-West Watershed Research Project* (Steve Bachofer, Saint Mary's College) An overview of the watershed research project model being developed by SCI-West including a discussion of ways to become involved.
- *Assessment using the SENCER Self-Assessment of Learning Gains Instrument* (Stephen Carroll, Santa Clara University) An introduction to the SALG instrument and how it can be used to understand perceptions of student learning gains.

WEDNESDAY, 19 AUGUST

Forging California's Path to Zero Net Energy

Organized by Karina Garbesi (California State University East Bay, Hayward, CA; karina.garbesi@csueastbay.edu) and co-organized by Elvyra San Juan (Assistant Vice Chancellor, California State University, Office of the Chancellor, Long Beach, CA; esanjuan@calstate.edu), Matt St. Clair (Sustainability Manager, University of California, Office of the President, Oakland, CA; Matthew.StClair@ucop.edu), and Daniel Press (Professor, Department of Environmental Studies, University of California, Santa Cruz, CA; dpress@ucsc.edu). *Scheduled for 10:00 a.m. – 3:00 p.m. on Wednesday, 19 August at San Francisco State University.*

The California Public Utilities Commission's Long-Term Energy Efficiency Strategic Plan establishes an ambitious goal: by 2030 all new commercial buildings will be zero net energy and 50% of existing buildings will be retrofit thereto. Achieving this will require (1) rapid learning and adaptation from early implementation projects and (2) rapid development of the state's professional workforce capacity. The UC/CSU systems are ideally placed to serve both roles, indeed the task is unachievable without our intensive focus thereon. Through phased implementation at campuses distributed throughout the state's climate zones, the two systems will identify and address policy and technical barriers, and highlight planned beta test models to implement zero energy building networks. Requiring intensive collaboration between research, management, and capital planning, the universities will become laboratories of practice, integrating undergraduate and graduate research into the process. While the near-term costs of these investments will be admittedly large, the near-term pay off will be as well, in the civic engagement of our universities and the vital enrichment of the learning environment. The long-term payoffs will be very substantial in terms of cost

savings and the environmental legacy we pass on to our children. This workshop seeks to develop a commitment to this process, a common vision for implementation and policy, and to identify critical research needs, key participants, their roles, and the next steps.

TECHNICAL SESSIONS SYMPOSIA

The following symposia are being planned for the annual meeting. Although most symposia are organized around invited papers, organizers often will consider adding one or more contributed papers if they are relevant to their programs. Should you wish to participate in one of these symposia, contact the symposium organizer directly. Should you wish to present a paper in one of the contributed paper sessions, refer to pages 33 and 31 of this *Newsletter*. Check the Division's web site, pacific.aaas.org, for the latest information on symposia and other program events.

Please remember that the listings below are tentative and subject to change. If you plan to attend the meeting largely for one symposium or technical session, check the Division's web site for updates to the program or phone the Division's office at 541-552-6869 to confirm the status of the session(s) before committing travel funds. As additional symposia are added to the program, they will be posted on the Division's web site (<http://pacific.aaas.org>).

(1) Darwin and the Galapagos. Organized by Michael Ghiselin (California Academy of Sciences; mghiselin@calacademy.org). *Scheduled for all day Friday and Saturday, 14 and 15 August, at the California Academy of Sciences (CAS).* **IMPORTANT NOTE:** Space for attending this symposium is limited. Admission will be by ticket only. Tickets may be requested in advance at no additional cost on the Advance Registration Form (see page 35 in this *Newsletter*). Each meeting registrant is allowed one ticket. Should any tickets remain after the 3 August deadline for advance registration, they will be available with on-site registration at the CAS the days of the event.

To commemorate the bicentennial of the birth of Charles Darwin and the 150th anniversary of the publication of On the Origin of Species, the California Academy of Sciences, in collaboration with the Pacific Division of the American Association for the Advancement of Science (AAAS), will sponsor a symposium on Darwin and the Galapagos on August 14 and 15, 2009. The Symposium will be dedicated to the memory of the late Robert I. Bowman, former Professor of Biology at San Francisco State University, who had a life-long interest in Galapagos finches. There will be additional sessions for contributed papers (see end of description for this session).

The Symposium sessions will be held at the California Academy of Science's new building, which attains the highest standards in green architecture, at 55 Music Concourse

Drive in Golden Gate Park, San Francisco. The Academy itself has a long history of involvement in scientific activities in the Galapagos Archipelago.

After the destruction of its building in the San Francisco earthquake and fire, the collections from the Galapagos expedition of 1905–1906 were crucial to the reestablishment of its facilities. The Academy has the best collection of Galapagos materials in the world.

On Monday following this symposium there will be a single-theme contributed paper session, “Working on Darwin.” If you are interested in contributing to this session, please contact the organizers: Michele Aldrich (e-mail: maldrich@smith.edu) and Alan E. Leviton (California Academy of Sciences; e-mail: alevito@calacademy.org).

Speakers:

Jack Dumbacher (California Academy of Sciences) “From Darwin’s Galapagos to Mayr’s New Synthesis: The Whitney South Seas Expeditions of Rollo Beck”

Michael Ghiselin (California Academy of Sciences) “Going Public on the Galapagos: Reading Darwin between the Lines”

Sally Gibson (University of Cambridge, Cambridge, UK) “Tracing Darwin’s Geological Footsteps on James Island (Isla Santiago)”

Peter and Rosemary Grant (Princeton University) “The Evolution of Darwin’s Finches”

Sandra Herbert (University of Maryland, Baltimore County) “Recreating Darwin’s Experiences as a Geologist using Texts, Sites, and Specimens”

Jonathan Hodge (University of Leeds, Leeds, UK) “Darwin, the Galapagos, and His Changing Thoughts about Species Origins: 1835–1837”

Matthew James (Sonoma State University, Sonoma, CA) “Collecting Evolution: The Unintended Vindication of Charles Darwin by the 1905–1906 Galapagos Expedition of the California Academy of Sciences”

John McCosker (California Academy of Sciences) “The Fishes of the Galapagos: An Update and Review”

Edward Larson (University of Georgia) “A Damned Creation: The Galapagos Before Darwin”

Duncan Porter (Virginia Tech) “Darwin: The Botanist on the Beagle”

Frank Sulloway (University of California, Berkeley) “Darwin and The Galapagos: What Darwin Would Like to Have Known”

Robert Van Syoc (California Academy of Sciences) “Darwin, Barnacles, and the Galapagos: A View through a 21st Century Lens”

(2) The Evolution of Cooperation: Theoretical and Experimental Approaches. Organized by Andrew Zink (Department of Biology, San Francisco State University, San Francisco, CA; e-mail: zink@sfsu.edu). *Scheduled for all day Tuesday, 18 August at San Francisco State University.*

Explaining cooperative associations remains one of the

greatest challenges of evolutionary biology. This symposium highlights theoretical and empirical approaches to the evolution of cooperation at two distinct levels of organization: individuals in populations (altruism) and species in communities (mutualism). Recent reviews have highlighted the need for theoretical integration of these two separate areas of research; this symposium is a first important step toward that goal. In addition, the topics addressed within each research area (such as individuals within populations) are intentionally broad in order to facilitate discussions and exchange of ideas across different areas of biology. The range of study organisms (protists, insects, plants, birds, mammals, humans) reveals both the breadth of the field and the great potential for novel collaborations among researchers that work on the evolution of cooperation.

Sessions and Speakers:

THEORETICAL APPROACHES

Andy Zink (San Francisco State University)

Barry Sinervo (University of California, Santa Cruz)

Ronald Lee (University of California, Berkeley)

Joan Roughgarden (Stanford University)

EMPIRICAL APPROACHES (Cooperation Within Species)

Rick Grosberg (University of California, Davis)

Sarah Cohen (San Francisco State University)

Neil Tsutui (University of California, Berkeley)

Alan Krakauer (University of California, Davis)

Dai Shizuka (University of California, Santa Cruz)

Lauryn Benedict (University of California, Berkeley)

Ron Coleman (California State University, Sacramento)

EMPIRICAL APPROACHES (Cooperation Between Species)

Tony DeTomaso (Stanford University)

Jay Stachowicz (University of California, Davis)

Joel Sachs (University of California, Riverside)

Donald Miller (California State University, Chico)

(3) Amphibian Declines: The First Wave of a Mass Extinction? Organized by Vance Thomas Vredenburg (Department of Biology, San Francisco State University, San Francisco, CA; e-mail: vancev@sfsu.edu; web page: <http://web.me.com/vancevredenburg>). *Scheduled for a half day Wednesday, 19 August at San Francisco State University.*

Many scientists argue that we are either entering or in the midst of the sixth great mass extinction of life on earth. There is no doubt that intense human pressure, both direct and indirect, is having profound effects on natural environments. The amphibians -- frogs, salamanders and caecilians -- appear to be the only major group currently at risk globally. A detailed worldwide assessment and subsequent updates show that one-third or more of the 6300 species are threatened with extinction. This trend is likely to accelerate because most amphibians occur in the tropics and have small geographic ranges that make them susceptible to extinction. Habitat destruction, climate change, introduced predators, and pollution have all been implicated in the declines. A new



Congratulations to the Merck/AAAS USRP

The Merck/AAAS Undergraduate Science Research Program (USRP), a national competitive awards program, is proud to announce its 2009 awardees. Each award provides \$60,000 (\$20,000 per year over three years) for joint use by the biology and chemistry departments at each recipient institution to support undergraduate research activities.

Since 1994 USRP grants have been awarded to over 200 colleges and universities and have supported over 2,000 undergraduates, providing them the opportunity to work with and learn from faculty in the laboratory and engage in basic research. The Program's support is provided by The Merck Company Foundation, which will have contributed over \$11,500,000 when the awardees grant term ends in 2011.

The purpose is to promote interdisciplinary **RESEARCH EXPERIENCE** for undergraduate students in **CHEMISTRY** and **BIOLOGY**.

2009 Award Winners

1. Ashland University
2. Bowdoin College
3. Colorado College
4. Furman University
5. Harvey Mudd College
6. Kean University
7. Lebanon Valley College
8. Niagara University
9. Otterbein College
10. Siena College
11. State University of New York at New Paltz
12. University of Colorado at Colorado Springs
13. University of West Florida
14. University of Wisconsin at Whitewater

Send questions and requests for additional information to: Merck@AAAS.org For full program details: www.merckaaasusrp.org



and significant threat to amphibians is a virulent, emerging infectious disease, chytridiomycosis, which appears to be globally distributed, and its effects may be exacerbated by global warming. This disease, which is caused by a fungal pathogen and implicated in serious declines and extinctions of more than 200 species of amphibians, poses the greatest threat to biodiversity of any known disease. These factors do not appear to be working alone and the situation has been characterized as a “perfect storm” of events culminating in tens to hundreds of extinctions in just the last two decades. This session will present some of the most recent work in the various causes of declines and will integrate efforts for our understanding of this phenomenon as well as illustrate possible solutions. A general message from amphibians is that we may have little time to stave off a potential mass extinction.

(4) Comparative Genomics: From Prediction to Function. Organized by Christopher Smith (Department of Biology, San Francisco State University, San Francisco, CA; e-mail: smithcd@sfsu.edu). *Scheduled for all day Wednesday, 19 August at San Francisco State University.*

Comparative genomics utilizes an increasing wealth of sequence data for many species and has been used to find conserved genomic regions, regulatory motifs that control gene expression, and protein residues that may be subject to post-translational modification. The success of the comparative genomics approach in deciphering the regulatory features and functions of gene networks depends both on the development of sophisticated algorithms to predict rare signals in genome sequences as well as developing assays to verify these predictions *in vitro* and *in vivo*. This symposium will explore the computational tools used in some aspects of comparative genomics as well as the experiments used to confirm that these bioinformatic predictions correspond to biological reality.

Sessions and Proposed Speakers :

BIOINFORMATIC PREDICTION

David Haussler (University of California, Santa Cruz)

*Ian Korf** (University of California, Davis)

*Ian Holmes** (University of California, Berkeley)

*Gill Bejerano** (Stanford University)

Serafim Batzoglou (Stanford University)

FUNCTIONAL VALIDATION

*Gary Karpén** (Lawrence Berkeley National Laboratory)

*Josh Stuart** (University of California, Santa Cruz)

Jonathon Weissman (University of California, San Francisco)

Dan Rokshar (Joint Genome Institute, University of California, Berkeley)

Mike Eisen (University of California, Berkeley; Lawrence Berkeley National Laboratory)

* = confirmed as of 16 March

(5) Weird Life. Organized by Jill C. Tarter (SETI Institute, Mountain View, CA; e-mail: tarter@seti.org), and John A. Baross (School of Oceanography, University of Wash-

ington, Seattle, WA; e-mail: jbaross@u.washington.edu). *Scheduled for a half day Tuesday, 18 August at San Francisco State University.*

During 2009, Charles Darwin and his contribution to our understanding of the connectedness of all life on Earth (as we know it) will be celebrated numerous times. But what about life as we don't yet know it? In 2007 the National Academy of Sciences released a report on of what it called ‘Weird Life’, life with an alternate biochemistry, life that may not share a common ancestor with all life that we are familiar with today. How would we recognize life based on different biosolvents, different nucleotides, different metabolic pathways? What instruments should we develop to aid human and robotic explorers undertaking a search for other forms of life? Are there extremophiles of the truly weird variety awaiting discovery on Earth, if only we knew how to identify them? These questions are all germane to the young discipline of Astrobiology as it seeks to understand the origins and extent of life here on Earth, and the potential for life beyond Earth.

Speakers:

John Baross (School of Oceanography, University of Washington, Seattle) “What Is Weird Life — Why Should We Care?”

Chris McKay (NASA Ames Research Center, Moffett Field, CA) “Shadow Life.”

Rocco Mancinelli (SETI Institute, Mountain View, CA) “Extremophiles We Already Know and Love: What Do They Suggest?”

Ray Kurzweil (Kurzweil Technologies, Inc., North Andover, MA) “Evolution of Carbon-based Life Into Silicon or Something Else.”

Chris Impey (Department of Astronomy, University of Arizona, Tucson) “A Second Genesis — How Do We Deal with That?”

John Baross (School of Oceanography, University of Washington, Seattle) “Distant Biosignatures.”

Jill Tarter (SETI Institute, Mountain View, CA) “Searching for Weird Life of the Intelligent Kind.”

(6) Sustainability as a Way of Life: Learning, Practice, and Experience. Organized by Robert Louis Chianese (California State University, Northridge, CA; e-mail: Robert.Chianese@csun.edu) and Carl A. Maida (University of California, Los Angeles, CA; e-mail: cmaida@ucla.edu). *Scheduled for all day Tuesday, 18 August, at the California Academy of Sciences.*

The ongoing process of achieving sustainable systems is transforming many areas of modern life and culture: housing, building and community design, agriculture, energy use and transportation, waste management, forestry, business and economics, as well as personal life style, community values, and social relationships. This symposium examines sustainability as it impacts and transforms our daily lives. We will explore a wide range of topics and questions, includ-

ing:

- Does sustainability represent a new paradigm for personal, community, and global cooperation, or is its impact limited to a few areas of economics and the environment?
- As we move further in the twenty-first century up the path toward more sustainable living, just how will our lives be changed?
- How have the arts, architecture, and design been influenced by sustainability in both their content and methods of production?
- What do plans for making sustainability a part of study across the curriculum mean for education and its goals?
- What are the implications for shifting our attention from “maximums” to “optimums” as social ideal?
- How might competitiveness as a goal be affected?
- Are we being asked, perhaps impossibly, to shift or abandon some basic and valuable elements of our humanness in the pursuit of more efficient and sustainable ways of living?
- How is personal consciousness shaped by having to take into account the global consequences of everyday living decisions?
- Will intimate relationships and love itself be transformed by sustainable practices?
- Does dedication to sustainable living involve a new ethic?

Speakers:

Jurgen Schmandt (University of Texas, Austin and Houston Advanced Research Center) “Sustainability Past and Present: Are We Making Progress?”

Lawrence K. Duffy (University of Alaska, Fairbanks) “An Arctic Dimension to Sustainability: Resource Development, Legacies, and Education.”

Alison M. Meadow (University of Alaska, Fairbanks) “Evaluating and Designing Urban Food Systems: The Role of Local Initiatives.”

S. Craig Gerlach (University of Alaska, Fairbanks) “Coming to Terms with Northern Foods, Northern Futures.”

Robert Louis Chianese (California State University, Northridge) “Does Economic Crisis Lead to a More Sustainable Way of Life?”

Krista Harper (University of Massachusetts, Amherst) “Ecologies of Hope: Cross-Cultural Perspectives on Sustainability and Social Justice.”

Marty Sayles (California State University, Northridge) “Going Green in Popular Culture.”

Jay Vavra (High Tech High, San Diego, CA) “The San Diego Bay Study: Community-Based Conservation.”

Wolff-Michael Roth (University of Victoria, B.C., Canada) “Bootstrapping into Resilience: Science Education as/for Sustainability.”

(7) New Humanities and Science Convergences: Darwin and Culture. Organized by Robert Louis Chianese (California State University, Northridge, CA; e-mail: Robert.Chianese@csun.edu) and Carl A. Maida (University of California, Los Angeles, CA; e-mail: cmaida@ucla.edu).

Scheduled for one half day on Monday, 17 August at San Francisco State University.

This symposium will explore the influence of Darwinian ideas that extend beyond biology into all branches of culture—from ecology, anthropology, economics, sociology and law, to such areas as art, literature, and design. Just how influential has evolution become in various academic disciplines, and how does it serve as a theoretical basis or even a metaphor for contemporary culture in its many forms today?

Does society evolve in Darwinian fashion, or is this just a metaphor to characterize change itself? Some speak of economies evolving in various stages as if it were a living species; does the analogy have some basis in biological fact? How can any one writer’s or artist’s or thinker’s work be said to evolve? Is contemporary architecture an evolutionary outgrowth of previous forms or a simple shift of design, materials and function? How much does the idea of sustainability, as it applies to cultural matters, resemble the sustainability of natural systems?

Speakers:

Carl A. Maida (University of California, Los Angeles) “Community as Experience: Dewey, Darwin and Aesthetic Ecology.”

Susan Massarik Aslan (Los Angeles Unified School District) “Educating for the Future: The Need for an Evolutionary Process in Teaching and Learning.”

Robert Louis Chianese (California State University, Northridge) “Victorian Poets Adapt to Darwin.”

Fred Massarik (University of California, Los Angeles) “Not Everything Is ‘Darwin’: Evolution and Archival Change Theory in Light of Field-Theoretic Thought.”

(8) Project-based Learning and the Culture of Science Education in the 21st Century. Organized by Carl A. Maida (University of California, Los Angeles, CA; e-mail: cmaida@ucla.edu) and Paul Heckman (University of California, Davis, CA; e-mail: peheckman@ucdavis.edu). *Scheduled for a half day on Wednesday, 19 August at San Francisco State University.*

Project-Based Learning (PBL) builds on John Dewey’s work on experiential, hands-on, student-directed learning, a century ago. According to the Buck Institute for Education, PBL is “a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks.” Although the various learning settings and PBL projects may resemble each other in terms of their organizational arrangements, the learning is ultimately delivered within a student-teacher relationship. The structure of this relationship and that of the school itself were shaped by an industrial culture that developed during a period of rapid industrialization in the late nineteenth century when the dual revolutions of technology and information processing were transforming the United States. For just as the technological and economic innovations of the Second

Industrial Revolution rationalized production and distribution techniques in the material economy, the contemporary “control revolution” has provided new modes of information processing and communication technology to transform the cognitive or symbolic direction of twenty-first century enterprises. During the earlier transition from craft to mass production, schools provided a social context for the task of renegotiating and reframing both occupational techniques and world orientations in light of dramatic technological changes. So, too, have the challenges of the current technological revolution shifted the emphasis of education toward students actively using what they know to explore, negotiate, interpret and create. PBL challenges students by acknowledging their roles as participants engaged in producing knowledge. Through an amalgam of knowledge, skills, teamwork, and communication, PBL helps to develop habits of mind associated with personal and occupational success in the global economy. Like that of any complex service organization, school culture includes both the quality of interpersonal relations and the informal norms governing various activities, specifically help and trust. This session, in a round-table discussion format, will examine the quality and nature of the student-teacher relationship in PBL, specifically in science education. Learning encounters can be conceived as dialogues, and a distinctive feature of PBL is that it is constructed and negotiated through such encounters. Students perceive the value of PBL, experience this form of learning, and are rewarded through the responses of others (including parents, siblings and peers) to their projects through learning encounters. Of particular interest is the nature of the relationship for both the student and the teacher in this process, as well as collaboration beyond the student-teacher relationship, especially with the larger community.

For students:

- What do you think PBL is about?
- What makes PBL unique?
- What do you value about PBL education?
- Describe your relationships with PBL teachers.
- Give an example of your PBL learning. Identify what you learned in this example and describe in detail how you learned it.
- How can you demonstrate that you learned it?

For teachers:

- What did you learn through the PBL process?
- What did you learn about yourself?
- What did you learn about the PBL method?
- What are the assets of the PBL pedagogy? For teachers? For students? For administrators?
- Would you like to see PBL teaching implemented in more schools by more teachers? What would the advantages be in doing this? Disadvantages?
- Do you think that all students would benefit from PBL or only some? What kind of student would benefit?
- Would you like to see PBL taught as a subject to teachers in

the future?

- What have you learned about yourself and your students through applying PBL methods?
- What hope do you hold for the future of the teaching profession, and of yourself as a teacher, as a result of your PBL experiences?

For both teachers and students:

- What features of PBL do you particularly appreciate and how does it relate to schooling?

Opening Remarks* and Discussants:

*Shirley Malcom** (American Association for the Advancement of Science)

Sam Beck (Cornell University)

William B. N. Berry (University of California, Berkeley)

Meg Burke (California Academy of Sciences, San Francisco)

Paul Heckman (University of California, Davis)

Richard Roberts (Los Angeles Unified School District)

Kimberly Tanner (San Francisco State University)

Jay Vavra (High Tech High, San Diego, CA)

(9) Evolutionary Innovations: Where Ecology, Development and Macroevolution Intersect. Organized by Karen Crow-Sanchez (San Francisco State University, San Francisco, CA; e-mail: crow@sfsu.edu). *Scheduled for Tuesday morning, 18 August at San Francisco State University.*

The origin of evolutionary novelties is central to evolutionary Developmental biology. Underlying factors associated with innovation include exploitation of existing genetic pathways in new ways via gene duplication, acquisition of new regulatory elements, and mutations in protein coding sequences. Associated factors include ecological opportunity and evolvability.

Speakers:

Chris Amemiya (Benaroya Research Institute at Virginia Mason, Seattle, WA) “How Genomics Is Reshaping Our Ideas About Evolution.”

Billie Swalla (University of Washington) “Origin, Evolution and Variations of the Chordate Body Plan.”

Karen Crow (San Francisco State University) “Duplicate Hox Genes in Ray-finned Fishes and Their Role in the Evolution of Novelty Diversity.”

Craig Miller (University of California, Berkeley) “Genetic Analysis of Loss and Gain Traits in Threespine Sticklebacks.”

David Lindberg (University of California, Berkeley) “Aspects of the Evolution of Echolocation.”

Artyom Kopp (University of California, Davis) “The Origin and Diversification of *Drosophila* Sex Combs.”

Antonia Monteiro (Yale University) “The Origin, Function, and Diversification of Eyespot Patterns in Butterflies.”

Chelsea Specht (University of California, Berkeley) “Innovations and Novel Structures: The Evolution of the Stamen Whorl in Tropical Gingers (Zingiberales).”

Suzannah Rutherford (Fred Hutchinson Cancer Research

PICTURE YOURSELF AS A AAAS SCIENCE & TECHNOLOGY POLICY FELLOW

Make a Difference.

Help give science a greater voice in Washington, DC! Since 1973, AAAS Fellows have applied their skills to federal decision-making processes that affect people in the U.S. and around the world, while learning first-hand about the government and policymaking.

Join the Network.

Year-long fellowships are available in the U.S. Congress and federal agencies. Applicants must hold a PhD or equivalent doctoral-level degree in any behavioral/social, biological, medical/health, or physical science, or any engineering discipline. Individuals with a master's degree in engineering and three years of post-degree professional experience also may apply. Federal employees are not eligible and U.S. citizenship is required.

Apply.

The application deadline for the 2010-2011 AAAS Fellowships is 15 December 2009. Fellowships are awarded in the spring and begin in September. Stipends range from \$70,000 to \$92,000.

Note: Additional fellowships are available through approximately 30 scientific society partners. Individuals are encouraged to apply with AAAS as well as with any scientific societies for which they qualify.



*Enhancing Public Policy,
Advancing Science Careers*

Christina Kakoyannis, PhD

Forest Resources,
Oregon State University

2005-2007 AAAS Fellow
at the U.S. Environmental
Protection Agency in the
Office of Environmental
Policy Innovation,
Evaluation Support Division

Now an evaluation officer
at the National Fish and
Wildlife Foundation in
Washington, DC

Full details at: fellowships.aaas.org



Center) “TBA”

Alan Love (University of Minnesota) “Evolutionary Innovations and Multidisciplinary Explanation in Biology: Prospects and Problems.”

(10) Conservation in an Urban National Park. Organized by Tania Pollak (Presidio Trust and San Francisco State University, San Francisco, CA; e-mail: tpollak@presidiotrust.gov), John Hafernik (San Francisco State University, San Francisco, CA; e-mail: hafernik@sfsu.edu), and William B.N. Berry (University of California, Berkeley, CA; e-mail: wberry@uclink4.berkeley.edu). *Scheduled for all day Monday, 17 August at San Francisco State University.*

Encompassing 80,000 acres and adjacent to cities containing 1.7 million people, the Golden Gate National Recreation Area (GGNRA) is one of the world’s largest urban national parks. The GGNRA is also nationally and internationally renowned for its beauty and recreational opportunities. These parklands support historic resources alongside valuable ecological resources, including 33 federally listed rare plant and animal species. This proximity to urban communities, and high visitor use, provide both challenges for protection of park resources and opportunities to engage the public in conservation, monitoring and restoration of those resources.

This symposium will focus on this urban national park’s challenges and opportunities, its recognition that resources cannot be conserved without the community’s participation, and its efforts to inspire that community to move from park user to park volunteer. The symposium will also address the park’s efforts at sustainability related to resource conservation and park management.

Speakers:

Sue Fritzsche (Supervisory Vegetation Ecologist, GGNRA, National Park Service) “Restoration in National Parks: An Overview.”

Mark Frey (Vegetation Ecologist, Presidio Trust) and *Lewis Stringer* (Natural Resources Specialist, National Park Service) “Habitat Restoration on Former Remediation Sites.”

Michele Laskowski (Propagule Collections Specialist, Golden Gate National Parks Conservancy) “Sustainable Nursery Practices.”

Michael Chasse (Vegetation Ecologist, National Park Service) “Rare Plant Monitoring and Management.”

(11) Near-Earth Objects: A Multi-dimensional Challenge. Organized by Rusty Schweickart (B612 Foundation and Association of Space Explorers (ASE) Committee on NEOs, Sonoma, CA; e-mail: rs@well.com). *Scheduled for one full day (TBA) at San Francisco State University.*

Near-Earth Objects are a threat, resource and scientific lodestone rolled into one. Our understanding of these primitive solar system left-overs is advancing with leaps and bounds. We track thousands of them on a nightly basis, most of which have been discovered only in the past 20 years. We

know of thousands of NEOs that course around the Sun in orbits that cross the orbit of Earth and are hence potential disasters in the making. In the 10-15 year future, our inventory of such NEOs will explode into the hundreds of thousands of which many will appear threatening. Conversely, NEOs are rich ore bodies which excite many as potential sources of consumables for future operations in space obviating the necessity for bringing tons of such materials up from the Earth’s surface. To others they are the history of the solar system written into millions of chapters awaiting translation. Finally, they are an emerging goal for future exploration, both robotic and human. This multiplicity of views of NEOs is emerging as a challenge for the immediate future of space activity and will be explored in these sessions.

(12) Materials Science and Nanotechnology. Organized by Panos Photinos (Department of Physics, Southern Oregon University, Ashland, OR; e-mail: phaaas@sou.edu), Ellen Siem (Department of Physics and Engineering, Southern Oregon University, Ashland, OR; e-mail: sieme@sou.edu), Phillip G. Collins (Department of Physics and Astronomy, University of California, Irvine, CA; e-mail: collinsp@uci.edu), Shalini Prasad (Department of Electrical and Computer Engineering, Portland State University, Portland, OR; e-mail: spasad@pdx.edu), and Jeremy Qualls (Department of Physics and Astronomy, Sonoma State University, Rohnert Park, CA; e-mail: jeremy.qualls@sonoma.edu). *Scheduled for one full day Monday, 17 August 2009 at San Francisco State University.*

This fifth annual symposium on Materials Science and Nanotechnology is planned for Monday, 17 August 2009 at San Francisco State University. Topics will cover the synthesis, preparation, characterization and applications of novel smart materials, including:

- Biomaterials
- Ferroelectrics
- Liquid crystals and complex fluids
- Nanomaterials
- Polymers
- Thin films and coatings


Please contact the organizers with ideas or abstracts for presentations. Particularly encouraged are contributions from graduate and undergraduate students.

(13) Advancing Materials Science and Nanotechnology Education. Organized by Panos Photinos and Ellen Siem (Department of Physics, Southern Oregon University, Ashland, OR; e-mail: phaaas@sou.edu and sieme@sou.edu). *Scheduled for one half day Tuesday, 18 August 2009 at San Francisco State University.*


This session will focus on leading educational practices in Materials Science and Nanotechnology at the undergraduate and graduate level. Contributions on curriculum design, effective experimentation, interactive simulation, and assessment methods are encouraged. Areas of interest also include developing a student’s critical thinking and student

retention, with an emphasis on minority students.

Persons interested in participating in this session should contact the program organizers with ideas or abstracts.

 **(14) San Francisco Bay: Tracking and Understanding a Changing Estuary.** Organized by John Largier (Bodega Marine Laboratory, University of California, Davis, CA; e-mail: jlargier@ucdavis.edu), Sarah Cohen (Romberg Tiburon Center, San Francisco State University, San Francisco, CA; e-mail: sarahcoh@sfsu.edu) Kathy Boyer (Romberg Tiburon Center, San Francisco State University, San Francisco, CA; e-mail: katboyer@sfsu.edu), and Terry Gosliner (California Academy of Sciences, San Francisco, CA; e-mail: tgosliner@calacademy.org). *Scheduled for all day Wednesday, 19 August at San Francisco State University.*

San Francisco Bay is changing – owing to the multiple influences of watershed changes, changing human use of the Bay, climate change, and management priorities. With attention to evolving issues, this symposium will feature invited presentations on efforts to track changing biophysical systems in the Bay and the research science that has led to new understanding. It will build on previous AAAS symposia and the published volumes edited by Hollibaugh and Conomos. The symposium will include speakers on invasive species, pelagic organism decline, climate change, contaminants, restoration, water circulation, phytoplankton, and more.

 **(15) Good Science is Only Part of the Job: Communicating Science to the Public.** Organized by Henry J. Campbell (CEO, Ion Publications, LLC (publisher of ScientificBlogging.com), 1024 Iron Point Rd., Folsom, CA, 95630; e-mail: Hank@ionpublications.com). *Scheduled for one half day on Monday, 17 August at San Francisco State University.*

As science has become a larger part of the cultural landscape, researchers have frequently found themselves navigating the difficult waters of policies and politics. It has become increasingly necessary for scientists to work with the media to insure accurate portrayals of science issues so there can be better understanding by the public and therefore better decisions by policy makers. The goal of this session is to discuss effective ways to increase knowledge of complex issues and also promote dialogue among scientists and the public. Each of the presentations will address how scientists can be better equipped to manage different media when sharing research and information with the public.

Hank Campbell (Ion Publications), “Why Communicating Science Is Important.” Hank Campbell founded Scientific Blogging in 2006 and it is among the top 25 science web sites worldwide and consists of research professors, post-docs, science book authors and the occasional Nobel laureate writing directly to the public on the latest science topics.

Michael Eisen (Howard Hughes Medical Institute Investigator and Associate Professor of Genetics, Genomics, and Development, Department of Molecular and Cell Biology, University of California, Berkeley), *The Future of Peer Re-*

view Journals.

Both journals and the peer-review system itself are prone to recurrent criticism. This talk will provide a look into peer-reviewed publishing by someone who has been on both sides of the aisle, as a published scientist and founder of a peer-review journal. In 2001 Dr. Eisen co-founded the Public Library of Science (PLoS), a collection of peer-review journals that is the model for internet-based, open access publication.

Eugenie C. Scott (Executive Director, National Center for Science Education, Inc., Oakland, CA), “Constructive Debates When Science and Politics Mix.”

Stem cells, evolution and global warming are all areas where politics and culture have changed the filter through which people see science. How policy waters are navigated can make the difference between perception of partisanship and clean science education.

The National Center for Science Education, Inc. is a not for profit membership organization of scientists, teachers, and others that works to improve the teaching of evolution, and of science as a way of knowing. Dr. Scott has served on the Board of Directors of the Biological Sciences Curriculum Study (BSCS), and the advisory counsels of several church and state separation organizations. She has held elective offices in the American Anthropological Association and the American Association for the Advancement of Science. Dr. Scott is the current president of the American Association of Physical Anthropologists.

Michael White (Department of Genetics and Center for Genome Sciences, Washing University School of Medicine, St. Louis, MO), “Interacting with Science Journalists.”

Science journalists are often blamed for exaggerations and errors that make their way into mass media publications but they are more often on the front lines and care a great deal about portraying accurate science. Knowing how to communicate effectively with science journalists can be just as important as communicating research.

Greg Critser (long time science and medical journalist), “Blazing Your Own Trail: Writing Directly to the Public.”

As the Internet has gained in breadth and popularity there are more ways than ever to reach the public. Blogs are one area that has become the great equalizer for researchers even if they lack a large amount of communications experience. But with 100 million blogs in existence, there are important strategies scientists will need to use in order to be heard.

Mr. Critser is a long time science and medical journalist whose work appears in the LA Times, the Times of London and the New York Times. He authored *National Geographic Traveler: California* (National Geographic 2000, 2005, 2008), *Fat Land* (Houghton Mifflin, 2003), and *Generation Rx* (Houghton 2005). He is currently working on a book about the rise of the modern mouse laboratory.

CONTRIBUTED PAPERS

Those wishing to submit papers for presentation at a contributed paper session (oral or poster) should refer to the “Call for Papers and Abstracts” on page 33 in this *Newsletter*, or download instructions from the Division’s web site (pacific.aaas.org). If your abstract contains special characters, please fax a print copy of it to the Pacific Division office, 541-552-8457, with the special characters clearly marked and notations indicating the fonts used.

The deadline for submitting abstracts is 15 May 2009.

If an abstract comes in after this date, it may not be listed in the program. Also, be aware that the abstract you submit will be published as written. It will not be edited. If it contains

errors, they will appear as submitted. Be sure to keep the length of your abstract to no more than 250 words and use 10-point Times New Roman (or variation) font (no exotic fonts, please!). Don’t forget to state clearly if yours is a student presentation so that it will be included in the judging competition. *Please keep in mind if you are a student who intends to be in the competition for Awards of Excellence and you are part of a symposium with your presentation scheduled to end later than 3:00 p.m. on Tuesday afternoon (check with the planner of your symposium), you must also present your work as a poster in order to be judged. Otherwise, you will not be eligible for student awards due to the conclusion of judging early Tuesday afternoon. Awards will be announced later that evening.*

Special single-theme contributed paper session: “Working on Darwin.”

On Monday, 17 August, following the two-day Darwin and the Galapagos symposium on Friday and Saturday, 14 and 15 August, there will be a single-theme contributed paper session, “Working on Darwin.” If you are interested in contributing to this session, please contact the organizers, Michele Aldrich (e-mail: maldrich@smith.edu) and Alan E. Leviton (California Academy of Sciences; e-mail: alevito@calacademy.org).

POSTER SESSIONS

Posters will be assigned a display space of 40” tall X 60” wide (1 m X 1.5 m). By action of the Pacific Division Council in order to assure fairness, all student posters must fit within the assigned display space to be eligible for student Awards of Excellence. A request for extra space will disqualify a student from the award competition. Posters will be grouped by discipline and subject matter.

Student posters will be judged for Awards of Excellence. Students must be present for a two hour period to allow judges the opportunity to discuss their work and to evaluate their posters.

With the permission of Dr. Carol Waite Conner and the Geological Society of America, the Pacific Division has reprinted Dr. Conner’s article, “The Poster Session: A Guide for Preparation.” It can be found on the Division’s web site, <http://pacific.aaas.org>. Click on the 90th Annual Meeting home page and then Poster Preparation (listed in the



Have you activated your *Science* Online subscription?

As a AAAS member, you also get online access to *Science*. Read breakthrough research before it’s published in *Science*; search our archives (back to 1880); review the upcoming table of contents.

To activate your *Science* Online account, visit http://www.sciencemag.org/subscriptions/indiv_activate.dtl. For additional assistance, call the Member Services toll free number — 1-866-434-AAAS (2227).



left column). Additional information and hints may be found at the web site "Creating Effective Poster Presentations," www.ncsu.edu/project/posters (Hess, G.R., K. Tosney, and L. Liegel, 2006).

PACIFIC DIVISION SECTIONS ACCEPTING CONTRIBUTED PAPERS FOR PRESENTATION AT THE MEETINGS

Agriculture and Horticultural Science. Section Chair and Program Coordinator: Dr. Michael D. MacNeil, U.S.D.A. Agricultural Research Service, Fort Keogh Livestock and Range Research Laboratory, 243 Fort Keogh Road, Miles City, MT 59301. Phone: 406-874-8213; e-mail: Mike.MacNeil@ars.usda.gov.

Anthropology and Archaeology. Section Chair and Program Coordinator: Dr. Walter Carl Hartwig, Division of Basic Medical Sciences, Touro University College of Osteopathic Medicine, Mare Island, CA 94592. Phone: 707-638-5238; e-mail: whartwig@touro.edu. Co-chair and Co-program Coordinator: Dr. Stephen Frost, Department of Anthropology, University of Oregon, Eugene, OR 97403. Phone: 541-346-5161; e-mail: sfrost@uoregon.edu.

Atmospheric and Oceanographic Sciences. Section Chair and Program Organizer: Dr. Anne A. Sturz, Department of Marine Science and Environmental Studies, College of Arts and Sciences, Dean's Office, F114, University of San Diego, San Diego, CA 92110-2492. Phone: 619-260-4545; e-mail: asturz@sandiego.edu.

Cell and Molecular Biology. Section Chair and Program Organizer: Dr. Kenneth Cornell, Department of Chemistry and Biochemistry, Boise State University, Boise, ID 83725. Phone: 208-426-5429; e-mail: kencornell@boisestate.edu.

Chemistry and Biochemistry. Section Chair and Program Organizer: Dr. Owen M. McDougal, Department of Chemistry and Biochemistry, Boise State University, Boise, ID 83725. Phone: 208-426-3964; e-mail: owenmcdougal@boisestate.edu.

Computer and Information Sciences. Section Chair and Program Organizer: Dr. Alan E. Leviton, Department of Herpetology, California Academy of Sciences, 55 Music Concourse Drive, Golden Gate Park, San Francisco, CA 94118. Phone: 415-321-8276; e-mail: aleviton@calacademy.org.

Earth Sciences. Section Chair and Program Organizer: Dr. J. Thomas Dutro, Jr., U.S. Geological Survey (E-308), National Museum of Natural History, Washington, DC 20560-0137. Phone: 202-633-1322; e-mail: dutrot@si.edu.

Ecology, Organismal Biology, and Environmental Sciences. Section Chair and Program Organizer: Dr. Richard Van Buskirk, Environmental Studies, Pacific University, 2043 College Way, Forest Grove, OR 97116. Phone: 503-352-2251; e-mail: vanbuskirk@pacificu.edu. Co-chair and Program Co-organizer: Dr. Michael Parker, Department of Biology, Southern Oregon University, Ashland, OR 97520. Phone: 541-552-6796;



e-mail: parker@sou.edu.

Education. Section Chair and Program Organizer: Dr. William B.N. Berry, Department of Earth and Planetary Sciences, 307 McCone Hall, University of California, Berkeley, CA 94720-4767. Phone: 510-642-3925; e-mail: wberry@uclink4.berkeley.edu.

General and Interdisciplinary. Section Chair and Program Organizer: Robert Chianese, (Emeritus) Department of English, California State University, Northridge, Northridge, CA 91330. Phone: 805-653-2520; e-mail: robert.chianese@csun.edu.

Health Sciences. Section Chair and Program Organizer: Dr. H. K. Choi, Department of Biology, California State University, Dominguez Hills, 1000 East Victoria Street, Carson, CA 90747. Phone: 310-243-3985; e-mail: hchoi@csudh.edu.

History and Philosophy of Science. Section Chair and Program Organizer: Dr. Donald McGraw, P.O. Box 515, Ephraim, UT 84627. Phone: 619-947-5108; e-mail: donaaldmcgraw@mac.com. See also the Working on Darwin contributed paper session on page 25.

Industrial Science and Technology. Section Chair and Program Organizer: Dr. Frank Jacobitz, Department of Engineering, University of San Diego, 5998 Alcalá Park, San Diego, CA 92110. Phone: 619-260-7820; e-mail: jacobitz@SanDiego.edu. Section Co-chair and Program Co-organizer: Mr. Henry Oman (Boeing Company, retired), 19221 Normandy Park Drive SW, Seattle, WA 98166. Phone: 206-878-4458; e-mail: homan@ieee.org.

Physics and Materials Science. Section Chair and Program Organizer: Dr. Panos Photinos, Department of Physics, Southern Oregon University, Ashland, OR 97520. Phone: 541-552-6475; e-mail: photinos@sou.edu.

Psychology. Section Chair and Program Organizer: Dr. J. Ken Nishita, California State University, Monterey Bay, 100 Campus Center, Seaside, CA 93955-8001. Phone: 831-582-3563; e-mail: ken_nishita@csumb.edu.

Social, Economic and Political Sciences. Section Chair and Program Organizer: Dr. Carl A. Maida, UCLA Schools of Dentistry and Medicine, University of California, PO Box 951668 CHS, Los Angeles, CA 90095. Phone 805-492-5613; e-mail: cmaida@ucla.edu. 📧



Call for Symposium Proposals

Deadline for submission: Tuesday, 28 April 2009

2010 AAAS Annual Meeting *Bridging Science and Society*

The Annual Meeting is one of the most widely recognized interdisciplinary scientific events, with hundreds of networking opportunities and broad national and international media coverage.

The relevance of science, technology, and engineering as well as scientific literacy to the well-being of society is more profound than ever. The meeting's theme is a call for every scientist and engineer to make their work both useful and understandable, and for society to discover again the excitement and hope that research and its findings offer.

In this time of global crisis, reassessment of every dimension of knowledge and progress is necessary to find sustainable pathways and promote viable solutions for

- invigorating the economy,
- protecting the environment,
- rebuilding infrastructure,
- renewing the fundamentals of education,
- affirming human rights as well as improving the human condition worldwide, and
- redefining medicine and public health locally and globally.

Our support and efforts must continue both in the quest for knowledge about the universe, the Earth's systems, and the many facets of the biological and the behavioral sciences, and in the development of new tools, techniques, and collaborations. In addition, work still remains to help reconcile science with religious values.

To improve the future for all and protect our planet, young minds also must be drawn into science and technology, and equipped with 21st century skills. Efforts must involve not only finding what works in the classroom but also opening laboratories, hospitals, and factories to students so they can experience the day-to-day worlds of possibility, discovery, and application.

Respond to this call to action by submitting a proposal at www.aaas.org/meetings.





**90th Annual Meeting of the AAAS, Pacific Division
San Francisco, CA
14 – 19 August 2009**

Final Call for Papers and Abstracts

Members of AAAS and its affiliated societies, students, teachers and other scientists are encouraged to participate in the annual meeting by presenting papers and/or posters. Persons wishing to present at one of the sessions should e-mail the title, abstract and other required information (see instructions below) to the chair of the appropriate society or section (see page 31) and also the Pacific Division office, *rchristi@sou.edu*. If your abstract contains special characters, fax a copy of it to the Pacific Division office, 541-552-8457, in addition to the e-mail submission. **The deadline for abstract submission is 15 May 2009.** Students must identify themselves as such so that judges will know to evaluate their presentations for Awards of Excellence. Oral presentations are scheduled every 20 minutes. Oral presenters should plan about 14 minutes for their talk, allow about five minutes for questions at the end, and a minute or so to change over if using PowerPoint.

Please format your submission as follows:

Line 1: Submitter's name

Line 2: Submitter's telephone number and e-mail address

Line 3: Presenter's name (if different from above) or "SAME" (if same as above)

Line 4: Presenter's telephone number and e-mail address

Line 5: Society, section or program to which you are submitting your presentation for review

Line 6: Type of presentation ("ORAL" or "POSTER")

Line 7: Is the presenter a student? ("STUDENT" or "NOT A STUDENT")

Line 8: Special equipment needs (other than computer, PowerPoint, and LCD projector)

Line 9: Paper title in title case and italics (e.g. *Paper Title in Title Case*), Author(s) name(s) in **ALL CAPS and BOLD**, Full address(es), including institution, mailing address, city, state and zip code, E-mail address for main presenter (see example below)

Line 10: Text of abstract. Limit: 250 words.

Example of a properly formatted abstract submission (lines 9 and 10 together)

*Formatting an Abstract for Submission to a Pacific Division Section Chair and the AAASPD Meetings Office, SAMUEL P. KRAFTER¹ and YESIMA PRESENTER² (¹Department of Biology, Southern Oregon University, Ashland, OR 97520; ²Department of Academic Speech, Bureau of Speech Management, 12 Back Street, Medford, OR 97504; *spkraf@biology.sou.edu*).*

All presenters should be listed sequentially, as above. If more than one address occurs among the presenters, indicate so by a superscripted number next to each presenter's last name, followed by a superscripted listing of all of the addresses. The e-mail address should be that of the main presenter. It helps tremendously when assembling the meeting program to have the above convention followed. Otherwise, we must stop and take time to reformat your submission.

Note that these text paragraphs are indented. Please indent 0.25 inches by using the first line indent command of your word processor, *not the tab*. All text should be full justified.

Please use 10 point Times New Roman font. If you substitute, your abstract will be reformatted to this font. If your text contains special characters, they probably won't survive e-mailing and/or necessary reformatting accurately. Thus, you should either fax or mail a correctly printed copy of the abstract to the AAASPD office. The fax number is 541-552-8457 and the mailing address is AAAS Pacific Division, Department of Biology, Southern Oregon University, 1250 Siskiyou Blvd., Ashland, OR 97520. Please point out special characters and identify the font set that contains them. If outrageously exotic fonts are used, we probably won't have the correct one to use and your special character will be very special, indeed. Please use common font sets (e.g. Symbol, Wingdings, etc.) for your special characters!



**91st Annual Meeting
SOUTHERN OREGON UNIVERSITY
Ashland, OR
13 – 17 June 2010**

Call for Symposium and Workshop Proposals

Members of AAAS and its affiliated societies, students, teachers and other scientists are encouraged to participate in the annual meeting by developing symposia and/or workshops. Persons wishing to develop a program for the 2010 Ashland, Oregon meeting should e-mail the title, description and other information (see instructions below) to the Pacific Division office at rchristi@sou.edu.

Symposia may be 1/2-day, full-day or longer. Individual symposium presentations are usually scheduled with more time than for contributed papers (30 minutes rather than 20 minutes), but the actual scheduling depends on the needs of the symposium and may be longer or shorter, even a combination of the two. Please contact Dr. Roger Christianson, Pacific Division Executive Director, to discuss your specific needs. When preparing your submission, please indicate which presenters are confirmed or not (see Line 10 below). If you do not yet have a list of presenters, you may submit a list of potential presentation topics. Please keep in mind that we need as much information as early as possible in order to adequately publicize the symposium.

Workshops generally are 1/2-day or full-day and may or may not accompany a symposium. If special facilities and/or equipment are required, be sure to identify what you need as completely as possible in your submission (see Line 10 below). If a cost is incurred, it will be passed along to participants as a workshop fee in addition to the ordinary meeting registration fee.

Questions? Contact Dr. Roger Christianson, AAAS, Pacific Division, Southern Oregon University, Ashland, OR 97520. Phone: 541-552-6747; e-mail: rchristi@sou.edu.

Please format your submission as follows:

- 1: Organizer's name
- 2: Organizer's full mailing address, including academic/professional affiliation, telephone number and e-mail address
- 3: Co-organizer's name(s) (if any)
- 4: Co-organizer's full mailing address, including academic/professional affiliation, telephone number and e-mail address
- 5: Is this a Workshop or a Symposium?
- 6: Number of 1/2-day (roughly three to three and a half hours, depending on the needs of the program) sessions requested
- 7: Pacific Division section(s) and/or affiliated society requested to sponsor this program
- 8: Title of proposed program
- 9: Brief description of proposed program (please limit to 250 words)
- 10: *If a symposium*, list the names of proposed (confirmed?) speakers, including academic/professional affiliation, telephone number, and e-mail address for each. Presentation titles are optional at this time and will be requested later, along with an abstract for each presentation.

If a workshop, indicate facilities and/or special equipment required and number of participants that can be accommodated.

phone: 541-552-6747 • e-mail: rchristi@sou.edu • internet: <http://pacific.aaas.org>



**AAAS, Pacific Division 90th ANNUAL MEETING
San Francisco, CA
14 – 19 August 2009**

**ADVANCE REGISTRATION FORM
FOR EARLY REGISTRATION, FIELD TRIPS, and OTHER SPECIAL EVENTS**

*Send this form directly to
AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Blvd. • Ashland, OR 97520
or call with information: 541-552-6869 or FAX to our dedicated line: 541-552-8457
Please PRINT CLEARLY or TYPE this form. If faxing, use black ink.*

NOTE: This form supercedes all others.

Name: _____ Date: _____

Mailing Address: _____

City, State, Zip: _____

E-mail: _____ Day Phone: _____

Institution/Company, (for your name tag – if blank, city & state will be used): _____

AAAS Member: Yes No Affiliated Society Membership: _____

How did you hear about this meeting? _____

Which *Newsletters* did you receive for this meeting? January April Neither

If so, how? Print copy via USPS Print copy from someone PDF download from internet

If you received a copy of the *Newsletter*, did you find it useful? Yes No

Are you interesting in helping judge student presentations at the annual meeting? Yes No

Please see page 8 of this *Newsletter* for information about judging. If you check the “yes” box, you will be contacted for additional information.

Are you planning a program or presenting a paper or poster? Yes No

If so, in which program or section? _____

(above must be filled out in order to receive program planner/presenter rate)

MEETING REGISTRATION FEES:

	Received by 15 June	Received by 3 August	On-site	
Full Meeting				
Professional	<input type="checkbox"/> \$80.00	<input type="checkbox"/> \$95.00	<input type="checkbox"/> \$110.00	
Program Planner/				
Presenter	<input type="checkbox"/> \$60.00	<input type="checkbox"/> \$70.00	<input type="checkbox"/> \$80.00	
Teacher K-14	<input type="checkbox"/> \$45.00	<input type="checkbox"/> \$52.50	<input type="checkbox"/> \$60.00	
Post-Doc	<input type="checkbox"/> \$45.00	<input type="checkbox"/> \$52.50	<input type="checkbox"/> \$60.00	
Student	<input type="checkbox"/> \$30.00	<input type="checkbox"/> \$35.00	<input type="checkbox"/> \$40.00	
Unemployed	<input type="checkbox"/> \$45.00	<input type="checkbox"/> \$52.50	<input type="checkbox"/> \$60.00	
Spouse	<input type="checkbox"/> \$30.00	<input type="checkbox"/> \$35.00	<input type="checkbox"/> \$40.00	⇒ Name, City, State (for name tag): _____
Emeritus/Retired	<input type="checkbox"/> \$45.00	<input type="checkbox"/> \$52.50	<input type="checkbox"/> \$60.00	_____

One-day of Meeting

Professional \$60.00 \$70.00 \$80.00 ⇒ Select day: Fri. Sat. Mon. Tues. Wed.

Bio-Rad Workshop

Workshop Only \$10.00 \$10.00 \$10.00

(This registration is for those attending only the Bio-Rad workshop portion of the meeting. It does not allow attendance at additional meeting sessions. It is not needed for those registering otherwise for the meeting (one-day or full meeting).)

DARWIN and the GALAPAGOS Symposium: Check box for a ticket to this event (one ticket is allowed per registrant).

This symposium occurs Friday and Saturday, 14 and 15 August at the California Academy of Sciences.

Please complete reverse side before sending in or faxing form.

DIVISION BANQUET: Complete descriptions of the entree offerings can be found on page 16 of this *Newsletter*. Please indicate the number of each type of meal for which you wish to purchase tickets. If you are a student in competition for a presentation award, you are invited to be a guest of the Division and do not have to pay to attend the banquet. Please be sure to mark the appropriate dinner choice for your student presenter ticket.

Regular tickets: ___ eggplant ___ shrimp ___ prime rib total: ___ @ \$35 each \$ _____

Student Presenter Ticket @ no charge (choose one): vegetarian shrimp prime rib

FIELD TRIPS: All trips are priced per person. See pages 16 – 18 of this *Newsletter* for details.

Field trip registration fee for non-registrants (once per person) ___ regs. @ \$10.00 \$ _____

Sunday, 16 August

Field Trip #1: Presidio Field Excursion ___ tickets @ \$25.00 \$ _____

Field Trip #4: San Andreas Fault ___ tickets @ \$50.00 \$ _____

Wednesday, 19 August

Field Trip #2: Pigments, Perfumes and Poisons ___ tickets @ \$25.00 \$ _____

Thursday, 20 August

Field Trip #3: Jasper Ridge Biological Preserve ___ tickets @ \$40.00 \$ _____

Field Trip #5: Natural History of Marin County ___ tickets @ \$50.00 \$ _____

Field Trip Lunch Preference:

Field trip lunches ordinarily include a meat sandwich. ↓
If you prefer a vegetarian sandwich, please check here: ←
↑

Registration Total \$ _____

Workshop Total \$ _____

Banquet Total \$ _____

Field Trips Total \$ _____

TOTAL DUE \$ _____

(Make checks payable to AAAS, Pacific Division or use your credit card—see below.)

PLEASE NOTE: Requests for refunds must be in writing and postmarked or date stamped no later than 15 July 2009. A \$10 handling fee will be applied. An additional 3.5% deduction will be applied to the total amount for credit card refunds.

WORKSHOPS: Preregistration for workshops is very helpful to the presenters. Please check the appropriate box(es) below if you plan to attend one or more workshops. Please see pages 18 – 21 of this *Newsletter* for descriptions of these workshops.

- Monday Bio-Rad Workshop sessions.** **Tuesday Bio-Rad Workshop sessions.** **Discovering Darwin Workshop.**
 Forging California's Path to Zero Net Energy Workshop. **SENCER Workshop**

RECEPTIONS: To help estimate the numbers of people participating in the events listed below, please indicate the number of people in your party that plan to attend each.

- ___ **Cracker Barrel Mixer** (Sunday evening, no charge to registrants and family)
 ___ **SFSU Presidential Reception** (Monday evening, no charge to registrants and family)

CREDIT CARDS

To pay for your advance registration by credit card, you may

- mail this completed form to the address below, or
- phone the information to 541-552-6869 between about 12:00 p.m. and 4:00 p.m. Pacific Time, or
- fax this completed form to 541-552-8457 (dedicated fax line into the Pacific Division office).

Type of Card: Visa Master Card Discover AmEx

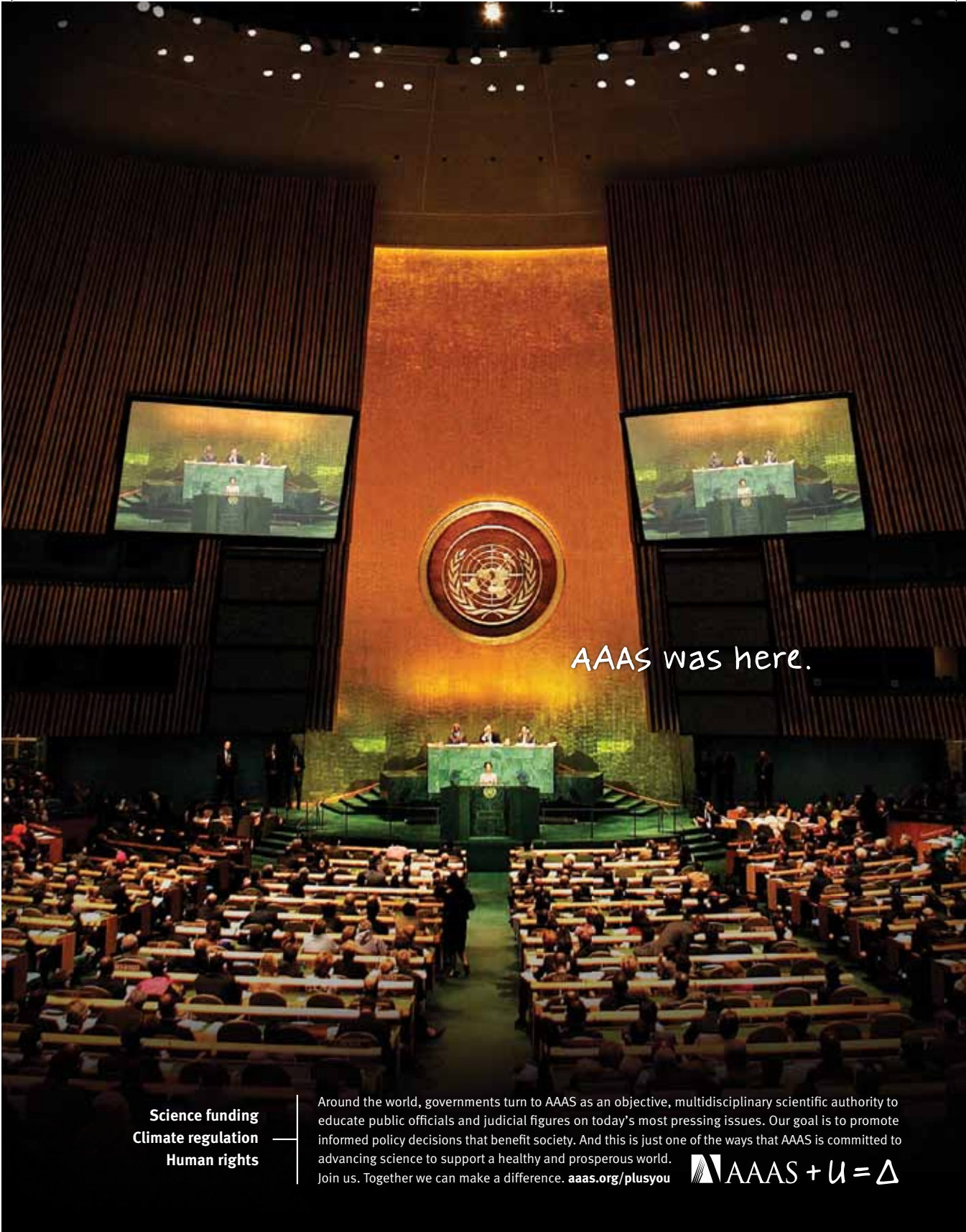
Credit Card Number _____ Expiration Date _____

Name on Card _____

Complete Billing Address for Card _____

Signature of Cardholder _____ Date _____

AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Boulevard • Ashland, OR 97520
E-mail us at aaaspd@sou.edu or call 541-552-6869 M – F 12:00 p.m. to 4:00 p.m., Pacific Time.



AAAS was here.

Science funding
Climate regulation
Human rights

Around the world, governments turn to AAAS as an objective, multidisciplinary scientific authority to educate public officials and judicial figures on today's most pressing issues. Our goal is to promote informed policy decisions that benefit society. And this is just one of the ways that AAAS is committed to advancing science to support a healthy and prosperous world. Join us. Together we can make a difference. aaas.org/plusyou





Pacific Division Publications San Francisco Book Sale

WOW!!! All Books.....50% + \$2.00 off WOW!!!
Excludes PROCEEDINGS

Includes free domestic shipping (U.S.A. only)
With this form only. Sale ends May 1, 2009.

Please PRINT or TYPE this form. Use an extra sheet of paper if necessary. If faxing, use black ink.

- Biodiversity and Taxonomy** (2005; paper, 236 pp.); ~~\$35.00~~ **\$15.50** (ISBN 0940228-62-9)
- Museums and Other Institutions of Natural History: Past, Present, and Future** (2004; paper, 325 pp.); ~~\$35.00~~ **\$15.50** (ISBN 0-940228-60-2)
- Agroecosystems and the Environment: Source, Control, and Remediation of Potentially Toxic, Trace Element Oxyanions** (1998; cloth, 213 pp.); ~~\$20.00~~ **\$8.00** (ISBN 0-934394-12-1)
- San Francisco Bay: The Ecosystem** (1996; cloth, 542 pp., color plates); ~~\$45.00~~ **\$20.50** (ISBN 0-934394-11-3)
- Genecology and Ecogeographic Races** (1995; cloth, 275 pp.); ~~\$28.95~~ **\$12.45** (ISBN 0-934394-10-5)
- Cracking Rocks and Defending Democracy: The Life and Times of Kirtley Fletcher Mather, 1888-1978** (1994; cloth, 342 pp., 39 photos); ~~\$31.95~~ **\$13.95** (ISBN 0-934394-09-1)
- Dietary Factors and Birth Defects** (1993; paper, 410 pp.); ~~\$28.50~~ **\$12.25** (ISBN 0-934394-08-03)
- Crater Lake: An Ecosystem Study** (1990; cloth 224 pp.); ~~\$26.95~~ **\$11.45** (ISBN 0-934394-07-5)
- Late Cenozoic History of the Pacific Northwest** (1985; cloth, 417 pp.); ~~\$28.95~~ **\$12.45** (ISBN 0-934394-06-7)
- Patterns of Evolution in Galapagos Organisms** (1983; cloth, 568 pp.); ~~\$32.50~~ **\$14.25** (ISBN 0-934394-05-9)
- San Francisco Bay: Use and Protection** (1982; paper, 310 pp.); ~~\$17.95~~ **\$6.95** (ISBN 0-934394-04-0)
- Frontiers of Geological Exploration of Western North America** (1982; paper, 248 pp); ~~\$16.95~~ **\$6.45** (ISBN 0-934394-03-2)

Proceedings Series

- Meeting Program with Abstracts** (Proceedings Vol. 1, Part 1, 1982 through Vol. 27, Part 1, 2008); **\$10.00 each**
- Evolutionists Confront Creationists** (Proceedings Vol. 1, Part 3, 1984; paper, 213 pp.); **\$10.00**
- Scientific Research and New Religions** (Proceedings Vol 2, Part 2, 1985, paper, 180 pp.); **\$10.00**
- California's Master Plan for Higher Education in the Twenty-first Century** (Proceedings, Vol 13, Part 2, 1996; paper, 118 pp.); **\$10.00**

Address orders to: AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Blvd. • Ashland, OR 97520
Phone orders: 541-552-6869 • dedicated FAX orders: 541-552-8457 • E-mail: aaaspd@sou.edu

ALL SALES FINAL — NO RETURNS

Payment must accompany all orders. Make checks payable to AAAS, Pacific Division.

Quantity*	Title	Price Each	Total
<i>Attach extra sheet if necessary.</i> *Maximum 3 of any sale title. Contact us for quantity orders.		SHIPPING (no charge to U.S.A.; others contact us for amount)	
		TOTAL DUE WITH ORDER	

Name _____ Date _____
 Address _____
 City _____ State _____ Zip _____
 Daytime Phone _____ e-mail _____

CREDIT CARD

- Visa
 Master Card
 Discover
 American Express

Credit Card # _____ Expiration Date _____
 Name on Card _____ Signature of Cardholder _____
 Complete Billing Address for Card _____

San Francisco State University Map – Location key

Administration (ADM) -- I8-9	Coppola Theatre -- H6	Health Center (SHS) -- G6	Mail Services -- F5	Police -- D4	Temporary Buildings -- F9
Amer. Language Institute (ALI) -- G7	Corporation Yard -- D4	Hensill Hall (HH) -- G9-10	Maloney Field (hardball) -- E2-3	Recycling -- E-F6	Tennis Courts -- D2
Bookstore -- H7	Creative Arts (CA) -- I6	HSS -- H-19	Mary Park Hall (MPH) -- F2	Science (SCI) -- G-H9	Thornton Hall (TH) -- F8
Burk Hall (BH) -- H-G6	Dining Center (City Eats) -- G3	Humanities (HUM) -- H5	Mary Ward Hall (MWH) -- G2-3	Seven Hills Center -- F3	The Towers (Cent. Sq.) -- G4
Business (BUS) -- H/I-8/9	Ethnic Studies & Psych. (EP) -- G6	Jack Adams Hall (SC) -- H7	McKenna Theatre (CA) -- I6	Shipping & Receiving -- D5	University Park North -- A5-E9
Cesar Chavez Student Center -- H7	Facilities -- D4	Knuth Hall (CA) -- I6	Memorial Grove -- G7-8	Softball Field -- H1-J2	University Park South -- I2-I9
Car Rental /Lot 25 -- B4	Fine Arts (FA) -- H6	Labor Archives -- B5	One Stop Center -- G5	Stud. Housing Office (MWH) -- G3	Village at Cent. Sq. -- G3-4
Child Care Center (Assoc. Stud.) -- F2	Garden of Remembrance -- H6	Library (LIB) -- I7-8	Parking Garage (main) -- E-F5	Student Services (SSB) -- G5	
Children's Campus-- C3-D4	Greenhouse -- F9	Library Annex I & II -- D3-4	Parking & Transportation -- D4	Studio Theatre (Creative Arts) -- I6	
Conference Ctr. (The Towers) -- G4	Gymnasium (GYM) -- G7-8	Little Theatre (CA) -- I6	Physical Therapy -- G7	Sutro Library -- B5	



Map of San Francisco State University. The parking structure is colored blue; the buildings in which the meeting will take place are colored yellow; the Seven Hills Center is colored red; the Cesar Chavez Student Center is colored orange.



American Association for the Advancement
of Science, Pacific Division
Southern Oregon University
1250 Siskiyou Boulevard
Ashland, OR 97520



NON-PROFIT ORG.
U.S. POSTAGE PAID
Medford, OR
Permit No. 292

**AAAS, PACIFIC DIVISION 90th Annual Meeting
CALIFORNIA ACADEMY of SCIENCES
SAN FRANCISCO STATE UNIVERSITY
San Francisco, CA
14 – 19 August 2009**

**PRELIMINARY ANNOUNCEMENT of SYMPOSIA,
WORKSHOPS, FIELD TRIPS and OTHER EVENTS**



SYMPOSIA

(see page 21)

- Darwin and the Galapagos
- Darwin Contributed Papers
- San Francisco Bay 
- Evolution of Cooperation: Theoretical and Experimental Approaches
- Amphibian Declines: The First Wave of a Mass Extinction?
- Comparative Genomics: From Prediction to Function
- Weird Life
- Communicating Science to the Public 
- New Humanities and Sciences Convergences: Darwin and Culture
- Sustainability as a Way of Life
- Project-based Learning and the Culture of Science Education in the 21st Century
- Evolutionary Innovations: Where Ecology, Development and Macroevolution Intersect
- Conservation in an Urban National Park
- Near-Earth Objects: A Multi-dimensional Challenge
- Materials Science and Nanotechnology
- Advancing Materials Science and Nanotechnology Education



FIELD TRIPS

(see page 16)

- San Francisco Presidio Field Excursion (Sunday)
- San Andreas Fault on the San Francisco Peninsula (Sunday) 
- Pigments, Perfumes and Poisons (Wednesday)
- Jasper Ridge Biological Preserve (Thursday)
- Natural History of Marin County (Thursday) 

WORKSHOPS

(see page 18)

- Discovering Darwin 
- Hands-on with Bio-Rad Molecular Biology Kits
- Science Education for New Civic Engagements and Responsibilities (SENCER) 
- Forging California's Path to Zero Net Energy

NOTE: These programs are being planned as of March, 2009. However, changes in offerings frequently occur.
For up-to-date information, please visit the Pacific Division web site, pacific.aaas.org