PROfile

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

Fall 2005

Inside

From the Department Head

Art Snoke

On September 1st, I replaced **Professor James I. "Tim" Drever** as the Head of the Department of Geology and Geophysics, and **Carol Frost** became the Associate Head of the Department. The retirement of **Tim Drever** marks the departure from the active teaching ranks of one of the University of Wyoming's most internationally distinguished scientists. Since 2002, Tim served as the Head of the Department of Geology and Geophysics, and he directed our Department with great wisdom, reason, and creativity. Carol and I inherit a healthy department with 113 undergraduate and 55 graduate students and an active faculty pursuing a variety of research projects throughout Wyoming and the world. I also proudly announce that beginning fall 2005 we added two new faculty members to our Department: Assistant Professor **Mark Clementz** (see article in this issue) and Academic Professional **Erin Campbell-Stone**. Erin has been teaching in the Department for the past several years, but her appointment is now on a much firmer basis. I anticipate that she will be teaching our summer field course for many years as well as instructing a variety of courses during the regular academic year.

The economy of the State is exceptionally robust with the prediction of a large budget surplus based chiefly on revenues from the energy industry. Both our undergraduate and graduate students are highly recruited by energy- and environmental-based companies (see the article on the AAPG Wyoming Rendezvous in this issue). It is truly a great time to be a geologist, especially a geologist in Wyoming. We in the Department of Geology and Geophysics feel that this is a unique period in our departmental history. We are hoping that the strong economy of the State will lead to reinvestment in energy-related education and research, especially in the Earth sciences. In this light, the University, in response to a request from the Wyoming Legislature, prepared a plan to develop a School of Energy Resources at the University of Wyoming. In this plan, the Department of Geology and Geophysics will play a leading role in the development of the School.

At the same time that a plan is being developed for a possible School of Energy Resources, the Trustees of the University recently approved a new program in Earth Systems Science. This program sets up a new major, "BS in Earth Systems Science with a concentration in a specific discipline" (including geology). Our department teaches the introductory course for this new major (GEOL 2000). With this new major at the University plus the ongoing energy boom in Wyoming, I expect to see our undergraduate enrollments rise and the number of our faculty increase. Presently, we are recruiting for two new faculty positions: sedimentary geology and geohydrology.

We continue to emphasize a field-based geoscience program, and I am delighted to report that the majority of our graduate/undergraduate students are still collecting primary geologic/geophysical data in the field in Wyoming and throughout the world. More importantly, they are using these data to develop new process-oriented approaches to sedimentary geology, structural geology and tectonics, marine geology, geophysics, Precambrian geology, petrology, glaciology, and other disciplines within the geosciences. For example, in the October 28th issue of the highly prestigious journal *Science*, PhD student **Josh Schwartz** was the lead author of an article that reported an important new discovery in regard to the dating and formation of oceanic crust (see **Schwartz, J.J., John, B.E., Cheadle, M.J., Miranda, E.A., Grimes, C.B.,** Wooden, J.L., and Dick, H.J.B., 2005, Dating the growth of oceanic crust at a slow-spreading ridge: *Science*, v. 310, p. 654–657).

As always we greatly appreciate the terrific support that we receive from our alumni—**Thank you!** It is your gifts to the Department that allow us to offer scholarships, special field-trip experiences, support for graduate/undergraduate students to attend professional meetings, support basic fieldwork, and so many other aspects that truly make our Department a special place to study the geosciences. Without the strong support of our alumni we would be a far less vibrant and broad-based department. In this issue you will find articles that will give you a better idea of what is going on in the Department. Best wishes for the upcoming holiday season, and we hope to see you in Laramie in the near future.

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

Faculty News

Professor **Carol Frost** has been appointed to the Board of Geologists by Governor Freudenthal for a term of July 1, 2005 through July 1, 2009. One of the board's duties, is the certification of professional geologists and geologists-in-training for the state of Wyoming.

Frost was also recently chosen, along with Deb Donohue, College of Law, to represent the University of Wyoming at the 2005-2006 Academic Management Institute. The program supports the development of senior-level women administrators in higher education and consists of four, one or two-day seminars throughout the year on various leadership topics.

Professor **Barbara John** has been elected to the multi-national 'Science Steering and Evaluation Panel' for the Integrated Ocean Drilling Program. The committee is comprised of 10 scientists from the United States, Japan and Europe, and is charged with overseeing and nurturing academic proposals for ocean drilling through the international consortia, funded at greater than $50,000,000/year.

Both **Barbara John** and **Mike Cheadle** are convening separate sessions at the upcoming Fall AGU meeting in San Francisco, Calif. in December. The meeting is anticipated to have over 11,000 Earth and space scientists from around the world presenting talks and posters over a 5-day period.

Senior Lecturer, **Randi S. Martinsen**, is a candidate for Treasurer of the American Association of Petroleum Geologists (AAPG). AAPG is the world's largest geological society, with approximately 30,000 members in 115 countries.

The Geology and Geophysics Department welcomes its newest Academic Professional Research Assistant, **Mike Meredith**, who will be managing the isotope geology lab for Professor Carol Frost for the coming year. He is supported by DOE and NSF funds so within weeks he will be an expert on coalbed methane produced water in the Powder River Basin and on the mid-crustal history of the Helgeland Nappe Complex of north-central Norway.

Professor **Steve Holbrook** published a paper titled, *Ocean internal wave spectra inferred from seismic reflection transects*, 2005, Geophysical Research Letters.

Holbrook was also interviewed for the national science radio program, "Imagine That", for a piece on methane hydrates that aired in June 2005.

In addition **Holbrook** gave an invited talk titled, "Seismic oceanography and the R/V Langseth," at Columbia University, Sept. 9, 2005.

Professors **Barbara John**, **Ron Frost** and graduate student **Craig Grimes** each recently received $20,000 grants from the Joint Oceanographic Institutions for ODP research.

The department sent a total of **37** individuals consisting of faculty, students, and staff to participate in the annual Geological Society of America (GSA) Meeting and Exposition in Salt Lake City on October 16-19, 2005.

New Method of Dating Oceanic Crust Is Most Accurate So Far

...as reported on K2TV and Wyoming Public Radio.

Ph.D. candidate **Joshua Schwartz** is the lead author of a recently published paper that recognises, for the first time, the relatively common occurrence of zircons in gabbroic rocks from mid ocean ridges.

After collecting zircon-bearing samples of ocean crust, the scientists used a Sensitive High Resolution Ion Micro Probe (SHRIMP) to determine the absolute ages of 17 samples from Atlantis Bank about 75 miles south of the Southwest Indian Ridge in the southern Indian Ocean. About 25 percent of the samples were 2.5 million years older than predicted by conventional models of crust generation at mid-ocean ridges.

"This research advances our understanding of how oceanic crust is formed, and the processes involved in that formation," says **Mike Cheadle**, geologist at the University of Wyoming (UW) and coauthor of an article describing the technique in the Oct. 28 issue of the journal *Science*.

Zircons are widely regarded as providing the best basis for finding the absolute age of rocks on land, according to Cheadle's coworker, **Barbara John**, who is also a geologist at UW. The zircon dating technique has been used extensively to answer questions such as when and how fast the Earth's continental crust forms. But until now, scientists have relied on geophysical methods based on magnetism to date ocean crust.

As the Earth's tectonic plates separate over time, new crust is created at mid-ocean ridges, says John. Minerals in the rocks that make up the crust are magnetized in the direction of the Earth's magnetic field as they cool and freeze. Because the field reverses polarity over time, the rocks record the polarity, creating alternating stripes on either side of a mid-ocean ridge.

Traditionally, instruments aboard ships have predicted the age of the ocean's crust by mapping these magnetic stripes, and then calculating an age using distance and time between polarity reversals within the crust, says Rodey Batiza, program director in the National Science Foundation (NSF)'s Division of Ocean Sciences, which funded the research. But that method does not reveal the entire process involved in the growth of ocean crust, he says.

Schwartz, the paper's first author and a UW Ph.D. candidate in geology, says the team's research offers another tool to understand the complex processes occurring beneath the Earth's surface. "Our finding that these zircons are older than they should be relative to their magnetic

age alters what we've thought about oceanic crust, he says. "The ability to date zircons in ocean crust offers another and better way to determine how ocean crust is formed."

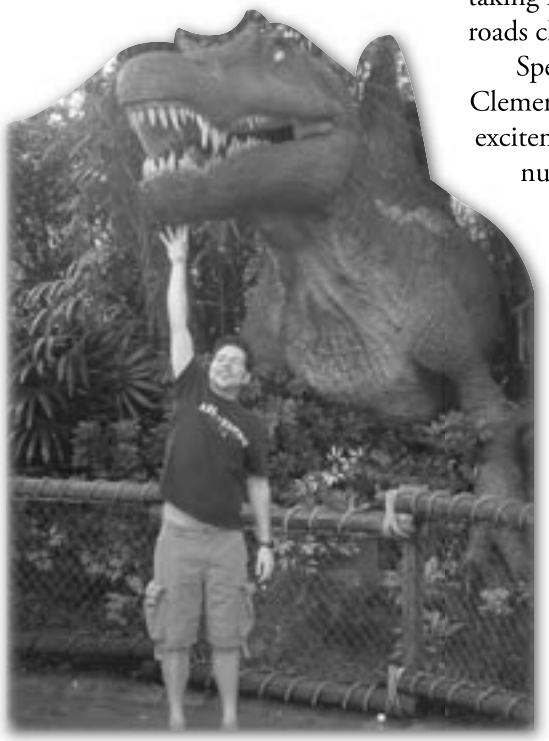
Adds Cheadle, "Findings about today's ocean ridges help us to better understand how the Earth has worked in the past."

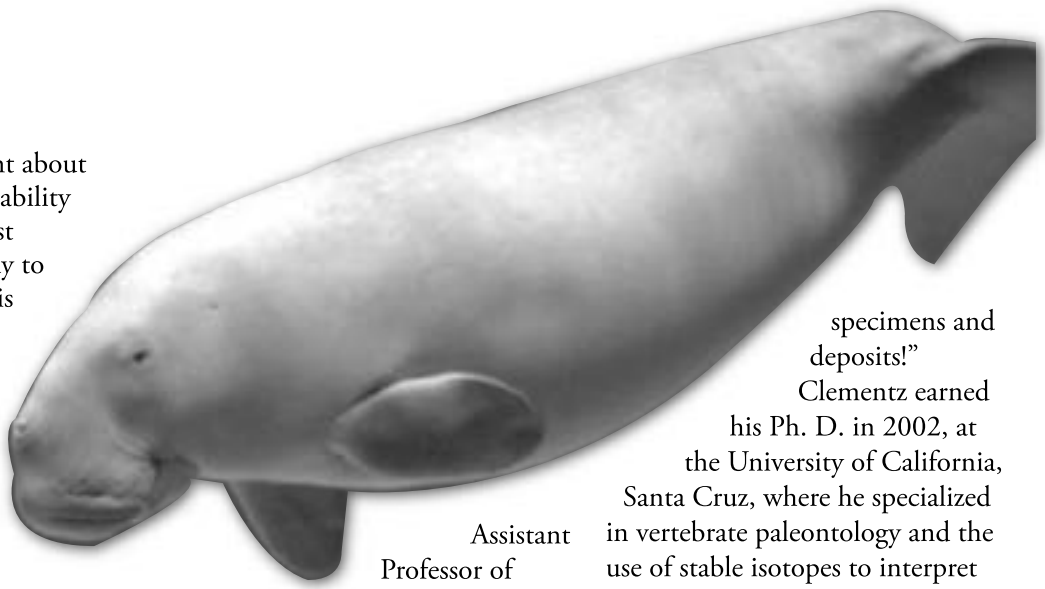
Other co-authors of the paper are affiliated with the U.S. Geological Survey in Menlo Park, Calif., and the Woods Hole Oceanographic Institution in Woods Hole, Mass.

Geology and Geophysics Faculty Focus: Mark Clementz

by Brendon Orr, Editor, Department of Geology & Geophysics

Having been born in the town of Sturgeon, Missouri, with a small population of approximately 800 people,





Assistant Professor of Paleobiology & Paleontology **Mark T. Clementz** is familiar with the benefits of living in a smaller community.

"I must say," says Clementz, "I'm glad to find myself in a town that offers some of the same qualities as those found in my childhood community. I am sure I will enjoy the laid back lifestyle and warm atmosphere that a town like Laramie provides."

When jokingly reminded of the fact that the "warm atmosphere" only lasts for so long in Laramie, Clementz shares, "Well then, I better get to taking in the Snowy Range before the roads close!"

Speaking of the Snowy Range, Clementz goes on to describe his excitement in reference to the numerous geological structures and fossil deposits in the area, "There are just so many great areas like the Sundance Formation, among others, that have a wealth of excellent fossil specimens and deposits!"

A self-acknowledged dinosaur enthusiast, new geology assistant professor Mark Clementz couldn't pass up the chance to get up close to a life-size model of the large theropod *spinosaurus* at the Jurassic Park exhibit in Universal Studios, Orlando, Florida.

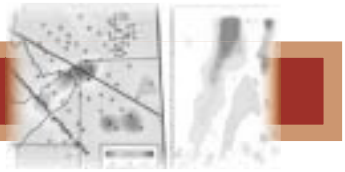
Clementz earned his Ph. D. in 2002, at the University of California, Santa Cruz, where he specialized in vertebrate paleontology and the use of stable isotopes to interpret the habitat and dietary preferences of ancient mammals. His research, which covers the areas of paleobiology and geochemistry, also involves the reconstruction of ancient vertebrate systems in an attempt to gain a better understanding of present-day vertebrates.

Before joining the department, Clementz spent two years carrying out postdoctoral work at the Smithsonian Marine Station in Ft. Pierce, Florida, where he studied the local manatee population in the wild.

Clementz hopes to use his knowledge and experience to build a research program that focuses on integrative studies of organisms and their environments, stressing coastal ecosystems at the interface between the terrestrial and marine realms. He also hopes to establish a cohesive relationship and dialogue between the Department of Zoology & Physiology and the Department of Geology and Geophysics.

The department is very excited about the contributions in teaching and research that Dr. Clementz will bring to the department and to the University of Wyoming. Clementz has also been the recipient of numerous honors and awards, including, a Smithsonian Postdoctoral Fellowship and a National Science Foundation (NSF) Predoctoral Fellowship. ❖

Yellowstone Hotspot



UW Scientists Confirm the Existence of a Mantle Plume Beneath Yellowstone

After years of debate within the science community, University of Wyoming researchers confirm the existence of a plume beneath the Yellowstone volcanic hotspot that currently resides within Yellowstone National Park (YNP).

Recent studies by Ken Dueker, an assistant professor in the UW Department of Geology and Geophysics, and Huaiyu Yuan, a doctoral degree candidate, verify a 60-mile diameter plume extending to a depth of 300 miles beneath YNP.

This pipe like formation of warm material, according to the researchers, is what earth scientists refer to as a "mantle plume." The team's findings appear in the May issue of Geophysical Research Letters journal.

"Our research looked at the ultimate origins of the anomalous volcanic activity in the park today," says Dueker. "We are going on record that there is an upper mantle plume beneath Yellowstone. This is important to the scientific community."

Yuan describes a plume as a narrow pipe of "hotter than normal" material that rises from the earth's deep interior. He says the hot plume material "vigorously melts" around 60 miles underneath YNP to produce the volcanic activity generally found above mantle plumes.

Dueker explains that for years earth scientists have thought that the Yellowstone hotspot track was one of the best continental examples of a plume, but "hard evidence was lacking."

He says the evidence to support the published conclusion is "quite good" because he and his colleagues operated 48 seismometers around the Yellowstone hotspot for one year.

"This large seismic experiment recorded a wealth of new data from distant earthquakes," says Dueker. "This allowed us to construct maps of the temperature variations, hundreds of miles beneath the park, much better than what was previously possible."

Researchers from the Universities of Utah and Oregon contributed to this project. Funding was provided by the National Science Foundation Continental Dynamics Program and facilities support by the PASSCAL Instrument Center at New Mexico Institute of Mining and Technology.

"We want to thank the numerous land owners who allowed us to place our seismometers on their property," says Dueker. "This experiment would not have been possible without their help."

Assistant Professor Ken Dueker (R) and graduate student Huaiyu Yuan (L) review images of the newly discovered mantle plume that resides beneath Yellowstone National Park.

Dueker, who came to UW in 2000 from the University of Colorado at Boulder, is a geophysicist and seismologist. He earned his doctorate degree from the University of Oregon and a bachelor's degree from Whitman College in Washington.

Yuan, from the People's Republic of China, came to UW in 2000 after receiving his master's degree from Yale University. ❖

Student News

Undergraduate Student Erin Stoesz Gives Talk at UW Fall '05 Convocation

Undergraduate student **Erin Stoesz**, a geology major from Laramie, was one of three College of Arts and Sciences students selected to discuss their research findings at the *Keith and Thyra Thomson Honors Convocation*. Stoesz discussed her journey to Nova Scotia through a College of Arts and Sciences Summer Independent Study award to learn about how Gaelic language influences music.

2005 ConocoPhillips Dept. of Geology and Geophysics Rocky Mountain Field Trip

The annual Labor Day weekend Rocky Mountain field trip, organized and led by Department Head **Art Snoke**, went north this year with part of the itinerary focused on the diverse and fascinating geology of southwestern Montana. Another reason for choosing this area for our 2005 trip was to examine part of the geology that the Lewis and Clark Expedition (The Corps of Discovery) had seen 200 years ago as they looked for the headwaters of the Missouri River.

We left Laramie on the afternoon of September 1st and spent our first night at Muddy Mountain BLM campground, south of Casper Mountain. Before we set up camp, we looked at the classic Upper Paleozoic and Lower Mesozoic stratigraphy exposed in the area as well as mid-Paleozoic and Precambrian rocks exposed on Casper Mountain—the view of Casper, Wyoming, from Lookout Point was terrific that afternoon.

From Muddy Mountain, we made a long drive on Day 2 to the Bighorn Canyon National Recreational Area (BCNRA). After having a great night camping at Barry's Landing, we spent part of the next morning discussing and looking at the spectacular geology exposed in the BCNRA, including a long stop at Devils Canyon Overlook. The group continued west to Powell, Wyoming, where we met UW alumnus, **Dave Lageson**, who is Professor and Department Head of the Department of Earth Sciences at Montana State University. Dave led us through Elk Basin, pass the Beartooth Front, across Bozeman Pass, and eventually into the Bridger Range, where we camped at Battle Ridge campground near a triangle zone developed along the western margin of the Crazy Mountains Basin.

On the next day, **Rich Aram**, ConocoPhillips, guided us through Jefferson Canyon where the La Hood Formation of the Mesoproterozoic Belt Supergroup is well exposed as well as complexly deformed Paleozoic and Mesozoic stratigraphic units of the Montana foreland. We ended that day with a fascinating tour through the Lewis and Clark Caverns also led by Rich. Our campsite that night was just down the mountain from the Caverns at the State Park campground, which provided several amenities, like hot showers, that we hadn't experienced for several days.

On Monday, September 5th (Labor Day), we headed to Yellowstone National Park (YNP) via the Madison River Valley with a stop to study the effects of the 1959 Hebgen Lake earthquake. The remainder of the trip focused on the geology of YNP with a brief stop to view the Teton Range as we traveled back to Laramie on Tuesday, September 6th. As always, we greatly appreciate the financial support of ConocoPhillips, which helps make this field trip possible. Also, special thanks go to Dave Lageson and Rich Aram for their contributions to the success of the 2005 field trip.

More Student News

Undergraduate student **Laura Vietti** spent a month in coastal Norway this past summer doing field work for her senior honors thesis entitled, "Reconstructing Iapetus: a study of conglomerate provenance in the Helgeland Nappe Complex of north-central Norway." She is studying a series of Ordovician conglomerates, some of which may have been shed from what is now East Greenland, and others of which may have had European, Baltica sources. Her field work, petrography, geochemistry, Nd and Sr isotopic characterization and U-Pb geochronological data should allow her to determine whether parts of coastal Norway were originally on the North American side of the proto-Atlantic Ocean.

A huge congratulations to graduate student **Liddi Brinck** on receiving the EPA STAR Graduate Fellowship 2005 for her ongoing research on Sr isotopes in regard to CBM waters. This is am important research project for the State as well as the Nation in regard to the overall effects of CBM mining on agriculture and groundwater resources. The department looks forward to hearing the results of her research in the future.

Undergraduate student **Shay Romine** was awarded a Wyoming EPSCoR Research Fellowship for the Fall 2005 semester for her work with Professor **Barbara John** on seismic velocity studies of Long Valley caldera in California.

Graduate Student Assembles Display of Kay Fowler

Catherine Campbell, first-year graduate student from Avon, Connecticut, assembled a display of artifacts and photographs belonging to Katharine Fowler, who attended UW field camp in 1927. After completing her PhD thesis on the anorthositic rocks of the Laramie Range, Dr. Fowler went to Sierra Leone, where she spent 3 years prospecting and mapping. The artifacts include her khaki field clothes, and her two pith helmets and their copper Cunard carrying case. We hope the display will inspire future generations of geological adventurers. ❖

Rocky Mountain Rendezvous of Geoscience Students & Employers

UW Petroleum Industry Job Fair Attracts Record Number of Companies

The fourth annual Rocky Mountain Rendezvous of Geoscience Students and Employers, Oct. 22-24 at the University of Wyoming, attracted twice as many employers as it has in years past.

"More than 90 students from colleges all over the U.S. have come to participate in the rendezvous and 24 companies have come to recruit them," says Randi Martinsen, UW Department of Geology and Geophysics lecturer and rendezvous coordinator, who notes that UW's previous rendezvous job fairs have averaged 12 recruiters.

Participating companies included Amerada Hess Corporation; Anadarko Petroleum; BP Corp. of North America; Burlington Resources; Cabot Oil & Gas; CBM Associates Inc.; Chevron; Conoco/Phillips; Encana Oil & Gas; Exxon/Mobil; Geosearch Logging; Nerd Gas Company, LLC; Pason Systems; Petro-Canada; TriHydro; WellDog; and XTO Energy, among others.

Martinsen attributes the positive reputation of the university's geoscience program for enabling the university to facilitate the event as a service to students both inside and outside of Wyoming and to employers in the field.

"Wyoming is very fortunate; we have a very highly respected geoscience program," she says. "We have a lot of companies that come and recruit our students, but they also can recruit students who attend good schools where nobody recruits."

Justin Milliard, a senior studying geology at the University of Montana, Missoula, says he had a positive experience at the rendezvous and is hopeful about the connections he made during the three-day event.

"The rendezvous is a very positive experience for students. We are able to meet other geology students and meet companies interested in offering employment or internship opportunities," he says.

Due to the current high price of oil and gas paired with the aging population of geoscience workers in the petroleum industry, it is a "fantastic time to be a geoscience student," according to Martinsen.

Poster WINNERS

1st place: UW graduate students Heather Jones and Liz Hajek with Dept. Head Art Snoke and Rendezvous Coordinator Randi Martinsen.

2nd place: Brigham Young University-Idaho students Clayton Painter and Mark Milliard w/ A. Snoke and R. Martinsen.

3rd place: West Virginia University graduate student Bryan Schwartz w/ R. Martinsen and A. Snoke.

"These companies are eager to hire students and this opportunity allows them to come here and see a broad spectrum of students," she says. "Our recruiters have come up to me and said the fair has exceeded their expectations, and the students are just walking on clouds."

At the rendezvous, students met with and provided resumes to top recruiters in the earth sciences, presented posters to show their individual strengths, attended field trips and short courses and socialized with recruiters and other students. Social events included a poster reception, dinner banquet and luncheon awards ceremony. Additionally, the recruiters presented a round table discussion of the petroleum industry and available careers.

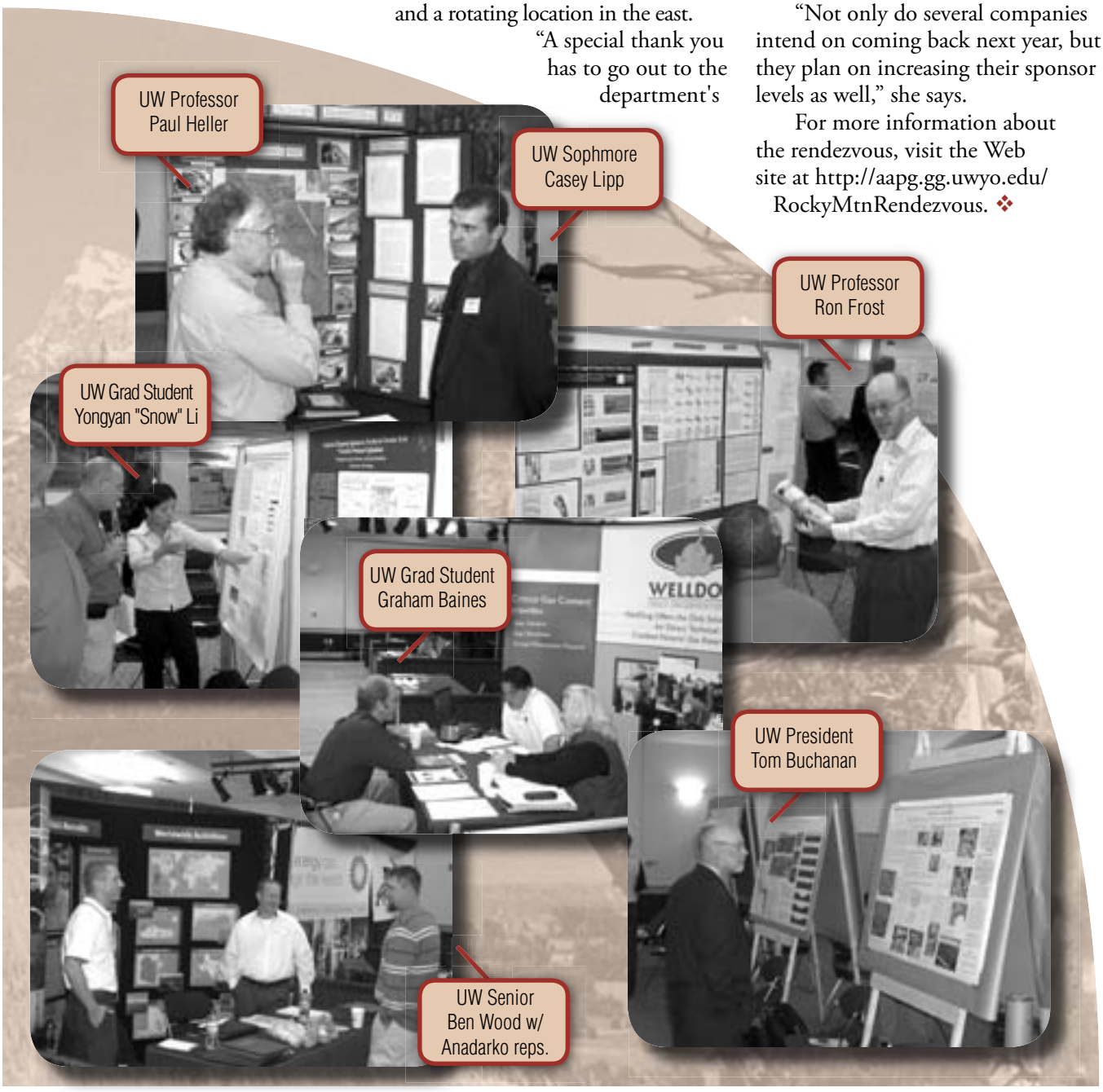
The rendezvous, hosted by the University of Wyoming Department of Geology and Geophysics, is one of four regional job fairs sponsored by the American Association of Petroleum Geologists (AAPG), with other locations in Houston, Norman, Okla., and a rotating location in the east.

"A special thank you has to go out to the department's generous staff who all chipped in and gave their time and energy in helping make this event a success," says Martinsen. "The staff's hard work really contributed to the friendly atmosphere that was enjoyed by both the company representatives and the students."

Given the increase in popularity of the event, Martinsen intends to put a limit on the number of participating companies for future rendezvous, with the intent to preserve the ideal student to company ratio.

"Not only do several companies intend on coming back next year, but they plan on increasing their sponsor levels as well," she says.

For more information about the rendezvous, visit the Web site at http://aapg.gg.uwyo.edu/RockyMtnRendezvous. ❖



Student Profile – Shay Romine

::: A Story of Resilience & Perseverence :::

by Brendon Orr, Editor, Department of Geology & Geophysics

"Nobody trips over mountains. It is the small pebble that causes you to stumble. Pass all the pebbles in your path and you will find you have crossed the mountain."~Author Unknown

When asked what inspired her to pursue a major in Geology, undergraduate student, Shay Romine explains, "I've just always liked rocks! As a child, I remember always being excited about choosing a few rocks from my grandfather's collection. My grandfather, being the 'rock hound' that he was, had accumulated quite the collection of rocks and fossils after years of 'rock hunting.'"

Romine, having lived in several communities across Wyoming, including Lander, Laramie, Thermopolis, Gillette, and Cheyenne, also gained a profound and inspiring sense of love and appreciation for the unique geological landscapes that a state like Wyoming offers.

"My family moved around a lot when I was younger, I even went to three different high schools," says Romine. "My parents got a divorce, my mom went back to college and later remarried, so our family, that included my two older sisters, and two younger siblings, one half brother, and one half sister, moved around a lot."

After graduating from high school in Buffalo, Wyoming, Romine attended the University of Rochester in western New York from 1998-99. She initially saw herself majoring in political science or engineering, but found that she still had a clear interest in studying geology.

"I was expecting to major in political science or engineering, but I decided to major in Geology and then realized that my decision would likely lead me back to the state of Wyoming to attend UW," says Romine.

"The reputation of the geology program and the Department of Geology and Geophysics was essentially the sole reason behind my decision to relocate. However, I also remember how the geology professors at Rochester University were really impressed by the fact that I came from Wyoming, and I remember actually correcting one of my professor's pronunciation of the Washakie (wa-sha-kie) Formation, which he pronounced, 'wa-shake-ie.'"

Upon transferring to the University of Wyoming in the Fall of '99, Romine was struck by the fact that it seemed as if almost every professor at the Department of Geology and Geophysics each had their own collection of rocks.

"It just reminded me of how a lot of people in my family each had their own collection of rocks, and if you have ever been in any of the professors houses, you can count on seeing rocks," Romine says. "That coupled with the fact that I was just thrilled to be back where I had so many memories of spending time in the outdoors as a kid."

After roughly 2 years of pursuing her bachelors degree, Romine encountered some hardships that would eventually lead to her withdrawal from UW for the Spring '02 semester. In addition to pursuing her bachelors in geology, Romine was also an active member of the UW cross-country team, and was good friends with both Morgan McLeland and Nicholas Shabron, two of the eight UW cross country students who were killed in a car accident on U.S. 287 in September, 2001. Romine came back to UW for the Fall '02 semester, but chose to withdraw from UW a second time, as a result of the pressure that she was receiving from some members of the cross-country team, to make her athletic goals more of a priority than her academic goals.

Romine then entered a period of soul-searching, where she would find herself on some new and exciting

Shay Romine leans against a recently felled tree near Flagstaff Arizona. Romine and her crew were working to thin the local ponderosa forest.

Student Profile – Shay Romine

::: A Story of Resilience & Perseverence :::

journeys. During the next 15 months of her life, she would be working for AmericaCorps in both Vermont and Northern Arizona.

"I had just decided to take some time off from school, and spend an entire year or so doing something that made me happy," says Romine. "I wanted to work in the mountains, so I got a job with the Green Mountain Club, a non-profit organization, affiliated with AmericaCorps, that runs the upkeep of numerous mountain trails of Vermont."

The experience would turn out to be a very enriching one, since Romine would go on to learn a lot about herself, meet many new and interesting people, and gain a lot of experience that she thinks she will be able to apply to all areas of her life in the future.

"For me, it is really easy to be happy in the woods; we would enter the woods on Monday and leave on Friday, so we were essentially putting in a full work week of hard manual labor, which I have to say was really satisfying. One feels good about his or her self if they are able to accomplish concrete and specific goals," says Romine. "I think living in the woods cuts away a lot of the stress and unimportant aspects of life, and just breaks it down into this simple and very peaceful way of living. My typical day would involve me getting up, eating, working, eating, and then talking with the people that I worked with before going to sleep. These people were actually from a wide range of backgrounds, and they were all very intellectual, thoughtful and sensitive, and we would have these deep, stimulating conversations while we were moving rocks and mud."

"If it wasn't for the department's help, I wouldn't even be here, nor would the completion of my bachelors degree even be possible..."

Romine, was eventually promoted to a "co-leader" of her crew, along with 2 other young women, and she gained a lot of invaluable experience from having to lead a diverse group of people.

"Most of the volunteers for our crew were actually middle-age men, many of whom were wealthy, upper-class citizens who would show up for a week or two at a time to help," explains Romine. "It was an incredible challenge, because the first thing you have to do is gain the respect of these upper-class men, who are older than you. So the first thing we would do for the first pack-in, was to put on the biggest and heaviest packs that we could and out-hike every single volunteer, and then those men would listen to us the rest of the week."

After her experience with America Corp., Romine returned to the University of Wyoming for the Fall 2004 semester, ready to finish her degree, but soon encountered some difficulties with her financial aid. Despite being told she was no longer eligible for financial aid by UW, the Department of Geology and Geophysics was actually able to go the extra step for her and increase her financial aid to get her through the year and encourage her to finish her degree. She also worked hard to find jobs and even sold her car to cover her tuition and fees for the remainder of the year.

"If it wasn't for the department's help, I wouldn't even be here, nor would the completion of my bachelors degree even be possible," says Romine. "I am so grateful to the department and the people who were intimately involved with helping me."

Despite an enormous class load this semester, consisting of 19 credit hours, Romine expects to finish her degree and graduate in December 2005, and intends to either attend graduate school or enter the work force.

In addition, Romine was the recipient of a Wyoming NSF EPSCoR Research Fellowship award for the Fall 2005 semester.

When asked what advice she might have to offer those students who may find themselves in tough situations, either of an academic or personal nature, Romine shares, "During my time with the Green Mountain Club, I worked with this woman from Florida, who was a Korean War orphan, yet despite her hard life, she had the most positive attitude that to this day, has been the best I have ever come across in my entire life. Needless to say, she was just very inspiring, and just being around her taught me a lot. She was actually a very successful woman, who owned and ran her own business, and she always hired people based on their attitude." Romine continues, "A positive attitude makes all the difference, and a smile and a little laughter goes a long way." ❖

---If you are a student and would like to be featured in our PROfile newsletter, please contact our editor Brendon Orr at editor@gg.uwyo.edu---

Alumni News

Tom Ahlbrandt (BA '69, Ph.D. '73) is a coauthor of the new AAPG memoir 86 titled "Global Resource Estimates from Total petroleum Systems". It presents the results of a major study of the petroleum resources of the world.

Tom Anderson (BS '79) has our thanks for donating to the Geological Museum a unique trace fossil he discovered in roadside rubble awaiting removal by highway construction crews in Wind River Canyon. He managed to salvage the specimen and transport it to UW —small achievement considering that it is a slab of the Cambrian Flathead Sandstone three feet long, two feet wide, and six inches thick. Its underside exhibits the filling of a trail several inches wide and extending the length of the slab. The rare combination of great geologic age, large size of the trace maker (trilobite?), and unusual length of the trail makes the specimen an obvious candidate for a planned museum exhibit featuring fossil tracks and trails.

Knut Andersson (Ms '78; Ph.D. '82) and wife Joanne stopped for a visit on their way home to Alberta after attending their son's college graduation ceremonies in Nebraska.

R.V. Bailey (BS '56) and Milton Childers (MA '57) visited the campus in June in search of literature and maps pertinent to their current geological work in Wyoming. Well known among economic geologists for their book "Applied Mineral Exploration with Special Reference to Uranium", the two entrepreneurs now include Wyoming coalbed methane in their sphere of interest.

John B. Branney (BS '77) accepted the position of Vice President of Global Manufacturing for Precision Energy Services, a Division of Precision Drilling.

Precision Energy Services provides drilling, formation evaluation, and completion services for the international oil and gas industry.

John was previously with Baker Hughes and Western Atlas International.

Skye Cooley (MS '00) started a new company: Cirque Geoscience.

Based in Washington State, Cirque is composed of scientists and technical staff offering data-driven geotechnical, biostatistical, and GIS services to land managers and government agencies across the West.

Cirque operates under a smart-partnership business model emphasizing project-focused teams, high-end analyses, and great custom maps.

Interested in partnering with us? Call Skye: 509.422.3919 or northisle@yahoo.com

John DeJoia (BS '85) was named Vice President of Technical Services of Straithmore Mineral Corporation's Santa Fe, NM office. He is responsible for the development and supervision of the technical staff in brining properties on-line.

John also serves as principal in an independent environmental, management and mining consulting firm.

Ralph Espach Jr. (MS '57) typically escapes the Oklahoma heat by spending the summer at his cabin near the old UW science camp. This year he brought along his collection of classic old geology books to donate to our library. This valuable acquisition includes famous books such as Hug Miller's (1858) *Testimony of the Rocks* and Lyell's (1875) *Principles of Geology*. Of greater regional interest are the numerous reports generated by nineteenth century geological surveys of the west (e.g. Powell's 1876 report on the eastern Uinta Mts. and Gilbert's 1880 report on the Henry Mountains). Several of these include out-size, beautifully illustrated atlases. Our sincere thanks to Ralph for this generous donation.

Philip Jenny (BA '60) donated a copy of the recent book "Evolution of Fossil Ecosystems" to our library. Phil recently relocated to Tennessee from El Paso where he had lived following his retirement from the National Park Service.

Andre Marachal (BS '59) returned to the campus in June for the first time since his graduation. Needless to say, he found that a number of changes had taken place in the interim.

James D. Murphy (Ph.D. '79) is currently serving as the President and CEO of his own Environmental Consulting company, Envirotest. James explains that his business continues to grow, and now has about

Above: SH Knight at the 1966 geology field camp.
Facing page: Illustration and description of Snowy Range.
-- Images provided by Ingrid (Eklov) Jonsson --

Alumni News Cont.

60 people, five of whom are licenced as PG's, with offices in Houston (HQ), Beaumont and Corpus Christi.

Two of James' daughters are off to college, Sarah at Boston College and Annie at the University of Arizona. His daughter Hannah is in 7th grade still so he and his wife will have miles to go before they get any sleep.

Alfred H. Pekarek (Ph.D. '74) is currently an Associate Professor of Geology at St. Cloud State University where he is expecting tenure during summer of 2005. Alfred's current academic research involves deciphering the glacial Stratigraphy of Morrison County, Minn. where he lives, as well as mapping the buried bedrock using a variety of methods, including coring. In addition, his work as a consultant in the oil industry has increased within the last year.

Vic Ridgley (MS '72) is currently working as a consultant for ATNA Resources, a Canadian junior mining company, where his team has been drilling deep holes beneath existing abandoned open-pits of the Pinson Mine near Winnemucca, Nevada. Vic's team is also preparing to begin an underground exploration drift to pursue gold mineralization in vein structures beneath the old pit complex. With luck, the mine will reopen next year as a functioning operation.

Jim Sukud (MS '78) has been doing college basketball RPI ratings since starting Collegiate Basketball News Co. in 1991 during the college basketball season. During the off-season, he works with Mundell and Associates, an environmental geology and engineering consulting firm based in Indianapolis as a project geologist. His interests include hiking, backpacking, etc. Please visit rpiratings.com to take a look at basketball stats.

Gerald Voorhees (MS '63) has a Jackson, Wyoming address but lists his current place of employment as "all over the world." This is not hard to believe considering his post-UW travels. After finishing his thesis in the thrust belt under the direction of Professor Don Blackstone, he spent more than thirty years doing petroleum geology/engineering in Libya, Guatemala, Egypt, Morocco, Indonesia, Kazakhstan, and Venezuela. It's good to know that some production work in Wyoming is included in his current activity.

Jerry Edwin Zoble (BA '53, MS '57) is now retired and living in Madison, Mississippi, after working as a petroleum geologist.

---Thanks to all of the alumni who filled out and returned the "Alumni News Form" that was included in last Spring's PROfile newsletter. We would like to invite all of our alumni to please continue to send us updates on all of your activities. Please send any updates to our editor Brendon Orr at editor@gg.uwyo.edu---

Coming up!

AGU
2005 Fall Meeting
December
San Francisco, California
www.agu.org

AMS
January 29 - February 2, 2006
Georgia World Congress Center
Atlanta, Georgia

AAPG
April 9-12, 2006
Houston, TX
www.aapg.org

ASPRS
May 1-5, 2006
Reno, NV
www.asprs.org

GSA
October 22-25, 2006
Philadelphia, PA
www.agu.org

Rocky Mountain Geology

Visit us on the Web at:
pubs.gg.uwyo.edu/rmg.htm
Or e-mail us at: editor@gg.uwyo.edu

PROfile

A semi-annual 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

Persons seeking admission, employment, or access to programs of the University of Wyoming shall be considered without regard to race, color, religion, sex, national origin, disability, age, veteran status, sexual orientation, or political belief.

University of Wyoming graduate students **Pedro Páramo** (L) and **Cody Helfrich** (R) stand at the edge of the active crater of Poás Volcano, Costa Rica, in July 2005. The two were installing seismometers as part of a multi-institution study of Costa Rican volcanoes funded by the National Science Foundation and directed by UW Professor W. Steven Holbrook.

UNIVERSITY OF WYOMING

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

CHANGE SERVICE REQUESTED

Nonprofit Organization
U.S. POSTAGE
PAID
University of Wyoming