



Sunset Crater Volcano National Monument, Arizona. (Photo by T.G. Manno)



President's Corner

Shafiu Jibrán, ANAS President

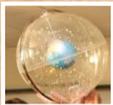
Greetings, fellow members of the Arizona-Nevada Academy of Science.

We had a very successful annual meeting in April at Glendale Community College in Glendale, Arizona. There were five sessions covering six different disciplines. It was well attended and we had a luncheon with very good food and a great speaker. The credit goes to the organizers of the meeting. In particular, I would like to thank Karen Conzelman, Florence Slater, Pam Marshall, and others who helped.

Even though it has only been six weeks since our annual meeting, it is time to think

about 2012. Our traditional rotation cycle places next year's meeting in Tucson, but we are still looking for someone to host it. Theo Manno has offered to help, but he cannot do it alone, and Karen Conzelman is actively searching for other volunteers. Please contact Karen if you know of anyone who is willing to host or help out.

Another issue we are facing this year is filling the editor position for our journal. The current editor, Tony Brazel, plans to retire in June. Tony has done great work to bring the journal to a respectable status by making sure that issues appear at their regular scheduled time. On behalf of ANAS, its members, and all readers of the Journal, I would like to thank Tony

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Editor, T. G. Manno, Ph.D., mannotg220@yahoo.com

wholeheartedly and wish him the best for his retirement. In the meantime, we need to find someone who is interested in assuming the editorship. I want everyone to know that the journal is among our most important activities. It is a refereed journal that publishes work in a wide range of scientific disciplines from our members and non-members alike. It also brings in a significant amount of revenue! Its 50-year history is archived in entirety on JSTOR.

President's Corner continued on page 10



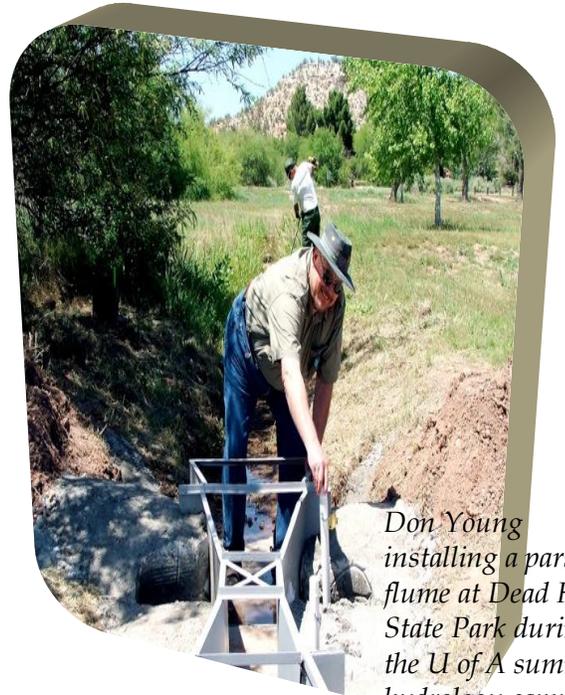
WHERE ARE THEY NOW?

By: Karen Conzelman

Newest Emeritus Member - Don W. Young

Don Young was introduced to ANAS by his graduate advisor in the mid-1970s. He made his first presentation of a scientific paper at an ANAS Annual Meeting. He found the atmosphere ideal for honing his presentation skills, and returning year after year, he enjoyed the fellowship of the Academy—particularly his colleagues in Hydrology.

Don came to Arizona to enter the doctoral program in Water Resources Administration at the U of A. Having grown up in Fort



Don Young installing a parshall flume at Dead Horse State Park during the U of A summer hydrology camp.

Continued on page 5

ARIZONA-NEVADA MUSEUMS SPECIAL EXHIBITS

[Las Vegas Natural History Museum](#)

Las Vegas, NV
<http://www.lvnhm.org/>

Englestad Family Prehistoric Life Gallery
 International Wildlife Gallery
 Las Vegas Founders African Galleries
 E. L. Weigand Foundation, Wild Nevada Gallery

[Arizona Museum of Natural History](#)

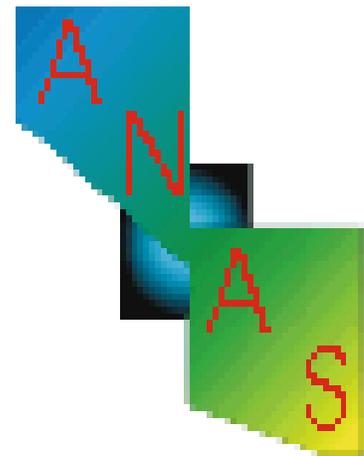
Mesa, AZ
<http://www.azmnh.org/Home.aspx>

The Primal Desert Next Door: Land of Black Volcanoes and White Sands
 Return to the Sea of Cortez

[Arizona State Museum](#)

Tucson, AZ
<http://www.statemuseum.arizona.edu/>

Many Mexicos: Vistas de la Frontera (until 2012)



9 April 2011: Arizona-Nevada Academy of Science
55th Annual Meeting held at Glendale Community College



Guest Speaker Brian Sullivan



ANAS President Shafiu Jibrán



From right to left: President Elect Pamela Marshall, Treasurer Karen Conzelman, and Permanent Secretary Pedro Chavez.

The 55th Annual Meeting of the Arizona-Nevada Academy of Science was held in Glendale, AZ on April 9th. Presentations and posters represented a variety of scientific disciplines, including psychology, hydrology, geology, biology, chemistry, mathematics, and education.

Highlights

Best Student Papers:

- Mariah Giardina, Northern Arizona University, "Challenges and Strategies for Spring Ecosystem Restoration in the Arid Southwest"
- Ryan Forster, Arizona State University, "Transcriptional Regulation of the Anti-aging Gene Klotho by 1,25-Dihydroxyvitamin D₃"

Best Student Posters:

- Jamie Lee, Arizona State University West, "Evaluation of Novel Curcumin Analogs as Biological Activators of Vitamin D Receptor Signaling"
- Andrea Loes, Arizona State University, "Inhibition of the Urease Activity From the Urinary Tract Pathogen *Staphylococcus saprophyticus*"

The luncheon speaker was Brian Sullivan from Arizona State University West. The title of his talk was "Impacts of urbanization and grazing on herpetofaunal communities of the Sonoran Desert: Separating myths from realities". Dr. Sullivan has authored over 100 articles, book reviews, reports, and book chapters on the evolutionary biology of vertebrates and the conservation and systematics of amphibians and reptiles of arid regions.



55th ANNUAL MEETING HIGHLIGHTS (CON'T)



Best student paper winner Ryan Forster with Florence Slater



Best student paper winner Mariah Giardina with Gerald Gottfried



Outgoing ANAS President Robert McCord



ANAS Outstanding Science Teacher Theo Manno with William Perry Baker



Ellis Award winner Shannon Leigh McClain with Robert McCord



ANAS members enjoy the poster session during the annual meeting

Save the Date for the 56th Annual Meeting in Tucson, AZ (tentatively 14 April 2012). Festivities will take place at a location to be announced.

Ellis Scholarship:

Shannon Leigh McClain was selected from among several outstanding applicants to receive a \$1000 scholarship from the Academy. The Ellis Scholarship is awarded to a graduating Arizona or Nevada high school student to attend one of our universities as a science or mathematics major. Shannon, a senior at Shadow Mountain High School in Phoenix, plans to attend Northern Arizona University's Exercise Science Program in the fall.

Outstanding Service Award.—Florence Slater, Ph.D., is this year's recipient of the Outstanding Service Award. A member of Glendale Community College's Biology department faculty, she has edited the ANAS Proceedings volume since 2002. Florence has also gone above and beyond her editorial responsibilities to coordinate many aspects of meeting planning, including identifying session chairs, soliciting participants, pulling together annual reports, and organizing schedules. Congratulations, Dr. Slater!



Florence Slater

Don Young, continued from page 2

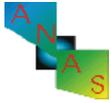
Lauderdale, Florida, Don was happy to be back in warmer climates after living for about twelve years in Pennsylvania and New York. He has been in Arizona ever since.

After finishing his Ph.D., Don took a job as a field hydrologist with the State Land Department in July, 1977. During 1987, he became Chief Forensic Hydrologist for the state Attorney General Water Rights Adjudication Team (WRAT). In that capacity, Don oversaw a group that provided technical support in defending the state and its agencies in water rights claims. Later, he returned to his alma mater as an adjunct professor. He enjoys teaching their summer field camp as well as specialty lectures on water rights and water law.

Don has always been a strong advocate for the Academy. The annual meetings have fostered the professional development of his students just as they helped Don during his student days. All have found the intimately friendly atmosphere to be a less threatening environment in which to commence their fledgling careers.

Don was an active member of the Board of Governors, first as a Director and ultimately as President in 1998-1999. During his tenure, the Academy's Educational Endowment fund was established and several important changes were made to the by-laws.

We congratulate Don as he joins the ranks of the Academy's emeritus members. Individuals in this elite class have maintained continuous membership for at least 17 years prior to reaching retirement age, and the change in their membership status is approved by the Governing Board. Although Don has retired, he certainly has not slowed down. In addition to running his consulting firm, *WESTWATER, LLC*, he continues to teach part-time and is currently involved in developing hydrology curriculum with Gateway Community College to facilitate seamless transfer to the U of A. Also, in the last few years, Don has helped out with the ANAS-sponsored Science Olympiad tournament as a member of the arbitration team.



MEET THE BOARD OF GOVERNORS!

The Board welcomes its two newly elected officers:

Michael Pasenko, Central Arizona Director

Environmental Consultant, Environmental Planning Group, Phoenix, AZ

Areas of interest: anthropology, paleontology, archaeology

Michael graduated from Northern Arizona in 1997 with a bachelor's degree in Anthropology. He continued his studies at Northern Arizona University receiving a master's degree in paleontology from the Quaternary Sciences Program in 2000. Since then he has worked in the environmental consulting business performing paleontological, geological, and archaeological work on transmission line and pipeline projects, solar and wind projects, and commercial development projects. This includes projects in Arizona, Nevada, New Mexico, Utah, and California, and includes work for federal and state agencies. He is currently employed at Environmental Planning Group in Phoenix, AZ. Pasenko's current research consists of descriptions of mammoth and mastodon remains from Arizona, description of a Pleistocene fauna from the Prescott area, and research on the morphology of postcranial material of gomphotheres.

Boyd Campbell, Membership Secretary

Professor of Anatomy, Southwest College of Naturopathic Medicine and Health Science, Phoenix, AZ

Areas of interest: anatomy, neurology, paleontology

Dr. Campbell (M.D., Ph.D.) did his undergraduate and graduate studies at University of Illinois. His interests were initially in herpetology, but his career has been primarily as a comparative neuroanatomist. Boyd's doctorate was in anatomy, and he did surgical internship at Rush-Presbyterian-St. Luke's Medical Center in Chicago followed by a residency in neurology, neurosurgery and neuroradiology. Boyd has held faculty positions at eight universities and was a career Army neurologist. His diverse background has also included performing experimental neurosurgery on duckbill platypuses and echidnas in Australia and on tiger sharks in the Caribbean Sea. A recent publication of the National Academy of Sciences lists him as one of the most distinguished neuroscientists of the recent past. Campbell is actively involved with a number of museums of natural history, and in addition to being the new Membership Secretary for ANAS, he is Vice President of the Southwest Paleontological Society.

Shafiu Jibrin, President

Associate Professor, Department of Mathematics and Statistics, Northern Arizona University

Areas of interest: operations research, semidefinite programming, linear matrix inequalities, redundancy in mathematical programming, numerical analysis

Shafiu did his undergraduate work at Bayero University in Kano, Nigeria. He received his MSc from University of Windsor, Ontario, Canada and his Ph.D. from Carleton University in Ottawa. The Nigeria to Canada connection was facilitated by the Canadian Commonwealth Scholarship program.

Fun facts: You will never find Shafiu eating shrimp and lobster. He hates the taste and texture of these crustaceans.

Pamela A. Marshall, President-Elect

Associate Professor, Division of Mathematical and Natural Sciences, ASU West Campus

Areas of interest: calcium homeostasis, mathematical modeling of cellular processes, lysosomal function, science education

Pam is a graduate of Southern Methodist University. She did her doctoral studies at University of Texas Southwestern Medical Center. She recently received a fellowship from ASU to add ethics components to her courses

http://asunews.asu.edu/20110407_lincolnfellows.

Fun Facts: Her initials spell out her first name. She has a 5-year-old daughter. Her father wrote a book on the discovery of all of the elements. Her undergraduate minor was in Women's Studies.

Bob McCord, Past President

Chief Curator of Natural History and Curator of Paleontology at Arizona Museum of Natural History

Areas of interest: vertebrate paleontology and herpetology, especially for Southwest US and Sonora, Mexico

Bob received his bachelor's degree from Valparaiso University. He did his graduate studies at U of A, receiving a master's in Geosciences and Ph.D. in Ecology and Evolutionary Biology.

Fun facts: Bob is a Lieutenant Colonel in the Civil Air Patrol and Flotilla Diversity Advisor for the US Coast Guard Auxillary. He has done field work in Pakistan, Mexico, Montana, Wyoming, Utah, New Mexico, and Arizona.

Karen Conzelman, Treasurer

Assistant Chair, Biology department, Glendale Community College

Areas of interest: improving science education and literacy, teacher training, Arizona Science Olympiad

Karen received her Ph.D. in Cell and Developmental Biology from Yale University. She grew up in Davis, California and received her bachelor's degree from UC Davis in Biological Sciences. She also received her secondary education teaching credential at UCD.

Fun facts: Teaching at GCC is the only full-time job Karen has ever held. She moved to Arizona directly from New Haven, and was so happy to be someplace warm again, she never left. While in college, she worked summers in South Lake Tahoe, two blocks from the casinos, selling souvenirs and T-shirts. Karen's housemate is a long-haired chihuahua that she rescued three years ago.

Anthony Brazel, Editor of Journal of AZ-NV Academy of Science

Professor, School of Geographical Sciences & Urban Planning, ASU

Areas of interest: physical geography, climatology, urban climates

Tony received his BA in Math and MA in Geography from Rutgers University. He then moved to Ann Arbor and received his Ph.D. from the University of Michigan.

Fun facts: He has 15 cats! No, he is not the male version of a "crazy cat lady." Tony is involved with a trap-neuter-return (TNR) group at ASU. It is a good thing that all those cats don't all live with him as Tony travels quite a bit as part of his job. Most recently he spent a month in Singapore. Between the early 1960s and late 1980s, Tony spent five field seasons in Alaska studying arctic tundra and glacier changes. Tony will be retiring from ASU on June 30 after 37 years on the faculty, including two terms as department chair. He was also state climatologist for 20 of those years.

Florence Slater, Proceedings Editor

Faculty, Biology Department, Glendale Community College

Areas of interest: microbiology and human physiology, especially in relationship to human disease, information technology

Florence received her BS from City University of New York and received her Master and Ph.D. from Rutgers University (maybe she and Tony passed in the halls?!)

Fun facts: Florence has two sons and six grandchildren, ages one to seven. She has traveled to all major continents of the world except Antarctica. Florence has a shared genome (identical, excluding epigenetics, of course). Florence is the younger one of the pair.

Boris Poff, Nevada Director

District Hydrologist, Bureau of Land Management, Southern Nevada Branch, Las Vegas

Areas of interest: desert hydrology and assessing desert springs

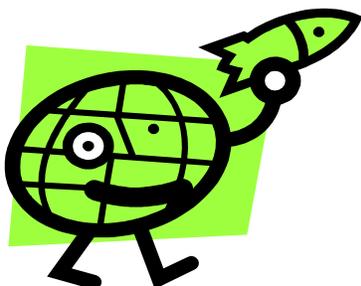
A former ANAS webmaster, Boris Poff's recent move to Las Vegas made him a natural for this position on the board. Boris did his undergraduate work at San Jose State University and completed his Ph.D. at Northern Arizona University's School of Forestry.

Fun facts: An avid snowboarder, Boris used to work on the Ski Patrol at the Arizona Snowbowl.

MEET THE BOARD continued on page 9

Posting: ANAS officers needed!

- Director at Large
- ANAS Journal Editor



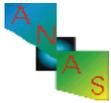
IMPORTANT!



ANAS is now on Facebook

Check it out on the ANAS webpage, or at:

<http://www.facebook.com/pages/Arizona-Nevada-Academy-of-Science/163999350323773>



FORMER ANAS PRESIDENT HEADS FOR JAPAN

By: Karen Conzelman

It has been a long time coming, but Robert Reavis leaves May 15 for a 64-week long sabbatical in Japan. Robert's sabbatical proposal was approved in 2009, but unfortunately, budget cuts froze all sabbaticals for two years. When the funding finally came through, Japan was hit by a deadly earthquake and tsunami that leveled entire towns on the Pacific coastline of Japan's northern islands, including the port city of Sendai, on March 11. Although Robert's work was to be based much further southwest, in Kyoto, the unknowns associated with the damage to several nuclear power plants left his plans very much in doubt. As the workers struggled to contain the nuclear crisis at the Fukushima power plant, the Maricopa Community College District administration reconsidered their support of Robert's project. It was starting to seem like the trip was simply not meant to be, but finally, clearance was given.



Robert Reavis, snorkeling with his family.

Reavis plans to study "Traditional Marine Fisheries and Modern Environmentalism in Japan." In particular, he will be spending time learning about Japan's ama (pearl) divers, the cormorant-using ukai fishers, whalers, and algae farmers who culture such things as the nori used in sushi. Some of these traditional means of harvesting the ocean's bounty are not likely to live beyond this generation of practitioners since all have largely been replaced by higher-yielding modern methods. Today, their revenue comes more from tourists than their catch.



As a marine biologist, Reavis looks forward to studying the unusual fish community found in Kushimoto. This area receives tropical waters from the Kuroshio current and with it, coral and reef fish along with some fish taxa found in California.

Reavis' work has previously focused primarily on behavioral aspects of sex-changing fish. He teaches biology and scientific diving at Glendale Community College (GCC).

Robert has been instrumental in growing "Green Efforts" at GCC. Truly a grassroots project, the environmental movement at the college has expanded over the last few years from a faculty group to a college-wide committee implementing changes at all levels that help to reduce the college's carbon footprint. While in Japan, Reavis will be studying at the Miyako Ecology Center in Kyoto. Built after the signing of the Kyoto Protocol, this facility has a mandate to teach all schoolchildren in the city about environmental issues. They also have a unique "check-out" solar panel program. Reavis will surely return to the college with new ideas and renewed energy for his existing passions—truly what a sabbatical should be. And considering how long the wait has been to get there, the rewards will be all the sweeter.

MEET THE BOARD, con't from page 7

Aregai Teclé, Northern Arizona Director

Professor of Hydrology and Decision Systems Analysis in the School of Forestry, Northern Arizona University

Areas of interest: hydrology and water resources, water quality and climate, conflict resolution and multi-objective decision-making in natural resources management

The Board of Governors welcomes back former ANAS President Aregai Teclé as Northern Arizona Director. He has been teaching and doing research at NAU for 23 years. Aregai has M.S. and Ph.D. degrees in Hydrology and Watershed Management from the U of A and another M.S. in natural resources/energy from Ball State University. His undergraduate degree is in biology and chemistry from Anderson University, Indiana.

Fun facts: Dr. Teclé grew up in Ethiopia and came to the US to attend college. He loves teaching and has taught all grades from junior high school to doctoral students. Aregai has mentored a total of 21 graduate students, including ANAS Nevada Director Boris Poff. See the Summer, 2010 ANAS newsletter if you missed the interesting story about Aregai's sabbatical to Ethiopia.

Theodore G. Manno, Newsletter Editor, Interim Southern Arizona Director

Faculty, AP Biology and Environmental Science, Catalina Foothills High School, Tucson

Areas of interest: behavioral ecology and conservation of squirrels, sustainable agriculture, educational policy, science writing for popular audiences

Theo received his Ph.D. from Auburn University (the same Auburn that was #1 in the BCS this year, assuming the quarterback is eligible) and his teaching credentials from Prescott College. His research on copulatory behavior has included field work in Utah, Costa Rica, and Canada, during which Theo meticulously followed the sexual histories of squirrels for 14 hours a day in bizarre weather conditions. Originally from New Jersey, Theo moved to Arizona sight unseen after his Ph.D. three years ago in search of employment and warm weather.

Fun facts: Theo has been to every US state except Hawaii (he plans to go next year). Before pursuing a science-related career, Theo was an avid musician on three instruments and was invited to play at Carnegie Hall. His favorite food is coffee. Here's a big shout-out to Theo's "homies", the sandwich makers at Tucson's Beyond Bread, and everyone in the state of Minnesota named "Joe".

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ANAS COMMITTEE ROSTER (for 2011-2012)

- Membership—Boyd Campbell
- Grants-in-aid—Erik Gergus
- Program—Karen Conzelman
- Necrology—Boyd Campbell
- Budget—Karen Conzelman
- Best Student Paper—Robert McCord
- Best Student Poster—Erik Gergus
- Bud Ellis Scholarship—Stephen M. Shuster
- Outstanding Science Teacher—William Perry Baker
- Outstanding Service Award—Anthony Brazel & Karen Conzelman



Students attend oral presentations during the annual meeting in Glendale.

President's Corner, continued from page 1

A third concern I have is our dwindling membership. We need to take practical and serious steps to increase our membership, and we need to strengthen our Nevada branch. With good efforts of our outgoing and incoming Nevada directors, we should be on our way to making that branch as strong as it was historically. Thus, I am happy that Boris Poff is the new director for Nevada. We also need to develop some recruiting strategies in institutions where we have members. I suggest that those members give a brief presentation on ANAS to their colleagues at a staff or faculty meeting. Points that may be raised include how ANAS has been an important forum for students to present results of their research.

Fourthly, as part of our effort to increase membership in Nevada and Arizona, we are currently exploring the possibility of having a joint meeting in 2013 with the AAAS in Las Vegas.

We hope to make a final decision on this in September of 2012.

Thanks to Pam Marshall, ANAS is now on Facebook, and I hope that with this publicity we will be reaching many young and aspiring scientists in the Southwest. With these kinds of efforts, I am confident that we will improve ourselves as a team.

Finally, I wish to thank last year's organizing committee, other members, and our sponsors for making our recent annual meeting a success. I hope your cooperation and support will continue.

I look forward to an active and rewarding first year as your president. I wish you all an enjoyable and fruitful summer break.

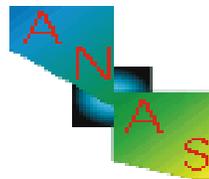
Shafiq Jibrin



The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them.—William Bragg Sr.

Theodore G. Manno, Ph.D.
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Member: Arizona-Nevada Academy of Science
<https://arizonanevadaacademyofscience.org>

[Invitation for submissions to ANAS newsletter](#)

ANAS members are encouraged to submit materials for publication in the newsletter, including but not limited to the following: articles for the 'Where are they now?' column, ANAS announcements, digital photographs, shout-outs, and special event notifications.

[Note from the editor](#)

Please feel free to send comments or questions about the ANAS newsletter!—Theo (mannotg220@yahoo.com)

Thanks to Karen Conzelman and Florence Slater for the pictures and other materials appearing in this issue.