

Ephemeral Flow

A NEWSLETTER ABOUT SAHRA

SUMMER 2006

Welcome to the Summer issue of Ephemeral Flow, a newsletter for sharing information within the SAHRA community. Ephemeral Flow is sent to SAHRA researchers, staff, and students at all participating institutions approximately every two months. Your contributions and suggestions are always welcome. Please send items to Mary Black at mblack@sahra.arizona.edu.

FEATURES

SAHRA Dazzles Congress

The Coalition for National Science Funding annually organizes a reception on Capitol Hill to highlight research being conducted by the National Science Foundation.

AGU joins with the American Geological Institute and the Geological Society of America to sponsor two booths at this reception. This year, the focus was hydrology, and AGU invited

SAHRA to be featured as a good example of NSF's investment in science. NCED, the National Center for Earth-System Dynamics, with which SAHRA has been

closely collaborating, was also chosen to exhibit. James Hogan, SAHRA's Assistant Director for Science, and Gary Woodard, Associate Director for Knowledge



Woodard and Hogan pause for a pose with NSF Deputy Director Kathie Olsen.

Transfer, attended the June 7th reception and also took the opportunity to meet with representatives of the offices of congressmen John Shaddeg, Jim Kolbe, Raul Grijalva, and Tom Udall, and

senators Jon Kyl and Pete Domenici.

Woodard and Hogan also met with Kathie Olsen, Deputy Director of

UPCOMING EVENTS

Sept. 13-16: Arizona Hydrological Society 2006 Annual Symposium, Glendale, AZ

Oct. 11-14: SAHRA's 6th Annual Meeting, DoubleTree Paradise Valley Resort, Scottsdale, AZ

CONTACT US!

Please let us know when you have news to share or a reason to brag. Students, let us know for example when you have completed your oral exam, defended your thesis/dissertation, or accepted a position in the real world (or even academia). Faculty members, are you offering a new course, hosting a workshop, leading a panel, editing a new journal? Anonymous or second-party tips on newsworthy announcements are also gratefully accepted.

NSF, and Margaret Lienen, NSF Associate Director for Geosciences, at the reception. Dr. Olsen needed little arm-twisting before she agreed to attend SAHRA's upcoming 6th Annual Meeting in Scottsdale in October 2006.

AWI obtains state funding

The new Arizona Water Institute (AWI) has received funding of \$1.5M from the Arizona State Legislature. This amount will be divided among Arizona's three state universities – NAU, ASU, and UA – to support projects of importance to water management stakeholders within the state, including agencies, watershed groups, Indian tribes, non-governmental organizations, communities, and private sector entities who are interested in



partnerships with the universities. The AWI director, Kathy Jacobs, is also deputy director of SAHRA. The Arizona Board of Regents recently provided additional funding to support the administration of the Institute for its second year.

AWI focuses on applied research to

resolve water problems throughout the state, economic development related to technology development and transfer, capacity building to support water management decision-making, and expanding water related educational opportunities. SAHRA has worked closely with AWI since it was formed in January, 2006. Notable collaborations between AWI and SAHRA include the development of the Arizona Hydrologic Information System and a stakeholder needs assessment.

RESEARCH

Walnut Gulch Mysteries Revealed

Paul Brooks, Tom Meixner, and Laura Klasner introduced Gretchen Oelsner and University of California-Berkeley REU summer intern Emily Novick this summer to the pleasures and pitfalls of field work in Walnut Gulch, in the San Pedro watershed near Tombstone, AZ. The group scouted sampling locations/field sites in grassland and shrublands in the area on June 12th. Samples collected



Tom Meixner demonstrates Sonoran Desert summer survival techniques to the group, which include seeking shade, wearing a hat, and never traveling without a margarita.

this summer will be used to continue Josh Koch's earlier work comparing the runoff source and geochemistry between grasslands and shrublands. In the month since their field trip, rainfall in the area has been 10 times the amount hapless Josh experienced in his two years at SAHRA.

Postdoc Opportunities at NMT

NMT seeks applications for two 2-year postdoctoral research positions in hydrology. One will focus on distributed hydrological modeling of watershed processes utilizing high-performance computing and remote sensing; the other will look at the hydrological impact of climate change scenarios from general circulation models. Candidates with experience in utilizing distributed hydrologic models of watershed processes and those with skills in high performance computing (software and hardware) are particularly encouraged. More details and application requirements are available at www.ees.nmt.edu/vivoni/postdoc.html or from Enrique Vivoni at vivoni@nmt.edu.

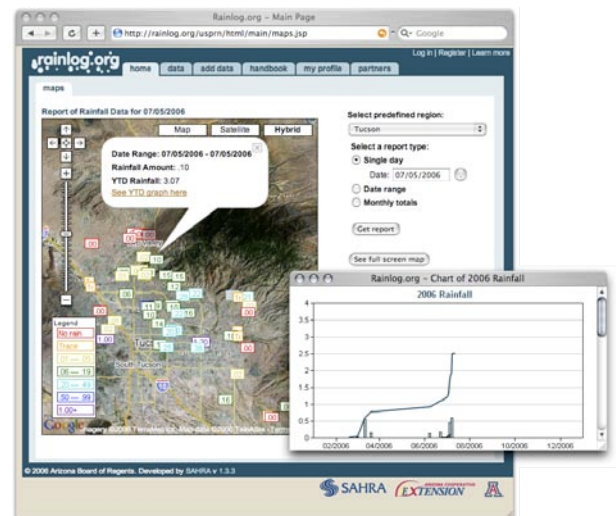
Track Your Precip at RainLog.org

Just because you have a Ph.D. in hydrology doesn't mean you can't admit to having fun with your home rain gauge. RainLog.org is a web-based collaborative effort that taps hundreds of volunteer weather

watchers to estimate rainfall volume at the basin scale. Developed jointly by SAHRA and UA Cooperative Extension, Rainlog.org is designed to meet the needs of many types of users, including drought monitors, irrigation schedulers, weather reporters, and K-12 educators.

Anyone with a backyard rain gauge can join, anywhere in the Southwest. Web site registration includes a map to pinpoint the latitude and longitude of gauge locations, plus advice on selecting and locating rain gauges. Uploading data after rain is a simple process. Those who have had rain gauges for years are invited to upload historic data.

Rainlog.org and similar efforts that tap the energy and enthusiasm of the public can provide widely dispersed measurements of critical hydrologic parameters. So get in on the action before the monsoon departs; sign up free at www.rainlog.org.



Rainlog.org's friendly user interface.

GRANTS/LEVERAGING

Improving Access to Teaching Tools

A proposal submitted by **Carla Bitter** and **Ramon Vazquez** to another UA TRIF program, Anyplace Access for Arizonans, has won a \$108K grant to create online water education resources for middle and

high school science teachers. The 2-year funding period will begin July 2007 and will allow SAHRA to create new SAHRA Web-based learning resources from the following existing programs:

- WATER Kits program and teacher training workshops
- Inquiry and Water Issues

teacher training course

- the SPLASH (Student-centered Program for Learning About Semi-arid Hydrology) high school curriculum

SAHRA's Education and Knowledge Transfer staff will work with the UA Learning Technology Center to develop this project.

PEOPLE

A Tale of Two Melissas

Please join us in welcoming **Melissa Higgins** to the Education staff at SAHRA at UA, where she will initially focus on the NSF-funded watershed visualization project. Melissa graduated from the University of Colorado-Boulder with a B.A. in physical geography and has



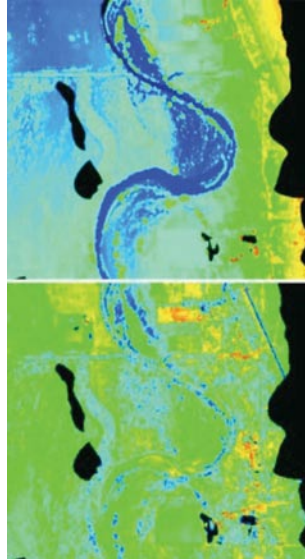
worked in the private sector for a GIS firm, at the National Center for Atmospheric Research, and most recently for the University of Nebraska-Lincoln at the National Drought Mitigation Center. She has settled comfortably in Tucson with her husband and two cats.

With heavy hearts we report that **Melissa Lopez**, Senior Office Assistant and front-line warrior for SAHRA, will leave her position in early August to begin life anew. Melissa will attend the French Culinary Institute in New York City in the fall. She has been with SAHRA since her early undergraduate years in July 2001 and has become indispensable because of her extreme competence, intelligence, and unfailing good humor, so life as we know it at SAHRA will soon come to an end. Nevertheless, we wish the very best for her future and remind her that it is not too late for her to cook for SAHRA's newsletter staff before she leaves.

Students who finished degrees

Kristin Green recently completed her MS in hydrology at the UA, with a thesis titled "Partitioning of evapotranspiration in a Chihuahuan Desert grassland." Kristin was advised primarily by Jim Shuttleworth, but also worked closely with Russ Scott. Her immediate plans include an August wedding in New Hampshire.

Congratulations will soon be due to **Ali Farid**, who will complete his Ph.D. in hydrology and water resources at the UA in August. His dissertation: "Using airborne lidar to differentiate cottonwood



Farid's (et al.) CJRS cover graphic shows LIDAR-derived images used to classify cottonwood age categories.

trees in a riparian area and refine riparian water use estimates." His recent paper on this topic won the cover spot for *Canadian J. of Remote Sensing* (v.32, no.1). Ali's primary advisor is Dave Goodrich.

"The influence of spatial

and temporal hydrologic variability on nutrient fluxes and transformation, San Pedro River," is the title of **Laura Klasner's** MS thesis, which she defended just days ago. Laura completed her degree in hydrology and water resources at UA, under the mentorship of Paul Brooks. Her immediate career plans are refreshingly indefinite.

Is **Keith Musselman** finally reaping the rewards of slogging through cold, snowy terrain under the dictatorial supervision of Paul Brooks? Hard to say. Keith finished his MS at UA in hydrology and water resources in June with his thesis, "Quantifying the effects of forest vegetation on snow accumulation, ablation, and potential meltwater inputs, Valles Caldera National Preserve, NM." Keith plans to work on finalizing a manuscript for publication this summer while working as a mountain guide in Glacier National Park, Montana, continuing his trek through frigid terrain.

This year's theme of dual-ing wedding bells and hydro MS degrees applies also

to **Heather Lacey**, a hydrology student at NMT, who recently completed her degree and is looking for a job in the Albuquerque area while planning a September wedding. In June, Heather completed her thesis in hydrology, "Quantification and characterization of chloride sources in the Rio Grande" under the direction of Fred Phillips.

Publicity/Honors

Southwest Hydrology added to its list of honors in July, winning an APEX 2006 Award for Publication Excellence. Entries were based on excellence in graphic design, editorial content, and the success of the entry in achieving overall communications effectiveness and excellence. Publisher **Betsy Woodhouse** submitted the March/April 2005 *SWH* issue on the Colorado River drought in the category of four-color magazines and journals.



The Price of Fame

Jim Shuttleworth received his International Prize in Hydrology in Paris in early July. He reports that the presentation in Paris was a huge success, but very intimidating, in an



enormous room set up in a big circle like the United Nations Security Council, each dignitary with his/her own microphone and simultaneous translation in a dozen or so languages, and more than 200 national delegates.

ANNOUNCEMENTS

Baby News

Double congratulations to SAHRA accountant **Angela Oropeza**, who gave birth to twin boys, Aiden and Abram, on July 8. Mom and babies are doing well. One of the boys is 17", 5 lbs. 1 oz., and the other, 18 1/2", 5 lbs. 2 oz.

R & R

Summer destinations

SAHRA people, especially the men it seems, are spreading over the planet this summer like a pandemic disease. See if you can match the world travelers with their destination(s):

- | | |
|------------------------|---------------|
| 1. Julio Canon-Barriga | a. Australia |
| 2. David Brookshire | b. Brazil |
| 3. Eleonora Demaria | c. Canada |
| 4. Hoshin Gupta | d. China |
| 5. Bashar Abdul Jawad | e. England |
| 6. Fred Phillips | f. France |
| 7. Alex Serrat | g. Jordan |
| 8. Jim Shuttleworth | h. Kenya |
| 9. Soroosh Sorooshian | i. Mexico |
| 10. Juan Valdes | j. Kyrgyzstan |
| 11. Enrique Vivoni | k. Scotland |
| 12. Gary Woodard | l. Spain |
| | m. Tunisia |

1. d; 2. l; 3. h; 4. b; 5. g; 6. j; k; 7. d; 8. a, e, f; 9. c; 10. l; 11. i; 12. m