Prof Recalls Geology Alum Who Recently Traveled into Space

By Lori Stiles
University Communications

By the time Joseph M. Acaba completed his master’s degree in geology from The University of Arizona in 1992, his academic adviser and thesis director, Joseph F. Schreiber Jr., knew that Acaba had “the right stuff.”

Schreiber, UA professor emeritus of geosciences, and the rest of the world saw Acaba make his first journey into space in March, one of seven astronauts aboard space shuttle Discovery for the mission designated as STS-119.

The STS-119 mission delivered the final set of solar arrays to the International Space Station that were needed to complete the station’s complement of electricity-generating solar panels, and through them support the station’s expanded crew of six in 2009. The station is a massive 630,000-pound structure that has grown to a size larger than an average four-bedroom house.

Acaba likened his role on the mission to “a utility player on a baseball team.” He was flight deck mission specialist on both the ascent and entry; he helped command the shuttle’s robotic arm; and he performed two of the mission’s four space walks.

Schreiber says he never doubted that Acaba, 41, was up to the job. He said he wasn’t surprised when Acaba was among three educators chosen in 2004 from a field of more than 1,600 qualified educators who applied for NASA’s astronaut program.

Acaba was born and raised in southern California. His dreams of exploring space formed early, after viewing filmstrips his father and grandfather had saved of the first Apollo lunar landing, and also from reading science fiction.

A scholarship from British Petroleum brought Acaba to the UA in 1990.

Acaba said that he was initially skeptical about moving from southern California to the desert, but that Schreiber was a big reason that “for me, it was a great experience. It turned out to be a great place to be a geologist.”

Schreiber took Acaba on his first geology field trip to western Cochise County, an area of magnificent granitic rock...
From the Department Head

My message in last fall’s newsletter was full of uncertainty over the University’s plans to transform itself and uncertainly over the consequences of big deficits in the state budget. Since then, some things are different, and some things have remained the same.

Different:
The Department of Geosciences is now part of a federation of departments called the School of Earth and Environmental Sciences. The Regents formally approved this school in April, and I will be the school’s first Director. The School consists of five units from the College of Science: Geosciences, Atmospheric Science, the Laboratory of Tree-Ring Research, the Accelerator Mass Spectrometry Lab, and newly moved from the College of Engineering, Hydrology and Water Resources. The Department of Soil, Water, and Environmental Science is also included in the School, but remains part of the College of Agriculture and Life Sciences. That’s a total of 86 faculty, 200 graduate students, 220 undergraduate majors, and close to $18M in externally funded research.

We will be a powerhouse on campus and nationally as UA and federal support focuses more and more on energy, resources, water, climate, and the environment.

Same:
The Department of Geosciences will continue in its present form, and I will remain as Department Head. Our undergraduate and graduate degree programs will continue in their present form. Geosciences won’t lose its standing as one of the best geosciences programs around. Just consider the name of the school and think: Earth first.

Different:
What will the School actually do? First, we don’t think that there will be any savings, at least not in the near future. But we will work better together coordinating our classes for non-science majors, organizing a monthly speakers’ series, backing up each other’s IT support, making a case for new faculty positions, and attracting external support for interdisciplinary research, teaching, and outreach in the earth and environmental sciences.

Same:
We have weathered this year’s budget cut. All departments got an additional cut to their state budget in March of this year. And here’s where the faculty really stepped up to meet the immediate challenge of getting us through this fiscal year. We met close to $50,000 of the budget cut through a voluntary program in which tenured faculty agreed to contribute either a percentage of their salary or a similar amount in their grant funds to support the department’s staff. Unlike many departments on campus, we did not need to lay anyone off. The level of participation in this voluntary program made me even more proud to be a member of this department.

The other key to our ability to survive these hard times is the support that we get from our alumni and friends. Thanks to such support, we can give undergraduates and graduate students the sort of field experiences that have made our programs so successful; we can provide financial aid to students; and we can support the research that is an integral part of their education. Support from our alumni and friends is an important part of our survival kit.

Different:
The UA is consolidating its many colleges — sort of. While the College of Science will persist, it will now be part of a super-college, the College of Letters, Arts, and Sciences (CLAS). As befits a super-college, it will have a super-dean, our own Joaquín Ruiz, who will also continue as Dean of the College of Science. Some savings are expected as hiring, advising, IT support, and business support are streamlined. Like the School of Earth and Environmental Sciences, CLAS is a work in progress. Look for more updates in the next newsletter.

Same:
To paraphrase Mark Twain (who stole it from someone else): “Nobody is safe while the legislature is in session.”

Donors

Many thanks to the alumni, friends, and corporations listed below for their generosity and support.

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Megan L. Anderson
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Michael J. Fitzgerald
Jeffrey A. Grover
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Kerry Inman & Denby Auble
William & Judith Jenney
Gary & Joan Lee Jones
Terry & Virginia Katzer
Jerome Kendall
James E. King
Charles F. Kluth
Robert W. Krantz
Melissa Lawrence
Shannan Marty & Chris Pendleton
Christopher "Kit" Marrs
Eugene Meieran
Mark A. Melton
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Mark D. Zoback

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outcrops where Acaba was soon doing field work for his thesis, "Primary Sediment Production from Granitic Rocks in Southeastern Arizona."

“The desert scenery was probably a shock to him at first,” Schreiber said.

But Schreiber knew the choice sites for geology not visible from the interstate. “I doubt that most people driving I-10 have any idea of the spectacular landscape north and south of the highway,” he said.

Schreiber recalls a story that shows how enthusiastically Acaba tackled his field work.

“Joe had the help of his two brothers in sampling an exposure of some ‘granite wash’ in a cliff near his research site, near the Apache Power Plant facility. They managed to get a truck to the top of the cliff, fasten a line to the truck’s front bumper, and then descend the cliff face while at the same time taking samples.”

Schreiber said that Acaba was impressively mature and well-organized, a self-starter, and a rapid learner.

Acaba “hit his stride academically with a straight-A average” and completed his master’s degree from the Geosciences Department in only two years, which is record time, Schreiber said.

Having full financial aid from British Petroleum Exploration helped, but his gift for organization played a role, too, Schreiber said.

“His organizational abilities were frequently a topic of conversation by his teachers and thesis committee members. He adapted easily to the field work and lab routine, and with his enthusiasm and talent for organization, he turned out data rapidly. I will always remember his organizational skills to handle the bundles of data he was turning out.

“I think part of this ability came naturally, but I would also give credit to his military training,” Schreiber said.

Acaba was a member of the Tucson US Marine Corps Reserve Unit while a graduate student at the UA.

After leaving the UA, Acaba pursued careers outside geology. “I didn’t want to leave Tucson,” Acaba said, “but for employment purposes, I had to.”

Acaba credits his diverse professional background as possibly one reason he’s where he is today.

After leaving Tucson, he worked for a couple of years as a hydrogeologist in Los Angeles. From there, he joined the US Peace Corps, working in the Dominican Republic as an environmental education volunteer. He then worked for a short time as the manager of a marine research center in the Bahamas. And eventually, he became a science and math teacher at a high school and middle school in central Florida.

“When I was teaching, I felt it was the profession that I was really meant to do, and I really still enjoy it,” Acaba said recently. “I wouldn’t have left teaching for anything, besides becoming an astronaut.”

Charlene Estrada is a graduating senior from the Department of Geosciences, with an area of concentration in Earth Systems Science. Since her freshman year at the UA, she has been actively involved in research that focuses on mineralogy and astrobiology.

Charlene became involved with the RRUFF Project studying the crystal structures, chemistry, and Raman spectroscopy of minerals as a freshman. She quickly learned to conduct Raman spectroscopy and developed into an accomplished mineral photographer. Under the guidance of Professor Bob Downs, she ran the powder diffraction facilities where she helped graduate students from around campus, and she conducted work for customers off campus.

During the summer of 2008, Charlene participated in a ten-week internship at the Carnegie Institution of Washington in Washington, D.C. She studied the adsorption of amino acids on mineral surfaces in the Geophysical Laboratory. By conducting batch adsorption experiments, she investigated the adsorption of left- and right-handed enantiomers of aspartic acid onto rutile. Charlene presented the results of her study at the 2008 American Geophysical Union Fall Meeting.

After her internship, Charlene was accepted into the NASA/UA Space Grant Undergraduate Research Program at the UA. During this year-long internship, she continued her work with the RRUFF Project, and she wrote a research paper for her honors thesis. Her paper looks at the relationship between Raman vibrations and bond strength/bond length systematics. Her paper will be submitted to the American Mineralogist for publishing.

Charlene has maintained a perfect 4.0 GPA as an undergraduate student. This spring, she was honored as a Galileo Circle Scholar by the College of Science, and she received the award for Highest Academic Distinction, at the COS spring 2009 convocation.

Outside the lab, Charlene has served as treasurer and then president of the Society of Earth Science Students (SESS), the undergraduate student geologist organization on campus. She was involved in the Arizona Blue Chip Program, a nationally esteemed four-year leadership enrichment program at the University of Arizona.

Beginning in September 2009, Charlene will be pursuing her PhD in Geochemistry at Johns Hopkins University, where she will be studying the interaction of organic molecules with mineral surfaces and its potential applications to origin of life scenarios.

Charlene is a brilliant young student with an exciting future. She is passionate about her work and is determined to achieve a successful career in Geosciences. It has been a pleasure and an honor to have her in the Department of Geosciences, and we wish her the best in the future.
Retirement

Shirley Wetmore

Shirley Wetmore retired from the University of Arizona’s Mineral Museum in February, 2009.

There is great appreciation for the legacy that she leaves behind.

Over the years, Shirley has worked tirelessly to maintain and improve the collections, promote the Mineral Museum, and educate thousands of visiting school children in minerals and geology.

Shirley became a volunteer at the UA Mineral Museum shortly after her arrival in Tucson in 1975. It was during this time that she helped organize and catalog the Museum’s collection that dates back to 1891.

In 1979, Shirley became the Curatorial Specialist, essentially assuming the duties of assistant curator. Since that time, she digitized the Museum records, created an Arizona mines file, expanded the education program, and established loan and policy procedures. In addition, she expanded the Museum staff to include work-study students, organized a special events program, implemented a mineral and meteorite identification service for the general public, and designed and constructed exhibits for the Museum and the Tucson Gem and Mineral Show.

When the collection moved to the Flandrau Science Center in 1993, Shirley worked closely with the Science Center staff to develop annual and special exhibits to enhance the overall experience of the visiting public.

Shirley’s expertise and enthusiasm will be deeply missed by Museum staff, the mineral and meteorite community, teachers, and countless schoolchildren. We wish her great happiness in her retirement and look forward to seeing her at the annual Tucson Gem and Mineral Shows!

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Geosciences Alumni Advisory Board Meeting Highlights

By Steve Naruk
Alumni Advisory Board Chair

The Geosciences Alumni Advisory Board held its 2009 annual meeting April 1st, at the Department, in conjunction with GeoDaze. Members in attendance included Nancy Beckvar (ORR/NOS/NOAA), Carlotta Chernoff (ConocoPhillips), Timothy Demko (ExxonMobil), James King (Cleveland Museum of Natural History, Retired), Jamie Webb King (California State College at Dominguez Hills, Emeritus), Kitt Marrs (A.W. Marrs, Inc.), Marc Sbar (ConocoPhillips, Retired), Will Wilkinson (Freeport-McMoRan Exploration Corp.), and myself, Steve Naruk (Shell International Exploration and Production). Regina Capuano (University of Houston), Steve Enders (Renaiscence Resource Partners), and Mark Zoback (Stanford University) sent their regrets.

The main purposes of the Advisory Board are to provide communication between alumni, faculty, students, and industry; provide input on economic and employment trends; advise the Department on its research and instructional programs; and assist the Department in identification and solicitation of financial and other resources.

Karl Flessa and Joaquin Ruiz kicked off the meeting with discussions about the state of Geosciences and the College of Science respectively, and the proposed federation of the Department of Geosciences with the Departments of Atmospheric Sciences; Hydrology and Water Resources; Soil, Water and Environmental Science; the Laboratory of Tree-Ring Research; and the Accelerator Mass Spectrometry Laboratory into a new, inclusive “School of Earth and Environmental Sciences.”

The Board strongly endorsed the proposed reorganization, perceiving that the faculty and students involved will benefit greatly from the increased integration of teaching and research efforts. Historically, the “walls” between all of these units have been very low. Combining them will enable the new school to compete more effectively for university and other resources, as well as expose students to more career opportunities. Because individual Departments will continue within the proposed school, there will be no loss of Departmental identity as far as alumni — or prospective students — are concerned.

The Advisory Board did express concern over the absence of the Department of Mining and Geological Engineering from the proposed new school. Geoscientists benefit significantly from exposure to research and career opportunities in mining and geological engineering. Conversely, the Department of Mining and Geological Engineering gains critical mass by combining with the proposed school, and mining and geological engineers gain increased exposure to the Geosciences, thereby increasing their ability to obtain state licenses as professional geologists as well as professional engineers.

Up to now, the Advisory Board has focused on building alumni relationships by hosting events in Houston, such as the annual Happy Hour and dinner at Kerry Inman’s art gallery, the summer-intern picnic and gator-fest at Brazos Bend State Park, and alumni receptions at annual professional meetings such as the American Association of Petroleum Geologists.

However, given the current financial straits of the Department, the Advisory Board is kicking-off its first-ever fundraising drive to support field trips, student research, and so many other things that make our Department – and our own careers – so successful. The faculty have already voluntarily donated $50,000 of their own salaries back to the Department, in spite of the fact that they themselves face mandatory 5-10 day unpaid furloughs starting this coming July!

Surely if the faculty can provide such support, so can we! Look for more details about this alumni fundraising effort soon!
Winter Degrees

Bachelor of Science
Nicolas Breckenfeld • Ryan Fitzpatrick • Morgan Helfrich
Rebecca Knutson • Jonathan Ondracek
Daniel Ross • Sally Thurner

Master of Science & Doctor of Philosophy
Nathanael English, PhD
Stable isotopes in the spines of columnar cactus:
A new proxy for climate and ecophysiological research, Julia Cole

Tamara Goldin, PhD
Atmospheric interactions during global deposition of Chicxulub impact ejecta,
Jay Melosh

Chao Li, MS
Tectonic setting of Mesozoic magmatism and related mineralization in the middle and lower Yangtze river valley, eastern China, Mark Barton

Scott McBride, MS
Sediment provenance and tectonic significance of the Cretaceous Pirgua subgroup, NW Argentina, Peter DeCelles

Gabriel Rotberg, MS
New geochemical and geochronologic data from the northern Sierra Nevada, California: Constraints on the preconditions for lithospheric foundering, Mihai Ducea

Joel Saylor, PhD
The late Miocene through modern evolution of the Zhada basin, southwestern Tibet, Peter DeCelles and Jay Quade

Kelley Stair, MS
The origin of intermediate composition magmas: Insights from the Sierra de Valle Fertil: A geochemical and geochronologic study linking mechanics of continental magmatic arcs at depth to the surface, Mihai Ducea

Alex Strugatskiy, MS
Structural reconstruction and reinterpretation of the area near Happy Valley, Little Rincon mountains, southeastern Arizona, Eric Seedorff

Congratulations and best wishes to all of our graduates!

Department News

The incoming class of graduate students for Fall 2009 will be 14 students. Two of these students are currently working on their MS degree and will proceed to their PhD degree.

The Department hosted its first annual alumni reception at the Annual AAPG meeting, which was in Denver this year. Alumni from the front-range area were invited to attend.

Faculty News

Julio Betancourt, Adjunct Geosciences Professor and USGS scientist, received the prestigious 2008 Presidential Rank Award that recognizes strong leaders who achieve results and consistently demonstrate strength, integrity, industry, and a relentless commitment to excellence in public service. Julio has conducted groundbreaking research in how climate variability affects ecosystems. He is also one of the first scientists to alert the public about the impact of buffel grass on the Sonoran Desert. For the full story, see http://lqp.arizona.edu/node/920.

Julia Cole was recently promoted to full professor in Geosciences.

Student News

Guleed Ali received an American Geological Institute Minority Scholarship for the 2008-2009 academic year.

Madison Barkley received the 2009 College of Science Outstanding Mentor/Teaching Assistant Award.

Ana Collins received an NSF Graduate Research Fellowship.

Andrew Frassetto received the 2009 College of Science Outstanding Scholar Award.

Sarah Ivory received an NSF Graduate Research Fellowship.

Andrew Kowler won a GSA Research Award for his project “Paleoclimatic Reconstructions for the Southwest from LGM to Present Using Pluvial Lake Shorelines.”

Lepolt Linkimer received the 2009 College of Science Outstanding Service Award.

Kendra Murray received an NSF Graduate Research Fellowship.

Jill Onken won a GSA Research Award for her project “Late Holocene Alluvial Cycles, Landscape Change, and Climatic Controls in the Carrizo Wash Watershed of West-central New Mexico.”

Cody Routson received an NSF Graduate Research Fellowship.

Allyson Thibodeau received the 2009 College of Science Outstanding Service Award.

Sarah Truebe received a National Defense Science and Engineering Graduate (NDSEG) fellowship.

Hinako Uchida won the North American prize for best crystallographic paper in any science discipline for her work on MgO inclusions in spinel.
How Martian Winds Make Rocks Walk

By Megan Levardo,
UA NASA Space Grant Intern

Wind and erosion caused the regular spacing of rocks seen in images from the Mars Rover Spirit, according to new research from UA geoscientist Jon Pelletier and his colleagues.

Rocks on Mars are on the move, rolling into the wind and forming organized patterns, according to a University of Arizona-led research team.

The new finding counters the previous explanation of the evenly spaced arrangement of small rocks on Mars. That explanation suggested the rocks were picked up and carried downwind by extreme high-speed winds thought to occur on Mars in the past.

Images taken by the Mars Exploration Rover Spirit show small rocks regularly spaced about 5 to 7 centimeters apart on the intercrater plains between Lahontan Crater and the Columbia Hills.

Although Mars is a windy planet, it would be difficult for the wind to carry the small rocks, which range in size from a quarter to a softball, said Jon D. Pelletier, associate professor of geosciences at the UA.

Pelletier and his colleagues suggest that wind blows sand away from the front of the rock, creating a pit, and then deposits that sand behind the rock, creating a hill.

The rock then rolls forward into the pit, moving into the wind, he said.

As long as the wind continues to blow, the process is repeated and the rocks move forward.

This explanation does not require extreme winds, Pelletier said.

“You get this happening 5, 10, 20 times, then you start to really move these things around,” he said. “They can move many times their diameter.”

The process is nearly the same with a cluster of rocks.

However, with a cluster of rocks, those in the front of the group shield those in the middle or on the edges from the wind, Pelletier said.

Because the middle and outer rocks are not directly hit by the wind, the wind creates pits to the sides of those rocks. Therefore, they roll to the side, not directly into the wind, and the cluster begins to spread out.

Pelletier, Andrew L. Leier of the University of Calgary in Alberta, Canada, and James R. Steidtmann of the University of Wyoming in Laramie report their findings in the paper “Wind-Driven Reorganization of Coarse Clasts on the Surface of Mars.” The paper is in the January issue of the journal Geology.

When Leier was a graduate student at the UA, he told Pelletier about an experiment on the upwind migration of rocks that Steidtmann, Leier’s thesis adviser, had conducted.

Steidtmann had studied upwind migration about 30 years ago. He used a wind tunnel to see how pebbles on sand moved in the wind. Steidtmann’s research showed that the rocks moved upwind and that over time, a regular pattern emerged.

Pelletier wasn’t sure how he could use the idea.

Later, while attending a lecture that showed pictures of uniformly organized rocks on Mars, Pelletier recalled his conversations with Leier about Steidtmann’s experiments – and it all came together.
To investigate the regular patterns of the rocks on Mars, Pelletier combined three standard numerical computer models. The first modeled air flow, the second modeled erosion and deposition of sand, and the third modeled the rocks' movement, he said.

“We can model it on the computer to try to get a better sense of what’s actually happening and to provide another sort of documentation or justification for the idea,” he said.

Pelletier was the first to combine the three standard models and apply them to this new problem.

He also conducted what is known as a Monte Carlo simulation, which applies his combination numerical model over and over to a random pattern of rocks to see how the rocks ultimately end up.

Pelletier ran the simulation 1,000 times. The rocks ended up in a regular pattern 90 percent of the time, he said.

As an independent verification, he also compared the pattern predicted by the numerical model with the distances between each rock and its nearest neighbor in the Mars images. The patterns of the Martian rocks matched what the model predicted.

Pelletier said upwind migration of rocks also occurs on Earth.

Co-author Leier wrote in an e-mail, “Something as seemingly mundane as the distribution of rocks on a sandy, wind-blown surface can actually be used to tell us a lot about how wind-related processes operate on a place as familiar as the Earth and as alien as Mars.”

However, because plants and animals can alter wind patterns and rearrange rocks, it is much more difficult to study this process on Earth, Pelletier said.

Of Mars’ mysterious walking rocks, he said, “This is a neat problem, but there are bigger fish to fry.”

Pelletier plans to apply the same numerical models to larger features on Mars such as sand dunes and wind-sculpted valleys and ridges called “yardangs.”

He said understanding the climate history of other planets and where those climates went awry can help in understanding our own climate system.
The 37th Annual GeoDaze

The 37th annual GeoDaze Symposium was held at the Arizona Historical Society Museum near the UA main campus April 2nd through 4th, 2009.

The 32 talks and 36 posters showcased the diversity and multi-disciplinary nature of Geosciences research today. Presentation topics included geophysics and geodesy; planetary geology; mineralogy; paleoclimate; economic geology; climate; environmental science; and geochronology. There were two categories of topics for posters: 1) environmental science, surface processes, and geoscience education; and 2) geochemistry, geochronology, geophysics, structure and tectonics.

Both graduate and undergraduate students participated, and the audience included faculty, staff, and students from the Department, Geosciences Advisory Board members, alumni, and individuals from other academic and professional communities.

Dr. John Smol, Professor in Department of Biology at Queen’s University in Kingston Ontario, and Canada Research Chair in Environmental Change, was the keynote speaker. Dr. Smol’s talk was titled “From controversy to consensus: Making the case for recent climatic change in the Arctic using lake sediments.”

Nine awards (see page 9) were given out during a ceremony that followed the keynote address and slide show.

Activities ended with the annual GeoDaze party at the Tucson Botanical Gardens. Tucson alumni and friends were invited, and approximately 130 individuals attended the festivities this year.

Dr. Jon Pelletier from the Department led the GeoDaze field trip. The trip focused on “Geomorphology of the Tucson Basin and Santa Catalina Forerange.” Our thanks go to ConocoPhillips for sponsoring the field trip.

A big round of applause goes to co-chairs Stephanie McAfee and Christian Manthei for all of their dedication and hard work, and to all of the individuals on various planning committees who made the event possible.

A special thanks goes to all of our alumni, friends, and sponsors whose financial support makes GeoDaze possible each year.

Finally, thanks to all of the students, faculty, staff, advisory board members, alumni, and friends for making the GeoDaze tradition of showcasing student research a great success again this year!

GeoDaze Donors

Special thanks goes to the following alumni, friends, and organizations for their financial support, which helps make GeoDaze possible each year.

— Individuals —
Jon A. Baskin
Gerard Beaudoin
Thomas H. Biggs
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Kunal Bose
Elwood R. Brooks
Anthony B. Ching
Jean S. Cline

Raj H. Daniel
Christopher Eckhart
Stephen Enders
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John R. Kerns
Susan Kidwell
Charles F. Kluth
Peter L. Kresan
Michael P. Kutney
Christian D. Manthei
Paul S. Martin &
Mary Kay O’Rourke
John R. Matis
Leslie D. McFadden
Keith H. Meldahl
Mark A. Melton
Nancy D. Naeser
Jack & Audrey Nations
Alan Notgrass
Robert W. Parker
E. Fred Pashley, Jr.
Maxine Peirce
Richard S. Pfirman
Bruce M. Prior
John Schaefer
Jack Schlemmer
John P. Schloderer
Miles G. Shaw

Douglas B. Silver
John M. Sweet
Margaret E. Venable
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Errol L. Montgomery & Assoc.
and the Southern Arizona Community Foundation
ExxonMobil
GeoDaze Awards

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<tr>
<th>Award Category</th>
<th>Winner</th>
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<tr>
<td>Best Overall GeoDaze Presentation</td>
<td>Errol L. Montgomery &amp; Assoc., Inc.</td>
<td>$2,000</td>
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<tr>
<td>Best Overall GeoDaze Poster</td>
<td>Arizona Geological Society</td>
<td>$1,000</td>
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<td>Best Undergraduate Presentation</td>
<td>Goran Buble</td>
<td>$500</td>
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<td>Best Economic Geology Presentation</td>
<td>Christian Manthei</td>
<td>$300</td>
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<tr>
<td>Best Geophysical Presentation</td>
<td>Jennifer Katie Sechrist</td>
<td>$300</td>
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<tr>
<td>Best Geochemical or Geochron Presentation</td>
<td>Willy Guenthner</td>
<td>$300</td>
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<tr>
<td>Best Environmental Presentation</td>
<td>Jess Conroy</td>
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<td>Best Paleoclimate Presentation</td>
<td>Sarah Truebe</td>
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<td>Best Undergraduate Presentation</td>
<td>Charlene Estrada</td>
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<td>Best Economic Geology Presentation</td>
<td>Doug Kreiner</td>
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<td>Best Geophysical Presentation</td>
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<td>Christine Gans</td>
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Congratulations to all of the award winners, and many thanks to all of the donors who supported the GeoDaze 2009. A total of $5,300 was given in awards.

Spring Scholarships

- Goran Buble received a ConocoPhillips scholarship for $4,675.
- Ana Collins received a ConocoPhillips scholarship for $4,125.
- Renata Jasinevicius received a ConocoPhillips scholarship for $4,125.
- Christian Manthei received a Sulzer scholarship for $4,125.
- Stephanie McAfee received a ConocoPhillips scholarship for $4,675.
- Lisa Molofsky received a ConocoPhillips scholarship for $4,550.
- Kathryn Katie Sechrist received an Economic Geology scholarship for $4,125.

A total of $30,400 was given as scholarships for the Spring Semester.

Undergraduate Field Camp Scholarships

- Justan Bell received a Chevron scholarship for $930.
- Christian Culbertson received a Chevron scholarship for $930.
- Dominique Giesler received a Diane Ferris and Chevron scholarship for $930.
- Joshua Golden received a Chevron scholarship for $930.
- Sarah Grubaugh received a Chevron scholarship for $930.
- Kyle Johnson received a Chevron scholarship for $930.
- Lauren Klipp received a Chevron scholarship for $930.
- Jennifer La Sure received a Chevron and Geosciences scholarship for $930.
- Andrew McCallister received a Geosciences and David Moore scholarship for $930.
- Melissa McMillan received a David Moore scholarship for $930.
- James McNabb received a David Moore scholarship for $930.
- Megan Rheuma received a David Moore scholarship for $930.
- Whitney Rutherford received a David Moore scholarship for $930.
- Robin Van Auken received an Evans B. Mayo scholarship for $930.
- Samantha Vandermeiy received an Evans B. Mayo scholarship for $930.
- Caleb Weaver received an Evans B. Mayo scholarship for $930.

A total of $15,810 was given as scholarships for Field Camp.

Summer Scholarships

- Serkan Arca received a Chevron scholarship for $500.
- Madison Barkley received a Chevron scholarship for $1,500.
- Meg Blome received a Chevron scholarship for $1,500.
- Goran Buble received a Chevron scholarship for $1,500.
- Alyson Cartwright received a Chevron scholarship for $1,500.
- Andrew Frassetto received a John and Nancy Sumner scholarship for $1,421.
- Facundo Fuentes received a Chevron scholarship for $1,500.
- Austin Holland received a Chevron scholarship for $1,500.
- Mauricio Ibanez received a Chevron scholarship for $1,500.
- Lisa Molofsky received a Maxwell Short scholarship for $1,269.
- Andrew Olson received a H. Wesley Peirce scholarship for $2,504.
- Jill Onken received a Keith Katzer scholarship for $1,089.
- Lynn Peyton received a Chevron scholarship for $1,500.
- Alex Pullen received a Peter J. Coney scholarship for $2,924.
- Cody Routson received a Wilson Thompson scholarship for $639.
- Joshua Spinler received a John and Nancy Sumner scholarship for $1,421.
- Sarah Truebe received a Wilson Thompson scholarship for $639.
- Kelly Umlauf received a Chevron scholarship for $1,500.
- Mark Warren received a Chevron scholarship for $1,500.

A total of $27,406 was given in scholarships for the summer session.

Galileo Circle Scholarships

The following students received a $1,000 Galileo Circle Scholarship from the College of Science. The Department of Geosciences had more Galileo scholars than in any previous year.

- Guleed Ali, Undergraduate
- Cemal Biryol, Graduate
- Facundo Fuentes, Graduate
- Austin Holland, Graduate
- Sarah Jorgenson, Undergraduate
- Christina King, Undergraduate
- Andrew Kowler, Graduate
- Douglas Kreiner, Graduate
- Marlene Leclerc, Graduate
- Jill Onken, Graduate
- Ryan Porter, Graduate
- Alexander Pullen, Graduate
Alumni News

Nancy Beckvar (MS 86)
Nancy is currently working as a Physical Scientist for the Office of Response and Restoration with NOAA in Seattle, Washington. She provides scientific support to NOAA coastal regional coordinators on a variety of issues at aquatic hazardous waste sites around the US. She still manages to hike in the Sonoran desert when in Tucson, where she observed this bobcat reclining on a saguaro top. Nancy is a current member of the Geosciences Advisory Board.
~nancy.beckvar@noaa.gov

Sumit Chakraborty (PhD 90)
Sumit was elected as a Fellow to the Geochemical Society and the European Association of Geochemistry, one of the most prestigious honors in the field of geochemistry. This fellowship was established in 1996 to acknowledge outstanding scientists who have made a major contribution to the field of geochemistry. Sumit is currently a professor at the University of Bochum in Germany.
~sumit.chakraborty@rz.ruhr-uni-bochum.de

Carlotta Chernoff (PhD 02)
Carlotta continues to enjoy working for ConocoPhillips and has been part of their Global Exploration Portfolio Management group for the last year. In her free time, she enjoys singing with a small chamber ensemble that performs in the Houston area, most recently presenting Handel’s Messiah and Mozart’s Requiem. Carlotta is a current member of the Geosciences Advisory Board.
~carlotta.b.chernoff@conocophillips.com

M. Stephen Enders (PhD 00)
Steve recently retired from Newmont Mining Company as Senior Vice President for Worldwide Exploration. He has since joined the University of Arizona’s Department of Mining and Geological Engineering as an Adjunct Professor and is a founding member of the Board of Directors for the University’s Institute for Mineral Resources. He is an Honorary Lecturer for the Society of Economic Geologists, and he retains strong interests in mineral exploration and innovation in the mining business. Steve is a current member of the Geosciences Advisory Board.
~mse@renrespartners.com

David Goodwin (PhD 03)
David has been promoted to Associate Professor of Geology at Denison University in Ohio.
~goodwind@denison.edu

John Matis (MS 70)
I Retired! We moved back to Colorado to be near my wife’s children, and so we could enjoy using our high-country cabin in Boulder County. I hope to develop an American Indian Atlas of the Front Range, serve on the local water board, fish for trout, and take road trips with my buddies.
~johnm80225@yahoo.com

Steve Naruk (MS 83, PhD 87)
Steve is currently a Principal Structural Geologist with Shell International Exploration and Production Research and Development in the Bellaire, Texas, Laboratory. He leads a team of geologists and reservoir engineers, quantifying the effects of structural/stratigraphic features on fluid flow. One of his current research projects involves fieldwork along the Kaibab monocline and in the Valley of Fire, investigating the occurrence of deformation bands. Steve is the current chair of the Geosciences Advisory Board.
~steve.naruk@shell.com

Judy Parrish (Former Faculty)
Congrats to the Department on the big minerals grant and the School of Earth Sciences proposal!
~jparrish@uidaho.edu

John Schloderer (MS 74)
After over 25 years with BHP Billiton, John is currently working in Zambia with Albidion Ltd. as General Manager of Exploration, based out of Perth, Australia.
William Wilkinson (PhD 81)
Will is currently Vice President-Africa for Freeport-McMoRan Exploration Corp. He is based in Phoenix, Arizona, but travels frequently to various parts of Africa. He is responsible for project direction, reconnaissance, and acquisitions throughout the continent. He is currently directing a pre-feasibility study on a new copper-cobalt discovery in the Democratic Republic of Congo. Will is a current member of the Geosciences Advisory Board.
~william_wilkinson@fmi.com

Wallace Woolfenden (PhD 96)
Wally just completed a Fulbright, US Scholar Program, Visiting Professor stay at Yarmouk University in Jordan.
~paleotoon@gmail.com

Pablo Yanez (MS 90)
Pablo is an Academic Technology Specialist at the College of William and Mary in Williamsburg, Virginia. His hobby is photography. You can see samples of his creative work at www.modernstills.com.
~ abloyanez@cox.net
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