PROfile

Inside

a CROSS SECTION of PEOPLE and EVENTS at the UNIVERSITY OF WYOMING

SPRING 2006

FROM THE DEPARTMENT HEAD

Art Snoke

On May 6, 2006, I had the pleasure of participating in Commencement as Department Head for the College of Arts and Sciences—part of the 116th Commencement at the University of Wyoming. We had an unusually large number of students (~20) participating in Commencement this spring, and we began a new tradition of having a departmental reception immediately after Commencement in the atrium of the Department of Geology & Geophysics. These events signal the end of an exciting and noteworthy spring 2006 semester for the Department. To begin, the Department has successfully recruited two new tenure-track faculty members: **Dr. Ye "Linda" Zhang** in geohydrology and **Dr. Barbara Carrapa** in sedimentary geology. Furthermore, the Wyoming State Legislature approved the plan to develop a School of Energy Resources at the University, and the Department hopes to play a major role in the development of the School.

During spring break, the Department staged three field trips to warmer climes than Laramie. A group of undergraduate students organized a trip to New Mexico and west Texas (including the compilation of a field-trip guidebook), and **Ron Frost** graciously acted as the faculty supervisor on this trip. Another group of graduate students under the guidance of **Bobbie John** and **Mike Cheadle** headed to the famous crustal extensional corridor along the Colorado River of westernmost Arizona and southeastern California (see summary later in the newsletter). Also, **Paul Heller** took some graduate students to Death Valley, California, to look at the Neoproterozoic and Paleozoic stratigraphy of this classic area.

After 34 years of teaching, research, and service to the University of Wyoming, **Ron Marrs** will retire at the end of June, 2006. Ron has made many outstanding contributions to the Department, including the development of the Remote Sensing Laboratory, teaching the summer field course for many years, and supervising numerous graduate students. Fortunately, Ron will be around the Department in his retirement as a source of valuable scientific information and sage advice as he continues his studies on environmental and energy problems using remote sensing techniques.

Finally, I want to highlight that the College of Arts and Sciences Board of Visitors is continuing its match (up to $1,000) of donations of all "first-time" donors to any Department in the College through June, 2006. I hope some of you will take advantage of this special opportunity. We greatly appreciate your support of our Department, and your contributions are important for providing our students many activities beyond regular courses, including special field trips, support for field studies, and participation at professional meetings.

I wish all of you an enjoyable summer and hope that you can find some time to relax. I plan to spend part of my summer months in Wyoming and other parts of the western North American Cordillera doing fieldwork with my graduate students, and these activities will truly be an enjoyable break from my administrative duties of the past academic year. ❖

Department of GEOLOGY & GEOPHYSICS
home.gg.uwyo.edu

Faculty News

At the December meeting of the American Geophysical Union (AGU) in San Francisco, faculty and students of the Department of Geology and Geophysics presented over **30** scientific papers. Faculty authoring papers include: **Erin Campbell-Stone**, **Mike Cheadle**, **Ken Dueker**, **Carol Frost**, **Ron Frost**, **Steve Holbrook**, **Neil Humphrey**, **Barbara John**, **Jimm Myers**, **Scott Smithson** and **Susan Swapp**. Over **20** Faculty, post-docs, graduate and undergraduate students attended the meeting.

Associate Professor **Mike Cheadle** and Professor **Barbara (Bobbie) John** were both invited to participate in separate sound bites for the National Science Foundation (NSF) sponsored radio show *Imagine That!* The show, which is geared towards a college-student audience, was heard nationally. Cheadle talked about dating oceanic crust and John discussed trying to drill through the boundary between the crust and mantle of the Earth.

In January, Professor **Bobbie John** was invited to give a talk at The *Peninsula Geological Society* at Stanford University, as well as at the Department of Geological Sciences at the University of California, Santa Barbara.

Professor **Bobbie John** and Jeff Gee (Scripps Institute of Oceanography) recently received $205,900 from the NSF for research entitled "Spatial and temporal scales of crustal accretion in slow-spreading crust - IODP Site 1039."

Although retired, Emeritus Professor and former Department Head **James "Tim" Drever** is still actively involved in professional activities. In October he gave an invited keynote talk at an NSF workshop in Delaware titled, "Frontiers in Exploration of the Critical Zone." In November he also gave an invited talk at the University of Tennessee. Drever will continue to serve as President of the Geochemical Society until the end of the year and intends to continue to serve as a member of the Advisory Board of the Petroleum Research Fund.

Associate Professor **Ken Dueker** and his research group installed 44 seismometers in June 2005, in order to measure earthquakes in British Columbia for the next 1.5 years. The group used trucks for the on-land installations and boats for accessing the deep fiords of this region. Dueker and his group routinely visit the sites every few months to collect the data. The primary goal of this project is to constrain whether there is a realistic root beneath one of the world's largest granitic batholiths.

Dueker's group also obtained a small grant from the NSF to continue research on the Yellowstone hotspot.

Professor **Carrick Eggleston** was invited to speak at the *Nanoscale Processes in the Earth and Planetary Sciences* conference at the University of New Mexico, from January 11–13, 2006. Eggleston's ongoing work with the Biogeochemistry Grand Challenge group, sponsored by Pacific Northwest National Laboratory, is taking him on visits to the Laboratory for the Physical Chemistry and Microbiology of the Environment in Nancy, France, in February, the University of East Anglia in Norwich, England, in March, and to ETH Zürich in April. Postdoctoral research scientist **Nidhi Khare**, from Eggleston's group, is working with bacterial proteins that exchange with minerals. Khare visited the National Synchrotron Light Source at Brookhaven National Laboratory to investigate protein structure in February. She has accepted a position at Notre Dame that begins later this spring.

Professor **Steve Holbrook** has been named the first Chair of the Marcus Langseth Science Oversight Committee, which will oversee all science operations on the Research Vessel Marcus Langseth. The R/V Langseth is a new seismic research ship, operated by Columbia University and the NSF as a national oceanographic research facility.

Academic Professional Lecturer **Erin Campbell-Stone** has been awarded a Faculty Education Enhancement Grant by the Wyoming NASA Space Grant. The grant is for the project entitled "Digital Geologic Mapping in Wyoming: Undergraduate Involvement in Wyoming State Geologic Survey Research into Landslide and Earthquake Hazards" which will develop an innovative, research-based curriculum for the University of Wyoming Geology Summer Field Course. This project will implement GPS/GIS-based field mapping in the Geology Field Course through collaboration with the Geologic Hazards Group of the Wyoming State Geological Survey.

As part of the project, geology students will field check air-photo mapping of active faults and landslides, collect data using GPS, make field interpretations, discuss their results, and incorporate their data into the WSGS GIS database to assist the survey in their efforts to ground-check the location of hazards that have been mapped solely on air photos. Two projects have been identified as particularly urgent and appropriate for students: the Grey's River fault and Rock Creek fault in western Wyoming, both capable of producing earthquakes over 7.0 in Richter magnitude and possible resultant landslides.

Campbell-Stone has also recently presented her educational research on scientific literacies at the European Geosciences Union meeting in Austria. Her talk, "Effective Techniques for Introducing Scientific Literacy in Introductory Physical Geology," discussed the methods she and Professor Jimm Myers use in Physical Geology labs at the University

of Wyoming to help students understand and effectively address scientific problems. The scientific literacies Campbell-Stone incorporates into Physical Geology labs include quantitative calculations; qualitative assessment; and reading graphs, charts, and tables. She also stresses the geology-specific skills of visualizing in three dimensions, creating and interpreting maps, and conceptualizing change over a variety of time scales.

In Washington D.C. at an NSF-sponsored "On the Cutting Edge" workshop entitled "Teaching Public Policy in the Earth Sciences," Campbell-Stone shared her successes and lessons learned while teaching the Intellectual Community in Earth Sciences course. This course, which is designed to introduce first-year students to the issues in and application of geology, is built around: (1) reading and discussion of current national and international events and controversies relating to geology, and (2) group projects to educate the general public about a geologic hazard or issue. Campbell-Stone will also present the labs developed by Prof. Jimm Myers, Garth Massey (UW sociology and international studies) and herself for Myers' courses: Energy: A Geological Perspective, Earth's Hazards, and Earth's Mineral Resources. The labs, which synthesize geologic issues with economic and societal issues, are each part of a three-week project that culminates in groups of students making recommendations on whether or not to develop a mineral or petroleum reserve.

Researchers Secure NSF Grant to Fund New Research of Teton Range

Professors **Ron Frost** and **Carol Frost**, and Senior Research Scientist **Susan Swapp** have received a grant in the amount of $216,000 from the National Science Foundation (NSF) that will help them study the tectonic evolution of high-pressure rocks from the Teton Range. The grant is to cover the costs of fieldwork, mineral and whole-rock analyses, bulk-rock isotopic analyses, and detailed geochronological studies.

The gneisses in the northern Tetons, which geologists at the University of Wyoming have dated to be around 2.67 billion years old, are some of the oldest high-pressure rocks on Earth. This means that the Tetons may preserve a record of one of the earliest Himalayan-type mountain-building events in the Earth's geologic history. A Himalayan-type event occurs when two continents collide. The collision that formed the high-pressure rocks in the Tetons appears to have involved the thrusting of a continental block that now lies beneath the Snake River Plain in Idaho on to the western edge of the Wyoming craton. This collision produced the highly deformed rocks that make up the bulk of the northern Teton Range, which can also be traced into the northern Wind River Mountains.

The results of this research will not only produce interesting insights into the geology and structure of the basement rocks of the Tetons; they should also provide geologists with an important window into when in Earth's history modern-style plate tectonics began. ❖

Professor Neil Humphrey Has Radar Tested in Antartica

Professor **Neil Humphrey** recently had a field crew in Antarctica test an ice radar that he designed and built this past summer. The radar is portable, micro-powered, and has a built-in microprocessor that can control the unit. In addition, the microprocessor has the capability to send data transmissions via a satellite phone. The radar is being deployed in Antarctica, to be left on an iceberg and remotely watched as the iceberg breaks up in the southern ocean over a period of one or two years. The whole installation weighs only a few pounds and runs for several years off of a small battery. ❖

Virtual Tour Website

This spring, the Department of Geology and Geophysics significantly enhanced its Website in an effort to attract high-quality graduate student applications. Given the emphasis that the Department places on its graduate program, and the importance of having talented graduate students, the Department created a "Virtual Tour" section of its Website that featured 12 video interviews of graduate students, faculty, and staff. The Website also includes a picture tour of featured labs and facilities, including the Isotope, Microprobe, and Surficial Processes "Cold" laboratories.

With funding from the University of Wyoming Graduate School and the use of video equipment from the Ellbogen Center for Teaching and Learning, the Department was able to create the project entirely "in house." The interview portion of the project entailed interviewing selected graduate students, faculty and staff, and then editing all of the footage into 2–2 ½ minute segments. The inclusion of features such as video transitions, title bars, and music give the interviews a sleek and professional appearance.

Professor **Steve Holbrook** and Department Editor **Brendon Orr** spearheaded the "Virtual Tour" project after the Department's Graduate Admissions Committee devised the initial concept in response to a request by the UW Graduate School for "innovative proposals" to enhance recruitment of high-quality graduate students.

Screen shot of "Virtual Tour" homepage.

"I think our Department does a pretty good job of recruiting the top students who apply to our graduate program," Holbrook explains. "We do this largely through campus visits where we bring applicants to Laramie so they get a chance to see our facilities and meet our faculty and students. However, an enduring challenge for us is getting students to apply in the first place. It's a tough problem — how do we convince students we don't even know yet to apply to UW? The 'Virtual Tour' Website is one way we're addressing that challenge. Our hope is that the virtual tour will give prospective students a feel for the atmosphere and people in our department—the special things that students see when they visit, but which are hard to convey otherwise. Thanks to the Graduate School's funding and the terrific work by Brendon Orr, I think we've got a terrific new recruiting tool on our Website."

To view the "Virtual Tour" Website go to vtour.gg.uwyo.edu/home.html or click the "Virtual Tour" link on the left hand side of the Department's homepage, home.gg.uwyo.edu/default.aspx, under the "What's New" subheading. ❖

Fossil Treasures

Dr. Cassiliano Participates in Symposium & Coauthors Book

by Brendon Orr, Editor, Department of Geology & Geophysics

Last November, Collections Manager, Dr. Michael Cassiliano was invited to participate in a symposium in Borrego Springs, California, titled "Fossil Treasures of the Anza-Borrego Desert: A Symposium Exploring North America's Richest Continuous Fossil Record for the Last Seven Million Years." In addition, Cassiliano was also asked to author a chapter of a book, that shares the same name as the symposium. The book was published in January 2006.

The two-day event, which was presented in partnership by the Anza-Borrego Foundation and Institute and the California State Parks, celebrated the completion of four years of collaborative work that included research from leading specialists, scientists, and researchers of the area. Many experts consider the Anza-Borrego badlands to be one of the richest and most varied fossil records in the Western Hemisphere. The badlands provide many clues to the beginnings of the Ice Ages and the origin and development of modern southwestern desert landscapes. The Anza-Borrego Institute, the educational and research arm of the Anza-Borrego Foundation, has the mission to promote conservation of the unique and fragile region through land acquisition, interpretation, education, and research.

The Institute offers a variety of field programs, workshops, lectures, and other events year-round in natural history, science, Native Peoples' culture, archaeology, history, and the arts for students and adults to explore the treasures of these lands in-depth with expert instructors.

Dr. **Michael Cassiliano** answers questions from the audience at the end of the symposium on Fossil Treasures of the Anza-Borrego Desert.

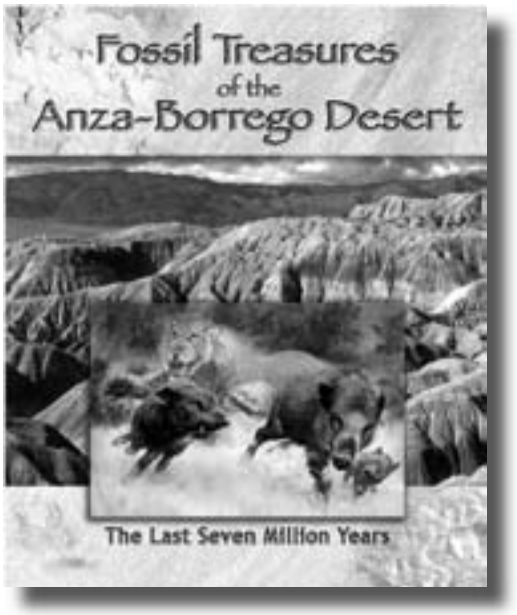
Several leading specialists and scientists were invited to present their theories and discoveries to a general audience of roughly 200 people during the November 19–20, 2005, symposium. The first day of the symposium consisted of lectures, during which the public learned about some of the more than 550 types of fossils, plants, and animals varying from microscopic pollen and algal spores to walrus bones and mammoth skeletons. On the second day of the symposium, participants got a first-hand look at the fossils and geologic history in the field during guided trips into the desert. Dr. Cassiliano served as one of the primary leaders for the field trips and was instrumental in coordinating the details of the excursions that consisted of approximately 15 vehicles and roughly three hours of travel time and six hours of time in the field. This task was not an easy one, especially given the makeup of the symposium attendees.

"The audience mainly did not consist of scientists but in fact retirees who had a lot of time on their hands," says Dr. Cassiliano. "With this in mind, I essentially gave them a lecture on how to use fossils to tell time, rather than a standard scientific talk...we even had a 97-year-old man who was with us on one of the field trips. Given that Borrego Springs is a retirement community and is right smack-dab in the middle of Anza-Borrego State Park, which is itself roughly the size of Rhode Island, it comes as no surprise that many of the town's citizens were interested in learning more about the history of their surrounding environment."

Dr. Cassiliano believes that the area would provide an excellent backdrop for some of the UW Department of Geology and Geophysics students to do some great research. "The area has some very good geology, and there are a lot of things that still need to be done research wise. I am sure the Park would love it if any of our faculty or students were interested in conducting research in the area."

Dr. Cassiliano said he fondly remembers the experience.

For more information on the symposium you may contact Mike Cassiliano via phone at (307)766-3346 or via e-mail at mcassil@uwyo.edu. Also feel free to visit the Anza-Borrego Foundation and Institute Website at www.theabf.org. ❖



Graduate Student Symposium 2006

Each year, the Graduate Student Symposium, sponsored by the UW Graduate School, showcases graduate student achievements, fostering interaction among graduate students in diverse disciplines and promoting broad-based literacy in graduate education. It also gives students a chance to enhance presentation skills for broad audiences and build their resumes. This year it was held in the University of Wyoming Union on April 3–4, 2006.

Liz Hajek ❧ Session Winner
Oral Presentation
Avulsion Clusters in Ancient and Experimental Alluvial Basins
with Paul Heller

Heather Jones
Oral Presentation
Reevaluating Avulsion Stratigraphy In Ancient Alluvial Basins
with Paul Heller

Kay Achenbach
Oral Presentation
Geometry of Mantle Flow Beneath the Mid-Atlantic Ridge at 15° N
with M. J. Cheadle and Susan Swapp

Graham Baines
Oral Presentation
Time-Averaged Rate of Detachment Faulting at Atlantis Bank, SWIR:...
with M. J. Cheadle

Cat Campbell
Oral Presentation
Strontium Isotopes as Tracers of Produced Natural Gas Water in the Powder River Basin, Wyoming
with Carol Frost

Lars Hansen
Oral Presentation
Deformation Associated with the Evolution of an Oceanic Core Complex, 23° N, Mid-Atlantic Ridge
with B.E. John and M. J. Cheadle

Elena Miranda
Oral Presentation
Oceanic Detachment Faulting at Atlantis Bank, Southwest Indian Ridge: Extensional Tectonics at an Ultra-Slow-Spreading Mid-Ocean Ridge
with B.E. John

John Jasbinsek
Oral Presentation
Fine Scale Velocity Models for a Low Velocity Zone Atop 410-Km Discontinuity Beneath the Lodore Aray, NW Colorado
with Ken Dueker

Student News

Graduate Students Receive NASA Space Grants

Graduate Student **Kay Achenbach**, a student of Associate Professor Mike Cheadle, was awarded a 2006 Wyoming NASA Space Grant Graduate Research Fellowship to study "Mantle Flow Beaneath Mid-Ocean Ridges" in March. The fellowship consists of a 2006–07 academic stipend, a summer stipend supplement, and full tuition and fees.

Graduate student **Beth Wilson** recently received a NASA Space Grant in the amount of $15,000. The grant also includes money to cover tuition, fees, and health insurance for next year. Her proposal was entitled "Scales of Seafloor Roughness and Their Effects on Ocean Mixing Using Seismic Oceanography." Wilson is supervised by Professor **Steve Holbrook**. The Wyoming NASA Space Grant Consortium gives approximately three such awards each year.

Awards

Graham Baines, PhD student of Associate Professor **Mike Cheadle**, received an outstanding student paper award for his presentation at the American Geophysical Union meeting in San Francisco in December 2005. His paper was entitled, "Time-Averaged Rate of Detachment Faulting at Atlantis Bank, Southwest Indian Ridge: evidence for highly asymmetric spreading rates during the formation of oceanic core-complexes."

Graduate student **Lars Hansen** recently won the top award in an international essay competition organized by GEM Systems of Canada (for more information on the competition, visit www.gemsys.ca/magnetic_essays.htm).

The annual competition is sponsored by six geophysical companies from around the world and is open to any student working in the field of magnetics. His essay, which was based on his undergraduate work at California Polytechnic State University, was entitled, "Mantle-held magnetic flux evidenced by 21MA R-N reversal recorded in Australian lavas." Hansen is supervised by Associate Professor Mike Cheadle and Professor **Barbara John**.

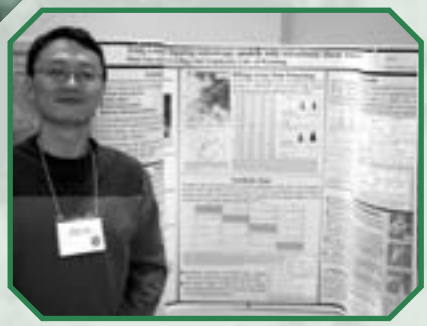
Undergraduate Students Initiated Into Phi Beta Kappa

Undergraduate students **Caleb King**, **Erin Stoesz**, and **Laura Vietti** were recently initiated into Phi Beta Kappa—the oldest, most prestigious academic honor society in the United States. To be initiated, students must have over a 3.8 GPA and must also have a liberal arts course record, including a foreign language.

Students Spend Spring Break Canoeing Colorado River

During this past Spring Break, eight graduate students, including **Kay Achenbach**, **Graham Baines**, **Craig Grimes**, **Dan Jones**, **Lars Hansen**, **Elena Miranda**, **Josh Schwartz**, and **Josh Sigler**, along with Associate Professor **Mike Cheadle** and Professor **Bobbie John**, spent six days canoeing along the lower Colorado River documenting spectacular exposures of highly extended continental crust. The students have worked together to create a Website, faculty.gg.uwyo.edu/cheadle/CRECWebpage/Homepage.html, which includes information and pictures about their trip. This field trip was partially supported by Burlington Resources. ❖

Graduate Symposium 2006 Continued...



Yuaiyu Yuan

Poster Presentation

Testing a Suit of Multi-Layer Dipping Anistrophy Models w/ Teleseismic Shear Wave Array Data

With Ken Dueker

Scott Badham

Poster Presentation

Mechanisms of Uplift of Deep Gabbro Bodies at Slow-Spreading Ridges

With M.J. Cheadle and B.E. John

Student Profile – Lars Hansen

::: A Consummate Outdoorsman :::

by Brendon Orr, Editor, Department of Geology & Geophysics

In spite of spending his childhood in California and Hawaii, graduate student Lars Hansen, a master's candidate at the Department of Geology and Geophysics, always had a thing for mountains.

"I've never been much of a beach person," says Hansen. "I am really more of a mountain guy. My dad was in the time-share business, so my family and I moved around a lot when I was young. Even though we would be spending time in California or Hawaii, we would always go back to Lake Tahoe where I was born. In fact, we eventually moved back to Lake Tahoe, where I attended high school."

Given the breathtaking surroundings of the Lake Tahoe area, it is not much of a surprise that Hansen developed an affinity for outdoor activities.

"I grew up skiing," Hansen explains. "I learned to ski before I could walk!"

One only has to look at the whiteboard in Hansen's office to understand what an avid skier he is. On the bottom right corner he keeps a running tally of how many times he has skied this winter, whether in the backcountry or at a ski resort. Upon the most recent check, the tally is now totaling 18 backcountry trips and 13 resort trips.

Lars and his wife Elissa on top of Eagle Lake Buttress, Lake Tahoe.

When spring and summer roll around and Hansen isn't able to ski, he devotes his spare time to his other hobby, rock climbing. Oddly enough, how he got into climbing was rather different from how he got into skiing.

"When I was younger I broke my back while climbing a tree," says Hansen, "and I was jumping between two trees…yada yada yada, definitely one of my bigger mistakes. However, it was ultimately one of those eye-opening experiences, where I just wanted to get outside more after my recovery and hike these big mountains that had these trails to the top, and I realized that many of these backcountry mountains required technical climbing skills. So I bought a book and a rope and along with a few of my other buddies we essentially taught ourselves to climb, just learning from our mistakes."

Lars and his dog, Dendro, skiing to the top of Waterhouse Peak, Lake Tahoe.

When Hansen is not skiing the fresh powder or playing the role of rock monkey, he is spending time in the world of academia, where he focuses on his broad research area of structural geology with an emphasis on microstructural analysis. In the future, Hansen may distill his research interests into the area of field rheology. However, in the long run, Hansen simply has the goal to one day be a professor and be able to take students out into the field and conduct his own research.

This summer Hansen plans to spend the majority of his time conducting research here at the department, but he hopes to still get a healthy amount of climbing and hiking in with his wife, Elissa, and his dog, Dendro, before the Fall semester starts up. ❖

Student Profile – Cat Campbell

::: When East Meets West :::

by Brendon Orr, Editor, Department of Geology & Geophysics

Three things stand out when you meet Catherine "Cat" Campbell: her carefree attitude, her silly sense of humor, and her infectious enthusiasm for life. Anyone who has either worked with Campbell or simply been a casual acquaintance, soon realizes how effortlessly she applies these three qualities to her academic and personal lives.

Originally from Canton, Connecticut, a small town of roughly 9,000 people, Campbell possesses a refreshing combination of small town charm along with a go-go attitude that one might expect from a New Englander. Her family consists of her mother and father, who still reside in Connecticut, and her older brother and his wife who live in Berkeley, California.

After receiving her undergraduate degree in environmental science from Connecticut College, Campbell moved west of the Mississippi to pursue her master's degree in isotope geochemistry. She attributes her decision to attend UW's Department of Geology and Geophysics to the great reputation of the Department and her enthusiasm for the research project that was offered to her by Professor Carol Frost. Campbell also explains that she was looking for something different and unique.

"When I flew out to the Department and met everyone, I was just blown away by the sense of community and the opportunities that were available here," says Campbell. "Laramie is a great small town…coming from New York and Boston, to have nothing around you is so nice!"

Campbell collecting a water sample from the bypass valve on a CBM well in the Powder River Basin of Wyoming last fall.

When asked whether or not she experienced an extreme culture shock, given that she was familiar with quick train rides into different metropolitan areas, Campbell explained, "It was, but that's awesome! It's so much fun! For example, I love walking into the Agriculture building and seeing people wearing cowboy hats, big belt buckles… out east, people just wore designer cowboy clothing, here it's real, it's authentic."

Campbell's thesis project has her working with coalbed methane (CBM) water and the use of strontium isotopes as tracers to determine where the water is originating. Using the distinct strontium ratios for coal and sandstone, she is hoping to show that if water from a CBM well has a sandstone strontium ratio rather than a coal ratio, the well is actually dewatering a sandstone aquifer rather than a coal aquifer, as is intended, and is therefore wasteful. Campbell's field research for her project involves frequent trips to several coalbed methane wells in the Powder River Basin of Wyoming, where she conducts tests and compiles data.

Campbell on an Outdoor Adventure snowshoe trip through Cameron Pass, Colorado.

When Campbell is not working with strontium isotopes, she devotes her spare time to participating in several outdoor opportunities that the Laramie area provides, such as skiing, hiking, mountaineering, and even ice climbing. She is also on the UW Club sports tennis and Ultimate Frisbee teams. "I always try to get out every weekend and experience something new," says Campbell.

When asked what she wants to do career wise, Campbell explains, "My ultimate goal would be to be like Bill Nye the Science Guy…to bring science to everyone and show them that there is so much you can do with it, it's not just this esoteric research. I hope to have jobs where I can gain tons of experience and find some way to convey all of it through either a book or changing policy."

This summer Campbell will be working as an intern for BP in Houston, Texas, an opportunity made available to her through the Department's Rocky Mountain Rendezvous. ❖

Alumni News

Jack Deibert (Ph.D. '96) and **Phyllis Camilleri** (Ph.D. '94) are authors of a paper in the February 2006 *AAPG Bulletin*. Their article, based on an incised-valley-fill sequence in Tertiary strata of Nevada, includes comments on predictive models for locating incised valleys in marginal-lacustrine extensional systems. Jack's spectacular photo of large-scale cross-bedding graces the cover of this issue.

Cover of February 2006 AAPG Bulletin.

Darryl Halling (B.S. '60, M.S. Univ. of N.C. '65) and **Ray Merry** (B.S. '60, M.S. '64) celebrated their 45th year after graduation with four weeks of fishing last July in some of their old haunts discovered as geology students at UW. (This time they could afford licenses!) Ray retired near Estes Park after doing geology in the West for 34 years. Darryl retired in the Iowa Great Lakes area after teaching high school geology and math with Department of Defense Schools in Africa, Asia and Europe for 11 years. Darryl was then charged with developing two outdoor/environmental education programs and centers in the Alps and Snowdonia, Wales.

Having been born and raised in Storm Lake, Iowa, both Darryl and Ray kept the Wyoming mountains and streams very close. They agreed it would be great to rendezvous with former classmates Rohr, Manion, Holenbeck, Cutler, McGrath, Thorson, Norman, Essis, et al. and sit around the camp fire and talk of S.H. Knight, Mears, Boyd, Blackstone, Thomas, McGrew, and the "good ol' days"; maybe in 2010!?!

Frank Royse, Jr. (MA '58) is pictured in the April issue of the *Explorer*, the newsletter of the American Association of Petroleum Geologists. The article lists AAPG members to be honored at the association's April convention in Houston. Frank is the recipient of the highly prestigious 2006 Pioneer Award.

Dr. Kent Sundell (BS '77, MS '80) brought a group of Casper College geology majors to UW for a tour of our department in early April. Kent is an energetic faculty member and head of the Geology Department at Casper College.

Michael W. Webb (Ph.D. '01) recently changed employers. After almost five years with Imperial Oil (Canada's ExxonMobil affiliate), Michael moved on to work as a senior geologist with Petro-Canada Oil and Gas. Michael was actually back in Wyoming last fall to look at some Frontier Formation outcrops in the southwest corner of the state, but was unable to make it back to Laramie to say "hi." With his new job, he hopes he can take more field trips to the U.S. Rockies.

Michael and wife Doris with sons Henry (L) and Charles (R) at the Calgary Zoo, Summer 2005.

Michael's home life is busy with his two boys, Charles and Henry, who will be four and two respectively, this summer. They enjoy racing cars, playing street hockey, reading books, etc., etc. Michael explains that he is now an expert on "Dora the Explorer" and "Blue's Clues!"

Anton Wroblewski (MS '97, Ph.D. '02) recently accepted an offer from ConocoPhillips to become a clastic stratigrapher in the Upstream Exploration Division. He and his wife will be moving to Houston, Texas, this summer.

Alumnus John Haun to Receive Outstanding Alumni Award

This May, alumnus **John D. Haun** (MA '49, Ph.D. '53), will receive the UW College of Arts and Sciences Outstanding Alumni Award. The award is in recognition of Dr. Haun's highly successful 53-year career in the field of petroleum geology. His early and continued investigations into the occurrence of, and exploration for, petroleum in the Rocky Mountain basins, especially Wyoming, have provided a standard for other exploration geologists. His influence has been felt as an author, editor, educator, independent consultant, and adviser in both public and private areas.

Dr. Haun has also received numerous awards from several other important scientific and professional societies such as: American Association of Petroleum Geologists; American Institute of Professional Geologists; and the American Geological Institute, just to name a few. It is also worth noting that he earned one of the first Ph.D. Degrees (1953) granted by this department. ❖

Gathering news!

Please take a minute to fill out the Alumni News Form insert and let your fellow UW Geology and Geophysics grads know what you're up to. Where you are. Who you've become.

More Department News

Other Alumni Awards

Michael R. Hudec, (Ph.D. '90), was awarded the American Association of Petroleum Geologists George C. Matson Memorial Award at the Annual Meeting in Houston on April 9, 2006.

Department Hosts Seminar to Address Flood Insurance Levels Along Hurricane Devastated Mississippi Coast

Recently, the Department of Geology and Geophysics hosted a three-day seminar for representatives of the Federal Emergency Management Agency (FEMA), URS Corporation, and several other consulting firms relative to the statistical methodology for setting flood insurance levels along the Mississippi coast. The maps for these levels are being revised in light of hurricanes Katrina and Rita. Emeritus Professor of Geology and Statistics **Leon Borgman**, Ph.D., was the seminar leader since his Empirical Simulation Techniques (EST) was mandated by FEMA as the methodology to be used in the overall risk computations. EST has been utilized by the Army Corps of Engineers for 25 years in their studies of the coastal United States and FEMA wants the studies to be consistent with the previous USACE flood level maps.

Since retirement in 1999, Dr. Borgman has been active in project work developing methodology for (1) statistical analysis of directional ocean wave spectra from instrumented small robot submarines (autonomous underwater vehicles or AUV), (2) multiple time series simulations of wave characteristics on the Pacific coast and in Chesapeake Bay, and (3) a major extension of the EST relative to Long Island, N.Y. He is currently involved in the Mississippi reanalysis, and a separate reexamination of recent statistical publications relative to extending and improving EST. In addition, he is working on the improvement of simulations of multiple time series for waves in the Chesapeake Bay. He also presented an invited keynote address at the Sixth International Conference on Civil Engineering in the Ocean in Baltimore last year.

Other Student Awards

Seniors **Erin Stoesz** and **Laura Vietti** were each named Outstanding Graduates by the University of Wyoming College of Arts and Sciences for 2006. Congratulations to both Erin and Laura, the Department is proud of you!

The Department of Geology and Geophysics also recognized its own outstanding students for the 2005–2006 academic year. Awards were given to undergraduate students **Josh Spinler** and **Laura Vietti**, and to graduate students **Graham Baines** and **Elena Miranda**.

Recently, at the 5th Annual GeoDays Meeting in Missoula, Montana, undergraduate students **Laura Vietti** and **Ben Wood** won first and second place respectively for their student posters.

Staff Receive Awards

Academic Coordinator **Sondra Cawley** received the "Tip of the Cap" Award for the 2005-2006 academic year. She was nominated by undergraduate student Erin Stoesz.

In addition, five of the Department's staff recently received awards in recognition for their years of service to the University of Wyoming. Staff members included **Michael C. Humphreys**, 35 yrs.; **Steven W. Boese**, 30 yrs.; UW Geology Museum Director **Brent H. Breithaupt**, 25 yrs.; **Sandra (Sandy) Lee Rambo**, 15 yrs.; and **Shawn K. Sheen**, 10 yrs. Congratulations to all of them for their hard work and dedication to the Department and the greater UW campus community!

Also, The Department of Geology and Geophysics' Student Club recently selected two outstanding Staff members and two outstanding Faculty. The staff awards went to **Carmen Candelaria** and **Shawn K. Sheen**, and the faculty awards went to Professor **Neil Humphrey** and Academic Professional Lecturer **Erin Campbell-Stone**.

Geology Bookstore Offers Great New Deal on Rocky Mountain Geology Issues (1998–2004)

Scientists, professors, students, and geology aficionados can now own 13 issues of the esteemed journal *Rocky Mountain Geology* for just $100. That's 13 issues for under $8 each, and a total savings of $95.

"This offer presents a great opportunity for people to update their collection of this leading scientific journal," explains Managing Editor **Brendon Orr**, "now, new subscribers have a way to affordably get up to speed on the past eight years of science dealing with the Rocky Mountain area. Apart from this deal, customers can also purchase invidual issues published between 1998 and 2004 at a rate of only $10 per issue."

For more information on subscribing to *Rocky Mountain Geology* or to purchase past volumes, please visit the Geology Bookstore Website at pubs.gg.uwyo.edu. ❖

Coming up!

ROCKY MOUNTAIN RENDEZVOUS
Sept. 30–Oct. 2, 2006

GSA
2006 Annual Meeting & Exhibition
The Pursuit of Science
October 22–25
Philadelphia, Pennsylvania
www.geosociety.org

AGU
2006 Fall Meeting
December 11–15
San Francisco, California
www.agu.org

PROfile

A semiannual publication
of the

University of Wyoming
Department of
Geology and Geophysics

Dept. 3006
1000 E. University Ave.
Laramie, Wyoming 82071 - 2000

307.766.3386
307.766.6679 Fax

home.gg.uwyo.edu

Arthur W. Snoke
Department Head
snoke@uwyo.edu

Brendon Orr
Editor
editor@gg.uwyo.edu

Graduate students **Graham Baines** and **Craig Grimes** operating the US Geological Survey SHRIMP II (super high-resolution ion probe) at Stanford University in January. As part of their Ph.D. studies, Graham and Craig are trying to understand how oceanic crust grows and is constructed by dating zircons found in oceanic gabbros .

University of Wyoming
Department of Geology and Geophysics
Dept. 3006
1000 E. University Avenue
Laramie, Wyoming 82071 - 2000

CHANGE SERVICE REQUESTED