General Information and General Sessions

90th Annual Meeting of the Pacific Division of the American Association for the Advancement of Science

San Francisco State University
and the
California Academy of Sciences
San Francisco, CA
14 – 19 August 2009

Contents accurate as of 22 July 2009.
Times and/or locations of events may change.
Please refer to the “Changes” flyer for updated information.
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90th ANNUAL MEETING of the AAAS, PACIFIC DIVISION
at the
SAN FRANCISCO STATE UNIVERSITY
and the
CALIFORNIA ACADEMY of SCIENCES
SAN FRANCISCO, CA
14 – 19 August 2009

GENERAL INFORMATION

PACIFIC DIVISION SECTIONS
SPONSORING SESSIONS
at the SAN FRANCISCO MEETING
Agriculture and Horticultural Sciences
Anthropology and Archaeology
Atmospheric and Oceanographic Sciences
Chemistry and Biochemistry
Cell and Molecular Biology
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

SAN FRANCISCO 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 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 SCIENCES**

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.” 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, California Academy of Sciences, circa 1895.
and a very limited number of specimens. Everything else was lost in the fire. Just prior to the fire, a group 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 four 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 (earlier 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, Mammalogy/Omnithology; 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 the following web site of the California Academy of Sciences: http://www.calacademy.org/academy/about/timeline.php.

ANNUAL MEETING

REGISTRATION

Registration Centers will be at set up at both the California Academy of Sciences and San Francisco State University according to this schedule:

**Registration at the California Academy of Sciences**, near the main entrance to the Forum:
- Friday, 8:00 a.m. – 3:00 p.m.
- Saturday, 8:00 a.m. – 3:00 p.m.
- Tuesday, 7:30 a.m. – 3:00 p.m.

**Registration at San Francisco State University**, in the main entry foyer to Hensill Hall (19th Ave. entrance, which is actually the third floor of the building):
- 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.

All persons planning to attend the meeting, except for public sessions, should be registered for the meeting and must wear their name badges at all times! On-site registration fees are as follows: full meeting 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 is $80. Note that If you attend more than one day, you must pay the full registration fee rather than paying day-by-day. 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 be making a presentation at the meeting.

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Special stipends of $75 were given to the first twenty K – 12 and community college instructors that registered in advance for this meeting. The stipend is not available to teachers who register on-site.

Students were given the opportunity to apply for travel awards of up to $150 to help defray their costs for the meeting.

About Field Trips: Pre-registration for all field trips was required due to limited seating in the vehicles and the need to inform some destinations of the number of people arriving. However, space may be available on some of the excursions. If you didn’t preregister for a particular field trip on which you are interested in participating, please inquire at the Registration Center to see if space is still available. 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.

About Workshops: All workshops are available at no additional charge to persons already registered for the meeting. Some workshops may have limited space available, so it is suggested persons interested in attending arrive early.

About Refunds: Requests for refunds must have been in writing and postmarked or date-stamped no later than July 15, 2009. Under extreme hardship conditions beyond a registrant’s control, requests for refunds may be honored beyond this date if presented in writing with an adequate explanation of the hardship that precipitated the request for the refund. A $10 handling fee is applied to all refunds. Additionally, a 3.5% deduction is applied to the total amount for credit card refunds.

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. “Local Hotels and Motels” below gives 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. Staff from the stockroom 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 and motels in all price ranges in the San Francisco area. Unfortunately, not many of them are close to SFSU or CAS. The following three hotels, located in the vicinity of San Francisco International Airport, are offering special rates for meeting attendees. Hotel search engines such as hotels.com or expedia.com are also places to find the best deals for lodging.

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
415-467-4400
Rate: $115/night for one or two persons
$125/night for three or four persons
Includes:
    parking
    airport shuttle
    high speed internet
    indoor swimming pool
    fitness center
    Cafe and bar on the premises.

Proximity to meeting:
    approx. 10 miles to SFSU (14 minute drive)
    approx. 10.5 miles to CAS (19 minute drive).

Hampton Inn San Francisco–Airport
300 Gateway Boulevard
South San Francisco, CA 94080
650-876-0200
Rate: $129/night for one to four persons in a room
Includes:
    parking
    local calls
    airport shuttle
    breakfast buffet
    high speed internet
    fully equipped business center
    guest laundry room
    indoor swimming pool
    fitness center
    evening manager’s reception every Mon – Wed

Proximity to meeting:
    approx. 11 miles to SFSU (15 minute drive)
    approx. 10.5 miles to CAS (19 minute drive).

Homewood Suites by Hilton
2000 Shoreline Court
Brisbane, CA 94005
650-589-1600
Rate: $109/night for up to four persons in a Studio Suite
$119/night for up to four persons in a King Suite
Includes:
- parking
- airport shuttle
- high speed internet
- fully equipped kitchen with refrigerator
- hot breakfast
- evening manager’s reception Mon – Thurs

Proximity to meeting
- approx. 10 miles to SFSU (14 minute drive)
- approx. 10.5 miles to CAS (19 minute drive).

TRAVEL to the MEETING and PARKING
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 the signs to the facility, which has an entrance off of Fulton Street at 10th Avenue.

Parking at the CAS:
Limited 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 the inside of the front cover of this Proceedings 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 the inside of the front cover of this Proceedings 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 the inside of the front cover of this Proceedings 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 the inside of the front cover of this Proceedings). Note that Level 4i Orange to 4n Orange and the roof level is restricted to staff and faculty between 7:00 a.m. and 5:00 p.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.

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 and 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 Avenue 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 and 18 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:

Friday (CAS) 8:00 a.m. – 3:00 p.m.
Saturday (CAS) 8:00 a.m. – 3:00 p.m.
Sunday (SFSU) 3:00 p.m. – 7:00 p.m.
Monday (SFSU) 7:30 a.m. – 4:30 p.m.
Tuesday (SFSU) 7:30 a.m. – 4:00 p.m.
Tuesday (CAS) 7:30 a.m. – 3:00 p.m.
Wednesday (SFSU) 7:30 a.m. – 2:30 p.m.

MESSAGES

To leave a message for a meeting registrant or to contact
AAAS, Pacific Division staff, call 541-292-1115. Please note that this line will be monitored only between the dates of 13 August and 20 August. After those dates, please use the regular Pacific Division number, 541-552-6869, in order to contact Pacific Division staff.

**BREAKS**
Mid-morning and mid-afternoon breaks are scheduled, as appropriate, for each session. Refreshments will be served during break times at a location near Registration Centers at both the CAS and SFSU.

**MEETING ROOMS, COMPUTERS, and POWERPOINT PRESENTATIONS**
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 Intel-based Macintosh computers running PowerPoint 2008, and standard computer projectors. Speakers presenting in the Theatre at the CAS should have been informed by their program organizers as to the equipment available. PowerPoint presentations may be loaded onto computers only from a CD-ROM or thumb/USB/flash drive. Be sure, when saving your PowerPoint presentation, that it will open on the platform available in the room in which you will be speaking.

Speakers requiring other specialized equipment such as slide or overhead projectors must have made their requests known when they submitted their abstracts. If available, specialized equipment will be provided. If rental costs are incurred, payment is the responsibility of the requestor.

**DATES, TIMES and LOCATIONS of PRESENTATIONS**
The meeting rooms, times of presentations, and abstracts for the meeting are published in this “Program with Abstracts” issue of the *Proceedings* (Volume 28, Part I), which is given to each meeting registrant.

**POSTER SESSIONS**
Posters are assigned a display space of 40” tall x 60” wide (1 m x 1.5 m). By action of the Council of the Pacific Division in order to assure fairness, all student posters must fit within the assigned display space to be eligible for student Awards of Excellence. Posters are grouped by discipline and subject matter.

There will be two poster sessions, one Monday afternoon and the other starting Tuesday morning. Each will include both students and professionals. Presenters should have their posters in place no less than 10 minutes prior to the beginning of their session and must be available for at least one hour during the session in order to discuss their results with interested persons. All posters must be removed within 30 minutes of the end of the session.

Student posters will be judged for Awards of Excellence. Students must be present with their posters until they have talked with all of their judges.

Additional information about posters, student judging of posters, etc., is found on page 51 of these *Proceedings*.

Presenters assume full responsibility for the security of their poster materials. Unclaimed posters will be discarded at the close of the technical sessions of the meeting on Wednesday.

**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 and full electronic access to AAAS member pages. Societies often supplement these awards with their own cash prizes.

For this meeting, 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 guests of the Division at the annual Banquet Tuesday evening, 18 August. Festivities that evening include the presentation of student awards. Students were asked to indicate on the Advance Registration Form if they were planning to attend the banquet. Those who responded positively were provided a ticket along with their other registration materials. If you are a student who is in competition for an Award of Excellence and you do not have a ticket for the banquet, please inquire at the Registration Desk to see whether any tickets are still available.
**GENERAL INFORMATION**

**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 earlier in the week. Your presentation will be judged as a poster 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.

**Sunday Evening Plenary Lecture.** 16 August, 7:00 p.m. in SCIENCE 201 on the San Francisco State University campus. Dr. Robert Chianese will present his popular lecture, *Ecological Awareness in American Landscape Art: Depicting and Repairing the American Wasteland*. For event details, please refer to listing below under PUBLIC LECTURES.

**Sunday Evening Welcome Wagon and Cracker Barrel Reception.** 16 August, 8:00 p.m. in the Greenhouse (just north 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 until 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 Noon Public Lecture.** 17 August, 12:15 p.m. in SCIENCE 201 on the San Francisco State University campus. Dr. Donald McGraw will talk about *Millennial Biology: The National Science Foundation and the Life Sciences, 1975 to 2005*. For event details, please refer to listing below under PUBLIC LECTURES.

**Monday Evening Plenary Lecture.** 17 August, 7:00 p.m. in the Seven Hills Center on the San Francisco State University campus. Dr. Lynne Elkin will give an historical perspective on *Specific Events Delaying Recognition of Franklin’s Contribution to DNA Structure*. For event details, please refer to listing below under PUBLIC LECTURES.

**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 the inside of the front cover of these Proceedings). 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 an oregano and pine nut pilaf); *Prime Rib of Beef* (prime rib of beef roasted at 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. There are a limited number of tickets available and people were asked to sign up in advance. If you are interested in attending the banquet but do not yet have a ticket, please ask at the Registration Center to see if any tickets are still available.

Following dinner will be the announcement of student presentation awards, and then Dr. Anne A. Sturz (Department of
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.

Wednesday Noon Public Showing of Students of Consequence. 19 August, 12:15 p.m. in SCIENCE 201 on the San Francisco State University campus. For event details, please refer to listing below under PUBLIC LECTURES.

PUBLIC LECTURES

All members of the public are invited to attend these lectures 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 SCIENCE 201 on the San Francisco State University campus. 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 Section of the AAAS, Pacific Division.

Monday Noon Public Lecture. 17 August, 12:15 p.m. in Room 201 of the Science Building at San Francisco State University. Dr. Donald McGraw, chair of the AAAS, Pacific Division’s History and Philosophy of Science Section, will present the talk, Millenial Biology: The National Science Foundation and the Life Sciences, 1975 to 2005. Dr. McGraw is a former Associate Provost at the University of San Diego. He currently is contracting with the National Science Foundation to write a history of the Biological Sciences at NSF during the 30 year period, 1975 to 2005, which is the topic of this talk.

Monday Evening Plenary Lecture. 17 August, 7:00 p.m. in the Seven Hills Center, 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 Paleoecology, Paleoclimatology and Paleoecology.

Tuesday Noon Public Lecture. 18 August, 12:15 p.m. in SCIENCE 201 on the San Francisco State University campus. Dr. Lynne Elkin (Professor Emerita of Biological Sciences, California State University East Bay, Hayward, CA) will present her talk, Specific Events Delaying Recognition of Franklin’s Contribution to DNA Structure. Dr. Elkin is a recognized authority on the life and work of Dr. Rosalind Franklin. Since 1999, she has delivered over 40 lectures in the United States and England based on her research into the events surrounding the life of Rosalind Franklin, especially during the early 1950s when competition to discern the structure of DNA was especially keen and Rosalind Franklin’s research played a pivotal role.

Tuesday Evening AAAS, Pacific Division Presidential Lecture. Tuesday, 18 August, about 8:15 p.m. in the Seven Hills Center on the San Francisco State University campus. 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.

Wednesday Noon Public Showing of Students of Consequence. 19 August, 12:15 p.m. in SCIENCE 201 on the San Francisco State University Campus. Though not quite a public lecture, this program should engender a high degree of interest in those who are concerned about high school education in the United States. Dr. Jay Vavra (High Tech High, San Diego, CA) will present a special showing of Students of Consequence, a 32 minute film produced by students at High Tech High to document their trip to Tanzania to learn about the African bushmeat problem and help authorities come up with ways to definitively differentiate between legal and illegal bushmeat sources. High school students can make a difference! Following the film, Dr. Vavra will be available to comment and answer questions.

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. Family members who are not registered for the meeting 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-attendee participates.

Due to limited space, advance registration is required for all field trips. Reservation and payment of field trip fee(s) were included on the Advance Registration Form. If there is
a field trip in which you are interested in participating but did not sign up for in advance, please ask at the Registration Center to ascertain whether or not a ticket may still be available.

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 the inside of the front cover of these Proceedings).

**Sunday, 16 August**

Field Trip #1: Presidio Field Excursion. Departs from in front of the lower entrance to the SFSU parking structure (east end of State Drive – please refer to the inside of the front cover of these Proceedings) at 9:00 a.m.; returns about 4:00 p.m. [Note: A Pacific Division representative will be present to provide participants with meeting materials, so please arrive early!] Includes transportation, box lunch and applicable fees. 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.

Field Trip #4: San Andreas Fault on the San Francisco Peninsula. Departs from in front of the lower entrance to the SFSU parking structure (east end of State Drive – please refer to the inside of the front cover of these Proceedings) at 8:30 a.m.; returns about 2:30 p.m. [Note: A Pacific Division representative will be present to provide participants with meeting materials, so please arrive early!] Includes transportation, box lunch, road log, and applicable fees. 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**

Field Trip #2: Pigments, Perfumes and Poisons at the San Francisco Botanical Garden. 12:30 p.m. – 5:00 p.m. Field Trip #2: This excursion departs from the lower entrance to the SFSU parking structure (east end of State Drive – please refer to the inside of the front cover of these Proceedings) promptly at 12:30 p.m.; returns at approximately 5:00 p.m. Includes transportation, applicable fees, and box lunch. 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

Field Trip #3: Jasper Ridge Biological Preserve. This excursion departs from the lower entrance to the SFSU parking structure (east end of State Drive – please refer to the inside of the front cover of these Proceedings) promptly at 7:30 a.m.; returns at approximately 2:30 p.m. Includes transportation, applicable fees, and box lunch. Cost: $40 per person.

Led by Philippe Cohen (Administrative Director, Jasper Ridge Biological Preserve) and Cindy Wilber (Education Coordinator, Jasper Ridge Biological Preserve), this field trip 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 Shaow-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.

Field Trip #5: Natural History of Marin County. This excursion departs from the lower entrance to the SFSU parking structure (east end of State Drive – please refer to the inside of the front cover of these Proceedings) promptly at 8:30 a.m.; returns at approximately 4:00 p.m. Includes transportation, applicable fees, brief habitat descriptions and species lists of dominant organisms, and box lunch. 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 90s) and may also include fog and strong winds and temperatures in the 50s 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

All workshops are available to all meeting registrants without additional fees. As with all of the technical program for this meeting, all workshop participants must be registered for the meeting. Persons coming solely for the Bio-Rad workshops are offered a special Bio-Rad-Only meeting registration fee. In order to help workshop developers in their planning, pre-registrants were asked to indicate their interest in attending each of the workshops. Some workshops have limited space. If you are concerned about whether a workshop still has room, please inquire at the Registration Center.

Descriptions of all workshops may be found starting on page 41 of these Proceedings.
Attention ARTISTS!

We are seeking art with a science pedigree!!

Planned in conjunction with the 91st annual meeting of the AAAS, Pacific Division, to be held at Southern Oregon University in mid-June 2010, is an art exhibit, or more specifically, an art/science exhibit.

Do you have any artworks based on your research or studies in the sciences you would like to include in this exhibit? If so, we would like to see your work. Or, please suggest to us, or forward this announcement to your colleagues who might be interested.

To be considered, please send an email with attached jpeg(s) (2MB limit each; 10MB total) or a CD/DVD to:

Michael Crane, Director
Schneider Museum of Art
Southern Oregon University
1250 Siskiyou Blvd.
Ashland, OR 97520
541-552-8484
cranem@sou.edu

Please copy all submissions to both:

Roger Christianson  Robert Chianese
AAAS, Pacific Division  Department of English
Southern Oregon University  California State University
1250 Siskiyou Blvd.  18111 Nordhoff Street
Ashland, OR 97520  Northridge, CA 93130
541-552-6747  robert.chianese@csun.edu
rchristi@sou.edu

For each submission, be sure to include a statement describing the work’s connection to science.

Questions? Contact Michael Crane or Roger Christianson (see information above).
Sunday, 16 August 2009

EVENING PLENARY LECTURE*
San Francisco State University
SCIENCE 201
Sunday
7:00 PM

1 Ecological Awareness in American Landscape Art: Depicting and Repairing the American Wasteland, ROBERT L. CHIANESE (California State University, Northridge, CA).

Welcome Wagon – Cracker Barrel RECEPTION
San Francisco State University
GREENHOUSE (just north of Hensill Hall)
Sunday
8:00 PM

Hosted by the San Francisco State University Biology Department, this reception begins immediately following Dr. Chianese’s lecture and continues until 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, and good conversation. Please wear your registration badge.

Monday, 17 August 2009

NOON PUBLIC LECTURE*
San Francisco State University
SCIENCE 201
Monday
12:15 PM - 1:00 PM


EVENING PLENARY LECTURE*
San Francisco State University
Seven Hills Center
Monday
7:00 PM

3 Shipwrecks as Fossils, CATHRYN R. NEWTON (Dean Emerita and Professor of Interdisciplinary Sciences, The College of Arts and Sciences, Syracuse University, Syracuse, NY).

SFSU PRESIDENT’S RECEPTION
San Francisco State University
Seven Hills Center
Monday
8:00 PM

San Francisco State University President Robert Corrigan will host an informal reception following Dr. Newton’s talk. All participants 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.

*The public is invited to attend this program at no charge.
General Sessions

**Tuesday, 18 August 2009**

**NOON PUBLIC LECTURE**
San Francisco State University
SCIENCE 201
Tuesday
12:15 PM

4 Specific Events Delaying Recognition of Franklin’s Contribution to DNA Structure,
LYNNE OSMAN ELKIN
(California State University East Bay, Hayward, CA).

**RECEPTION and STUDENT AWARDS BANQUET**
San Francisco State University
Seven Hills Center
Tuesday
6:00 PM

A hosted reception, beginning at 6:00 p.m., will feature soft drinks and juices. Dinner will be served around 6:45 p.m. Be sure to bring your dinner ticket with you, as it is needed to not only verify that you are on our dinner list but it also tells the servers your choice of entree. Tickets to the banquet cost $35 and needed to be purchased in advance. Students in competition for Awards of Excellence may attend the banquet as guests of the Division. However, they must also have requested a ticket in advance (at no charge). If you do not have a ticket but would like to attend the banquet, please check at the Registration Center no later than 3:00 p.m. on Tuesday to check ticket availability. Following dinner will be the announcement of the winners of the sectional and division-wide student Awards of Excellence. Student award winners are asked to stay until the end of the program so that photographs may be taken of the group. After announcement of the award winners, Dr. Anne Sturz (University of San Diego, San Diego, CA) will present the Presidential Lecture. The evening should end by 9:30 p.m. or earlier.

*The public is invited to attend this program at no charge.

**Wednesday, 19 August 2009**

**MEETING of the COUNCIL of the PACIFIC DIVISION**
San Francisco State University
Blakeslee Room
(at the top of Thornton Hall)
Wednesday
7:00 AM - 10:00 AM

The Council of the AAAS, Pacific Division will hold its annual breakfast and business meeting starting at 7:00 a.m. at the top of Thornton Hall in the Blakeslee Room. The Council will elect officers, discuss programs for the 2010 and 2011 annual meetings, and transact such other business as is required by the Division’s By-laws.

**NOON PUBLIC SHOWING of Students of Consequence**
San Francisco State University
SCIENCE 201
Tuesday
12:15 PM

Though not quite a public lecture, this program should engender a high degree of interest in those who are concerned about high school education in the United States. Dr. Jay Vavra (High Tech High, San Diego, CA) will present a special showing of Students of Consequence, a 32 minute film produced by students at High Tech High to document their trip to Tanzania to learn about the African bushmeat problem and help authorities come up with ways to definitively differentiate between legal and illegal bushmeat sources. High school students can make a difference! Following the film, Dr. Vavra will be available to comment and answer questions.