



SPRING 2012

# PROFILE

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## FROM THE DEPARTMENT HEAD

As the last week of classes rapidly approaches, the newsletter gives me chance to pause to look back at some of the major accomplishments of the past year. During the year the number of faculty grew by two. **Janet Dewey** is a new academic professional research scientist who has taken over the reins of our Geochemistry Analytical Laboratory. Janet has the difficult task of rebuilding the laboratory that some of you may remember as the domain of **Steve Boese**. She is off to a strong start thanks in large part to the generosity of the School of Energy Resources who has helped us to acquire new analytical equipment. We also welcome **Brandon McElroy** as a new assistant professor who specializes in sedimentology and surface processes. Brandon integrates field and experimental observations with theoretical and numerical modeling to understand both modern and ancient sedimentary processes. He is building experimental facilities to study both fluvial and submarine sediment transport processes, and has been outfitting a new research vessel to study modern sedimentation in natural systems as well.

Other major accomplishments include getting the newly christened Wyoming High Precision Isotope Laboratory up and running under the direction of associate professor **Ken Sims**, a start on overhauling our famed, but perhaps a bit dated, Geological Museum (see article herein), and the growth of the Roy J. Shlemon Center for Quaternary Studies. Faculty have been very visible as well. Over the past year our faculty, collectively, have given over 50 invited talks to external organizations. Special congratulations are due to professor **Art Snoke**, who received this year's *Exemplary Faculty Award* from the College of Arts & Sciences, and to Steve Holbrook who was named a Fellow by the American Geophysical Union. Special thanks are also due to Randi Martinsen who has now run the very successful job fair, the Rocky Mountain Rendezvous, for ten years. This year's Rendezvous brought together 23 companies and 250 students for three days of job interviews, short courses and field trips. I would also particularly like to thank **Sondra Karr (Cawley)**, who is retiring from the University after over two decades running our undergraduate advising and graduate admissions programs. She has been a calming voice to students and faculty alike and will be sorely missed.

As I mentioned in last fall's newsletter, we have been starting to work on alumni relations and events. This has included developing a closer relationship with the Wyoming Geological Association, who has very generously provided scholarships to our students over the years. In addition, as promised, we are now planning an alumni event to be held in late October this year in Denver. **Jim Steidtmann** has generously agreed to help put together this event. I have emailed our Front Range alumni about that event, using what contact information I have. If you or someone you know should be included on that email list, please send me the contact information at [heller@uwyo.edu](mailto:heller@uwyo.edu). Meanwhile, we will also be planning a Houston event to be held during the 2013-2014 academic year. I hope to see you at one of these events! ♦

*Paul L. Heller*

### *One in 1,000: Holbrook named AGU Fellow*

**E**ach year, one in 1,000 members receives the call. This year, **Steven Holbrook's** name was chosen as one of the elite in the world of geophysics.

Holbrook, a University of Wyoming professor in the Department of Geology and Geophysics, was named a Fellow by the American Geophysical Union. In all, 61 Fellows were elected by AGU for 2012. Holbrook is recognized for his research in the acquisition and analysis of marine and onshore reflection and refraction seismic data.

"Top-flight departments expect AGU Fellows on their faculty," Holbrook says. "This is the start of something. I'm sure I won't be the last one on my faculty to receive this award."

Holbrook, who served as secretary of the seismology section of AGU a decade ago, says he considers this award as recognition from his peers and describes it as "a career achievement award for a body of work." He says he was nominated by a professor at Oregon State University and one in Paris, France.

Over the course of his career, Holbrook has studied topics as varied as continental breakup, volcanism and continental growth, physical oceanography and methane hydrates (methanes locked in ice that can serve as a potential energy source) -- on research cruises in such far-flung places as Greenland, Iceland, Norway, Newfoundland, Alaska, Costa Rica and New Zealand. He also first developed seismic oceanography, considered a new type of research in the world of seismology.

Holbrook describes what he does as akin to "taking a CT scan of the Earth."

The AGU was established in 1919 by the National Research Council and, for more than 50 years, operated as an unincorporated affiliate of the National Academy of Sciences. AGU is now a nonprofit organization dedicated to the furtherance of the geophysical sciences through the individual efforts of its more than 50,000 members, and in cooperation with other national and international scientific organizations.

"AGU congratulates its 2012 class of Fellows. The Fellows program recognizes AGU members who have made exceptional contributions to their fields as evaluated by their peers and vetted by section and focus group committees," reads a statement on AGU's website about this year's Fellows. "To qualify for consideration, nominees must be responsible for a major breakthrough, discovery, or paradigm shift in one of the Earth and space sciences."

"It's a great source of pride for UW to have faculty members of Professor Holbrook's caliber," says Myron Allen, UW's provost and vice president for academic affairs. "To



**Steven Holbrook, a UW professor of geophysics, stands aboard the research vessel Marcus G. Langseth, which is owned by the National Science Foundation. Holbrook served as chief scientist during a 2008 research expedition in the Pacific Ocean, off Costa Rica. The research focused on studying the composition of the crust under the Costa Rican subduction zone, where the Cocos tectonic plate is diving under the Caribbean plate.**

his Wyoming colleagues—and to the many students he has taught—this honor seems overdue. But, in fact, he's one of the youngest of this year's honorees... To be nominated and selected as an AGU Fellow recognizes the wide influence of one's work on this enormous community of scientists."

"I have received a lot of support from UW and from many post-docs and students over the past 15 years," Holbrook says. "That support has contributed directly to this award."

A black-tie ceremony will honor the new Fellows at the AGU meeting, scheduled during December, in San Francisco. Holbrook, who will receive a certificate and plaque, says he plans to attend. ❖

### *Sims Featured on National Geographic "Explorers" Site*

**Kenneth Sims** is now in the esteemed company of Titanic discoverer Robert Ballard and famed primatologist Jane Goodall.

He is one of approximately 200 National Geographic grantees (out of thousands) chosen to be featured on the National Geographic "Explorers" site. His interview can be found at <http://www.nationalgeographic.com/explorers/bios/kenneth-sims/>.

"You always appreciate being recognized," says Sims, an associate professor in the University of Wyoming Department





During a 2006 research expedition, Ken Sims, a UW associate professor of geology and geophysics, throws a rope over the edge of Masaya volcano in Nicaragua. (John Catto/Alpenglow Pictures)

of Geology and Geophysics. “This recognition is a nice thing from National Geographic.”

“He and his work were selected because his research is considered particularly interesting and emblematic of National Geographic grants,” says Barbara Moffet, senior director of communications for National Geographic.

Sims surmised that this honor stemmed, in part, from his research last year at Nyiragongo, a 2-mile-high volcano over the eastern edge of the Democratic Republic of the Congo—a trip that was largely financed by National Geographic.

Sims said his exploratory nature began almost from the crib. To stop Sims from climbing out when he was 3, his mother told him that he learned to climb in a chicken wire outdoor playpen that was “a cage with a top.” As he grew older, Sims hiked and climbed mountains with his father. Eventually, Sims became a professional mountain guide, leading clients up Mt. McKinley, as well as the mountains of South America and Antarctica.

In addition to adventuring miles above the Earth, Sims has viewed the cold, briny depths of the ocean floor and the world’s largest volcanic lava lakes (1,100 degrees Celsius) from only a few feet away.

Sims says there is a symbiosis to his physical adventures in the field and his teaching and research.

“It’s getting unique samples. I’m getting samples that most geologists cannot access,” he says. “Every time I’ve gone to a field area, I’ve produced a paper. The field work and adventure is really cool. But I haven’t met a good scientist who can’t sit down and write a good paper. You have to follow up on the field work.”

Sims’ next adventure?

“I am constantly heading up to Yellowstone, studying the water-rock-volcanic interactions into the caldera there,” he

says. “I’ll be flying into the Wind Rivers via helicopter May 1 to get the first snow melt and study how waters move under alpine glaciers. I have recently been funded to study alkaline volcanism in Antarctica and will be heading down there next fall to collect samples from Ross Island and Erebus volcano.”

Sims also was featured in the October edition of National Geographic Explorer (student magazine). For that interview, go to <http://magma.nationalgeographic.com/ngexplorer/pioneer/1109/articles/mainarticle.html>. A National Geographic story about Sims’ Nyiragongo expedition appeared in the spring 2011 UWyo Magazine. ❖

## UW Plans Geological Museum Improvements

**P**lans to revitalize the University of Wyoming Geological Museum are moving forward with the selection of an architectural firm to design improvements to the 56-year-old facility.

Work is slated to take place this summer in the first phase of renovation aimed at making the museum a focal point for student and faculty research, while giving the public an appreciation of Wyoming’s geologic history and mineral resources.

The architectural and engineering firm of Malone Belton Abel P.C., of Sheridan, was selected to conduct a detailed analysis of the museum and work with UW planners to develop a schematic design for the improvements.

“The group working on the project has developed all sorts of wonderful new ways that the museum will involve and educate the public, and these improvements are the first step toward meeting those objectives,” says **Carol Frost**, UW’s vice president for special projects and a longtime faculty member in the Department of Geology and Geophysics.

Due to state budget cuts, the museum closed briefly in the summer of 2009, drawing attention from the museum’s fans around the world. When the museum reopened in August 2009, it was with the help of private funds from the UW Foundation. Shortly after that, noted UW supporters Brainerd “Nip” and Anne Mears donated \$570,000 to support the museum. Matched by state funds, the endowment now totals \$1.14 million.

A second fund, in memory of noted geologist S.H. Knight, was created later in 2009. With state matching dollars, it has reached \$250,000, joining with the Mears’ endowment to generate operating money for the museum.

Meanwhile, the UW president’s office has allocated \$500,000 in one-time money for museum upgrades. Adding that to \$200,000 generated by the Mears’ endowment, the university has \$700,000 to spend for the first phase of the project.

The work is expected to include possible removal of asbestos in the museum’s floor tiles; modernizing the building’s

mechanical, electrical, lighting and fire protection systems; upgrading of technology; updating and reinstalling existing exhibits, including new signs; and designing and installing some new exhibits.

“From the time the museum was closed, we’ve come an enormously long way,” says **Art Snoke**, professor and former Geology and Geophysics Department head who has led a task force charged with reinventing the museum. “We’ll make a gigantic step forward this summer. It should provide a springboard for further fundraising to help the museum reach its full potential.”

The roots of the Geological Museum reach back to 1887, the year UW opened. It was a small natural history museum that consisted of the personal collection of J.D. Conley, a professor who taught a range of courses, including geology, astronomy, physics, commercial arithmetic and bookkeeping.

As UW grew and expanded, so did the museum, its collections and displays. Wilbur Knight, hired in 1893 as a professor of mining and geology, succeeded Conley as curator. Eventually, the collection outgrew its home in the Hall of Language (now Old Main), and most of it found a new one in a wing of the Mechanical Building. When the Hall of Science was completed in 1902, the museum moved there. It stayed there until 1956, when the current structure was built on the east wing of what is now the S.H. Knight Geology Building.

By that time, Knight’s son, Samuel Howell Knight, had worked at the university for more than four decades. In that time, he had developed the UW Geology Department into one of the nation’s best. Knight designed the terra cotta bas-relief Stegosaurus and Triceratops panels at the front of the museum; built the copper Tyrannosaurus Rex that guards the museum’s entrance; and even painted several of the displays inside the museum. He also was responsible for the initial mounting of the Apatosaurus skeleton that is the museum’s centerpiece.

**Kelli Trujillo**, the museum’s current part-time manager, says the project planners intend to maintain some of the museum’s endearing features—“preserving Sam Knight’s museum,” as she says—while modernizing the infrastructure and “telling the scientific story as accurately as we can.”

For example, she anticipates that while the Apatosaurus will stay in the center island—along with the skeleton of “Big Al” the Allosaurus—other fossils now in the island, but not from the Jurassic period, will be moved elsewhere in the museum. The center island then could be enhanced with topographical features and plants to represent the “Jurassic world.”

Along those lines, museum planners would like to organize exhibits according to geological time to enhance the “informal science learning” that takes place in the museum, says **Mark Clementz**, associate professor in the Department of Geology



**Children from the UW Early Care and Education Center are among the young people who regularly visit the UW Geological Museum. The museum is slated to undergo significant upgrades later this year. (UW Photo)**

and Geophysics who’s in charge of the Department’s scientific collections. Additionally, there are plans to rotate some displays in the museum to feature UW’s extensive collection of vertebrate and invertebrate fossils, along with rocks and minerals.

“What’s on display in the museum now is the tip of the iceberg of what we have,” says Clementz, who himself is working on a National Science Foundation (NSF)-funded exhibit about whale evolution.

There also are plans to develop more hands-on exhibits to make museum visits an even more meaningful experience for children—who made up a good share of the museum’s 13,000 visitors between Aug. 1, 2010, and July 30, 2011.

But the museum changes aren’t only aimed at visitors. Plans call for the facility to become a center for teaching and research, with connections not just to the Department of Geology and Geophysics but to entities across campus.

Planning for the Geological Museum was aided by an outside assessment and self-study conducted through the Museum Assessment Program of the American Association of Museums.

The museum currently has no full-time staff and relies on a work-study student and two graduate students to be open to the public 34 hours a week. The hope is to eventually have several

full-time staff members to help the facility realize its potential. However, that will depend upon further financial contributions.

"We're excited about the renovations that will take place, but it's just a start," Snoko says. ❖

## Online Ordering and Subscriptions to Rocky Mountain Geology Available on New Geobookstore Website

Academic geoscience researchers, professional geologists, students, and individuals interested in geology of the Rocky Mountains now can order published issues of the peer-reviewed scientific journal *Rocky Mountain Geology* (RMG) online at the newly launched Website, geobookstore.uwyo.edu. Online subscriptions to the journal also are available.

"We accept credit and debit cards (Visa & MasterCard) as methods of payment, and it is now easier than ever for individuals and institutions to subscribe to the journal," says Managing Editor **Brendon Orr**. "Customers also can browse through archives of RMG and its predecessor (*Contributions to Geology*) and securely complete their orders online."

Individual article downloads for all issues continue to be available at RMG's portal on GeoScienceWorld at [rmg.geoscienceworld.org](http://rmg.geoscienceworld.org). ❖



Customers can order back issues and subscribe to *Rocky Mountain Geology* entirely online at [geobookstore.uwyo.edu](http://geobookstore.uwyo.edu).

## Faculty News

Distinguished Emeritus Professor **Leon Emry Borgman** (1928–2007) recently received a posthumous UW College of Arts and Sciences *Outstanding Former Faculty Award*.

In April, Research Professor **Kevin Chamberlain** gave an invited talk at Winona St. University, Minn. titled, "Tectonic history of the Archean Wyoming Province with implications for supercontinent reconstruction and mineral exploration."

Associate Professor **Ken Dueker**, along with graduate student Steve Hansen (PhD), recently had an article published in *Earth and Planetary Science Letters* titled, "Hot mantle upwelling across the 660 beneath Yellowstone."

Professor **Carrick Eggleston** was recently awarded \$140,776 for his NSF proposal titled, "Natural Solar Cells and their Geochemical Implications."

In March, Professor and UW Vice President of Special Projects **Carol Frost** gave an invited talk on the petrogenesis of ferroan granites at the Istanbul Technical University Department of Geological Engineering in Turkey.

In February, Professor **Steve Holbrook** gave invited talks at Texas Tech University and Utah State University titled, "Arcs, Continents, and the Andesite Paradox," in addition to also giving a talk at the AGU Ocean Sciences meeting titled, "Imaging the generation sites and internal structure of large non-linear internal waves across the Luzon Passage and South China Sea."

In March, Holbrook also gave invited talks at Marshall University, Virginia Tech, and the University of Wisconsin, titled, "The Subduction Sponge: Mantle Serpentinization in the Downgoing Plate."

Holbrook also co-convoked a special session at the AGU Ocean Sciences in Salt Lake City, Utah titled, "Imaging The Ocean Interior: From Seismics To Optics."

Assistant Professor **Brandon McElroy** recently had an article published in the journal *Ecology* titled, "Optimum swimming pathways of fish spawning migrations in rivers."

Associate Professor **Bryan Shuman** recently had two articles published in the journals *Climate Change* and *Ecological Monographs* respectively titled, "Recent Wyoming temperature trends, their drivers, and impacts in a 14,000-year context" and "Resilience and regime change in a southern Rocky Mountain ecosystem during the past 17,000 years."

Associate Professor **Kenneth W. W. Sims** was recently named the 2012 Padapopoulos Fellow at Kincaid School in Houston, Texas. Other past fellows include Jane Goodall, Mark Kline, Michael Gazzaniga, and Scott Dulchavsky. More information about Sims' visit is available at, [http://www.kinkaid.org/cf\\_news/view.cfm?newsid=653](http://www.kinkaid.org/cf_news/view.cfm?newsid=653).

The James N. Papadopoulos Fellowship was established in 2000, funded by an endowment created by Dr. and Mrs. C. N. Papadopoulos. The program invites experts in the life sciences to campus to conduct a significant interchange with students about cutting-edge research and the implications it has for life today. It also addresses important biological/ethical issues for



## DEPARTMENT NEWS CONTINUED

the future. The fellow is invited to give a presentation during an upper school assembly and to interact in smaller, break-out sessions with select students who show interest in the fields of science and research.

This semester, Sims was also a featured speaker at the Boston Museum of Science for the museum's Pompeii exhibit giving a talk titled, "Volcanos on the Verge." Video of the talk is available at, <http://www.youtube.com/watch?v=t4BA7GKtpBU>.

In addition, Sims gave talks at Harvard University, Colorado State University, Elliot Person Kindergarten in Boston, Mass., and also the Cathedral Home for Children in Laramie, Wyo.

Sims also recently had an article published in the journal *Geochimica et Cosmochimica Acta* titled, "Halogens and trace metal emissions from the ongoing 2008 summit eruption of Kilauea volcano, Hawai'i."

**P**rofessor **Art Snoke** was recently awarded the UW College of Arts and Sciences Exemplary Faculty Award for 2012.

Funded by an anonymous donor, the award recognizes a senior faculty member who serves as a role model. Recipients not only perform well in fulfilling teaching and research obligations, but also contribute to the College's welfare through service on committees and task forces and by taking the initiative to solve problems. Special mention was made of Snoke's role in initiating the remodel of the Geological Museum.

**A**ssistant Professor **Ye Zhang** recently had two articles published in the *AAPG Bulletin* and the *Journal of Hazardous, Toxic, and Radioactive Waste* respectively titled, "Geologic Modeling and Fluid-Flow Simulation of Acid Gas Disposal in Western Wyoming" and "Acid Gas Storage in a Deep Saline Aquifer: A Numerical Sensitivity Study on Parameter and Model Uncertainty."

In May, Zhang also gave an invited talk at the 4<sup>th</sup> International Conference on Porous Media at Purdue University, Indiana, titled, "Optimal Complexity in Subsurface Modeling: Insights Gained and Ongoing Research." ❖

### Student News

**U**ndergraduate senior **Rachel Bain** (Glendale, Wisc.) was recently elected into the Phi Beta Kappa (PBK) Society.

The PBK is the oldest and most prestigious honorary academic society in the United States. Only about 10 percent of the nation's institutions of higher learning have Phi Beta Kappa chapters and only about 10 percent of the arts and sciences graduates of these distinguished institutions are selected for Phi Beta Kappa membership.

The ideal Phi Beta Kappa has demonstrated intellectual integrity, tolerance for other views, and a broad range of academic interests. Each year, about one college senior in a hundred, nationwide, is invited to join PBK.

Rachel was also selected as a University of Wyoming (UW) College of Arts and Sciences Outstanding Graduate for 2012. The award is given to graduating students in recognition of their exceptional academic achievements and scholarship.

After starting college as a math major at a private college in Illinois, Rachel switched gears after completing her freshman year and transferred to UW.

"I decided to major in geology after I took Physical geology to meet a general education requirement and basically fell in love with the subject," says Rachel. "I wanted to find a university with a strong geology program coupled with adequate financial aid resources and after narrowing my decision down to University of Wisconsin-Madison or UW and visiting both institutions, I was extremely impressed by UW. After being here for nearly three years, I can say that it was one of the best decisions I have ever made."

As she approaches graduation, Rachel reflects on her time at UW and shares that she has genuinely enjoyed every geology class she has taken and has learned a lot from the professors at the Department.

"I think the highlight of being a geology major at UW is having lots of interesting geology nearby and being able to go out on class field trips to learn about it," explains Rachel. "Initially, I was not a big fan of field trips, but after comparing UW to other universities, it has struck me what an incredible opportunity we have here and how much I have learned as a result."

**G**raduate student **Jesse Hahm** (MS) was recently awarded a competitive Goldschmidt Travel Grant to support his attendance at the 22<sup>nd</sup> V.M. Goldschmidt Conference in Montréal in June. Jesse will be giving an oral presentation at the conference titled, "Exploring the effects of bedrock nutrient density on life and topography in the Sierra Nevada Batholith, California," will feature results from his research on landscape evolution at the Southern Sierra Nevada Critical Zone Observatory. Jesse is advised by Assistant Professor **Cliff Riebe**.

**G**raduate students **Jorden Hayes** (PhD) and **Jeremiah Marsicek** (PhD) each recently received 20,000 Wyoming NASA Space Grant Graduate Research Fellowships for their research projects respectively titled, "Water storage and weathering in southern Sierra critical zone from seismic waveform tomography" and "Examining past abrupt climate changes: a long-term context for understanding current and future climate trends." Hayes' project is co-advised by Professor **Steve Holbrook** and Assistant Professor **Cliff Riebe** and Marsicek's project is advised by Associate Professor **Bryan Shuman**.

**T**his summer, Graduate student **Ye Li** (PhD) will work as a research intern for Chevron in Houston, Texas. Ye will be working on the Hydrocarbon Charge team studying the relationship between the kinetics of hydrocarbon generation used in mathematical models and the pressure-temperature-volume relationships of natural accumulations in the Congo Basin. Ye is advised by Assistant Professor **Ye Zhang**.

**G**raduate student **Claire Lukens** (PhD) was recently awarded a Geological Society of America (GSA) research grant for her research proposal titled, "Process from Provenance: Sediment origins and grain size evolution in steep mountain catchments." Claire is advised by Assistant Professor **Cliff Riebe**.

**I**n April, graduate student **Guang Yang** (MS) presented a poster at the 10<sup>th</sup> Annual Conference on Carbon Capture, Utilization and Sequestration in Pittsburgh, Penn., titled, "Uncertainty Analysis of Carbon Sequestration in an Inclined Deep Saline Aquifer." ♦

## ALUMNI NEWS

**A**lumnus **James (Jim) A. Barlow, Jr.** (MA 1950; PhD 1953, Honorary Doctorate 1988) continues to work as a geologist as he gradually retires. His son and daughter and four grandkids currently live in Jackson, Wyo. Barlow shares that, "Wyoming is well-endowed geologically with oil enhanced recovery, natural gas potential to gasoline, coal potential to gasoline—all forms of technology which can contribute to Wyoming's strong present and future financial place in all 50 states."

**A**lumna **Beverly A. Blakeney DeJarnett** (BS with Honor 1983) was recently elected Research Councilor of the Society for Sedimentary Geology (SEPM).

After receiving her BS in Geology from UW, Beverly went on to earn her Master's degree from Pennsylvania State University in 1986. She began her career as a geologist with Champlin Petroleum (later Union Pacific Resources) and worked in both their Denver and Fort Worth offices. Beverly ultimately formed BBD Consulting in 1992 and since then has provided both regional and field-scale stratigraphic analyses of clastic systems for clients throughout the US. In addition to her consulting, Blakeney works part-time for the Bureau of Economic Geology (BEG), the University of Texas at Austin, as a research scientist in BEG's Houston Research Center. Blakeney has published numerous articles and has received awards for her presentations at national meetings. Her research interests include studying the effects of variable accommodation on stratigraphic packages, and integrating ichnology into sequence stratigraphic interpretations. She is currently completing her PhD from the University of Alberta at Edmonton and her research centers around an integrated

study of the ichnology and stratigraphy of selected transgressive sequence sets in the Cretaceous Western Interior Seaway.

**A**lumnus **Michael Hager** (PhD 1973) was recently honored at the UW College of Arts and Sciences Awards Banquet where he received an *Outstanding Alumnus Award*. Michael is currently the Director of the San Diego Museum of Natural History.

**A**lumnus **Bob Marron** (non-grad) is currently self-employed as a consulting geologist in Sheridan, Wyo. where he has been working for RL Energy and Pamont Gold in Mexico for the past 15 years.

In 2008, Bob received the Entrepreneur of the Year award from the Wyoming Business Report and the Central High Plains Energizer award.

**A**lumnus **James C. Miller** (PhD student, non-grad) passed away on January 9<sup>th</sup>. Jim finished his coursework in 1994 and continued his dissertation work on geoarchaeology despite his health problems.

**A**lumna **Lesley (Cunningham) Urasky** (BS 1990; MS 1993) is currently working as a high school science teacher in Rawlins, Wyo.

Lesley recently spent seven weeks in Antarctica during the 2010–2011 austral summer as a PolarTREC teacher. She accompanied John Stone from the University of Washington and Brenda Hall from the University of Maine's Climate Change Institute. They collected rock samples at three remote, helicopter-supported locations along the Beardmore Glacier in the Transantarctic Mountains.

The research goal of the expedition was to use surface exposure dating to help constrain the timing of retreat of the Beardmore during/since the Last Glacial Maximum (LGM). While there, Lesley submitted online journal entries and maintained a photo album allowing students worldwide to follow her expedition at, [www.polar trec.com/expeditions/glacial-history-in-antarctica](http://www.polar trec.com/expeditions/glacial-history-in-antarctica).

Upon her return, she published an article about her experience titled, "PolarTREC: To Antarctica in the Name of Research and Teaching," in the October, 2011 issue of the National Association of Geoscience Teachers journal *In The Trenches*.

Last November, Lesley was also chosen as the Wyoming Geological Association's Earth Science Teacher of the Year for 2011. ♦

### Gathering news!

We always enjoy hearing from our alumni! Please let us know where you are and who you've become!



You can e-mail updates to [ggeditor@uwyo.edu](mailto:ggeditor@uwyo.edu)



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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.



Graduate student Brady Foreman (PhD), studying how rivers in NW Wyoming and western Colorado responded to an abrupt global warming event 55 million years ago. In geology lab with Professor and advisor Paul Heller.