

FROM THE DEPARTMENT HEAD

Art Snoke



PROFILE

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history



a
CROSS SECTION
of
PEOPLE
and
EVENTS
at
the



UNIVERSITY OF WYOMING

FALL 2007



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

In several weeks the fall semester will end with the last day of classes and the beginning of Finals Week. It only seems a short time ago that we began the fall semester with the Annual Rocky Mountain Field Trip, which is summarized later in this newsletter. However, many events have happened in that short time interval.

We had another well-attended and well-organized Rocky Mountain Rendezvous with 22 companies represented and 130 students participating in this regional job fair. Senior Lecturer **Randi Martinsen** was again the organizer of this AAPG-sponsored event, and our dedicated Department Staff greatly facilitated the smooth operation of this complex event. Homecoming Weekend with our annual Alumni Party on Friday afternoon quickly followed the Rendezvous. Then we were off to Denver for the Annual Meeting of the Geological Society of America, and the Department hosted another well-attended Alumni Reception on Monday evening of the meeting. A group of faculty and students is headed off to San Francisco to participate in the Fall Meeting of the American Geophysical Union (AGU) during the second week of December.

Despite this hectic schedule, we still teach classes, take students into the field, and do geological and geophysical research. With the energy boom in full swing in Wyoming, our student numbers, both undergraduate and graduate, are steadily increasing.

In addition to the highlighted events and the continuous stream of visiting scientists to the Department, we have several new faces on the G&G Faculty: **Barbara Carrapa**, **Bryan Shuman**, and **Ye Zhang**. Our newsletter editor, **Brendon Orr**, compiled three excellent profiles of these new faculty members to give you an introduction to each of them. Presently, we have two ongoing faculty searches for an applied geophysicist (part of the new School of Energy Resources) and an environmental geochemist. These searches are yielding many excellent applicants, so I am hopeful that I will be able to tell you about additional new faculty in the next newsletter.

In addition to new faces in the Department, several new initiatives are on the horizon. At the Alumni Reception in Denver, the Department formally announced a new fund-raising campaign to establish an endowed chair in geology in honor of late Professor **Donald L. Blackstone, Jr.** Also, the University has approved our request to completely remodel Room 216 in the S. H. Knight Geology Building. This room is our main lecture hall, and it has had few improvements since it was established in the mid-1950s. This facility will be out of commission for a number of months during the renovations, but in the end we will have a modern lecture theatre for our large enrollment classes as well as our weekly Distinguished Lecturer Series. In addition to new faculty members, I am happy to report that I see many of our emeritus faculty members in the building nearly every week, and some are here virtually every day of the semester. The combination of a group of distinguished emeritus faculty and faculty members who are just beginning their careers makes the Department an exciting and stimulating place to work, learn, and study the geosciences—clearly a dynamic science for the 21st Century.

Best wishes for an enjoyable holiday season and a productive, healthy, and Happy New Year.



Last April, Research Professor **Kevin Chamberlain**, Associate Professor **Ken Dueker**, and graduate student **Huaiyu Yuan** attended the Western Geoswath Earthscope workshop in Boise, Idaho.

Earthscope is a multi-disciplinary, 10-year project to investigate the structure and evolution of the North American continent and the physical processes controlling earthquakes and volcanic eruptions. Nicknamed the 'Hubble of the Geosciences,' Earthscope will image the crust and upper mantle of the U.S. in 3-D with better resolution and coverage than previously possible. Geoswath is a multi-disciplinary, collaborative effort to augment the Earthscope imagery with surface geologic studies and focused, higher resolution geophysical deployments to elucidate key geologic features and processes within the United States. Prime Geoswath targets include the Yellowstone hotspot, and Beartooth and Bighorn Mountains in northern Wyoming. Chamberlain presented one of four invited overview talks. The title of his talk was "Geochronology in Earthscope-the 4th D." The workshop was attended by 48 participants representing 31 universities and the United States Geological Survey.

Chamberlain was also invited to speak in the Pardee keynote symposium titled "Pulse of the Earth: Geochronology and paleomagnetism of large igneous provinces—the key to reconstructing Precambrian supercontinents" at the GSA annual Meeting in Denver, on October 28, 2007. The Pardee keynote symposia were intended as special events of broad interest. Out of ~3700 presentations at GSA this year, only 72 were designated as Pardee keynotes. Chamberlain's talk was titled "Insitu micro-baddeleyite U-Pb dating method: An age from any mafic dike." Senior Research Scientist **Susan Swapp** is a co-author on the paper.

Recently Professors **Mike Cheadle**, **Ron Frost** and **Barbara John**,

along with PhD student **Craig Grimes**, attended the post-cruise meeting of IODP (Integrated Ocean Drilling Program) Expeditions 304-305 in Hilo Hawaii (September 16–20th). John, Frost, and Grimes all sailed on *Expedition 304* (November 2004-January 2005). Prior to the meeting, the group took a field trip to the Kilauea volcano and saw many recent volcanic features, including active steam vents and sulfur deposits, but sadly, no fresh lava (they did get to breathe some noxious volcanic gases). The lava from Kilauea, which for more than 20 years had been flowing into the ocean, changed course in early September and now is flowing into the jungle and is nearly inaccessible.

During the meeting John talked about the detailed stratigraphy of the 1400-meter core that was recovered by the two expeditions. Grimes talked about the U-Pb zircon dates he obtained from the core. At 1–1.3 million years old, these are some of the youngest zircon ages ever obtained and certainly are the youngest zircon ages obtained from sea-floor rocks. Frost talked about the processes that produced the serpentinization of the olivine-rich rocks in the core.

Assistant Professor **Mark Clementz** recently received a \$40,000 grant

from the Petroleum Research Fund for his proposal entitled, "Quantification of Cenozoic marine primary productivity through geochemical analysis of marine mammal apatite."

In addition, Clementz presented a talk at the Society of Vertebrate Paleontology entitled, "Using stable isotope analysis to test inferred semi-aquatic habits in fossil herbivores from the early Oligocene of Egypt," and recently published a paper in *Marine Biology* entitled, "Diet induced differences in carbon isotope fractionation between sirenians and terrestrial ungulates."

Professor **Carrick Eggleston** is leading a group of UW faculty in the formation of a renewable energy center within the new School of Energy Resources, recognizing not only Wyoming's rapidly developing wind energy industry but also its longer-term potential for solar energy.

Eggleston was also recently invited to give a special seminar on nanotechnology at the Stevens Institute of Technology in New Jersey, reflecting his involvement in an energy nanotechnology group at UW working on novel solar and fuel cell technologies. The novel solar



From (L) to (R): Associate Prof. **Mike Cheadle**, Prof. **Ron Frost**, Prof. **Barbara John** and graduate student **Craig Grimes** at the USGS Hawaii Volcano Observatory overlooking Halema'uma'u crater on Kilauea.

cells he is working on make use of mineral semiconductors—hematite and alabandite—whose photocatalytic behavior also have implications for the chemistry of the early Earth.

Earlier this year, Professor **Carol Frost** was elected Secretary/Treasurer of the Board of Geologists for the state of Wyoming for 2007-2008. Frost was also recently elected Counselor to the Mineralogical Society of America for 2008-2010.

In October, Frost attended the National Association of State Boards of Geology annual meeting in Denver. At this meeting, she joined other Subject Matter Experts in writing questions for the Professional Geologist exams. The State of Wyoming uses these national examinations in licensing Geologists-in-Training and Professional Geologists.

Adjunct Professor **Warren B. Hamilton** has been selected for the Geological Society of America Structural Geology & Tectonics Division Career Award for 2007. Congratulations Warren!

Senior Lecturer **Randi Martinsen** recently received a Special Commendation Award from the Society of Exploration Geophysicists (SEG) at their annual meeting in San Antonio for her service to the profession in regard to the *Rocky Mountain Rendezvous*, hosted by the Department of Geology and Geophysics (see event story on pages 8–9).

Last May, Martinsen gave a talk on Climate Change to the Heritage Pines Republican Club, in Hudson, Florida.

In November, Martinsen also attended the AAPG European Region Energy Conference and Exhibition in Athens, Greece.

Professor **James Myers** (PI) and Lecturer **Erin Campbell-Stone** (CoPI) were recently awarded a \$140,900 grant by the NSF DUE Course Curriculum and Laboratory Improvement program to create a course titled, *Global Sustainability: Managing Earth's Resources*.

The course will be geared for first- and second-year students, and will be offered at UW as a University Studies Program course. As part of the course development, Myers and Campbell-Stone will conduct research focusing on helping students prepare for citizenship by improving their

critical thinking abilities and problem-solving skills, while expanding their capacity to reason quantitatively in a range of real world situations.

In late July and early August, Dept. Head **Art Snoke** and Assistant Professor **Barbara Carrapa** taught at the Integrated Solid Earth Sciences Summer School on Tectonic Exhumation. The summer school is supported by the National Science Foundation and is held annually at Colorado College in Colorado Springs. The participants at the summer school are advanced graduate students from the U.S. and overseas. The summer school consists of a variety of activities from lectures to laboratory exercises to field trips.

Professors **Art Snoke** and **Carol Frost** were recently awarded a research grant of \$183,635 from the National Science Foundation for 2007–2009. The title of their newly funded research proposal is: “Evolution of a long-lived, supra-subduction accretionary complex (Baker terrane, NE Oregon): A study of structural development and crustal growth during an arc-arc collision.”

2007 CONOCOPHILLIPS ROCKY MOUNTAIN FIELD TRIP

The themes of the 2007 ConocoPhillips–University of Wyoming Rocky Mountain Field Trip were the Green River Formation—an exceptionally well-preserved Middle Eocene lacustrine deposit; evolution of the western Wyoming fold-and-thrust belt (including late Cenozoic normal faulting); and development of Laramide basement-involved uplifts (Rock Springs, Wind River, and Gros Ventre uplifts).

The field trip, which was led by Professors **Art Snoke** and **Ron Frost** included two new faculty members: Assistant Professors **Ye Zhang** and **Barbara Carrapa**, 29 undergraduate and graduate students, two representatives from ConocoPhillips, and our excellent cooks: Amy and Ranie. One of the ConocoPhillips representatives, Anton Wroblewski, is an alumnus of the Department of Geology & Geophysics at UW. Anton received his Ph.D. degree from the University in 2002.

Snoke and Frost offered this description of the trip:

On **Day 1** (August 30th) we drove from Laramie to Flaming Gorge National Recreation Area to begin our study of the Green River Formation. On **Day 2** (August 31st) we studied outcrops of the Green River Formation in the Firehole Canyon area and gradually drove north past the Pinedale anticline, but stopped to explore the Fremont Lake area (near Pinedale), view the high peaks of the Wind River Range, and view the Cliff Creek thrust (part of the Prospect thrust system) at Battle Mountain where rocks of Jurassic Nugget Sandstone are thrust onto vertebrate-bearing, Paleocene Hoback Formation. Eventually we reached our camping site at the University of Michigan's Camp Davis facility in Hoback Canyon.

On **Day 3** (September 1st) we traversed across the northern part of the Wyoming thrust belt along Snake River Canyon from Hoback Junction to Alpine, Wyoming. We turned south and drove toward Afton and en route discussed the late Cenozoic normal faulting that is spectacularly exposed in Star Valley. After lunch on **Day 3**, we took a short hike to the Periodic Spring east of Afton. We spent the night near Montpelier, Idaho, camping near the surface trace of the Meade thrust. On **Day 4** (September 2nd), we traversed back across the southern part of the Wyoming thrust belt, spent the afternoon at Fossil Butte National Monument where parts of the Green River and Wasatch Formations are superbly exposed. In the Ham's Fork area we studied the Ham's Member of the Evanston Formation, Absaroka thrust, and west flank of the Lazeart syncline. We camped that evening along the Green River below Fontenell Dam.

On **Day 5** (September 3rd), we visited the Red's Cabin monocline, where middle Eocene rocks are folded by late displacement along the Wind River thrust. Included within this sequence is a spectacular example of a delta that fed into ancient Lake Gosiute. Finally, we spent several hours looking at the metasedimentary rocks of the Miners Delight Formation on Peabody Ridge in the South Pass area, southern Wind River Range. Then we made the drive back to Laramie past the Granite Mountains and through Muddy Gap and onto Rawlins and finally Laramie. ❖

NEW FACULTY PROFILES

::: From the Alps, to the Andes, to the Snowies :::

by *Brendon Orr, Editor, Department of Geology & Geophysics*

Having been born in the small, northern Italian town of Voghera, located in a basin of the Italian Alps, perhaps it was inevitable that new Assistant Professor **Barbara Carrapa** would develop a fondness for the mountainous terrain that was in her backyard. Eventually, her fondness would become her passion, and she would begin an academic career that would help her better understand the terrain that she explored as a child.

After earning her Master's degree from the University of Pavia (Italy) in '98, and her Ph.D. from Vrije University (Amsterdam, The Netherlands) in '02, Carrapa completed her four-year postdoctoral fellowship at the University of Potsdam (Germany). Having spent time in these different areas, she was able to reflect on the differences and similarities between the three different countries.

"In general all countries in Europe have some common characteristics," says Carrapa. "The cultures are somehow similar, yet very different at the same time. I would say that the northern

Europeans are very different from the Mediterranean Europeans. Spain, France, and Italy are pretty close, culturally, but when you go further north, for example in Germany or The Netherlands, the culture and the language can be very different."

It was during her time in The Netherlands, at Vrije (which means Free) University, that Carrapa was able to focus her research into the areas of sedimentary geology and low-T-thermochronology, with applications towards the study of tectonics. As part of her research, both as a student and as a post-doc, she was able to do fieldwork in both the European Alps and South American Andes. Carrapa enjoyed studying the two mountain ranges, given that they represent two different examples of mountain formation. As Carrapa explains.

"With the Alps, we are dealing with a continent-to-continent collision, where two continental plates have collided into each other over millions of years. With the Andes, we are looking at a mountain range that was formed through oceanic subduction, where an oceanic plate is moving underneath a

Below: Carrapa standing on top of Doane Peak of the North Tetons, WY, during her fieldwork with other UW members this past summer.

Right, facing page: Carrapa at Angstaco Basin, in northwest Argentina, pointing at syn-orogenic sedimentary rocks that were highly deformed during the Tertiary period. As she points at the strike of those rocks, she can hardly hide her excitement after finding such a remarkable geological feature.

continental plate rather than colliding with another continental plate."

After completing her postdoctoral fellowship, Carrapa continued her studies in Germany for another four years before moving to Laramie this past May to join the University of Wyoming's (UW) Department of Geology and Geophysics.

Carrapa insists that the cultural adjustment has not been all that difficult and in fact she enjoys many aspects of Laramie, the Department, and UW.

"I love it here," says Carrapa. "One thing I missed during much of my time in Europe, was the possibility of going out and doing something in the outdoors. Here there are mountains close by, and given my love for fieldwork, I



couldn't be happier. I also do not mind the cold here, it's nothing compared to the wet cold of a winter in the Netherlands or Germany. But winter has yet to come..."

While still relatively getting her feet wet here at the Department, Carrapa is enjoying all aspects of being a professor. In particular, she is enjoying advising graduate students and playing a role in their success.

"To be able to have a part in seeing a student grow and be successful is very rewarding to me," says Carrapa.

When she isn't studying the mountains, Carrapa—who speaks five languages (Italian, French, Spanish, German, and English)—is climbing them. Being somewhat of a climbing enthusiast, she enjoys spending much of her free time either climbing at the gym or going out to places like Vedauwo or the Snowy Range. It is during these experiences that she is able to relive the moments of her exploring the Italian

Alps as a little girl. Only now, she is exploring the Snowies of Wyoming.

Benvenuta Barbara! ❖

::: An Analytical and Inquisitive Mind :::

When new assistant professor **Ye Zhang** was growing up, her father, a professor in electronic engineering, always told her to get to the bottom of a question. It was his emphasis on problem solving, coupled with Zhang's natural gravitation towards math and physics, which helped Zhang develop a fondness for the sciences.

"I had always been interested in the sciences," says Zhang. "My father always insisted that we try and solve the hardest problems and the extra assignments given

to us by our teachers. Sometimes I could, sometimes I could not, and I would have my father solve it overnight only to find that he would have a new, different question waiting for me the next morning."

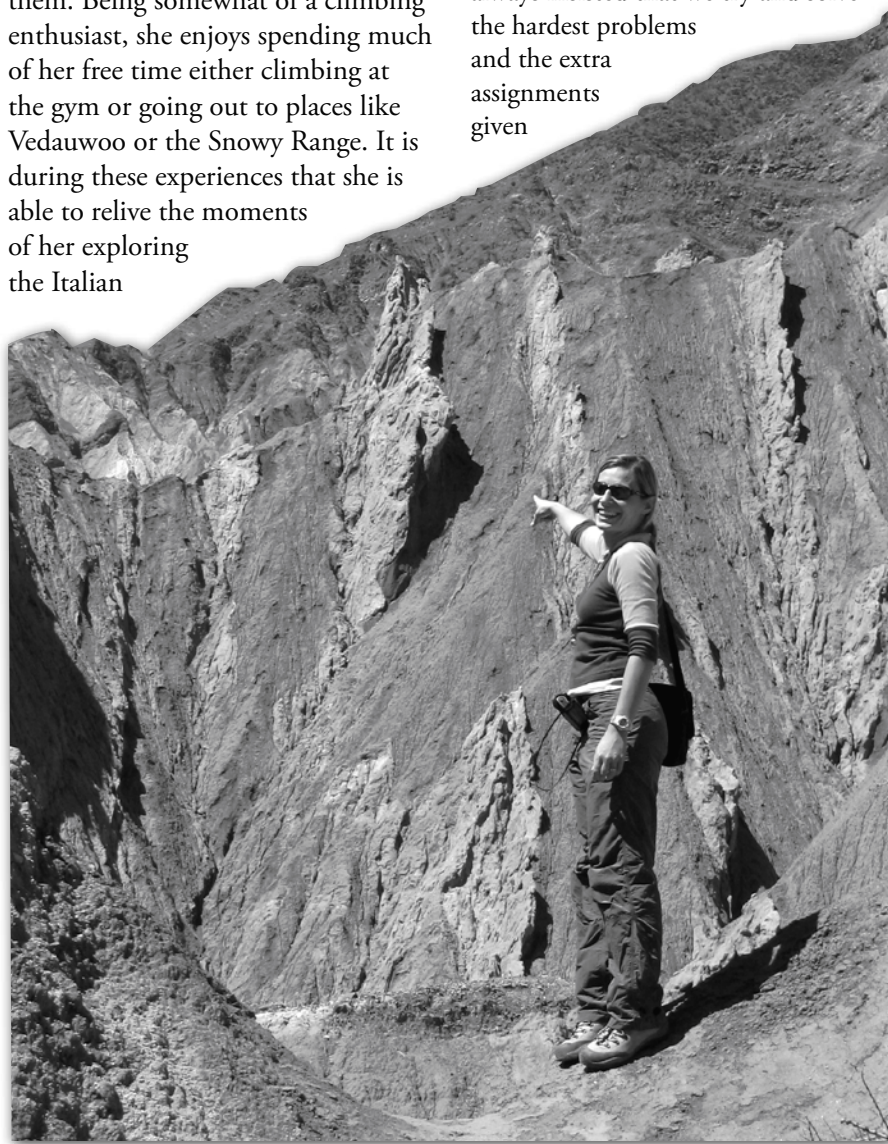
After growing up in the cities of Yangzhou and Bengbu, China, Zhang attended Nanjing University in Nanjing, China—the ancient southern capital of the country—where she earned her undergraduate degree in hydrogeology and engineering geology.

"The college system in China is different from that in the U.S.A.," says Zhang. "In China, you take a college entrance examination and apply to different universities before you know the actual grades. A part of the application process includes a form where you check different areas of study that you may be interested in. Depending on how high the grade is, you will be accepted by a particular school that will also decide which area of study you're most suitable for. So one exam determines everything and we call it the 'Black July'. I was assigned earth sciences, and after two years of study I was able to focus specifically on hydrogeology and engineering geology."

When asked why she chose those specific fields, Zhang explains, "I was always good at quantitative studies particularly those emphasizing logic. Hydrogeology seemed like the most interesting to me. I like the fact that things I learned in math and physics can be used to study hydrogeology."

Echoes of Zhang's father's tutelage played a role in her continued interest in quantitative studies. He always urged her to never memorize anything, but to understand the logic behind a problem, thus making it easier for a solution to be obtained.

After graduating at the top of her class, Zhang was honored by being recommended to attend the graduate school (Nanjing University) without having to take part in the national grad-school entrance examination that is typically required of prospective





Left: Assistant Professor Ye Zhang.

“I got into this because I was tired of waiting a long time for a serial code to finish,” says Zhang.

Zhang is also interested in developing new modelling techniques in solving a variety of hydrogeological problems in three-dimensions.

When she is not solving problems, Zhang spends much of her spare time reading. She particularly enjoys books and magazines

students. Upon completing a years worth of her Master’s program, she decided to study abroad and continue her graduate education in the states, where she would go on to earn a M.S. in hydrogeology at the University of Minnesota and a Ph.D. in hydrogeology at Indiana University.

After receiving her Ph.D. in 2005, Zhang completed a two-year postdoctoral stint at the University of Michigan as a prestigious Turner Fellow. In the summer of 2007, Zhang arrived at the Department of Geology and Geophysics at the University of Wyoming.

At the Department, Zhang looks forward to applying her quantitative skills towards research in hydrogeology. She is particularly interested in the theoretical problems of estimating parameters for modeling groundwater flow and solute transport. For projects that involve large simulation grids, she applies her knowledge of scientific computing to write parallel simulation codes that are able to solve the problem quickly.

that deal with biographies, travel, and ancient Chinese history and philosophy, but also enjoys reading a good novel. Though never intentional, she feels that reading helps her develop better English writing skills. Additionally, she enjoys knitting while watching an interesting program on TV and going out for a movie or walk with her husband.

In the midst of her first semester as a professor, Zhang looks forward to the challenges and the responsibilities that lie ahead of her. Surely, solutions will be devised to any problems that she may encounter. ❖

::: Paleoclimatologist and Mountain Man :::

After earning his Master’s degree from Brown University in May 1997, new Assistant Professor **Bryan N. Shuman** set his sites on the grueling 3,100-mile trek otherwise known as the Continental Divide National Scenic Trail. The trail, which begins

Right, facing page: Assistant Professor Bryan Shuman, with his daughter Eleanor, while skiing at Chimney Park, Medicine Bow National Forest, WY, in Spring, 2007.

Below right, facing page: Pictures of Shuman during his 3,100-mile hike of the Continental Divide National Scenic Trail.

in Glacier National Park, MT, and ends near the border between Mexico and New Mexico, passes through all of the Rocky Mountain States and understandably, covers a wide variety of terrain. However, despite the six-month (June-Dec.) duration of the trip, spine tingling encounters with grizzly bears and mountain lions, and nearly being struck by lightning on multiple occasions, one gets the feeling that Shuman was in his element throughout the journey.

“I had been on another long hike before,” says Shuman. “After I got my Bachelor’s degree, I hiked the Appalachian Trail from Maine to Georgia, so I had experience doing a long trip like this before. I just wanted to give the Rockies a try this time.”

After saving about \$2,000 while earning his Master’s degree, Shuman treated himself to what he refers to as ‘some nice time off,’ before going back to earn his Ph.D.

“It’s actually a really inexpensive way to spend a lot of time, because you really don’t have a lot expenses when you are hiking and camping,” explains Shuman.

While living *la vida* thrifty, Shuman would spend a portion of his adventure gaining an intimate perspective with the state that he would call home a decade later. His excursion through ‘the Cowboy State’ would include stops in Yellowstone National Park, Wind River Range, Great Divide Basin, Red Desert, and finally the Sierra Madre before continuing on his journey down through Colorado.

When asked whether or not he had any near-death experiences during his rocky mountain tour, a hint of a



I was woken up by a mountain lion that was less than 10-feet away, growling at me. I have this really distinct memory of my flashlight reflecting off of his eyes, so that was memorable.”

Fortunately, Shuman survived his encounter with the mountain lion, finished the 3,100-mile trail, and went back to graduate school to earn his Ph.D. in 2001. After a two-year postdoctoral stint at the University of Oregon, and serving both

(Geography Department) and Adjunct Professor (Geology Department) at the University of Minnesota for four years, he now finds himself back in Wyoming, one of the states he had traversed ten years prior.

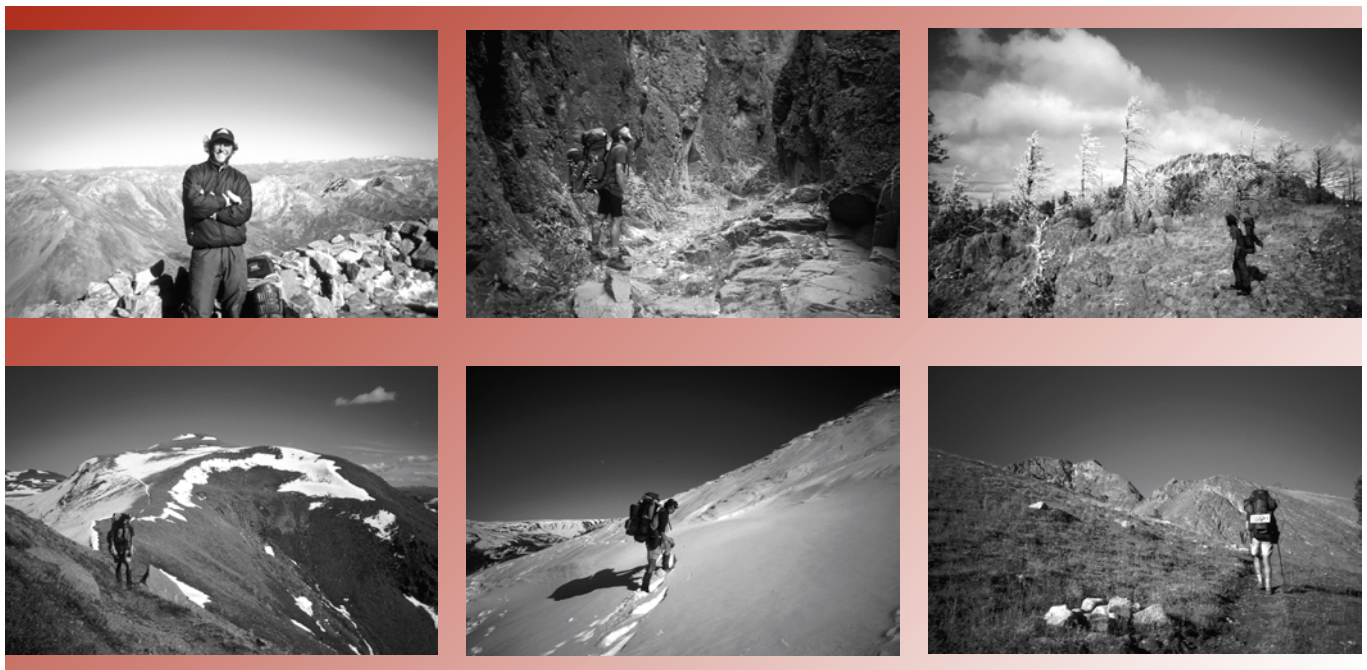
As an Assistant Professor at the Department of Geology and Geophysics at the University of Wyoming (UW), Shuman plans to continue his research in the areas of paleohydrology, paleoclimatology, and paleoecology. Specifically, he looks forward to studying how the availability of water changes over time and how that affects the surrounding ecosystems. He also looks forward to further researching the impact of climate change on water, a major issue in Wyoming.

“I’m excited to look at how much water levels changed here in the past,” says Shuman. “We know historically how it has gone up and down, but we don’t have much data for how water levels have varied here over longer timescales. Being able to look at lakes and their water levels anywhere from the last few centuries back to 10,000 years ago should help us further understand what conditions we may be going through today.”

In his spare time, Shuman looks forward to the upcoming ski season and also spending time with his wife, Cynthia Weinig, an Associate Professor in the Department of Botany (UW), his three-year-old son, Emmet, and his one-year-old daughter, Eleanor. ❖

smile can be seen as Shuman begins to share one tantalizing tale that comes to mind.

“Actually, when I was almost done with the trip in New Mexico,” describes Shuman, “I was sleeping out one night without my tent, under the stars, and



Rocky Mountain RENEZVOUS of Geoscience Students & Employers

Petroleum Companies Laud Rocky Mountain Rendezvous

There's a simple reason why companies in the petroleum industry attend the Rocky Mountain Rendezvous of Geoscience Students and Employers, hosted annually by the University of Wyoming.

"We just find exceptional students, one after another after another," says Julia Ericsson, manager of sedimentary systems and subsurface technology for ConocoPhillips.

This year was no exception.

The sixth annual event on the UW campus, Sept. 28-Oct. 1, attracted 22 companies and some 130 students from schools across the country. The Rendezvous is one of five petroleum industry job fairs sponsored annually by the American Association of Petroleum Geologists (AAPG).

"There are good geoscience students at schools all across the country, including Wyoming, and what we do is provide a venue for them to meet with prospective employers," says **Randi**

Martinsen, a lecturer in the UW

Department of Geology and Geophysics and coordinator of the event. "We always get tremendously positive feedback from students, and the recruiters are always happy with the students they see here."

Adds Jim Huck, a 1980 UW graduate who works as a senior geophysicist at Bill Barrett Corporation in Denver, "We really enjoyed meeting all the students. We were hopeful of getting a couple of interns, and we found so many qualified students. I can tell you this, we plan on being back again next year."

In addition to UW students, this year's Rendezvous drew aspiring geoscientists from West Virginia, Tennessee, Texas, Oregon and Wisconsin, among other states.

During the four-day event, students met with recruiters from various companies—including BP Americas, Chevron and Hess Corporation—attended field trips and short courses and socialized with other students.

"It was more than I expected," says **Matt Lusk**, a first-year UW Master's student from Bakersfield, Calif. "I've been to job fairs before and you just go up and talk to somebody and maybe give them your résumé and hope they call you. It's an informal thing."



1st place: UW graduate student Liz Hajek.



2nd place: Brian Gray, from Central Washington University and Rendezvous coordinator Randi Martinsen.



3rd place: (L) to (R). Martinsen, J.L. Anoka of Colorado State Univ., Jonathan Antia of the Univ. of Nebraska and Rachelle Wagner from Northern Arizona University.

Poster WINNERS

1

2

3

UW Grad Student
Kelsey McArthur



UW Senior Vicki
Meyers



UW Professor
Ron Frost

UW Senior Katie
Ransbottom



“But this, they really and truly seemed interested in who you were and what you wanted to do.”

Josh Sigler, a third-year UW Master’s student from Worchester, Ohio, attended the Rendezvous for the third time. This year’s event was the best, he says.

“It’s been an amazing period of growth for the Rendezvous,” says Sigler, who landed an internship with ExxonMobil after interviewing at last year’s event. “I think the recruiters know that this is the place to be to find good students.”

WildHorse Energy, an international uranium development company headquartered in Australia, was among the satisfied companies.

“It was a solid day and I was so impressed with the students,” says Mike Hawks, a project geologist who works in the company’s office in Casper. “I certainly found some people I’d like to continue negotiations with in the future. We’ll do it again next year.”

Some recruiters, like ConocoPhillips, use the Rendezvous to



(L) to (R) UW Graduate
Students John Jasbinsek
& Josh Stachnik

interview only non-UW students and then remain on campus for an extra day or two to meet with UW students.

Why?

“We really value our time with the Wyoming kids, because they’re over-the-top in their capabilities,” says Peter Hennings, a senior scientist and director for ConocoPhillips. “We come here every year hoping to find at least a couple full-time hires from Wyoming.”

The Rendezvous also provides an opportunity for students to present posters to show their individual strengths. The winners of the contest, judged by the corporate recruiters, shared a prize pool of \$3,500.



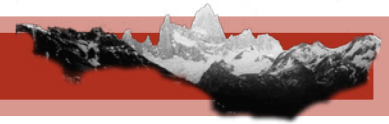
(L) to (R) UW Grad
Student Liz Hajek & UW
Professor Ken Dueker

Elizabeth

“**Liz**” Hajek, a UW Ph.D. candidate from Afton, Minn., won the \$800 first prize, and Brian Gray, from Central Washington University, won \$600 for second place.

Three students tied for third place and received \$400 each. They were J.L. Anoka of Colorado State University, Jonathan Antia of the University of Nebraska and Rachelle Wagner from Northern Arizona University.

Nine students won \$100 honorable mention awards, including UW students **Jennifer McHarge, Kelsey McArthur** and **Vicki Meyers**. ❖



At the Annual Meeting of the Geological Society of America, held recently in Denver, **Dan Jones**, PhD graduate student supervised by **Art Snoke**, was awarded an Outstanding Research Proposal Award by the Division of Structural Geology and Tectonics. Dan was one of three awardees. Dan's proposal was titled: "Paleoproterozoic crustal growth at the southern margin of Laurentia: A multidisciplinary study of the origin and tectonic significance of the Big Creek Gneiss."

In October, graduate student **Clayton Painter** presented a poster at the RMS-AAPG event in Snowbird, Utah, entitled, "Another look at Hartzog Draw Stratigraphy, Powder River Basin, Wyoming."

Undergraduate students **Vicki Meyers** and **Joshua Slattery** each gave poster presentations at the annual GSA Rocky Mountain Section meeting, held in Saint George, Utah, from May 7-9, 2007. The titles of their presentations were, "Tracking the Elusive Sauro pods

Director and Curator Brent Breithaupt accompanied them on their trip to Utah and served as advisor and co-author for each of their poster presentations.

Last spring, America's original scholastic honor society, Phi Beta Kappa, initiated two new members from the University of Wyoming Department of Geology and Geophysics. Graduate student **Angela Shankle** (Oshkosh, Neb.) and undergraduate student **Rhonda Wright** (Rock Springs, Wyo.) were among several other UW graduates that were selected this spring.

Students are selected by the local Phi Beta Kappa members and are in the top 6 percent of their graduating class.

Phi Beta Kappa was founded in 1776, during the American Revolution, at the College of William and Mary. Since its founding, Phi Beta Kappa has evolved to become the nation's leading advocate for the liberal arts and sciences at the undergraduate level. Phi Beta Kappa elects new initiates each

year from 276 chapters nationwide.

Seventeen U.S. presidents and six Supreme Court justices have been members of America's oldest honor society. Mark Twain, Nathaniel Hawthorne, Ralph Waldo Emerson and Alexander

Graham Bell were

lifetime members of the organization. **A**ssociate Professor **Ken Dueker** and his students have been continuing their exploration of the deep planetary subsurface using seismic recordings from

large earthquakes scattered about the planet.

Colorado-based fieldwork this summer consisted of permitting sixty seismic sites within the Colorado Rocky Mountain region. Next summer, broad-band seismometers will be deployed at these mountain sites to record earthquake waves for a year. These recordings will then be used to image the temperature and chemistry of the underlying lithosphere and upper mantle. These seismic deployments are part of a multi-discipline project, which seeks to ultimately disentangle the tectonic and climatic processes that have shaped the modern topography of the Colorado Rockies. For more information about this project visit, www.ees.nmt.edu/Geop/CREST.

Wyoming-based summer fieldwork consisted of graduate students, **Steven Hansen**, **John Jasbinsek**, **Jennette Peck**, and **Josh Stachnik**, as well as four undergraduate students driving between the four corners of the state to find and permit fifty seismic sites. These Wyoming sites will have broadband seismometers installed by the NSF EarthScope program this fall and will operate for two years. The real-time seismic data and corresponding earthquake locations can be viewed at the seismic kiosk in the atrium of the Earth Sciences building.

Additionally, the seismic data from ten broadband seismic stations recently installed around Jackson Hole, Rawlins, and Laramie are now being received in real-time using an internet relay from the National Earthquake Center in Golden, Colorado.

Long term, Dueker and his students are seeking to improve the real-time seismic monitoring capabilities within the state, especially with regard to the big volcanic caldera that lurks in the northeast portion of our state underneath Yellowstone.

Dr. **Huaiyu Yuan** graduated this summer and began a post-doctorial position at Berkeley. ❖



Participants of the Medicine Bow Mountain field trip during the *Rocky Mountain Rendezvous* at Snowy Range Pass.

and Pterosaurs at Seminoe Reservoir in South-Central Wyoming" (Meyers), and "Faunal Diversity and Taphonomy of the Steele Shale, Mesaverde Group, and Pierre Shale in Southeastern Wyoming" (Slattery). UW Geological Museum



Last May, **Colonel John W. Guy** (B.S. '59) was honored by the College of A&S as a Distinguished Alumnus for 2007.



Col. John W. Guy

After a tour in the United States Marine Corps (USMC) as a sergeant and after receiving a Bachelor's degree in geology, Guy continued his 38-year career as a Marine commissioned officer. Over the course of three decades, he served stateside and in Cuba (during the October 1962 Cuban Missile Crisis), Vietnam, the Philippines, Japan, and Korea. He received many decorations and commendations throughout his career, including the Silver Star (the 3rd highest award for valor), the Bronze Star, and the Purple Heart. Guy studied Asian history and received a Master's degree from the University of San Diego.

Guy and his wife Darlene (parents of three children and two grandchildren) took up residence in Powell. In 1999, Guy was elected president of the University of Wyoming Alumni Association, and his name became synonymous with the university, as he traveled throughout the state and region promoting UW.

In August, Alumna **Kara Philippe (née Hackwith)** (M.S. '02) and her family—which includes her 2nd child, Joseph, born September 21, 2006—moved to Luanda, Angola from Pau, France.

Alumnus **Vic Ridgley** (M.S. '72) tells us that he has been working “like a maniac” as a consultant for U.S. Gold, which recently acquired an exploration title to approximately 150 square miles in prospective gold-mining territory between Cortez and Eureka, two of northern Nevada's major cultural centers. Most of his effort has been dedicated to lugging more than 90,000 ft. of currently drilled HQ core.

At the moment, Ridgley is waiting to heal from a recently repaired torn rotator cuff, unrelated to the strenuous logging regimen. We wish you a speedy recovery Vic!

Alumnus **Ralp G. Risley** (M.S. '61) is presently semi-retired and sent us a “life summary” since he graduated from UW.

Risley has been married for 45 years to his wife Sara, who he met at the University of Colorado in Boulder. They have three sons and five grandchildren. His career was in three segments: first in major coporations; second as an entrepreneur and co-founder of California Energy; third, after taking the company public, he started his own consulting business focusing on privately held family businesses. He is now looking at starting another company, which focuses on opportunities created by changes in government financial and regulatory policy.

Last March, alumnus **Richard LSmale** (B.S. '73) retired from the L.A. County Sheriff's Department after 26 ½ years of service with the department and 33 ½ years in law enforcement. He received the “Distinguished Service Medal” at a retirement luncheon held in his honor. The medal is the second highest award that can be given from the department

and only two to three deputies, out of a pool of over 12,000, earn it each year.

Smale also plans to move back to Wyoming within the next two years or so. We will look forward to welcoming you back Richard!

Alumnus **Derek Teini** (B.S. '02; M.P. '05) is currently working for the city of Laramie's Community Development Department as a planner. He is presently working on the City of Laramie's Comprehensive Plan, which is to be approved by the city council soon.

In addition, Teini is working as the project manager for the Casper Aquifer Protection Plan Update, where he is in the early stages and hopes to see a great document come out of his work. He has also been married for four years and is expecting a baby in the near future. The department regrets to announce that alumnus **Herbert E. Burnside** passed away on March 24, 2007. ❖

Coming up!

AGU

2007 Fall Meeting
December 10–14
San Francisco, California
www.agu.org

AMS

88th Annual Meeting
January 20–24, 2008
New Orleans, Louisiana
www.ametsoc.org

AAPG

April 20–23, 2008
San Antonio, Texas
www.aapg.org

GSA

October 5–9, 2008
Houston, Texas
www.geosociety.org



Profile

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2007 ConocoPhillips–University of Wyoming Rocky Mountain Field Trip participants at Salt River Pass, western Wyoming, with the Salt River Range of the western Wyoming fold-and-thrust in the background. The field trip was led by Department Head **Art Snoke** and professors **Barbara Carrapa**, **Ron Frost**, and **Ye Zhang**.

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