

2009 Climate Specialty Group Newsletter

From the Chair

What happens in Vegas, stays in Vegas. This is the advertising jingle for our 2009 Annual Meeting location. However, this really does not fit us well as a group, at least in our professional capacities! We are supposed to communicate new science results, listen to new findings, have great discussions with our colleagues, plan future projects with collaborators, and then bring this all home to our universities and organizations. That is the real mission of attending a meeting of any sort, and so it is true of this meeting, too. I look forward to seeing as many of you as possible at our Climate Day activities on Wednesday, March 25, in the Royale Pavilion 3 on the 1st floor of the Riviera Hotel. This is a decent sized room, and I hope we fill it to capacity for the **John Russell Mather Paper of the Year** talk at 3:10 PM by Lei Meng of Texas A&M University, entitled "A Comparison of Soil Moisture Models using Soil Climate Analysis Network Observations". Following at 5:20 PM is our **CSG Plenary Speaker** Julio L. Betancourt, who will give a talk on "Climate and Ecosystems in the Western U.S. – History and Prospectus". Finally, at 7 PM, we will commence the **CSG Business Meeting**, when we will honor Jeffrey C. Rogers of The Ohio State University with the CSG Lifetime Achievement Award. Please try to attend these back-to-back sessions in Royale Pavilion 3. THEN you can go do the stuff that stays in Vegas, at the Physical Geography Reception that same Wednesday night at 9-11 PM in Royale Pavilion 1 in the Riviera. You hardly need to move from 3:10 PM to 11 PM. Thanks to the AAG staff for arranging these events in the schedule so conveniently!

The rest of the meeting looks pretty good, too. Hardly a time slot goes by between midday Sunday and midday Friday without at least one climate or climate-related session. A total of 35 sessions list the Climate Specialty Group as a sponsor or co-sponsor, and 258 papers use the word "climate" as a keyword. This is definitely one of those times when planning ahead where you want to be and what you want to see would be advisable! The AAG Web site has the Annual Meeting link right on the home page: <http://www.aag.org/>.

I would like to thank the CSG Board of Directors for their active participation in the preparations for this meeting, and for all their other contributions.

Vice-Chair: Mark Schwartz, U of Wisconsin-Milwaukee

Honors Director: Jill Coleman, Ball State

Young Scholar Director: Greg Goodrich, Western Kentucky U

Director: Tracy DeLiberty, U of Delaware

I would also like to thank Michael Keables, U of Denver, for his service as Webmaster for the CSG Website.

Have a pleasant, stimulating, productive, refreshing, renewing meeting!

Michael Palecki, NOAA/NESDIS/NCDC

Call for Nominations: CSG Board of Directors

Nominations are presently being solicited for two openings on the CSG Board of Directors. The terms of Jill Coleman, Honors Director, and Greg Goodrich, Young Scholar Director, will be expiring after the 2009 Annual Meeting season. For eligibility requirements for these positions, please check our CSG bylaws at: <http://www.geography.du.edu/csg/>. Nominations should be submitted to Michael Palecki (michael.palecki@noaa.gov) prior to noon on Friday, March 20, or can be made from the floor at the Business Meeting. Nominations must include the name and affiliation of the nominee, the office for which the nominee will stand, and a confirmation that the nominee is willing to serve. If a nomination is made from the floor, the nominee must be present to confirm their willingness to serve. See article VI of the bylaws for further details. Thank you to all who are willing to serve the CSG, or have served the CSG in the past.

CSG Financial Report: Mark Schwartz

The Climate Specialty Group would like to thank Sandie Mather for yet another very generous donation for the support of the John Russell Mather Paper of the Year Award.

Plenary speaker costs will be back to normal levels this year, due to the air travel and hotel needs of this year's speaker, unlike last year's speaker, who merely hopped the local transit system to attend our meeting. A slight decline in fund levels is anticipated this year, which is in keeping with the desire of the AAG for Specialty Groups to keep their accounts trim.

Balance 2/29/08: **\$7,820.34**

2008 Meeting Expenses: \$2212.89
Dues Received (Mar-Dec): \$1944.00
Mather Donation: \$1000.00

Balance 12/31/08: **\$8,551.45**

2009 Estimated Activity
Dues Received (Jan-Feb) \$ 402.00
Plenary Speaker Expenses \$1200.00
Phys Geog Reception \$ 700.00
Student Paper Prizes \$ 575.00
Paper of the Year Award \$ 250.00
Awards, speaker dinner, etc. \$ 500.00

2009 Meeting Expenses est. \$2823.00

Estimated Balance 3/30/09: **\$5,728.45**

CSG Student Paper Competition: Jill Coleman

The CSG 2008 Student Paper Competition had 13 entrants. The results are as follows:

First Place. Jonathan Hanes (University of Wisconsin-Milwaukee): Connecting Surface-Atmosphere CO₂ Exchange with Spring Phenology in a Northern Mixed Forest

Second Place. Joshua Durkee (University of Georgia; now at University of Western Kentucky): Climatological variations in subtropical South American precipitation attributed from mesoscale convective complexes

Third Place. David Knight (University of Virginia): Climatology of tropical cyclone rainfall in the southeastern United States.

Honorable Mention. Cory Morin (University of Arizona): A West Nile Virus Vector's Response to Climate Variability using the Dynamic Mosquito Simulation Model (DyMSiM)

For the 2009 competition, there are 11 participants. We encourage you to see as many of these student papers as you can. If you do not have a conflict of interest, we would appreciate any help you could provide in judging the contest, especially the early and late week sessions. Please let Jill Coleman know if you are able to be a judge, and she can send you a judging form template for you to print prior to the meeting. Jill can be reached by e-mail at jscoleman@bsu.edu or by phone at (765) 285-1772.

Sunday, March 22

1135 Analyses of High-Impact Weather I Location: Skybox 207, Riviera Hotel, 2nd Floor

1:20 PM: Donna Hartz: A Comparison Of Extreme Climate Linkages To Heat Related Emergency (911) Calls In Phoenix, Arizona And Chicago, Illinois

Monday, March 23

2105 Recent Climate Change in the USA Location: Grande Ballroom H, Riviera Hotel, 1st Floor

8:00 AM: David Hondula: Decreases in the U.S. "Transition" Frequency and a New Perspective on United States Climate Change

2456 Advances in Paleoclimatology: Moisture Changes through Time and their Impacts III

Location: North Hall N117, Las Vegas Convention Center

2:20 PM: Erika Wise: Multicentury climate-streamflow linkages in the north-central Rocky Mountains

Tuesday, March 24

3554 Hydroclimatology II Location: North Hall N115, Las Vegas Convention Center

4:10 PM: Lei Meng: Observational Relationship between Precedent Soil Moisture and Summer Precipitation in the U.S. Great Plains

3654 Hydroclimatology III Location: North Hall N115, Las Vegas Convention Center

5:20 PM: David Knight: The contribution of tropical cyclones to extreme rainfall events in the southeastern United States

Wednesday, March 25

4231 Climate Specialty Group Student Paper Competition (4 Papers) Location: Skybox 203, Riviera Hotel, 2nd Floor

10:10: Jared Desrochers: Using a Standardized Snowfall Index to Improve Analysis of Snowfall Change and Teleconnection Relations

10:30: Andrew Augustine: Influences of Convective Activity on Tropospheric Ozone Development in Baton Rouge, Louisiana

10:50: Jeanne Thibeault: The Future of Drought in the Bolivian Altiplano: Projected Changes in Drought Severity and Relationships with Soil Moisture and Zonal Wind Anomalies

11:10: Christopher J. Crawford: Past and Present Climatic Variation in the Southern Appalachian Mountains.

Thursday, March 26

5131 Climate and Infectious Disease I Location: Skybox 203, Riviera Hotel, 2nd Floor

8:40: Cory Morin: Modeled Response of the West Nile Virus Vector *Culex quinquefasciatus* to Changing Climate Using the Dynamic Mosquito Simulation Model

5604 Land use and regional land-atmosphere interactions Location: Grande Ballroom G, Riviera Hotel, 1st Floor

6:00 PM: John Frye: Convective Initiation Along Soil Moisture Boundaries in the Southern Great Plains

News Items Submitted by CSG Members

Taking the Pulse of our Planet:

Volunteers Needed to Track Seasonal Signs of Climate Change

Volunteers across the nation are being recruited to get outdoors and help track the effects of climate on seasonal changes in plant and animal behavior. The USA-National Phenology Network (USA-NPN), a consortium of government, academic and citizen-scientists, is launching a new national program built on volunteer observations of flowering, fruiting and other seasonal events. Scientists and resource managers will use these observations to track effects of climate change on the Earth's life-support systems.

"This program is designed for people interested in participating in climate change science, not just reading about it," said USA-NPN Executive Director and U.S. Geological Survey scientist Jake Weltzin. "We encourage everyone to visit the website (<http://www.usanpn.org/>) and then go outside and observe the marvelous cycles of plant and animal life." Phenology is the study of the seasonal cycles of plant and animals, such as plants sprouting, flowering and fruiting, and animals reproducing, migrating and hibernating. Changes in these patterns, caused by climate change or other factors, can significantly affect human economies and health. In some areas, such changes have already imperiled species.

The USA-NPN monitoring program harnesses the power of people and the Internet to vastly increase the data available to scientists and the public alike, Weltzin said. The program provides easy-to-use methods to track the life cycles of nearly 200 species of plants, and will begin monitoring animals next year. Mark D. Schwartz, a professor at the University of Wisconsin-Milwaukee and chair of the USA-NPN board of directors, said “My work with lilac phenology and models has shown that by monitoring these events across large areas over time, researchers can better understand and predict global climate change impacts. Once the USA-NPN has collected enough data, we will be able to develop tools to help mitigate and adapt to ongoing and future climate change.” For example, data collected by USA-NPN will help resource managers predict wildfire risk and pollen production, detect and control invasive species, monitor droughts, and assess the vulnerability of various plant and animal species to climate change.

The USA-NPN National Coordinating Office is based at The University of Arizona in Tucson. USA-NPN is built upon partnerships among citizen scientists, government agencies, nongovernment organizations, academic researchers, educators and the public. The rapidly expanding network includes collaborations among the U.S. Geological Survey, University of Wisconsin-Milwaukee, The University of Arizona, U.S. Fish and Wildlife Service, and The Wildlife Society. (Information contributed by CSG Vice-Chair Mark Schwartz)

U.S. Climate Reference Network

After 8 years of effort, the deployment of 114 climate-science quality automated observation systems was completed in Fall 2008 by the National Climatic Data Center. Each of these stations uses a triplicate configuration of temperature and precipitation measurements calibrated to NIST traceable standards to produce some of the most accurate in situ measurements of surface climate in the world. The network also measures solar radiation and has a downward facing IR instrument to measure surface skin temperature. During 2009-2011, the network will be further augmented by the deployment of a suite of soil moisture / soil temperature probes and a relative humidity sensor. New suites of data products and analyses will be released in the coming years, but to start this process, it is now possible to easily access large amounts of hourly or daily data from the USCRN by ftp of ASCII text files located at: <ftp://ftp.ncdc.noaa.gov/pub/data/uscrn/products/hourly02> and <ftp://ftp.ncdc.noaa.gov/pub/data/uscrn/products/daily01>. There is a README.txt file in each area that provides the fixed record format of these files, which are organized by station-year. Data are also available for an experimental network in Alabama, and for several stations in Alaska and Hawaii. More information on the network can be found at: <http://www.ncdc.noaa.gov/oa/climate/uscrn/>. If you have any questions regarding the USCRN, the data or the program, please contact Michael Palecki at michael.palecki@noaa.gov. (Information contributed by CSG Chair Michael Palecki)

Dissertations Initiative for the Advancement of Climate Change Research Symposium

The Dissertations Initiative for the Advancement of Climate Change Research (disccrs.org) is expecting to host its 5th annual symposium in the spring of 2010 (contingent on renewed funding). All recent Ph.D. graduates interested in interdisciplinary climate change research are encouraged to register their dissertation abstract with the DISCCRS registry at disccrs.org to become part of the young scholar network and to receive the weekly climate change newsletter. Information about the annual symposium, as well as eligibility requirements and application details will also be posted as they become available. Please contact Jenn Marlon, DISCCRS Research Assistant, through their Web site for further information. (Information contributed by CSG Member Jenn Marlon)

Physical Geography Special Issue

Lesley-Ann Dupigny-Giroux reports that a special issue of the journal Physical Geography that she organized and guest edited is coming out this month. The issue is about Climate Literacy and is probably the first of its kind anywhere. Contributors include state climatologist, climate educators and scientists both from the US as well as from Europe. It will be Volume 29, Number 6. (Information contributed by CSG Member Lesley-Ann Dupigny-Giroux)

John E. Oliver

John Oliver passed away May 9, 2008. A frequent participant in AAG meetings, John was a distinguished member of the Climate Specialty Group, having served as CSG Chair from 1984-1986, and received the first Lifetime Achievement Award presented by the CSG in 1998. His primary professional position during his career was as a professor in the Department of Geography and Geology at Indiana State University from 1973-2002. Oliver was a fine scholar, teacher and writer, and contributed greatly to the discipline. For a more complete discussion of his life and work, please consult the July/August issue of the AAG Newsletter, p.22, where Greg Bierly, John Harrington, Jr., and others provide a tribute. (Information contributed by CSG Members Greg Bierly and John Harrington, Jr.)

National Climate Service

The concept of a National Climate Service has been endorsed by Dr. Jane Lubchenco, the person chosen to be the NOAA Administrator by the new administration. A new NOAA line office is being organized under the direction of Tom Karl, who for many years directed the National Climatic Data Center. The implications of these changes could be considerable for applied climatologists in the Climate Specialty Group. In addition, a week after the AAG Meeting, there will be a National Academy of Science Summit on America's Climate Choices, which could further shift the landscape of applied climatology in the U.S.: <http://americasclimatechoices.org/>. The details of all these changes are not yet clear, but many

of these developments could be positive for CSG members. (Information contributed by CSG Member Daniel Berkowitz, with some additions by CSG Chair Michael Palecki)

Climate Specialty Group Lifetime Achievement Award

The CSG Board of Directors is very pleased to present Jeffrey C. Rogers its 2009 Lifetime Achievement Award. Jeff's nomination was supported by a number of individuals who knew him well and appreciated his work and service over the years. He received his Ph.D. from the University of Colorado in 1979, and immediately landed his one and only professional position, that of being a member of the faculty in the Department of Geography at The Ohio State University. He soon received tenure and had a little spare time, so he was named Ohio State Climatologist in 1986. Jeff's quiet demeanor and tendency to shine the spotlight on his graduate students should not be taken as any sign of a lack of achievement. During his career, he has published 55 refereed papers, 5 book chapters, and many other reports and news articles about climate variations in the state of Ohio. The tremendous impact of his pioneering work on atmospheric teleconnections started with Harry van Loon, especially the North Atlantic Oscillation, has given him a disciplinary influence well beyond mere numbers of papers; four of his papers have been cited over 100 times each. He has received numerous competitive grants over the years to support his work and the work of his graduate students. He has been advisor to more than 25 graduate students and innumerable undergraduate students, and is a well regarded teacher and mentor. Jeff even served a term as secretary/treasurer of the CSG. Finally, his service as Ohio State Climatologist has greatly increased the information stakeholders and policy makers in Ohio have regarding their climate-impacted decision making. Jeff Rogers career is a testament to his intelligence, hard work, and concern for others, and his lifetime of achievement is clearly deserving of the recognition which he will receive at the CSG Business Meeting on Wednesday, March 25, at 7 PM in Royale Pavilion 3 on the first floor of the Riviera Hotel.

John Russell Mather Paper of the Year

The John Russell Mather Paper of the Year winner for 2009 is Lei Meng, a graduate student working with Steve Quiring at Texas A&M University. His paper, "A Comparison of Soil Moisture Models using Soil Climate Analysis Network Observations", is co-authored with Steve Quiring, and was published in the AMS Journal of Hydrometeorology in August 2008 (v.9, n.4, pp. 641-659). The paper provides an excellent analysis of a number of major soil moisture models and their performance when compared to in situ observations at several sites. However, model performance varied considerably from place to place and year to year, so care must be taken in using modeled soil moisture fields as information for decision making, especially in areas with large gradients. Please see Lei Meng's extended presentation on Wednesday, March 25, at 3:10 PM in the Royale Pavilion 3 on the first floor of the Riviera Hotel.

2009 Plenary Speaker Julio Betancourt

Our plenary speaker for 2009 is Julio L. Betancourt from the U.S. Geological Survey National Research Office's Desert Laboratory in Tucson, AZ. The title of Julio's talk is "Climate and Ecosystems in the Western U.S. – History and Prospectus", which will be presented on Wednesday, March 25, at 5:20 PM in the Royale Pavilion 3 on the first floor of the Riviera Hotel. This is a very appropriate cross-disciplinary talk for a meeting in the Western U.S., and Julio is one of the foremost researchers in this arena, bringing together a deep personal understanding of ecosystems, ecological processes, climate variability and change, and their mutual interactions. He will select key research insights into the ecological changes observed in the West, connect these with the role of climate variability, and examine the future of the West under a changing climate regime and how we can manage ecosystems in this context. Geography is a key component of this work, as often these patterns can be synthesized only at regional to subcontinental scales. For more about Julio Betancourt and his background, please go to: http://www.paztcn.wr.usgs.gov/julio_cv.html.

2009 Climate Specialty Group Business Meeting

The CSG Business Meeting is scheduled for Wednesday, March 25, from 7:00 – 8:00 PM, in the Royale Pavilion 3 on the first floor of the Riviera Hotel. The Physical Geography Reception follows at 9:00 – 11:00 PM nearby in the Royale Pavilion 1 room, so you have time to go out and hit a buffet line between the Business Meeting and the Reception. Therefore, I hope you are all able to attend the Business Meeting, and arrest the bit of a slide in attendance we had last year due to the confusion regarding the room location.

Preliminary Agenda for the CSG 2009 Business Meeting

1. Welcome (M. Palecki)
2. Approval of Minutes of the 2008 Business Meeting – see below (M. Palecki)
3. Nomination and Election of New Officers (M. Schwartz)
 - a. Honors Director (replacing Jill Coleman)
 - b. Young Scholar Director (replacing Greg Goodrich)
4. Chair's Report (M. Palecki)
5. Vice-Chair's Financial Report (M. Schwartz)
6. Honors Director's Report (J. Coleman)

7. Business Items (M. Palecki)

- a) Plenary speaker suggestions for the 2010 AAG meeting in Washington, D.C.
- b) Your Officers at Work: The USCRN and the USA-NPN
- c) Discussion: A National Climate Service
- d) John Russell Mather Paper of the Year Award to Lei Meng for “A Comparison of Soil Moisture Models using Soil Climate Analysis Network Observations”, in the Journal of Hydrometeorology.
- e) Lifetime Achievement Award to Jeffrey C. Rogers

8. Announcements and New Business (M. Palecki)

9. Adjournment

Minutes of the 2008 CSG Business Meeting in Boston, MA

1. Welcome (A. Burnett)

Adam Burnett welcomed the assembled members and identified new members.

2. Approval of Minutes of the 2007 Business Meeting (A. Burnett)

Dave McGinnis moved to approve the minutes, many seconded the motion, and the minutes were approved by acclamation.

3. Nomination and Election of New Officers (M. Palecki)

a. Director (replacing Lesley-Ann Dupigny-Giroux)

Tracy DeLiberty, U of Delaware, was elected as the Director for 2009-2010

b. Vice-Chair (replacing Michael Palecki)

Mark Schwartz, U of Wisconsin-Milwaukee, was elected Vice-Chair for 2009-2010, and Chair for 2011-2012.

4. Chair's Report (A. Burnett)

Adam Burnett reported that there were 416 members of the Climate Specialty Group, up slightly from 406 the previous year. About 40 sessions listed the CSG as a sponsor or co-sponsor. Adam reported on the CSG events for the 2008 AAG Meeting, including the John Russell Mather Paper of the Year session featuring Kevin Law of Marshall University, the CSG Plenary Session featuring Kerry Emanuel of MIT, and the Physical Geography Reception.

5. Vice-Chair Financial Report (M. Palecki)

The CSG balance at the end of February 2008 was \$7820.34. The expenses for the 2008 meeting were estimated to be \$2,265.00, for a balance after the meeting of approximately \$5555.34. Despite efforts to spend more money by increasing the prize levels for the student paper competition, an increase in the post-meeting total is anticipated due to the very small costs for this year's plenary speaker, who arrived at the meeting by mass transit and had only the registration expense. Next year, we can afford to bring in someone not located in Las Vegas, due to the many inexpensive flights reaching that destination.

6. Specialty Group Chairs Meeting (A. Burnett)

Adam reported on the Specialty Group Chairs Meeting. The AAG encourages specialty groups to collaborate in organizing sessions on cross-disciplinary topics. In 2008, the membership in the AAG exceeded 10,000, with more than 7,000 attending the annual meeting. The National Research Council of the National Academy of Sciences convened a panel for strategic planning in geographic science. The Annals was working on its 5th special issue, this

year on geographic aspects of peace and conflict. In 2010, the Annals special issue will focus on climate change. Keith Henderson mentioned that the Annals is now providing faster turn-around on manuscripts.

7. Honors Committee Director Report (J. Coleman)

The 2007 winners in the Student Paper Competition

First Place, Eungul Lee, University of Colorado

Second Place, Jinyoung Rhee, University of South Carolina

Third Place, Gwangyong Choi, Rutgers University

Honorable Mention, James Tamerius, University of Arizona

Jill Coleman, Honors Director, reported that the 2008 competition had 13 participants, rather scattered through the meeting. She asked for some extra volunteers to help with some of the later talks in the meeting.

8. Business Items (A. Burnett)

a. Plenary speaker suggestions for the 2009 AAG in Las Vegas, NV.

A number of excellent candidates were proposed for the plenary speaker honor at the 2009 AAG meeting, covering a wide range of climatology sub-fields. Given the relatively large positive balance in the CSG account, some flexibility is possible regarding flying in a speaker versus the need to have a local speaker.

b. Update on climate scientist mentoring network initiative (L. Dupigny-Giroux)

Lesley-Ann Dupigny-Giroux reported that 51 individuals had joined the mentoring network as mentors or people being mentored, including 10 located outside the U.S. Lesley-Ann had been working to improve communications between the experienced academics and the younger scientists. Although there were some significant impediments, progress was being made.

c. Update on climate literacy and introduction to the "John Russell Mather and Sandra Pritchard Mather Climatology Knowledge Environment." (L. Dupigny-Giroux and Susan Gallagher)

This is a joint CSG-AAG initiative that is focused on building a Web portal and outreach program regarding the state of knowledge of climate change. Promoting awareness and understanding of climate change is a key goal of the program. The initiative is named in honor of Russ and Sandi Mather, legendary geographic climatologist Russ and active supporter of climate education Sandi. Many people just do not receive a quality education in climate science, even given the importance of climate and climate change to society. Supporters of climate literacy in UCAR, CIRES, NOAA, and other groups have been developing a framework based on some basic principles. This initiative is moving forward in the AAG this year due to the generous support of Sandi Mather, and is led by Susan Gallagher in the AAG central office.

d. John Russell Mather Paper of the Year Award was presented to Kevin Law (Marshall University) for "A statistical model to forecast short-term Atlantic hurricane intensity" in Weather and Forecasting.

e. The CSG Lifetime Achievement Award was presented to David Robinson (Rutgers).

David Robinson is one of the world's leading experts on planetary snow cover and its climate interactions. He has taught in the Department of Geography at Rutgers since 1989, advising numerous undergraduate and graduate students and serving on 80 master and doctoral committees. Dave has been Chair of Geography at Rutgers for a total of more than 8 years. He has served terms as Director of the Climate Specialty Group and Cryosphere Specialty Group of the AAG, President of the American Association of State Climatologists, and chair of several NOAA science committees. He is now serving on the NOAA Advisory Board Climate Working Group. Dave has been a Contributing Author to the Intergovernmental Panel on Climate Change Working Group I publications and, during the last few years, he has compiled and written the snow section for the annual State of the Climate Report produced by the National Climatic Data Center for publication by the AMS. Dave has won \$6.4 M in grants, and produced 80 refereed papers and 12 book chapters. Finally, Dave has been an active State Climatologist for New Jersey and a leading member of the American Association of State Climatologists for many years, and tirelessly

supports his state and its people with climate services and information and hundreds of press contacts annually. The Climate Specialty Group congratulates Dave Robinson on his selection as CSG Lifetime Achievement Award winner.

7. Announcements and New Business (A. Burnett)

Keith Henderson, AAG Council, reported on the AAG Developing Regions Initiative. This is a program that supports reaching out to colleagues in the developing world, and allowing those that cannot afford it to join the AAG.

8. Adjourn (A. Burnett)

The election results were announced (see above), and Adam thanked Lesley-Ann Dupigny-Giroux for her service on the Board of Directors. Mike Palecki then thanked Adam Burnett for his service to the CSG, and the motion to adjourn was accepted by acclamation.

A Summary List of CSG Sponsored or Co-Sponsored Sessions, With a Few Additions on Climate

Sunday, March 22

1135 Analyses of High-Impact Weather I

is scheduled on Sunday, 3/22/09, from 1:00 PM - 2:40 PM in Skybox 207, Riviera Hotel, 2nd Floor

1235 Analyses of High-Impact Weather II

is scheduled on Sunday, 3/22/09, from 3:10 PM - 4:50 PM in Skybox 207, Riviera Hotel, 2nd Floor

1240 Sedimentary Perspectives on Paleoenvironmental Change: Part 2.

is scheduled on Sunday, 3/22/09, from 3:10 PM - 4:50 PM in Skybox 212, Riviera Hotel, 2nd Floor

1410 Presidential Plenary Session: The Future of Water in the American West

is scheduled on Sunday, 3/22/09, from 6:00 PM - 7:30 PM in Royale Pavilion 5, Riviera Hotel, 1st Floor

Monday, March 23

2105 Recent Climate Change in the USA

is scheduled on Monday, 3/23/09, from 8:00 AM - 9:40 AM in Grande Ballroom H, Riviera Hotel, 1st Floor

2156 Advances in Paleoclimatology: Moisture Changes through Time and their Impacts I

is scheduled on Monday, 3/23/09, from 8:00 AM - 9:40 AM in North Hall N117, Las Vegas Convention Center

2256 Advances in Paleoclimatology: Moisture Changes through Time and their Impacts II

is scheduled on Monday, 3/23/09, from 10:10 AM - 11:50 AM in North Hall N117, Las Vegas Convention Center

2404 What is distinct about the new carbon economy, what are connected climate governance challenges and consequences? SESSION I

is scheduled on Monday, 3/23/09, from 1:00 PM - 2:40 PM in Grande Ballroom G, Riviera Hotel, 1st Floor

2456 Advances in Paleoclimatology: Moisture Changes through Time and their Impacts III

is scheduled on Monday, 3/23/09, from 1:00 PM - 2:40 PM in North Hall N117, Las Vegas Convention Center

2504 What is distinct about the new carbon economy, what are connected climate governance challenges and consequences? SESSION II

is scheduled on Monday, 3/23/09, from 3:10 PM - 4:50 PM in Grande Ballroom G, Riviera Hotel, 1st Floor

2556 Advances in Paleoclimatology: Moisture Changes through Time and their Impacts IV

is scheduled on Monday, 3/23/09, from 3:10 PM - 4:50 PM in North Hall N117, Las Vegas Convention Center

Tuesday, March 24

3143 Climate Change and Environmental Justice

is scheduled on Tuesday, 3/24/09, from 8:00 AM - 9:40 AM in North Hall N101, Las Vegas Convention Center

3147 Dendrochronology I: Dendroclimatology

is scheduled on Tuesday, 3/24/09, from 8:00 AM - 9:40 AM in North Hall N108, Las Vegas Convention Center

3154 Arctic Hydroclimatology I: Characterization of Spatial and Temporal Variability and Recent Change

is scheduled on Tuesday, 3/24/09, from 8:00 AM - 9:40 AM in North Hall N115, Las Vegas Convention Center

3243 Climate Change Policy

is scheduled on Tuesday, 3/24/09, from 10:10 AM - 11:50 AM in North Hall N101, Las Vegas Convention Center

3254 Arctic Hydroclimatology II: Characterization of Spatial and Temporal Variability and Recent Change

is scheduled on Tuesday, 3/24/09, from 10:10 AM - 11:50 AM in North Hall N115, Las Vegas Convention Center

3437 Livelihoods, Institutions, and Climate Change I: Adaptation in Non-Agricultural Landscapes

is scheduled on Tuesday, 3/24/09, from 1:00 PM - 2:40 PM in Skybox 209, Riviera Hotel, 2nd Floor

3454 Hydroclimatology I

is scheduled on Tuesday, 3/24/09, from 1:00 PM - 2:40 PM in North Hall N115, Las Vegas Convention Center

3531 The Mojave Desert: Threats and Restoration

is scheduled on Tuesday, 3/24/09, from 3:10 PM - 4:50 PM in Skybox 203, Riviera Hotel, 2nd Floor

3537 Livelihoods, Institutions, and Climate Change II: The Vulnerability and Adaptation Interface

is scheduled on Tuesday, 3/24/09, from 3:10 PM - 4:50 PM in Skybox 209, Riviera Hotel, 2nd Floor

3554 Hydroclimatology II

is scheduled on Tuesday, 3/24/09, from 3:10 PM - 4:50 PM in North Hall N115, Las Vegas Convention Center

3614 Town Hall Meeting: America's Climate Choices

is scheduled on Tuesday, 3/24/09, from 5:20 PM - 7:00 PM in Capri 101, Riviera Hotel, 1st Floor

3632 Reducing the Threat of Drought: Better Understanding Drought Impacts and Risk Management Options

is scheduled on Tuesday, 3/24/09, from 5:20 PM - 7:00 PM in Skybox 204, Riviera Hotel, 2nd Floor

3637 Livelihoods, Institutions, and Climate Change III: Varieties of Adaptation across Scale

is scheduled on Tuesday, 3/24/09, from 5:20 PM - 7:00 PM in Skybox 209, Riviera Hotel, 2nd Floor

3654 Hydroclimatology III

is scheduled on Tuesday, 3/24/09, from 5:20 PM - 7:00 PM in North Hall N115, Las Vegas Convention Center

Wednesday, March 25

4131 Urban Microclimates: Mapping, Measurements, Models

is scheduled on Wednesday, 3/25/09, from 8:00 AM - 9:40 AM in Skybox 203, Riviera Hotel, 2nd Floor

4135 Climate Change and Wine Production

is scheduled on Wednesday, 3/25/09, from 8:00 AM - 9:40 AM in Skybox 207, Riviera Hotel, 2nd Floor

4148 Climate Change and Emissions

is scheduled on Wednesday, 3/25/09, from 8:00 AM - 9:40 AM in North Hall N109, Las Vegas Convention Center

4213 Native Lands, Climate Change and Environmental Issues

is scheduled on Wednesday, 3/25/09, from 10:10 AM - 11:50 AM in Royale Pavilion 8, Riviera Hotel, 1st Floor

4231 Climate Specialty Group Student Paper Competition

is scheduled on Wednesday, 3/25/09, from 10:10 AM - 11:50 AM in Skybox 203, Riviera Hotel, 2nd Floor

4455 Climate Change and Water Resources: From Impact Assessment to Adaptation I

is scheduled on Wednesday, 3/25/09, from 1:00 PM - 2:40 PM in North Hall N116, Las Vegas Convention Center

4508 Climate Specialty Group John Russell Mather Paper of the Year

is scheduled on Wednesday, 3/25/09, from 3:10 PM - 4:50 PM in Royale Pavilion 3, Riviera Hotel, 1st Floor

4555 Climate Change and Water Resources: From Impact Assessment to Adaptation II

is scheduled on Wednesday, 3/25/09, from 3:10 PM - 4:50 PM in North Hall N116, Las Vegas Convention Center

4608 Climate Specialty Group Plenary Speaker Julio L Betancourt: Climate and Ecosystems in the Western U.S. - History and Prospectus

is scheduled on Wednesday, 3/25/09, from 5:20 PM - 7:00 PM in Royale Pavilion 3, Riviera Hotel, 1st Floor

4655 Climate Change and Water Resources: From Impact Assessment to Adaptation III

is scheduled on Wednesday, 3/25/09, from 5:20 PM - 7:00 PM in North Hall N116, Las Vegas Convention Center

4708 Climate Specialty Group Business Meeting

is scheduled on Wednesday, 3/25/09, from 7:00 PM - 8:00 PM in Royale Pavilion 3, Riviera Hotel, 1st Floor

Thursday, March 26

5108 Climate Change, Development and Research Agendas in the Lower Colorado River Basin

is scheduled on Thursday, 3/26/09, from 8:00 AM - 9:40 AM in Royale Pavilion 3, Riviera Hotel, 1st Floor

5131 Climate and Infectious Disease I

is scheduled on Thursday, 3/26/09, from 8:00 AM - 9:40 AM in Skybox 203, Riviera Hotel, 2nd Floor

5208 Climate Change, Ecosystems and Research Agendas in the Lower Colorado River Basin

is scheduled on Thursday, 3/26/09, from 10:10 AM - 11:50 AM in Royale Pavilion 3, Riviera Hotel, 1st Floor

5231 Climate and Infectious Disease II

is scheduled on Thursday, 3/26/09, from 10:10 AM - 11:50 AM in Skybox 203, Riviera Hotel, 2nd Floor

5253 Hurricanes I: Coastal Vulnerability and Risk Assessment

is scheduled on Thursday, 3/26/09, from 10:10 AM - 11:50 AM in North Hall N114, Las Vegas Convention Center

5453 Hurricanes II: Societal Impact and Resilience

is scheduled on Thursday, 3/26/09, from 1:00 PM - 2:40 PM in North Hall N114, Las Vegas Convention Center

5553 Hurricanes III: Climate Dynamics and Biotic Response

is scheduled on Thursday, 3/26/09, from 3:10 PM - 4:50 PM in North Hall N114, Las Vegas Convention Center

5604 Land use and regional land-atmosphere interactions

is scheduled on Thursday, 3/26/09, from 5:20 PM - 7:00 PM in Grande Ballroom G, Riviera Hotel, 1st Floor

5653 Hurricanes IV: Historical and modern climatology

is scheduled on Thursday, 3/26/09, from 5:20 PM - 7:00 PM in North Hall N114, Las Vegas Convention Center

6148 Hurricanes V: Paleotempestology

is scheduled on Friday, 3/27/09, from 8:00 AM - 9:40 AM in North Hall N109, Las Vegas Convention Center

Friday, March 27

6105 Climate, Wildfire, and Woodland Dynamics in the Great Basin of North America - I

is scheduled on Friday, 3/27/09, from 8:00 AM - 9:40 AM in Grande Ballroom H, Riviera Hotel, 1st Floor

6106 Impacts of Climate Change

is scheduled on Friday, 3/27/09, from 8:00 AM - 9:40 AM in Royale Pavilion 1, Riviera Hotel, 1st Floor

6205 Climate, Wildfire, and Woodland Dynamics in the Great Basin of North America - II

is scheduled on Friday, 3/27/09, from 10:10 AM - 11:50 AM in Grande Ballroom H, Riviera Hotel, 1st Floor

6251 Environmental Issues in the West: Geysers and Climate

is scheduled on Friday, 3/27/09, from 10:10 AM - 11:50 AM in North Hall N112, Las Vegas Convention Center