

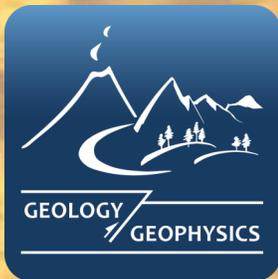


2017

PROFILE

FROM OUR DEPARTMENT HEAD

INSIDE



- ◇ Awards
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- ◇ Students
- ◇ Traditions



**Department Head
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The fall semester is drawing to a close, but life in the department has been very busy. There are many positive developments that I would like to share with you!

The Provost of the University, Dr. Kate Miller, is a geophysicist with an academic appointment in Geology and Geophysics, and was able to find the time to join the Rocky Mountain Field Trip at the start of the fall semester. The trip was a huge success by all accounts, with 16 grad students (10 new), 7 faculty members, and 2 Alumni (Johanna and Eric Wells) attending. The trip was co-led by John Kaszuba, Laura Vietti, Ron Frost, Neil Humphrey, and Mr. John Heberger Jr. of Jackson, Wyoming, and was sponsored by ConocoPhillips. The RMFT is an increasingly prominent highlight of the start of each fall semester, and thanks to all involved!

Faculty are busy teaching all kinds of courses at different levels, but I want to especially recognize Barbara John and Janet Dewey for their leadership in two field-based courses in the first part of the semester. Field-based teaching is key to our degree programs, and takes far more planning and contact-time that does staying in the classroom. It's a job deserving of special recognition!

The department is currently operating at a relative low point in total faculty numbers as a result of retirements, the tragedy of Prof. Paul Heller's passing, and departures over the last 3 years. It has certainly been a somewhat difficult time, but we have nevertheless maintained our courses and teaching, and have been able to maintain our research funding levels despite having fewer faculty. We are starting to recover, and nowhere is this recovery more evident than in opportunities to hire faculty.

As you may know, we hired Dr. Simone Runyon as a result of a search for an Economic Geologist in spring 2017. Dr. Runyon is presently completing a postdoctoral fellowship at the Carnegie Institute of Washington, and will join our department in August 2018.

In September we were given the go-ahead to hire in the area of Biogeochemistry as part of an EPSCoR project funded by the National Science Foundation. Our already strong ties with the life sciences, including faculty member Ellen Currano with a joint appointment in Botany and strong connections with the Berry Center, the Program in Ecology, and the School of Environment and Natural Resources, will be bolstered through this cooperative and interdisciplinary hiring opportunity.

Later this fall, we were also given the go-ahead to conduct a search in the area of Crustal Dynamics. The search committee has moved quickly so that we will be ready to interview early in the winter after classes start. I am deeply thankful for the work of both search committees in the crucial task of selecting candidates that will be the future of this department. We certainly anticipate that our growth will continue in future years, and the faculty will be making decisions over the next 6 months about the future of our field in order to arrive at strategic decisions about future hiring. We welcome any thoughts that you the Alumni have on this subject.

We are finalizing a department strategic plan (with special thanks to faculty member Andy Parsekian), as part of university strategic planning, and are working toward an external review of the department. This is at least a decade overdue – our last external review took place in 1997! Our goal is to do the information gathering, synthesis and self-analysis required for the long-term growth of a department strategically poised for the future.

The generosity of donors in particular has been crucial to our ability to maintain high quality programs and field education experiences for our students, and I am deeply grateful to all of you for your support. The fact is that as we enter what many are calling “the new normal”, your generosity helps insulate us from the worst of the financial crisis and will continue to do so for the foreseeable future. I am very happy to report that donations have been so tremendous this year that we will be able to do things in the coming few years that we have not been able to do before, from enhanced graduate student support to the possibility of an endowed chair. THANK YOU on behalf of the entire department and our students!!

If you have any questions, please do not hesitate to contact me at carrick@uwyo.edu.

Sincerely,
Carrick Eggleston
Professor and Head
Department of Geology and Geophysics
University of Wyoming



UW

UNIVERSITY OF WYOMING
Department of Geology and Geophysics

MATHEMATICAL GEOSCIENCES — BEST PAPER AWARD 2015

Dario Grana is an assistant professor in the Department of Geology and Geophysics at the University of Wyoming. He received an MS in Mathematics at University of Pavia (Italy) in 2005, an MS in Applied



Mathematics at University of Milano Bicocca (Italy) in 2006, and a Ph.D. in Geophysics at Stanford University in 2013. He worked for four years at Eni Exploration and Production in Milan, and joined the University of Wyoming in 2013. He is coauthor of the book *Seismic Reflections of Rock Properties*, published by Cambridge University Press in 2014. He is also the recipient of the 2017 EAGE Van Weelden Award, the 2016 SEG Karcher Award, and the

2014 Eni Award for New Frontiers of Hydrocarbons, together with Tapan Mukerji, Gary Mavko, and Jack Dvorkin (Stanford University). His main research interests include rock physics, seismic reservoir characterization, geostatistics, data-assimilation and inverse problems for subsurface modeling.

The awarded paper focuses on statistical methods for the classification of geologic facies based on petrophysical and geophysical log measurements in the borehole. Log-facies classification allows estimating the profile of facies at the well location and determining the correlation between facies and rock and fluid properties in the reservoir. Generally, the algorithms commonly applied in facies classification studies do not account for the spatial correlation of the facies and each sample is classified independently. In the proposed method, the classification is based on a hidden Markov model, where the spatial distribution of the facies is expressed through a transition probability matrix that describes the probability of

transitions from one facies to another one. Because the parameters of the hidden Markov model, such as the transition probabilities and facies proportions, are generally unknown, the authors propose to estimate the unknown parameters using the Expectation–Maximization algorithm, rather than choosing the parameters a priori. The methodology is demonstrated in a clastic reservoir in the North Sea with four litho-fluid facies and in an unconventional reservoir in the Marcellus shale formation with four lithological facies. The method validation includes a sensitivity analysis and a comparison to other statistical methods to prove the ability of the proposed method of inferring the model parameters from the measured data and predicting geologically consistent facies profiles and show the added value of the spatial correlation model. ▶

THE MAKING OF A YOUNG AWARD WINNER

In 2017, **Dario Grana** received the EAGE A. van Weelden Award. He recently received the Best Paper Award in Mathematical Geosciences for 2015 and has been recognized as one of the six Rock Physics Influences for 2018 by IARP.

Each year EAGE's Arie van Weelden Award is presented to a young professional who has made a highly significant contribution to one or more of the disciplines in our Association. Dario Grana, an assistant professor at the University of Wyoming was this year's recipient. ▶



L-R: Jean-Jacques Bêteau, Dario Grana and Chris Ward
at Awards Ceremony in Paris

Ph.D. CANDIDATE RESEARCHES EFFECTS OF FRACKING



A topic of significant discussion in society and politics over the past few years is hydraulic fracturing, also known as fracking. This is the practice of using highly pressurized water for the purpose of fracturing subsurface rocks to get easier access to the fluids within the rock at incredibly fast rates. Using his research award from the Department of Energy's

Office of Science Graduate Student Research Program, University of Wyoming Ph.D. candidate **Ryan James Herz-Thyhsen**, seeks to shed a little bit of light on the subject not just for industrial professionals, but for politicians and the general public.

Herz-Thyhsen's scientific research specifically pertains to the interaction between the water that is initially injected during the process of hydraulic fracturing and the rocks containing hydrocarbon in the subsurface of the Earth.

Herz-Thyhsen wants to research how the water and the hydrocarbons move in the subsurface. By researching the movement, Herz-Thyhsen hopes to understand the storage space changes in the rock, such as possible differences in the rocks' pore sizes.

"Answering questions concerning fluid movement allows us to better understand what happens to the injected water, and how to optimize hydrocarbon recovery from the target formations," Herz-Thyhsen said.

Answering these questions is a priority for Herz-Thyhsen, thanks to what was happening near his home when he was only an undergrad. Being from Pennsylvania, he was always in close proximity to the Appalachian Mountain Range, where he would hike and bike often during the summer. While he was working on his bachelor's degree in geology, the Marcellus Shale that was quite abundant in Pennsylvania was a subject of national contention. Since natural gas is produced from the Marcellus Shale only by the process of hydraulic fracturing, Pennsylvania was at the center of public and political debate.

"It occurred to me that hydraulic fracturing was, in part, such a divisive issue because nobody could answer about the details of important questions concerning hydraulic fracturing. That realization has motivated me to conduct scientific research that can help us begin to answer question concerning the fate and transport of water and hydrocarbons in the subsurface," Herz-Thyhsen said.

Herz-Thyhsen will have plenty of resources to use that the award covers. From the end of October to the beginning of February, he will be conducting research on hydraulic fracturing in the Oak Ridge National Laboratory in Knoxville, Tennessee. From the various techniques needed to examine the pores inside the rocks, to having the support of some of the best scientists and scientific tools, Herz-Thyhsen will be more than prepared to do his research effectively. "I will be able to interact with top scientists that will provide guidance and insight into my research," Herz-Thyhsen said.

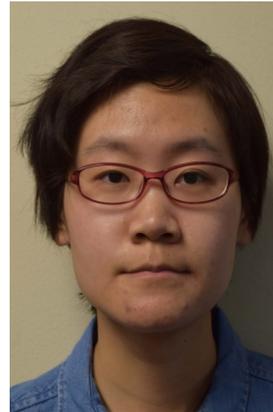
According to Herz-Thyhsen, hydraulic fracturing is not only an easy way to have access to natural gases but is also an important subject for the entire future of global energy.

"This technology combined with horizontal drilling has spurred a paradigm shift in the energy sector that has altered the global energy landscape, and we don't really understand the details," Herz-Thyhsen said.

Herz-Thyhsen has a decent idea of what he wants the future to hold for him and his research. The topic of hydraulic fracturing is so contentious, he wants to help communicate his current and future research to not only industrial professionals, but also to politicians and to the general public.

"I aim to solve societally relevant problems, contentious problems and serve as a liaison between academic and industrial professionals. I will also inform the public of complex and contentious problems, including social problems that induce tension between the individual public and industrial spheres," Herz-Thyhsen said.▲

GRANT AWARD RECIPIENTS



Lingxiao Jia,
University of Wyoming



Anthony Moraes,
University of Wyoming

Tulsa, OK, 7 August 2017 – The SEG/ExxonMobil Student Education Program (SEP) is a short course preceding the SEG Annual Meeting that prepares college students for the challenges of an oil industry career. The program includes two days of lectures and exercises directly related to geoscience/geophysical work performed in the oil industry. ExxonMobil provides course materials, team exercises, and networking opportunities. The awarded travel grants cover travel expenses, lodging, and registration fees to the SEG/ExxonMobil Student Education Program for 22-24th and the SEG Annual Meeting taking place 24-27 September 2017 in Houston, TX, USA.

Forty university students from around the world were awarded the SEP travel grant to attend the SEG/ExxonMobil Student Education Program in Houston, Texas. Competition for the travel grant is highly competitive. Applications were received and evaluated based on the students' academic performance, essays, previous published work, and recommendations.

After attending the course, students will enjoy the rest of the week exploring all the venues of the International Exposition and Annual Meeting and end with a commencement ceremony to receive their prestigious award. SEG congratulates this year's Student Education Program awardees.▲

MADI WEWER RECEIVES NSF GRADUATE RESEARCH FELLOWSHIP

Madeline Wewer, who has just joined us as a new graduate student, was one of four University of Wyoming students to receive National Science Foundation (NSF) Graduate Research Fellowships this past summer.

Madi recently graduated from Southern Methodist University with her bachelor's degree in geophysics. Wewer, from Marietta, Ga., will begin her master's program in marine geology and geophysics at UW this fall.



'In a nutshell, I will be part of a team exploring the sea floor and will work on understanding the tectonics and faulting at the Gakkel Ridge — the world's slowest spreading ridge beneath the Arctic Ocean,' she says. Michael Cheadle and Barbara John, UW Professors in the Department of Geology & Geophysics, are Wewer's advisers.

The NSF Graduate Research Fellowship is one of the nation's most highly competitive awards for graduate studies.▲

ECUADOR IS A LAND OF VOLCANOES — BY KEN SIMS

Ecuador is a land of volcanoes. In an area of just 283,651 km² (similar in size to the State of Nevada) there are 43 volcanoes (28 volcanoes on the mainland with an additional 15 in the Galapagos Islands). Twenty-three of these volcanoes are active and erupted in the past millennia; 8 erupted multiple times in the 21st century and 4 of those volcanoes on the mainland (Cotopaxi, Reventador, Sangay, Tungurahua) have erupted this year and another (Cayambe) shows early signs of unrest.

Ecuadorian volcanoes on the mainland are large, high-altitude (5 to 6 thousand meters above sea level), steep-sided, symmetric stratovolcanoes that are often glaciated and stand majestically, yet loom ominously, over the fertile agricultural valleys below. Their omniscience is woven into the very fabric of Ecuador's prehistoric and historic cultures. They are known as benevolent "givers" (Sangay) and volatile "exploders" (Reventador). The accounts of their destructive effects are well documented since colonial times.

Because of their imminent threat to Ecuador's major population centers (e.g. Quito, Riobamba) and agricultural valleys, forecasting mainland volcanism is critical to Ecuador's state of health.

Over the past 10 years, with funding from the National Science Foundation and the National Geographic Society, my research in Ecuador has focused on "boots on the ground" geological fieldwork coupled with state of the art geochemical measurements to determine explicitly both the timing of past volcanic eruptions and the timescales of the magmatic processes that culminate in these eruptions. These



temporal constraints are critical to better models of volcanic hazard modeling, both in Ecuador and throughout the world, as the past is the key to the future.

Having been at UW for seven years and thus eligible for sabbatical leave, and having worked in the welcoming culture of Ecuador twice before with my family, I applied for and received funding to be a US Fulbright Scholar. During this sabbatical I was hosted as a visiting professor by the Instituto Geofísico de Escuela Politécnica Nacional (IGEPN) in Quito, Ecuador, who by necessity have developed a world-class volcano and earthquake monitoring program.



Now back at home sitting by a warm fire on a winter Wyoming night, it is easy to reflect on what my sabbatical and the US Fulbright award meant to my family and me. As a scientist: I was able to spend six adventurous months conducting field work at high altitudes and in remote pristine locations; I was able to contribute to the education of Ecuadorian

students by presenting several seminar talks on volcanism and isotopes, and teaching a short course on Thermodynamics; and I greatly strengthened my collaborative relationships among my IGEPN colleagues, whose understanding of Ecuadorian volcanism and tectonics is unequalled. And as a father and husband, I watched my family: expand their horizons and learn humility as world citizens; study a new language; visit places I only got to imagine about as a kid; thrive in a new cultural setting; and, most importantly, grow yet closer together through our shared experience. What an amazing opportunity my UW sabbatical and the US Fulbright Scholar award afforded us. ▲

FACULTY HIGHLIGHT

WYOMING PBS TELEVISION DOCUMENTARY

UW Institutional Marketing is making a Wyoming PBS television documentary which will include a segment on **Ye Zhang's** research at Blair Wallis well field. The documentary is due to broadcast this Spring on Wyoming PBS. Ye Zhang has been invited to join the editorial board of the Journal of Hydrology as an Associate Editor. An invitation-only position, and this Journal is one of the best in the hydrology field. ▲



Associate Professor **Mike Cheadle**, of University of Wyoming—Geology & Geophysics, was recently voted **'Best Speaker for 2017'** by the Wyoming Geological Association in Casper, WY. Previous winners from the Department include **Neil Humphrey, Randi Martinsen, Paul Heller, Jim Steidtmann and Jim McClurg.** ▲



SEG AWARD

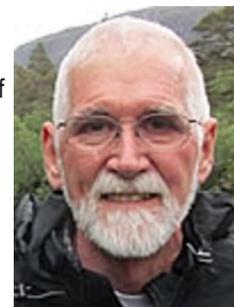
Scott Smithson (Emeritus Professor) was one of two recipients of the 2017 Society of Exploration Geophysicists (SEG) Outstanding Educator Award. Smithson's scientific contributions helped lead the University of Wyoming Department of Geology & Geophysics to distinction in geophysical imaging of the earth's continental crust, and his training of many very talented students and post-doctoral associates over his career has had a far-reaching impact in furthering science and industry exploration successes. Well done, Scott, you truly deserved this award. ▲



GSA AWARD

Art Snoke received the Geological Society of America (GSA) Structural Geology and Tectonics Career Contribution Award.

Snoke's award from the GSA goes to "an individual who throughout his/her career has made numerous distinguished contributions that have clearly advanced the science of structural geology or tectonics." The award was inaugurated in 1988 and previous winners of this award read like a 'Who's—Who' of the famous structural geologists: Rogers, Ramsey, Dalhstrom, Crowell, Burchfield, Ramberg, George & Greg Davis, Hamilton, Atwater to name but a few. We congratulate Art on this well deserved award. ▲



CONOCO-PHILLIPS ROCKY MOUNTAIN FALL FIELD TRIP



This year's Rocky Mountain Field Trip was a great success.

Photo by: Robert Kirkwood

ASK AND YOU SHALL RECEIVE

Dear UW Community. WOW! We have over 1000 eclipse glasses donated to the UW Geological Museum to pass along to the **Astronomers Without Borders**. Thank you! ▲



G&G graduate student, Tanner Waggoner showing kids Wyoming 'Moon Rocks'

WYOMING ROCKS! TO THE MOON AND BACK

Fall Outreach Event—Organized by UW Geological Museum and Wyoming State Geological Survey; contributions include Planetarium and UW Pedology Lab. ▲



Museum volunteer handing out scavenger hunt.



Museum Assistant guiding a virtual tour of the Moon

WILD SCIENCE FESTIVAL: JACKSON, WY

Over 300 Wyoming students, including schools from the Arapaho Tribe visited our display. ▲



UW Geological Museum

UW Geological Museum,
Roy J. Shelton Center for Quaternary Studies,
Wyoming Institute for Humanities Research (WIHR)

MICRO ECOS

BRANDON GELLIS + SHELBY SHADWELL



ARTIST RECEPTION
THURSDAY, OCT. 12 » 5 - 6:30 PM
REFRESHMENTS WILL BE PROVIDED

On display through Fall 2017



L-R: Scientist Thomas Minckley, Artist Shelby Shadwell and Artist Brandon Gellis



Micro Ecos Artists Reception: A Science Art Collaboration

UW Geological Museum Receives Grant to Digitize Wyoming's Rare Fossil Mammal Collection

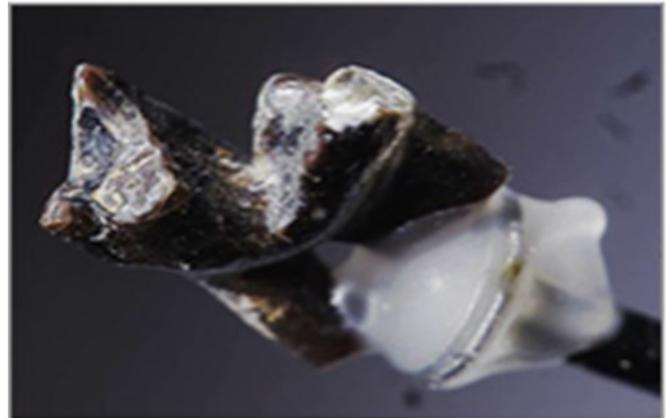
October 16, 2017

The University of Wyoming Geological Museum has only one-half of one percent of its fossils on display to the public. The other 99.5 percent are stored away, and very few, save some visiting researchers, rarely see these hidden treasures in any form. Thanks to a \$100,000 grant from the Institute of Museum and Library Services (IMLS), the museum will be able to make more of its rare fossil mammal collection available to researchers, schools and the public through digitization of roughly 5,000 items.

For example, people will be able to learn the difference between a *Condylarth* (a primitive hoofed ungulate) and a *Coryphodon* (an extinct combination of a pig, hippo and rhino). Fossils of early marsupials, horses and primates also will be part of the digital collection.

The two-year project is titled "The Cretaceous-Paleogene (K-PG) Fossil Mammal Project: Digitizing and Sharing Wyoming's Rare Fossil Mammal Collection for Understanding Mammal Extinction and Recovery through Ecosystem Collapse." The \$101,413 grant will support the creation of 15,000 research-quality images of 5,000 rare mammal specimens -- some as small as the head of a pin -- from the collection, which spans the Cretaceous-Paleogene mass extinction, the period shortly before and after dinosaurs disappeared. The images will be made globally accessible through both the museum's online database and the large data aggregator and web portal.

"A lot of these specimens are federally owned. A lot were found on BLM land," says **Laura Vietti**, UW Geological Museum and collections manager. "We're caretakers of these specimens. It's a



This is a close-up image of a 50-million-year-old mammal tooth under the microscope that will be used in the digitization of the UW Geological Museum's rare mammal fossil collection. A \$100,000 grant from the Institute of Museum and Library Services will support the creation of 15,000 research-quality images of 5,000 rare mammal specimens. (Laura Vietti Photo)

shame only 100 people, including students, a year get to look at them when they are owned by everybody. We only get about 10 visiting researchers a year, which is very small based on how good our collection is."

The 5,000 specimens to be digitized originate from 100 percent of sites in Wyoming, including the Big Horn Basin, Hanna Basin, the Great Divide Basin near Bridger and the Lance Formation, located near Lusk, Vietti says.

The total cost of the project will be \$221,271 when UW's \$119,858 cost share -- a combination of university, UW Foundation and state funds -- is included. Vietti will oversee project activities, which commenced Oct. 1. Her duties include selection of specimens for digitization; training students to use the Keyence imaging station; helping UW Libraries Digital Collections Office integrate and transfer images onto online portals; and helping the director of the Wyoming State Science Fair generate promotional materials and help facilitate high school science fair research projects using the digitized fossil collections.

“Wyoming has one of the best fossil records that spans before and after the K-PG extinction,” Vietti says. “We have something from just about every time period.”

“We have mammal fossils from both sides of the meteor event” that wiped out the dinosaurs, says Chad Hutchens, director of the UW Libraries Digital Collections Office.

Hutchens will coordinate with Information Technology and the Advanced Research Computing Center to secure web-accessible and preservation-level storage of all specimen images and associated metadata. He also will supervise an undergraduate student who will handle file management, file transfer, metadata entry and quality assurance.

With the use of a digital microscope and the Keyence imaging station, multiple photos can be taken of each part of a fossil -- even a tooth the size of the head of a pin -- through a technique known as “focal stacking.”

The digital microscope can take one image in focus and then another in focus,” Hutchens explains. “It stacks the photos into one image that is all in focus.”

With these clear images, Vietti says a mammal can be identified by its tooth. Additionally, a tooth can provide clues to that animal’s diet; the actual size of the animal; and even the last meal it ate, she says.

“We are looking at a pool of mammals that came before the mammals we know today,” Vietti says. “Most mammals we know in Wyoming evolved from ancestors of these.”

Erin Stoesz, the Wyoming State Science Fair coordinator, will introduce and promote the digitized rare mammal fossil collection for use in science fair research projects, particularly at the high school level.

Mark Clementz, director and curator of the UW Geological Museum, will assist in specimen selection; will aid Vietti and Stoesz in generating outreach material; and will work with high school students on science fair projects using the digitized K-PG fossil mammal collection.

Two UW graduate assistants and two undergraduate students will assist with project activities. To ensure long-term preservation, the images and specimen records will be archived on UW servers. The museum will collaborate with Wyoming high school educators and students to use the digitized fossil mammal collection images in classroom activities and Wyoming State Science Fair research projects, further enhancing educational use of the collections.

The IMLS received 558 applications with requests for \$104.5 million. Of those, 132 projects were selected, with funding of nearly \$19.2 million. Since she became museum manager three years ago, Vietti says this project has been a personal interest of hers.

“This is a digital way to open our collection doors to Wyoming, the country and the world,” Vietti says. “People won’t have to physically loan these specimens. We won’t have to send them across the world.” ▲

NATURAL TRAP CAVE - NORTH CENTRAL, WY



G&G Masters student Nathaniel Applegate showing off a fossil fish he excavated on a UW Geological Museum field trip to learn about the Green River Formation near Kemmerer, WY.



UW Geological Museum and Collections Manager Laura Vietti at the base of Natural Trap Cave. The Cave entry and exit require belaying down and climbing up an 80ft drop on rope.



UW Geological Museum and Collections Manager Laura Vietti showing off a Pleistocene bison vertebra at the site of its collection in the Natural Trap Cave, North-Central WY.



The University of Wyoming research team at the top of Natural Trap Cave. (L-R: Thomas Minkley, Laura Vietti, Brandon Gellis, Tyler Kerr and Linnea Lueken .

VOYAGE OF THE JACKALOPE

The Jackalope is a 5-foot-long mini boat that was part of the outreach program **John Cheadle** organized for their Pito Deep expedition. She was purchased in kit form from Educational Passages in Maine and given to Theresa Williams' middle school class at the UW Lab School. Williams' students built, painted, and named the mini-boat as part of their studies. They placed objects and information about Laramie and Wyoming in her waterproof "time capsule" including an explanation of the name Jackalope in 20 different languages.



Equipped with an Iridium GPS system, the mini-boat was set to report her position once every 24 hours, with the National Oceanographic and Atmospheric Administration (NOAA) picking up the signal and publishing her position on the Web. She was launched from the RV Atlantis at the end of the Pito Deep Expedition in February and began what was to be a 190-day-long journey across the Pacific Ocean.

She travelled 12,310 kilometers along a great circle. In late August, she made landfall on Ontong-Java Atoll in the western Pacific Ocean—one of the largest atolls in the world. Williams' students followed the journey and learned much about ocean wind patterns and currents and the geography of myriad ocean islands as she crossed the Pacific. ▲

To learn more go to: <https://www.pitodeep.org/>



Mike Cheadle and Barbara John aboard RV Atlantis (courtesy photo)

2017 GSA CONFERENCE—SEATTLE, WA.

UW Geology & Geophysics Masters student, **Daniel Applegate**, was one of our volunteers to man our department's booth during this year's GSA Conference. He showed off his talents by making the UW Steamboat logo out of mini chapsticks to pull people over to our booth—with great success. ▲





IN REMEMBRANCE

James R. Steidtmann passed away on Saturday, April 15, 2017 surrounded by his family at his home in Arvada, Colorado. Jim was born on October 14, 1938 in Toledo, Ohio and raised in Bowling Green. His parents worked at a university and like his parents before him, Jim was drawn to science. After attending Bowling Green State University and Dartmouth, Jim earned a Ph.D. in Geology from the University of Michigan.

Jim loved the outdoors and fell in love with Wyoming while doing his dissertation research on the origin of the Pass Peak Formation in the Hoback Basin, Wyoming. He was thrilled to land a tenure track position at the University of Wyoming starting in 1968. He quickly made his dedication to the University and geology well known. His first house in Laramie was literally visible from his office window. In 1979, he met another love, his soon-to-be wife Randi, who conveniently, was also a geologist. Jim loved field geology and throughout his life he relished fond memories of his early career doing fieldwork in the beautiful Wind River mountain range. Over the course of his career he took hundreds of budding geologists and scientists into the field – he even took his children (though their enthusiasm wasn't always apparent). Occasionally Jim would say that he “got a Ph.D. in Geology when getting a Ph.D. in Geology was a lot like getting a Ph.D. in camping,” then he'd wait for someone to say, “That sounds like fun,” to which he'd reply with a twinkle in his eye, “Yeah, but instead of carrying sleeping bags and cook stoves, I carry rocks in my backpack.”

Jim also took a particular joy in fostering and cultivating the passions of those around him. He likely nudged more than a few folks to pursue careers in geology. In the midst of his service as Geology Department Chair, Jim found time to serve as the Faculty Advisor to the UW alpine ski team club, a role he loved. Jim tried to retire in 2003 but was enticed back to direct the Enhanced Oil Recovery Institute at UW. In the last weeks of his life, many people reached out to share their memories of Jim, and so many of those memories were about him as a mentor and teacher. As one former student stated “Jim was not afraid to tackle the big ideas” and he cultivated that philosophy in his students. Whether formally as a Professor, or informally with a fly rod on a trout stream, Jim could be counted on to help others succeed.

Alongside his love of geology, Jim was a quintessential family man. He could often be found on the weekend supporting his family at band events, soccer games and horse shows. He continually surrounded his family and loved ones in warmth, humor and fun. Jim was an avid skier and shooter and enjoyed the simple serenity of reading the latest CJ Box novel from the deck of his cabin in the Medicine Bows. He loved Wyoming with all his heart.

Jim is survived by his wife Randi, sister Sally, children David (Geneviève Aron), Dana (Dave Walter) and Matt, and grandchildren Lauren and Kaya.

A memorial service was held in the atrium of the Earth Science Building, University of Wyoming, Laramie on Sunday, May 7. In lieu of flowers, the family asks that donations be made to the Department of Geology and Geophysics in honor of Jim Steidtmann. ▲

Sign up for our email list!
www.uwyo.edu/geolgeophys/alumni/update.html

THANK YOU!

Fold

PLACE
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