Bob Butler Receives Outstanding Faculty Award as he prepares for career number two!

During his final days at the UA, Bob Butler received the Geosciences Advisory Board’s Outstanding Faculty Award for his dedication as a teacher and excellence as a researcher.

The Department hosted a dinner in Bob’s honor to thank him for all of his contributions to the Department over the years and to acknowledge that Bob will be moving on to a second career in science education at the University of Portland.

Here at the UA, Bob has contributed to the growth and development of the Geosciences Department for 30 years. He has trained graduate students in the science and art of paleomagnetism. He has taught many introductory courses at the undergraduate level. He helped build the geophysics program. And he has had a vibrant research program that has taken him all over the world.

In 2002, Bob received the Distinguished Professors award for outstanding teaching and research, one of the highest honors the University gives.
The Department of Geosciences wishes to express its gratitude to alumni and friends who support programs and scholarships through their generous contributions.

--- Individuals ---
- Gary Ahrens
- Mary Barrick
- Jon Alan Baskin
- Roger Bernardini
- Charles Bock
- George Burr
- Cheryl Butler
- Robert Caughey
- Carlotta Chernoff
- Darlene Coney
- Joseph Cramer
- Vivian Dell ‘Acqua
- Omar DeWald
- James Dretler & Faria Clark
- Christopher Eckhart
- John Empsall
- Steve Enders
- Rolfe Erickson
- Mary Ervin
- Michael Fitzgerald
- Robin Frisch Gleason
- Brian Galloway
- Laping Gao
- Rebecca Garoutte
- Terrence Gerlach
- Patrick Gisler
- Howard Grahn
- Redge Greenberg
- Armand Groffman
- Jim Hardy
- Tekla Harms
- Vance Haynes
- James Hays
- Elaine Hazelwood
- Corolla Hoag
- Tim Jull
- Charles Kluth
- Diane Laetz
- Juan Lias
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- Stephen Marshak
- Neal McClymonds
- Edgar McCullough Jr.
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- Mark Melton
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- Syver More
- Ann Moushey
- Bruce Myers
- Steve Naruk
- Steve Natali
- Beanor Nelson
- Meredith Nettles
- Lorrel Nichols
- Elizabeth O’Leary
- Anne Ortiz
- Allan Patch
- Susan Patch
- Philip Pearthree
- Ofiri Pearson
- Bruce Prior
- Jeanne Rodriguez
- Christopher Roe
- Amy Ruf
- Jeff Seekatz
- Elena Shoshitaishvili
- Douglas Silver
- Michael & Lynn Soreghan
- Marvin Stauffer
- David Steadman
- Lynn Strickland
- Mark Tinker
- Yukimitsu Tomida
- Dee Trent
- Edward Wellman
- John Welty
- Mark Zoback

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It is hard to believe another year has gone by as we prepare for Spring graduation and the end of the semester. The Department and the University are moving forward on many fronts, and I am very optimistic about the future of Geosciences at the UA. As I reported in my last update, the Provost, George Davis, appointed a focused study team (which I was a member of) to report on Earth Science and Environmental Programs on campus. We submitted the report to the Provost in February. We focused on strengths in the broad area of Earth Sciences and recommended that Earth Science and Environmental Programs be pushed as part of the focused excellence plan of the University. I am confident that this will continue to be positive for the entire University and for Geosciences. We still have to work toward finding new resources to maintain and improve the Department. We did not have a budget cut for the Department this year, which was a relief compared to past years, and we hope the same will be true for the 2004/2005 budget next year.

We have hired a new Assistant Professor in Geophysics, Dr. Richard Bennett. Rick will start this fall semester and bring GPS and Geodesy expertise to the Department. Rick received his PhD from MIT and is currently a Research Scientist at the Harvard-Smithsonian Center for Astrophysics. We are in the process of working out our faculty-hiring plan for next year, and we hope to hire more faculty next year. John Sutter (Team Chief Scientist, Western Earth Surface Processes Team, USGS) and I (as well as many others on campus) continue to work on plans for a joint US Geological Survey (USGS) and University of Arizona (UA), Earth Surface Processes Research Institute (ESPRI) on campus. The exciting news is that the University has approved a new building to be completed in 2006 to house new USGS scientists and ESPRI.

I am extremely pleased that our graduate students continue to find excellent jobs when they finish. We had 18 graduate students complete their degrees in 2003. I am pleased to report that two found faculty positions, three went to postdoctoral positions at academic institutions, five went to industry, three finished their MS degrees and are continuing on for a PhD, and four went to other research positions. In addition, two former graduate students took faculty positions after finishing a postdoctoral position. We are trying to keep better track of where our students go, so if you have changed jobs recently, please let us know.

GeoDaze was a big success again with 45 student presentations over the two-day event. Thanks to all the Alumni that contribute to making GeoDaze possible and to the 2004 GeoDaze co-chairs Jessica Rowland and Jessica Conroy. Next year, GeoDaze is scheduled for April 7-9, 2005, so mark your calendars.

Bob Butler received the Outstanding Faculty Award from the Alumni Advisory Board during GeoDaze. Bob is moving on in June to career #2 in science education at the University of Portland. We had a dinner in Bob’s honor, and several of Bob’s former students attended. We had fun highlighting Bob’s career. We will miss Bob!
Awards, Scholarships, and Fellowships

**Undergraduate Awards**

- **Candice Marburger**, Geosciences Outstanding Senior
- **Steven Hubbs**, Geosciences Excellence in Research

**Graduate Awards**

- **Megan Anderson**, COS Outstanding Teaching Assistant
- **Andrew Leier**, Geosciences Outstanding Teaching Assistant

**Undergraduate Scholarships**

- **Erin Brenneman**, CATTS Scholarship
- **Leslie Dix**, Willard Vorhees Scholarship
- **Timothy Fischer**, Willard Vorhees Scholarship
- **Yann Gavilot**, David Moore Scholarship
- **Louis “Cody” Helfrich**, Willard Vorhees Scholarship
- **Theresa Kayzar**, David Moore Scholarship
- **Alexander Pullen**, Ruben Winslow Scholarship
- **Koichi Sakaguchi**, David Moore Scholarship
- **William “Ross” Waldrip**, Orlo Childs & David Moore Scholarships

**Graduate Scholarships**

- **Patricia Alvarado**, ChevronTexaco Scholarship
- **Kevin Anchukaitis**, Sulzer Scholarship

- **Fernando Barra**, J. David Lowell Scholarship
- **Joshua Calkins**, ChevronTexaco Scholarship
- **Robinson Cecil**, Peter Coney & ChevronTexaco Scholarships
- **Stephen DeLong**, ChevronTexaco Scholarship
- **Nathan Brooks-English**, CATTS Fellowship & Keith Katzer Scholarship
- **Matt Fabijanic**, ChevronTexaco Scholarship
- **Facundo Fuentes**, ChevronTexaco Scholarship
- **Jerome Guynn**, Tucson Gem and Mineral & ChevronTexaco Scholarships
- **Shundng He**, ChevronTexaco Scholarship
- **Andrew Hennes**, ChevronTexaco Scholarship
- **Camille Holmgren**, Cranwell Smith Scholarship
- **David Kennedy**, Sulzer Scholarship
- **James Morrison**, ChevronTexaco Scholarship
- **Kirsten Rowell**, Wilson Thompson Scholarship
- **Joel Saylor**, ChevronTexaco Scholarship
- **Timothy Shanahan**, ChevronTexaco Scholarship
- **Kimberly Tait**, Tucson Gem and Mineral Scholarship
- **Ta-Shana Taylor**, Maxwell Short Scholarship
- **Jana Van Alstine**, ChevronTexaco Scholarship
- **Frank “Trey” Wagner**, BP Amoco & ChevronTexaco Scholarships
- **Jennifer Wagner**, Charles Evenson Scholarship
- **Brian Yanites**, Maxwell Short Scholarship

I want to thank all of our Geoscience alumni and friends for their continued support of the Department. We have been able to offer more field experiences for both our undergraduate and graduate students due to your continued support. We are also working to build up our endowments for undergraduate and graduate scholarships and fellowships for much needed student support. As you can see we were able to give out a large number of scholarships that range from $500 to $5000 per student. We also had five Geoscience students receive College of Science, Galileo Circle scholarships (see page 7). We have 18 endowments that support our students. The largest endowments are the J. David Lowell Fellowship, the Peter J. Coney Fellowship, the H. Wesley Peirce Scholarship, the Bert S. Butler Scholarship, and the John and Nancy Sumner Scholarship. We hope to build these even more over the next few years.

**Memorials**

- **Peter Baldwin** died on December 1, 2003. Peter received a BS degree from the Department in 1973.

**Alumni Drawing Winner**

Dave Melendrez (MS ’91) works for Barrius Technology Inc. in Houston, Texas. Congratulations Dave! We hope you enjoy your Geosciences T-shirt.

Send in your updated contact information and have your name added to the drawing pool for the next Geosciences T-shirt!
Team Tackling Tibet

by Paul Kapp

The Tibetan plateau is the most impressive topographic and structural feature on Earth (Fig. 1), and is actively growing due to the ongoing collision between India and Asia. Its study has fueled many of the hottest debates in continental tectonics today; these include (1) whether the continental lithosphere subducts or shortens like an accordion during collisional orogenesis, (2) how lower crustal flow may be manifested in surface topography and geology, and (3) the tectonic significance of syn-collisional extension. Fundamental to resolving these debates are field-based geologic studies on the deformation history and lithospheric structure of the remote plateau interior. A rapidly growing team of Geosciences faculty and students are establishing the UA, and the collaborating Institute of Tibetan Plateau Research in Beijing, as world leaders in this research. Below is a summary of ongoing projects and the questions being addressed.

Lithospheric Structure of Tibet

Prior to Indo-Asian Collision

It is widely assumed that the high elevation (~5 km) and thick crust (>65 km) of Tibet are largely the consequence of India slamming into Asia during the past ~55 Myr. However, this assumption is questioned by recent geologic studies which show that Tibet was the locus of major deformational events prior to the Indo-Asian collision. Pete DeCelles and I, together with Shundong He (MS), Andrew Leier (PhD), and John Volkmer (MS), have initiated a study of Cretaceous – earliest Tertiary rocks in southern Tibet in an attempt to place constraints on pre-collisional tectonism and paleogeography. The results should help to establish realistic initial conditions (such as crustal thickness and mantle structure) for models of Cenozoic orogeny. Preliminary results include documentation of (1) a major Cretaceous thin-skinned fold-thrust belt, (2) thick Upper Cretaceous to lower Tertiary nonmarine sedimentary sequences, and (3) a >3-km-thick section of 68 to 50 Ma volcanic rocks, which provides the opportunity to explore, in collaboration with Mihai Ducea, how the transition from oceanic subduction to continental collision may be recorded by variations in volcanic geochemistry.

Mechanical Significance of Extension in Tibet

Despite ongoing convergence between India and Asia, active deformation of Tibet is characterized by roughly E-W extension. This extension has been attributed to numerous processes;
however, none of them satisfactorily explains the distribution and orientations of Tibetan rifts. Tibetan normal fault orientations exhibit an axis of symmetry that is located in front of the Indian indentor and oriented parallel to India-Asia motion (Fig. 3). Normal fault orientations fan northward away from India, with those in the north being located along and oriented normal to a northward convex arc. Based on mechanical modeling, Jerome Guynn and I conclude that Tibetan rift orientations can be explained by northward indentation of India into an overthickened Tibetan crust. Is extension in Tibet accommodating topographic collapse of the plateau as widely argued? Maybe not. If the northward flux of crust beneath Tibet due to Indian insertion along the Himalayas is greater than the volume of crust thinned by extension and lower crustal flow, then the Tibetan crust may be getting thicker and the plateau higher as we speak.

What is the Tibetan Crust Made of?
George Gehrels and I are testing two competing models for the origin of early Mesozoic high-pressure mélange in central Tibet (Fig. 2): (1) Underthrusting from a major Paleo-Tethyan suture located near the trace of the mélange belt, and (2) Underthrusting from the Jinsha suture, ~200 km to the north, during flat-slab oceanic subduction beneath a crustal fragment. If we establish that a major suture is located near the trace of the mélange, then this area should become a prime target for future studies that attempt to unravel how India’s penetration into Asia has been accommodated, as every established suture in Tibet is proposed to have localized continental subduction during the Cenozoic. Alternatively, if the mélange was underthrust from a suture ~200 km to the north, then large volumes of relatively weak and hydrous mélange may comprise the deeper crust of central Tibet. Desperately needed constraints on the composition, age, and structure of the Tibetan lower crust are also being provided by an in-depth study of the only known exposure of metamorphosed crystalline basement in Tibet (Amdo gneiss; Fig. 2), led by Jerome Guynn. Results will aid interpretation of crustal seismic anisotropy studies by George Zandt’s research group and provide realistic rheologic parameters for geodynamic models of Tibet.

Additional studies are being initiated on: (1) the E-W trending Zada basin in southwestern Tibet, which is the largest and most enigmatic Neogene basin exposed along the northern flank of the high Himalayas (with PhD student, Joel Saylor), (2) Cretaceous synorogenic deposits exposed just northwest of Lhasa which should place quantitative constraints on the timing and rates of precollisional shortening (with MS student, Matt Fabijanic), and (3) the poorly understood northern extension of the Himalayan fold-thrust belt in the Tibetan Himalaya of southernmost Tibet (Fig. 2). Research in Tibet is funded by the U.S. National Science Foundation, The Petroleum Research Fund of the American Chemical Society, the department’s GeoStructure Partnership with ExxonMobil and Midland Valley, and a UA faculty small grant.
As a Hispanic graduate student studying mineral deposits, I am grateful to have received the David Lowell Fellowship. The UA's Department of Geosciences has a long-standing tradition of Economic Geology research that is recognized around the world. As an international student from Chile, the major copper producing company in the world and a mining country of excellence, I feel very fortunate to be part of a leading edge research group under the leadership of Joaquin Ruiz.

My research involves two of the most important questions in metallogenesis. What is the timing or age of mineral deposit formation and the source of ore-forming elements? Traditionally, the age of ore deposits has been determined by dating the associated silicates or rocks that host the mineralization, but the origin of metals and the relative contributions of crust and mantle to the source of base metal deposits are poorly constrained. Our approach to these fundamental questions focuses on using Re-Os isotopes. This isotopic system is ideally suited for this study, because rhenium and osmium are both siderophile and chalcophile elements and hence are concentrated in the sulfide minerals.

The application of the Re-Os system to molybdenite, a molybdenum sulfide present in a wide variety of ore deposits but particularly important in porphyry-type deposits, has been an extremely useful and reliable tool in determining the age of mineralization. Our studies on the American Southwest porphyry copper province (Arizona, New Mexico, and Sonora, Mexico) have shown that the porphyry mineralization started around 70 my ago and ended around 50 Ma. Furthermore, the low error associated with the Re-Os molybdenite ages allows us to identify multiple episodes of molybdenite mineralization in a given deposit, supporting the idea that porphyry deposits are the result of multiple and episodic mineralization events. We are currently testing the hypothesis that long-lived porphyry systems yield deposits with large copper tonnage.

Regarding the source of metals, the use of the Re-Os system on other sulfides, such as pyrite and chalcopyrite, has provided supporting evidence for crustal contributions in the formation of porphyry copper deposits in the American Southwest.

I plan to apply this isotopic system to other types of ore deposits around the world, like the Zambian Copperbelt, the Platreef in South Africa, and the Toki cluster in Chile in order to properly evaluate crust and mantle contributions to the source of metals and the relationship between copper tonnage and duration of the hydrothermal system.

I would like to thank David Lowell for establishing this scholarship. I am grateful to Joaquin Ruiz for the opportunity to study in this Department and for his constant support. I also want to thank Spencer Tittley, Jonathan Patchett, John Chesley, Mark Baker, Chris Eastoe, and Tim Swindle for sharing their time and knowledge with me.

David Lowell earned a BS degree in Mining and Geological Engineering from the UA in 1949 and a MS degree in Geology from Stanford University in 1959. He has also received an honorary degree from the UA's College of Science and from the University of San Marcos in Peru.

Lowell has shown his commitment to UA through his intellectual and financial support of Geosciences faculty and students. He served on the Geosciences Advisory Board from 1996 to 2001, when he was made an Honorary Member. He endowed the Lowell Chair in Economic Geology to start a new Masters degree program in economic geology. And he created a scholarship for an outstanding graduate student from South America who is studying economic geology and mineral deposits.

Lowell has received a variety of honors and awards over the years, including the Economic Geologists Silver Medal, the American Mining Hall of Fame Medal of Merit, the Gold Medal of the Mining and Metallurgical Society of America, and most recently, the Penrose Medal for Lifetime Achievement.

David Lowell is an asset to the University, and we are proud to call him our friend.
The GALILEO CIRCLE is a society of friends who support continued excellence in science at the University of Arizona through their annual membership, scholarship contributions, and science advocacy.

This year, five students from the Department of Geosciences received GALILEO Scholarships in the amount of $1,000 each. Twenty-five scholarships were given to other deserving students in the College for a total of 30 scholarships awarded this year.

Individuals who join the GALILEO CIRCLE at the $1,500 level are designated as Scholar Patrons and $500 of their contribution goes directly to support a student in a College of Science department of their choice. The remainder of the contribution is placed in the Dean’s Fund for Excellence to support students, outstanding young researchers, and stellar faculty in the College.

Patrons have the opportunity to meet their scholars at an annual spring GALILEO CIRCLE Scholars Luncheon. GALILEO CIRCLE members are also invited to attend special seminars, lectures, and events — including unique science trips both at home and abroad.

For more information about the GALILEO CIRCLE and how you can support a GALILEO Scholar in the Department of Geosciences, contact Bo Baylor at 520-621-4060 or bbaylor@u.arizona.edu.
The 32nd annual GeoDaze Symposium was held at the UA Student Union on April 1st and 2nd. The 30 talks and 14 posters exemplified the diversity and multi-disciplinary nature of geosciences research today. Topics covered included, paleoecology, biogeochemistry, geomorphology, sedimentology, planetary geology, paleoclimatology, GIS and remote sensing geophysics, economic geology, geochemistry, and tectonics. Both graduate and undergraduate students participated, as well as individuals from other academic and professional communities.

Thirteen awards were given during a ceremony that followed all of the presentations and a student slide show.

Dr. Kevin Furlong, Professor of Geosciences at the Pennsylvania State University, was the keynote speaker. Dr. Furlong is also the director of the EMS Environment Institute Natural Hazards Center. His talk was entitled “Caught in the Crunch: Making the New Zealand Plate Boundary.”

The 2004 GeoDaze field trip was led by Jon Spencer of the Arizona Geological Society. The group visited a late Cenozoic Pirate fault on the western edge of the Santa Catalina Mountains. They also visited the Romero Creek area to observe geomorphic changes that occurred after the 2003 Aspen fire.

A special thanks goes to the Co-Chairs Jessica Conroy and Jessica Rowland for all of their dedication and hard work. A special thanks also goes to our alumni, friends, and sponsors (see page 9) whose financial support makes the GeoDaze Symposium possible each year. Finally, a big round of applause goes to all of the students, faculty, staff, and alumni for making the GeoDaze tradition of showcasing student research another great success!
GeoDaze Awards

Elena Shoshitaishvili and Richard Clarke
Best Talk in Geophysics
Megan Anderson

Best Talk Based on Field Geology
Robinson Cecil

William Jenney, Jr. and Kerry Inman
Best Talk in Tectonics
Robert Fromm-Rihm

Best Poster
Stacie Gibbins

Best Poster Runner-up
Camille Holmgren

SESS Best Undergraduate Poster
Steven Hubbs

Best Talk in Paleocology/Ecology
David Kennedy

Geomark Research, Inc.
Best Talk in Economic Geology/Petrology
Steven Hubbs

Les McFadden
Best Talk in Geomorphology/Sedimentology/Biogeochemistry
Andrew Leier

H. Errol Montgomery
Best Overall Talk
Christa Placzek

SESS Best Undergraduate Talk
Koichi Sakaguchi

John Cropper
Best Talk in Paleoclimatology
Jennifer Wagner

Geosciences Best Talk
Lara Wagner

GeoDaze Sponsors

— Individuals —
Stephen Ahlgren
CS Venable Barclay
Jon Alan Baskin
Thomas Biggs
Suzanne Bowe
Carlotta Chernoff
Anthony Ching
Gary Colgan
John Philip Cropper
Paul Damon
John Dreier
Murray Gardner
Terrence Gerlach
Patrick Gisler
James Hays
Tom Heidrick
Kerry Inman
William Jenney
Richard Jones
Donlon LoBiondo
Paul Martin
Edgar McCullough, Jr.
Leslie McFadden
Keith Meldahl
Nancy Naeser
Robert Parker
Bernard Pipkin
Elena Shoshitaishvili
Spencer Titley
John Wilder
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Fall Degrees 2003

Bachelor of Science
Yann Gavillot • Hector Hinojosa

Master of Science and Doctor of Philosophy

David Barbeau, PhD
Application of growth strata and dentrital-zircon geochronology to stratigraphic architecture and kinematic history, Pete DeCelles

Daniel Berman, MS
Hillside gullies and possible glacial landforms associated with the degradation of highland craters on Mars, Victor Baker

Casey Hagbo, MS
Characterization of gas-hydrate occurrences using 3D seismic data and seismic attributes, Milne Point, North Slope, Alaska, Roy Johnson

Eric Jensen, PhD
Magmatic and hydrothermal evolution of the Cripple Creek gold deposit, Colorado, and comparisons with regional and global magmatic-hydrothermal systems associated with alkaline magmatism, Mark Barton

Francisco Quiroz-Luna, MS
Geology and hypogene alteration and mineralization at escondida, northern Chile: orphyry and high-sulfidation events, Spence Titley

Marilena Stimpfl, PhD
Experimental studies of Fe²⁺-MG order-disorder in orthopyroxene: equilibrium, kinetics, and applications, Jibamitra Ganguly

Melissa Trout, MS
Vegetation history of San Elijo Lagoon, California, Owen Davis

Hinako Uchida, MS
Single-crystal X-ray diffraction of spinels from San Carlos Volcanic Field, Arizona, Bob Downs

Elizabeth Wilson, MS
Regional geochemical characteristics of Laramide Volcanics, southeastern Arizona and adjacent areas, Spence Titley

Congratulations to all of our graduates and best wishes in your new pursuits!

Bob Butler cont’d...

A number of Bob’s former graduate students came to participate in the evening celebration. Steve May, a Senior Research Associate for ExxonMobil, shared slides and memories of times spent with Bob in the field during the “early years.” Tekla Harms, Professor in the Department of Geosciences at Amherst College, Gary Calderone, Geology Instructor at Glendale Community College, and Andy Sandberg, Geophysicist for

Samson Exploration and Production Company, all shared some of their memories as well.

Pete DeCelles and George Gehrels, both UA Geoscience Professors, shared slides and stories from more recent years. Bob ended the program with a tribute and thank you to all his colleagues and staff here in the Department who have worked with him over the years.

Bob has been a tremendous colleague and an outstanding mentor and advisor to students, guiding many of them into Geoscience careers. Thank you Bob, we will miss you greatly!
Dee Trent (PhD ’73)  
Barney Pinkin (PhD ’65) and I have completed the fourth edition of our textbook, “Geology and the Environment,” which was published in February 2004. We were joined in this edition by an additional coauthor, Rick Hazlett, Professor of Geology, and Director of the Environmental Analysis Program at Pomona College. Rick and I are also coauthors of “Joshua Tree National Park Geology,” a guide for the interested park visitor, published in 2002. Barney and I have both retired from full-time teaching and are now full-time pensioners.  
~dtrent9845@aol.com

Brooke Clements (MS ’91)  
Brook provided this photo of UA alumni at the Cordilleran Roundup Conference in Vancouver, Canada, in January.  
~Brooke.clements@ashton.ca

Front, left to right: Brooke Clements (MS ’91); Kent Turner (MS ’83); George Sanders (PhD ’79); John-Mark Staude (PhD ’95); Moira Smith (PhD ’90). Back, left to right: Eugene Schmidt (MS ’73); James Lang (MS ’86, PhD ’91); Clancy Wendt (MS ’78); Stan Keith (MS ’79); Matthew Gray (MS ’88); Lance Miller (PhD ’94); Peter Megaw (PhD ’90); Wojtek Wodzicki (PhD ’95).

Brian S. Currie (PhD ’98)  
Jack Lawrence Currie (7 lbs. 15 oz, 20.5 inches) was born at 2:44 PM on February 17. Both Jack and Kate are doing well.  
~curriebb@muohio.edu

Lisa LaFlame (BS ’94)  
I am a geophysicist at READ Well Services in Houston, Texas.  
~lisa_laflame@hotmail.com

Jennifer in Baghdad, Iraq.
Please update your contact information!

We are especially interested in your **E-mail address** as we hope to produce electronic news bulletins in the future.

Name ____________________________________________________________

(Circle the address that you prefer as a mailing address.)

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New job? Kids? Back in school? Retired? Attend national meetings? See a classmate? Take a trip? Send us your news for future newsletters (please include a photo that will be returned).

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Send your information by US mail or E-mail (lesa@geo.arizona.edu)