


AG^{UW} NEWS

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Microbiology students spend less time hearing lectures, more time in laboratory in this revamped course.

SEE STORY PAGE 10



UNIVERSITY OF WYOMING

COLLEGE OF AGRICULTURE
AND NATURAL RESOURCES



Dean Frank Galey

“ Nothing happens unless first a dream.”

Carl Sandburg



Dear Friends and Colleagues,

Almost 20 percent of our students are working on a master's degree or Ph.D. I am asked, "So, why is graduate education a focus at UW?"

A graduate student focuses his or her effort in a more specific area or develops an area of specialization. Students define a problem and, by utilizing scientific and other specialized techniques, conduct and interpret research to gain insights into solving that problem. That research is also often applied to solving problems important to you, our constituents. Students present research findings to professional or scientific audiences and publish that knowledge in peer-reviewed literature. These students are expected to interpret and present their findings to agricultural consumers and livestock producers.

A high-quality graduate education positions students for professional and personal growth. It provides job flexibility and promises greater independence and earning potential. Many students pursue graduate degrees for marketability. Our master's and Ph.D. students are in high demand and have been very successful in finding high-quality positions. A highly skilled workforce is provided employers. Graduate students also are essential to the recruitment and retention of nationally recognized faculty members.

Local governments, policymakers, and industry associations often ask us for information on a variety of issues. Working side by side with our distinguished faculty members, graduate students focus on issues related to energy production, land ownership, taxation, banking, sustainable agriculture, and diseases affecting wildlife and livestock – issues with direct application and benefit to Wyoming.

Agronomy graduate student Nate Storey was one of two, first-place prize recipients last year in the annual UW College of Business \$10K Entrepreneurship Competition. Storey developed techniques to market and hydroponically grow leafy vegetables and herbs in vertical systems, which consume a minimum of floor space in a production area. These systems could be placed in retail grocery outlets so shoppers could harvest the freshest possible produce. Vertical hydroponics may also be adapted to grow food fish in the sump of the hydroponic system, a technique known as aquaponics. The fish produce nutrients for plant growth, and the plants purify the fish water. Nate's work was supported in part by the Edward and Susan Lloyd Graduate Research Award. The Lloyd award supports agricultural research leading to marketable products and small business establishment.

Animal science graduate students recently won a poster competition at the Colorado Nutrition Roundtable. Desiree Shasa, a Ph.D. student from Rockaway, New Jersey, working with Professor and Rochelle Chair Steve Ford, won first place with her poster "The impact of maternal obesity on eliminating the postnatal leptin spike and increasing adiposity of offspring across generation in the sheep." Katie Kessler, a graduate student from Lander, who is advised by Assistant Professor Kristi Cammack, placed second with her poster "Changes in performance and liver gene expression in feedlot steers consuming high sulfur water and supplemented with molybdenum." UW contributed five out of the 15 posters in the competition. Other UW presenters included Amanda Jons of Cedar Park, Texas; Rebecca Cockrum of Beebe, Arkansas; and Ricardo Arias of Danli, Honduras.

These are a few examples of how a strong graduate program benefits students, the University of Wyoming, the College of Agriculture and Natural Resources, and our stakeholders. By investing in the next generation of leaders, we are helping those charged with creating tomorrow's jobs and opportunities in Wyoming.

In this issue are stories about student travel and internship opportunities. In addition, you can read about a television segment being produced by the National Geographic Society detailing the investigation of the death of animals in the Red Rim elk herd a few years ago due to poisonous lichen.

Have a great winter! Thank you for your continued support of your college! We can be contacted at (307) 766-4133 or by e-mail at agrdean@uwyo.edu. Our website is www.uwyo.edu/UWag/.

Dean Frank Galey

College of Agriculture and Natural Resources

HIGH PLAINS RANCH PRACTICUM EXPANDS INTO NEBRASKA, COLORADO

Grants totaling almost \$671,000 will expand into Nebraska and Colorado an eastern Wyoming ranch management skills development program.

Four ranch practicums will be offered per year: two in Wyoming, one in Nebraska, and one in Colorado, says Dallas Mount, University of Wyoming Extension educator based in Platte County.

The High Plains Ranch Practicum, already established in eastern Wyoming, is a hands-on program designed to build ranch management skills and tools.

Mount, who started the practicum with Aaron Berger of University of Nebraska-Lincoln Extension, notes the programs will be eight full days spread over several months.

The new practicums will be offered beginning this spring. "They will cover what we see as four focus areas for successful ranching: range and forage management, nutrition and reproduction, financial management, and family and employee working relationships," says Mount.

A beginning rancher supplemental pro-

gram will be offered for beginning ranchers from any of the four ranch practicums.

UNL and Colorado State University are co-authors of the grant and are co-project directors. The \$670,890 grant is through the USDA National Institute of Food and Agriculture. The program will also have \$167,722 in cost-share funds.

Program partners are the Wyoming Stock Growers Association, Colorado Cattlemen's Association, and the Nebraska Grazing Lands Coalition.

The partner organizations will distribute scholarships to attend schools, train rancher mentors to work with targeted beginning ranchers, and provide information/education to beginning ranchers at annual meetings and through quarterly publications.

"The Ranch Practicum School has been successful in training beginning and experienced ranchers since it began in 2005," says Mount. "This grant program seemed to us to be an excellent fit with the ranch practicum, and the team that came together around this proposal was unique and greatly strengthened the proposal."



Alex Malcolm, right, was presented the Jim DeBree Excellence in Cooperative Extension Award by Glen Whipple, director of the University of Wyoming Extension.

Fremont County educator receives UW Extension's most prestigious award

A Fremont County University of Wyoming Extension educator has received the most prestigious honor in UW Extension.

Alex Malcolm, 4-H and agricultural and natural resources educator, was presented the Jim DeBree Excellence in Cooperative Extension Award in Evanston November 3 during the organization's annual training conference. Malcolm is based in Riverton.

The award, honoring the retired UW Extension administrator, is given to those who demonstrate a high level of professional performance and leadership within their program areas and communities.

EXTENSION SERVICE, RENEWABLE RESOURCES RENAMED

The extension service and a department in the college are sporting new names.

The UW Board of Trustees voted in November to change the UW Cooperative Extension Service to University of Wyoming Extension.

The trustees also approved changing the name of the Department of Renewable Resources to the Department of Ecosystem Science and Management.

FIRST CUTTING

CASPER RANCHER RECOGNIZED FOR LONG-TIME SUPPORT OF EXTENSION SERVICE

A Casper-area rancher received a national award recognizing contributions to the land-grant Cooperative Extension Service and the University of Wyoming.

Bob Kidd was presented the national Friend of Extension Award last fall by Epsilon Sigma Phi, which provides professional development in the extension service, during the association's national conference in Syracuse, New York.

"Bob has been a stalwart supporter of the College of Agriculture and Natural Resources and UW Extension for all of my 25 years in the college and extension," notes Glen Whipple, associate dean and director of UW Extension.

Kidd has a fundamental desire to help others improve their lives, Whipple says.

"He shares our vision for extension's accomplishments and successes," says Whipple.



Bob Kidd, center, receives his award from Epsilon Sigma Phi president Deborah Thomason of Clemson University and Glen Whipple, director, University of Wyoming Extension.

"In this I perceive Bob's motivation to be as pure as the most idealistic extension educator."

A 1972 graduate of UW, he has served on the College of Agriculture and Natural

Resources Advisory Board since 1985. He was in the first class of the UW Extension Wyoming Leadership, Education and Development program funded by the Kellogg Foundation. He is founding president of the Wyoming Agricultural Leadership Council, an organization that still supports the Wyoming L.E.A.D. program.

Kidd has represented the college and UW Extension on the Association of Public and Land-Grant Universities' Council for Agricultural Research, Extension and Teaching. He serves as the organization's liaison to the National Association of Counties.

"His enthusiasm for the entire land-grant system is unmatched," notes Frank Galey, dean of the College of Agriculture and Natural Resources.

STUDENTS RECEIVE \$411,900 IN AGRICULTURAL SCHOLARSHIPS

More than \$411,900 in college Brand of Excellence Scholarships has been presented to 201 students this year.

Jim Wangberg, associate dean and director of the Office of Academic and Student Programs, dedicated the 30th Annual Brand of Excellence Scholarship program in October to former Associate Dean of Academic and Student Programs, now retired, Professor Joseph Kunsman.

"Joe Kunsman was the visionary who

made this banquet possible," notes Wangberg. "He organized the first event in 1982 when others said such a college event would never gain support. Tonight is a tribute to the difference one person's vision can make."

A record 381 attended the banquet, including about 130 recipients. To see a gallery of scholarship recipients go to <http://bit.ly/uEzExa>.

"I am so grateful and appreciative of all the people who support this event,"

Wangberg says. "The night is a celebration of not only the student recipients but also a celebration of their families and loved ones, the scholarship donors, and the college faculty and staff members dedicated to our students' success. The one staff member deserving special thanks is Kelly Wiseman, program event planner and coordinator and an advocate for students throughout the year."



Doug Hixon, left, receives the Pacesetter Award from Jason Fearneyhough, director of the Wyoming Department of Agriculture.



Rachel Mealor, left, is presented the Friend of Agriculture Award from Jessica Crowder of the Wyoming Department of Agriculture.

UW AG COLLEGE MEMBERS RECEIVE HONORS AT WYOMING STATE FAIR

Excellence in agriculture awards were presented to a University of Wyoming professor in animal science and an extension range specialist by the Wyoming Department of Agriculture (WDA) during the Wyoming State Fair and Rodeo.

Professor Doug Hixon in the Department of Animal Science received the Pacesetter Award, and extension range specialist Rachel Mealor in the Department of Ecosystem Science and Management received the Friend of Agriculture Award.

WDA director Jason Fearneyhough says Hixon, head of the animal science department, received the Pacesetter Award for his innovative thinking, progressive management, and cooperation between users of public lands.

“Our staff members would like to

recognize Doug for going above and beyond these standards through his extended career at UW and all of his efforts to help the cattle industry,” says Fearneyhough. “As one of the most respected cattle minds in the country, he has represented UW and Wyoming throughout North and South America. His work has helped Wyoming develop markets in Argentina and Brazil as well as the rest of the world. He is a true friend and confidant to producers all over the state.”

Jessica Crowder from the WDA’s Natural Resources and Policy section presented Mealor the Friend of Agriculture Award. She says Mealor was recognized for her work on several projects that demonstrate her expertise and dedication to Wyoming producers and land managers and her ability

to work well with agricultural producers and natural resource professionals.

“She has been an asset to the WDA through her work on the Rangeland Health Assessment Program development committee and her strong support of the program, the pilot projects, and role as the leader in UW’s active involvement with the program,” notes Crowder.

“She tirelessly promotes agriculture, teaches others about range management, and is always willing to help the WDA with special projects,” she says. “Along with this, she played an instrumental role in updating the Coordinated Resource Management (CRM) workbook to make it a valuable resource for CRM groups through her contributions and insights as well as her work on the committees throughout the process.”

FIRST CUTTING

STUDENTS ROLL IN NATIONAL RANGE COMPETITION

Students in the Department of Ecosystem Science and Management swept competition at the November joint meeting in Lander of the Wyoming Section of the Society for Range Management (SRM) and the Wyoming Association of Conservation Districts.

Competition and results were:

Extemporaneous speaking – Students blind draw three topics and have two hours to prepare a 6-12 minute speech on one of those topics – First, Tate Smith, Rye, Colorado

Plant identification contest – Students identify 50 Wyoming rangeland plants and report scientific name, family or tribe, native or introduced, and annual or perennial – First, Bailey Terry, Newcastle; second, Sage Askin, Douglas; third, Evan Hathaway, Fairview

Undergraduate Range Management Exam – Students are tested on topics that include range ecology, grazing management, range improvement, range regions, range inventory and analysis, and multiple-use relationships – First, Sage Askin; second, Amanda O'Donnell, Spring Creek, Nevada; third, Tate Smith; fourth, Kayla Bish, Longmont, Colorado; fifth, John Wagner, Sterling, Colorado

Rangeland Cup – First, University of Wyoming, Katie Schade, Fort Sumner, New Mexico, Tyrell Perry, Clearmont, and Tate Smith

Wyoming Section of SRM Undergraduate Scholarship recipient – Tyrell Perry



Students competing were front, from left, John Wagner, Tate Smith, Evan Hathaway, Travis Decker. Middle: Katelyn Schade, Amanda O'Donnell, Sarah Kauer, Haley Lockwood, Amanda VanPelt, Bailey Terry. Back: Kayla Bish, Katelyn Mattila, Rick Comer, Allen Wellborn, Scott Meyers, Blair Gauthier, Sage Askin, Tyrell Perry. Not pictured, Wade LaCount.

ANIMAL SCIENCE GRADUATE STUDENTS PLACE FIRST, SECOND

Department of Animal Science students placed first and second in graduate poster competition at the Colorado Nutrition Roundtable in September at Colorado State University.

Desiree Shasa of Rockaway, New Jersey, won the competition with "The impact of maternal obesity on eliminating the post-natal leptin spike and increasing adiposity of offspring across generation in the sheep." Her adviser is Professor and Rochelle Chair Stephen Ford.

Katherine Kessler of Lander was second with her poster "Changes in performance and liver gene expression in feedlot steers consuming high-S water and supplemented with molybdenum." She is advised by Assistant Professor Kristi Cammack.

The department contributed five of the 15 posters presented, notes Professor Doug Hixon, head of the department. Others participating were Amanda Jons of Cedar Park, Texas, Rebecca Cockrum of Beebe, Arkansas, and Ricardo Arias, of Danli, Honduras.



SHERIDAN COUNTY EXTENSION EDUCATOR RECOGNIZED FOR NUTRITION EFFORTS

A Sheridan County educator received the Newer Employee Recognition Award from the University of Wyoming Extension.

Kentz Willis, a nutrition and food safety educator based in Sheridan, serves Campbell, Crook, Johnson, Sheridan, and Weston counties. The award was presented in Evanston November 3 during the organization's annual training conference.

"I've been fortunate to have worked with some really amazing partners in my area and across the state," says Willis.

Willis received a bachelor's degree in nutrition food science from South Dakota State University in 2004 and a master's degree in food and human nutrition from the University of Wyoming in 2008. He joined UW Extension in 2008.

Willis has helped lead efforts with extension's EatWyoming: Wyoming Local Foods, Sports Nutrition, Dining with Diabetes, and Living Well programs, and is chair of extension's nutrition and food safety team.

"I hope he remains in UW Extension for many more years," wrote one nominator. "We need his intelligence, training, and insight as well as his strong, but quiet, leadership."



Extension director Glen Whipple, right, presents Kentz Willis with the Newer Employee Recognition Award.

QEP ENERGY COMPANY DONATES LAND TO SUBLETTE COUNTY 4-H COUNCIL; INVIGORATES AG EDUCATION EFFORTS

Opportunities for Sublette County 4-H'ers to raise livestock and participate in agricultural education programs are expected to increase due to an energy company's land donation.

QEP Energy Company, a subsidiary of Denver-based QEP Resources Inc., donated approximately 35 acres to Sublette County 4-H in an agreement with the Sublette County 4-H Council, according to Robin Schamber, Sublette County 4-H educator.

The donation created the Sublette County 4-H Agricultural Center and the Rose Skinner Preserve 2 miles south of Pinedale on U.S. Highway 191. The preserve is

named in honor of the longtime resident and former mayor of Pinedale.

Sublette County 4-H youth, including those who live on properties with restrictions that don't allow livestock, will be able to participate in livestock and agricultural education programs at the preserve, notes Schamber. QEP's donation will also include the construction of a barn, fencing, and other livestock facilities.

Schamber said educational opportunities at the new 4-H center will include range and forage studies, horticultural programs, and livestock management, grazing, and health programs.

"We are excited to also offer use of the center to Pinedale FFA members and to maintain our collaborative working relationship between the two youth ag programs," she says.

Schamber notes agricultural education could begin this winter and livestock projects in summer.

The donated land is part of a parcel purchased a few years ago by QEP. The company is constructing an office building on a portion of the land adjacent to the 4-H agricultural center. The office will accommodate approximately 90 employees.

FIRST CUTTING

GIRL SCOUT COOKIES SPARK CURIOSITY – LEADS TO UW GOLD FINALIST'S MAJOR

Dietetics and Girl Scout cookies.

Yes. The two can be related.

UW Gold Finalist Catherine Schmidt says her major when first entering UW was international studies. A conversation with a friend (majoring in dietetics) about nutrients in Girl Scout cookies sparked an interest in dietetics – international relations was left in the rear-view mirror.

Schmidt, in the Department of Family and Consumer Sciences, was selected as one of six UW Gold Finalists, which replaces the traditional homecoming. Finalists are chosen on the basis of scholastics, community service, and leadership.

The Laramie senior was one of two semifinalists from the department. Elisabeth Meier of Cheyenne was also chosen. Finalists were named during homecoming.

Schmidt has a love of children and would like to enter pediatric nutrition. She would also consider working toward a master's degree or looking into physical therapy or even medical school.

"Right now, I'm just taking things as they come and taking the path that I will hopefully enjoy," says Schmidt.

The UW Gold also honors community service. She helped with the summer Special Olympics and other volunteer efforts that are the focus of philanthropic efforts by her sorority, Tri Delta. Any outside activities helps her be a better student, she says, especially community service.

Her favorite is St. Jude Children's Research Hospital.

"It is inspirational the amount they are able to give to children and families without patients paying anything," she says. "They have advanced the field of science greatly, and it is all for the children. This organization is so focused on children and keeping them happy in what can be a very stressful time. I feel like they have a good grasp on the important things in life and, therefore, are one of the best causes I can support."



Catherine Schmidt



Extension director Glen Whipple, left, presents the 2011 Creative Excellence Recognition Award to Stan Skrabut.

INNOVATION DRAWS UW EXTENSION'S CREATIVITY AWARD

Infusing innovation into extension offices across Wyoming and providing creative training for educators and staff members earned an instructional technology educational specialist the 2011 Creative Excellence Recognition Award from University of Wyoming Extension.

Stan Skrabut, in the Office of Communications and Technology, College of Agriculture and Natural Resources, received the award in November during extension's professional development conference in Evanston.

"When the award was announced, I was taken by complete surprise," says Skrabut, who joined extension in 2008. "I am very humbled by this recognition for doing my job. I come to work each day with the sole purpose of making the jobs of extension educators better."

Skrabut was recognized for introducing social media into extension educational efforts, matching appropriate content to a variety of audiences, and using sound adult teaching and learning theories. "He is constantly searching for new and, most importantly, effective teaching tools and methods for extension professionals," wrote one nominator.

Skrabut is pursuing a doctorate in education at UW.



EQUINE SPECIALIST INTEGRATES DONATED HORSES, ADOPTED BURROS INTO COURSES



Assistant Professor Amy McLean stands next to Starbuck and Chance Abel stands with Tatoo, horses donated by the Jackson Land and Cattle Company.

Donated horses and adopted burros are helping teach students in equine courses this year.

The Jackson Land and Cattle Company donated two horses – Tatoo and Starbuck, says animal science Assistant Professor Amy McLean, extension equine specialist. Chance Abel, Jackson Land and Cattle Company manager, and also a Department of Animal Science graduate, delivered the horses.

McLean says the horses will be integrated into the Equine Behavior and Welfare, Advanced Equine Evaluation and Selection, and Livestock Showing and Fitting courses, and into the equine laboratory with the Introduction to Animal Science class. They will not be used in any way that could harm the well-being of either horse, she says. The horses will also likely be used in the new club/team sport – Ranch Horse Versatility.

McLean has also adopted two burros – John Wayne and Billy the Kid – from the Bureau of Land Management to be used in her Equine Behavior and Welfare Classes.

UW HORSE JUDGING TEAM IN PHOTO FINISH AT QUARTER HORSE COMPETITION

Their neck-and-neck finish at the American Quarter Horse Association World Championship competition in November and the team's second-place finish at the All American Quarter Horse Congress in October is a story-book tale, says the coach of the University of Wyoming Horse Judging Team.

"Our success is truly a Cinderella story," says Amy McLean, assistant professor in the Department of Animal Science and extension equine specialist. West Texas A&M edged UW out of first by one point during competition in Oklahoma City. Twelve teams participated.

The reserve world champion senior horse judging team competed against the top equine programs in the country, many that have judging team legacies, notes McLean.



UW Horse Judging Team coach Amy McLean, left, with team members Ruth Uptain, Lacey Teigen, Lisa Eckhardt, Corinna Slingerland, and Stephanie Schroeder.

"We beat them all at the All American Quarter Horse Congress and we turn around at an even tougher contest and, like a racehorse that's 40-1, we slipped up the rail and lost by a photo finish to West Texas

A&M – a school and program that has many judging titles," she notes.

West Texas A&M finished with 3,296 points, UW garnered 3,295, and Kansas State University was third with 3,283 points.

UW finished third in performance and fourth in halter and reasons. Stephanie Schroeder of Douglas was fourth overall, first in reasons, and placed seventh in performance judging. Lacey Teigen of Laramie was eighth-high individual, and teammates Lisa Eckhardt of Watkinsville, Georgia, Corinna Slingerland of Lander, and Ruth Uptain of Casper placed in the top 20 overall.

"It really was a dream come true for each of the girls on the team," says McLean. "They worked so hard and judged so consistent it says a lot about their dedication for judging."



Mariel Pfeifer, left, and Kelsie Delaney work together in the laboratory for the Microbial Diversity and Ecology course.

GETTING TO THE ROOTS

Emphasis on more lab work, shorter lectures to teach microbiology students research techniques

Students in this down-to-earth class are learning research techniques through hands-on lab work.

Assistant Professor Naomi Ward in the Department of Molecular Biology decided to take a less-is-more approach when crafting a new class in Microbial Diversity and Ecology. She turned the traditional course structure upside down by emphasizing research techniques and having shorter lectures. She took over the course after the former instructor moved to another department.



This semester's 15 students – five of them graduate students – spend six hours a week working in four teams to solve four microbial problems they brought into the teaching lab from the real world.

"This is all about the world of microbes, bacteria specifically; we're focusing on the soil," says Ward. "We're looking at the bacteria living in the soil and associated with the roots of different plants."

Timothy Long and other students spent six hours a week in the laboratory.



COLLECT SAMPLES FROM OUTSIDE BUILDING

Students collected samples from alfalfa and golden aster, spruce, and cottonwood trees outside the Animal Science/Molecular Biology Building the first week of class. Physical and chemical properties of the soils were measured; from that point, the class has taken two directions.

The flowchart on the lab's blackboard details the two prongs. The top prong ends in an arrow pointing to “discover new species – Nobel Prize.” The lower prong points to “discover new antibiotic – get rich.” Those last two stages are NOT in the syllabus, says Ward, who laughs.

The first path the class is treading is more typical and familiar to microbiologists, she says. Samples are smeared on agar plates targeting specific bacteria. Some were grown in light, without light, with oxygen, and without oxygen. “The students’ job was to pick the ones they were interested in and get them to a pure state,” she says.

IDENTIFY BACTERIA

Photographs show slimy bacteria, orange bacteria, and white, crusty ones. Students are trying to identify the bacteria using genetic analysis. “One particular gene that all bacteria have is a really good marker to ID them,” says Ward. “They are sequencing DNA from that gene and comparing it with a really big database of sequences other people have gotten from known species.”

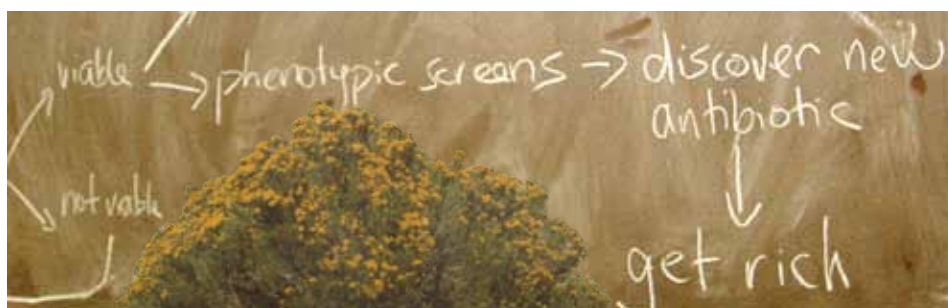
Students will then see if any of the bacteria produces antibiotics.

“The soil is actually one of the major sources of antibiotics,” notes Ward. “We can see even in some of these early plates there is some evidence of antibiotic activity.”

She points to an agar plate that has a clear area between two bacterial colonies – like a riverbed separating two land masses – that indicates one bacterium is producing



Members of Assistant Professor Naomi Ward's Microbiology Diversity and Biology class are, from left, Kelsie Delaney, Mariel Pfeifer, Alexander Bucuvalas, Volkan Koseoglu, Jonathan Kawulok (kneeling), Megan Taylor, Patrick LaBreck, Carissa Tasto, Ward (kneeling), Timothy Long, Elizabeth Hiatt, Jennifer Bell, Quinn Whitney, Aaron Jensen (kneeling), Christopher Vassallo, and Rajan Ghimire



AMAZON RAIN FOREST? TRY WYOMING HIGH DESERT FOR FUTURE MEDICINES

Could the soil beneath our feet yield medicines the way the Amazon Rain Forest does?

The answer is yes, says Naomi Ward.

“We really have an incomplete understanding of bacterial diversity,” she notes. “Most bacteria are hard to grow on agar plates, and any information we can add about the diversity of microbes is important. Soil microbes are responsible for many of the key nutrient transformations, especially nitrogen.”

Opportunities to learn more about the diversity of organisms provide tools to advance knowledge of their functions in the soil, she notes.

“In this class, we are not looking at what the microbes are doing in the soil, beyond some testing of antibiotic production,” says Ward. “That’s beyond our scope. But, what we are doing is building a culture collection.”

All bacterial samples are frozen and preserved. “The idea is over the years to build a collection. We could then start to ask those types of questions,” she says.

The course is built around a book written by researchers at the University of California, Los Angeles. A website allows students from around the country using the book to contribute their research results.



Alexander Bucuvalas and Johnathan Kawulok were part of four teams working to solve four microbial problems.

an antibiotic to destroy the other bacteria trying to infringe upon its turf.

“We’re going to be going further with that idea and seeing if we are finding any new antibiotic producers in the soil,” says Ward.

A SECOND APPROACH

“There are some bacteria we can’t grow with the techniques we are using,” says Ward. “We know that for sure. It’s estimated that, of all the bacteria around us, about 1 percent can be grown on agar plates; the rest are too picky. This method gets at those through their genes without having to grow them first.”

No agar plates in the second approach; the genes of bacteria extracted directly from the soil cloned into plasmids, yielding many small colonies.

Along the research path, students confront problems they encounter, which reinforces research techniques.

“They are doing a lot of troubleshooting when things don’t work,” says Ward.

“In a normal lab class, if it doesn’t work, you ditch it and that’s the end of it. Here, I’m trying to have them think about ways to make it work and give them an opportunity to test out their ideas of what might be interesting to look at.”

Students function as real researchers. “We are giving them the tools they need to go and solve the problem. The main thing is the hands-on emphasis,” says Ward.

About half of molecular biology students during exit interviews state they would have liked more hands-on research experiences in upper-level classes.

Ward says the class is especially important for undergrads not in a research lab while in the department – this class addresses that gap in research experience. The class also fits with what professional microbiology societies want: more hands-on education and more techniques to get students to think for themselves, says Ward.



Assistant Professor Naomi Ward

SUPPORT STAFF MEMBERS MAKE CLASS POSSIBLE

The possibility of 15 students embarking in 15 different directions places different demands on an instructor.

Ward says she and teaching assistant Volkan Koseoglu were able to plan the first four weeks of the class because all students were doing much the same thing. After that, each student explored her or his own study.

Prepping each lab for 15 students means having the right equipment ready and the right chemicals and reagents needed.

“It’s a challenge for our support staff,” says Ward, who thanked Karen White for great help in setting up the teaching lab, and John Willford (instructional lab coordinator) for a stellar job with preparation of culture media.

“He has made hundreds of these agar plates that require new recipes,” she says. “Halfway through the semester, I had to call him and say we were going to run out. We couldn’t predict how many were needed. He is great. We are very dependent upon people like Karen and John who are supportive of the class and give the class flexibility. I also have a wonderful teaching assistant, Volkan, who is a Ph.D. student in the Molecular and Cellular Life Sciences Program. He’s there every lab helping out.”



Walt Cook is interviewed by Tigress Productions crew members last fall in a segment to air on National Geographic television.



Researchers detail Red Rim elk die-off mystery for National Geographic film crew

WILD CASE FILES

Efforts to solve the 2004 and 2008 Red Rim elk die-off mystery will be fodder for a National Geographic television show this spring.

Tigress Productions of Britain interviewed researchers and traveled to the Red Rim Habitat Area and Sybille Research Unit last fall, and producers say the show may air in April but exact dates and times are not yet available.

"They had contacted me initially a year or more ago," says Walt Cook, the college's brucellosis research coordinator, at the time

of the die-off a wildlife veterinarian with the Wyoming Game and Fish Department (WGFD). "They were intrigued."

SEVERE WINTERS OF 2004, 2008

Up to 500 elk died at the Red Rim in 2004 and just under 100 in 2008. The area southwest of Rawlins comprises approximately 50 sections and is not normally used by elk, says Cook, but harsh winter conditions drove them to that area in early 2004. Coyote hunters found two partially



Walt Cook is the college's brucellosis research coordinator but was a wildlife veterinarian with the Wyoming Game and Fish Department at the time of the die-offs.

paralyzed elk February 6, 2004. The count steadily increased. On February 14, seven more elk were found and by February 20, 63 elk were confirmed down or dead. By March 1, there were 280 confirmed cases. The cases kept mounting. By the end of April, the cases had risen to 326 with an estimated 400 to 500 total.

Associate Professor Todd Cornish, a pathologist, made several trips to the area. Working together, the WGFD and Wyoming State Veterinary Laboratory ruled out more than 40 differential diagnoses as potential causes. Unraveling the mystery began when game warden Benge Brown noticed the elk were eating the lichen, and Professor Merl Raisbeck (see story page 15) began examining whether there was a relationship; he found an old citation from the 1950s suggesting there might be. The cause – probably usnic acid perhaps in combination with another toxin in the lichen, *Xanthoparmelia chlorochroa* – was not determined until the end of March.

Deaths occurred again in 2008 during similar severe winter conditions.

PROFESSORS, GAME AND FISH PERSONNEL

Tigress crew members filmed Raisbeck and Professor Donal O'Toole in the Department of Veterinary Sciences, and Terry Kreeger, WGFD veterinarian and animal immobilization expert, Brown, and Greg Hyatt, also with the WGFD.

The Tigress crew conducted various re-enactments.

"They wanted the timeline of what happened, the different hypotheses, how we narrowed it down, and the ultimate cause," says Cook.

Once the cause was determined, procedures were put in place to haze elk from the area if showing similar symptoms. That happened in 2008. "There have been occasional small numbers of instances but not close to that in 2004," notes Cook.

"You can't help but believe they eat this lichen in their normal diets but, when rumens were analyzed, 50 percent of their diet was lichen during the die-off. I think they

were ingesting a lot more than ordinarily," says Cook. "How it was finally definitively diagnosed, Terry Kreeger and his crew fed lichen to three elk at the Sybille Research Unit. The elk didn't like it. They had to mix it with alfalfa to get them to ingest it. Two of the three elk that ate it had some symptoms. The third didn't. Refused to eat it. It must not be palatable to them in large quantities unless they are facing starvation."

COOPERATION SOLVES MYSTERY

Cook credits close collaboration for solving the mystery.

"How we solved the problem was having really good working relationships with the game and fish department and the Department of Veterinary Sciences," says Cook. "There were very thorough necropsies done at the Wyoming State Veterinary Laboratory. I think that shows the value and how fortunate we are in Wyoming to have a cooperative relationship between the WGFD and the university."



Terry Kreeger, Wyoming Game and Fish Department veterinarian and animal immobilization expert, is filmed with an elk at the Sybille Research Unit.

MYSTERY SOLVED – MAYBE

Raisbeck speculates whether real cause identified

Even after seven years, after several graduate students, several journal articles, and a power failure that destroyed test samples, what killed up to 600 elk in two episodes in the Red Rim still piques Professor Merl Raisbeck.

Sure. Usnic acid in the lichen *Xanthoparmelia chlorochroa*, common to many areas in the West, was determined the culprit, but ...

“Everybody kind of regards it as a done deal and it’s old hat and it probably is, but doggone it, it interests me,” Raisbeck says amidst the rhythmic knocks of an automatic mixer in his lab.

Raisbeck described the work completed at Red Rim by himself, other Department of Veterinary Sciences faculty members, graduate students, and collaborators in the Wyoming Game and Fish Department. “This is one that often gets misquoted, but, we are ignorant at a much higher level than we used to be,” he quips. “I’m pretty comfortable saying usnic acid was involved. It’s not the whole story and maybe not the story at all.”

Some conditions surrounding events in 2004, when up to 500 elk were affected, and 2008, when less than 100 were stricken, contrast. A Chinook wind the day after Christmas in 2004 melted the snow in the Red Rim Habitat Area southwest of Rawlins. The temperature plummeted to 15 below zero New Year’s Day and created a crust several inches thick. The only vegetation available for elk was on hillsides blown bare – lichen that had been blown and collected by the wind. That 2004 lichen was more potent in terms of how much it took, how long to cause effects, and how dramatic



Former veterinary sciences Ph.D. student Becky Dailey with Professor Merl Raisbeck. Dailey helped identify and quantify secondary metabolites in *Xanthoparmelia chlorochroa*.

the effects were when fed to sheep in experiments versus the 2008 lichen. Raisbeck wonders if seasonal effects came into play, and then there is the metabolism that occurs when some compounds entering a rumen metamorphose by the time they exit.

“If you’ve spent anytime knocking around the desert in Wyoming, you’ve seen the lichen,” Raisbeck says. He’s got a plastic baggie filled with the stuff thumbtacked to a corkboard in the lab. It looks like broccoli pieces. “The only place where die-offs seem to happen in those numbers is in the Red Rim,” he says. “Now, I personally believe that it probably happens all over the place, and we’re just not recognizing it because it is one or two animals instead of 600.”

Funding for continued research would be nice, but Raisbeck is not optimistic.

Whoever ties into the research would have to commit long-term, like a Ph.D. student. Raisbeck studies the poison in his spare time because he likes the stuff of scientific mysteries, but, “Even if someone offered me a million dollars tomorrow, I couldn’t start on it because of what is piled up here with other projects,” he says.

Raisbeck was interviewed for the television show about the die-off and winces when he recalls something he said. “I said something like, ‘I’m an academic. I’ll take support wherever I can find it.’ I shouldn’t have said that,” he says. “But it’s true. The public perception is we sit around in the ivory tower, diddling with stuff and the money just flows somehow, and it doesn’t. Maybe it does in other disciplines, but it sure doesn’t in mine.”

New fund strives to broaden student

College advisory board initiates fund drive

Why should a person continue their education beyond high school?

In Wyoming and nationally, top reasons include:

- Pursuing a career that requires college-level training and skills;
- The opportunity to meet new people, have new experiences, and explore new interests;
- The opportunity to pursue academic interests in the intellectual environment offered by a university; and
- A desire for self-discovery.

Hands-on learning opportunities outside the classroom are one way the college adds value to a student's degree, and a fund drive started by the College of Agriculture and Natural Resources Advisory Board (see page 17) will provide more opportunities.

EXPERIENCES STRENGTHEN EDUCATION

Opportunities to work with faculty members on research projects, attend national or international scientific meetings, or participate in regional or national competitions all have an important place in today's educational experience.

"We strive to give students a wide range of experiences," says Anne Leonard, director of College Relations. "These include travel to regional or national meetings, field trips, and participation in student intercollegiate competitions."

Many department heads echo this sentiment. Doug Hixon, head of the Department



Former UW Meat Judging Team members, from left, Brogan Clay, Jaymes Talbott, Wade Allnutt, Chris Kelly, Jessi Larsen, and Becky Vraspir traveled to Australia and earned second place in the 2010 Beef Judging Contest at the University of New England in Armidale, New South Wales.

of Animal Science, encourages students to attend commodity group meetings such as the National Cattlemen's Beef Association Convention and Trade Show.

This meeting "includes educational programs and allows (our students) to interact with potential employers in the huge trade show," Hixon notes. "Additionally, they would see first-hand what the industry is doing to address issues that impact the beef industry."

OFFER NETWORKING OPPORTUNITIES

Enette Larson-Meyer, an associate professor in the Department of Family and Consumer Sciences, has also helped students attend national meetings including the American Dietetic Association and the American College of Sports Medicine.

"These conferences are invaluable for them to learn about networking in their profession," says Larson-Meyer. "They usually get very excited about meeting other students and professionals and about the nationally ranked speakers who present. Apart from this, it looks great on their resumes when they apply for the competitive internships that the students took the interest to attend a national meeting."

Student participation is not limited to professional meetings. The college also hosts student teams that compete against other colleges and universities. The Rangeland Cup and the Undergraduate Range Management Exam (URME) are examples of national intercollegiate competitions. Both give students a chance to demonstrate their knowledge and skills in the area of rangeland

experiences

management. This past year, UW's four-member Rangeland Cup team placed first at the national range management competition, and the URME team placed second out of a field of 25 collegiate teams.

STUDENTS CONNECT WITH STUDENTS

There are many benefits from participation in these types of activities. As an undergraduate, Kelsie Spieser, now a graduate student in the Department of Veterinary Sciences, was a member of the meats judging team. She says connecting with students from other universities, the chance to meet with industry representatives, and getting a "realistic view of what is available to you after graduation" were highlights of her meat judging team experience.

Many careers now require advanced degrees. The national shortage of qualified scientists underscores the need for graduate-level education. In-depth research projects, development of critical and analytical thinking skills, and opportunities to interact with other professionals in their chosen fields of study are inherent in graduate-level education.

Presenting a research poster or paper at scientific meetings helps graduate students network with other professionals and also highlights the quality of UW's graduate programs.

An example is Philippe Moriel, a recent master's student from Brazil working in nutrition in the Department of Animal Science. Moriel won the 2010 Western Section, American Society of Animal Science Graduate Student Competition. Philippe is now working on a Ph.D. at the University of Florida.

SEND fund drive will pay students' fuel, room and board expenses

A fund drive to boost student educational experiences outside the classroom has been started by the College of Agriculture and Natural Resources Advisory Board.

The effort, called Student Engagement and Networking Drive, will provide money for fuel and room and board to provide more opportunities for students to travel to events such as professional conferences, competitions, commodity group, and association meetings.

Advisers for student groups have reduced the number of students they can take on trips because of fuel and room and board expenses.

"Travel funds would allow us to send undergraduates to scientific and professional conferences," says Steve Herbert, associate professor and head of the Department of Plant Sciences. "Faculty members rarely have sufficient grant funds to take undergraduate students to meetings in addition to the graduate students they bring."

Professor Donna Brown, head of the Department of Family and Consumer Sciences (FCS), says participating at conferences aids in a student's career development. "These conferences are invaluable for them to learn about networking in their professions," she says.

FCS student Kati Stoll last year traveled to the National Phi Upsilon Omicron Conclave in Savannah, Georgia. "It was an amazing opportunity," she says. "We were able to attend breakout sessions of outstanding speakers in the field of family and consumer sciences. Not only were we able to meet professionals in our field, but we also had the opportunity to meet other students from different schools, which, to this day, we stay in contact with."

IF YOU WISH TO DONATE

Those wanting to help sponsor additional activities for students can designate a gift for the Student Engagement Network Drive (SEND). Donations can be made through the UW Foundation's secure website at www.uwyo.edu/giveonline or use the donation form on page 19.

COLLEGE OF AGRICULTURE

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Department of Plant Sciences

Department head:
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AND NATURAL RESOURCES

Department of Ecosystem Science and Management

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Professor Bret Hess, associate dean

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DEPARTMENTS

Note: All department and office websites can be accessed by going to www.uwyo.edu/uwag and clicking the Departments link on the left-hand side of the page.

University of Wyoming Extension

Director: Glen Whipple, associate dean

Website: www.uwyo.edu/ces/

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PROGRAM NOTES

AGRICULTURAL AND APPLIED ECONOMICS

The department awards the Vanvig Fellowship to its top graduate student. The Vanvig Fellowship, created and funded by former department head **Andy Vanvig** and his wife, **Connie**, usually provides up to \$5,000 to support the awardee's scholarly endeavors. The department had too many exceptional students this year to pick a single winner, says Assistant Professor **Benjamin Rashford**. With the help of a second donor, two \$4,000 Vanvig Fellowships were awarded. **Jordan Steele** and **Abby Mellinger** are graduate students who stand out amongst the best across the university, says Rashford. Steele, from Aladdin, completed his bachelor's degree in agricultural business at UW in 2010. Steele has maintained a 3.8 GPA in graduate coursework and was elected by his peers to be the department's graduate student representative. He is also teaching an undergraduate course in the department on farm and ranch management. For his thesis, he is examining the farm-level economic impacts of wolf predation on livestock. Mellinger, from Cody, completed her undergraduate studies at UW in 2009 as a double major in economics and environment and natural resources. She has also maintains a 4.0 GPA in graduate coursework and was selected a 2011-2012 recipient of UW's energy graduate assistantship. Her thesis research examines the



*Assistant Professor
Ben Rashford*

economic efficiency of conservation easements to mitigate energy development impacts on wildlife in western Wyoming.

ANIMAL SCIENCE

Department of Animal Science students placed first and second in the graduate poster competition at the Colorado Nutrition Roundtable in September at Colorado State University. **Desiree Shasa** of Rockaway, New Jersey, won the competition with "The impact of maternal obesity on eliminating the post-natal leptin spike and increasing adiposity of offspring across generation in the sheep." Her adviser is Professor and Rochelle Chair **Stephen Ford**. **Katherine Kesler** of Lander was second with her poster entitled "Changes in performance and liver gene expression in feedlot steers consuming high-S water and supplemented with molybdenum." She is advised by Assistant Professor **Kristi Cammack**. Others participating were **Amanda Jons**



*Assistant Professor
Kristi Cammack*

of Cedar Park, Texas, **Rebecca Cockrum** of Beebe, Arkansas, and **Ricardo Arias**, of Danli, Honduras.

The Jackson Land and Cattle Company donated two horses to the department. Assistant Professor **Amy McLean** says **Chance Abel**, Jackson Land and Cattle Company manager, and also a Department of Animal Science graduate, delivered the horses in September. McLean says the horses will be integrated into the Equine Behavior and Welfare, Advanced Equine Evaluation and Selection, and Livestock Showing and Fitting courses and into the equine laboratory with the Introduction to Animal Science class. They will not be used in any way that could harm the well-being of either horse.

The UW Horse Judging Team, coached by McLean, has been successful in fall competition. The team of **Stephanie Schroeder** of Douglas, **Ruth Uptain** of Casper, **Lisa Eckhardt** of Watkinsville, Georgia,

Corinna Slingerland of Lander, and **Lacey Teigen** of Laramie placed second in intercollegiate competition at the 2011 All American Quarter Horse Congress in Columbus, Ohio. Schroeder won top overall individual honor. The team also claimed reserve champion honors at the American Quarter Horse Association World Championship in November in Oklahoma City. West Texas A&M edged past UW by one point to win the championship.

FAMILY AND CONSUMER SCIENCES

Professor Sonya Meyer's visual merchandising and fashion promotions course partnered with the UW Bookstore to produce a fashion show to commemorate the bookstore's 90 years in operation, held during UW's 2011 Homecoming week. The theme was Then and Now and students used garments in the department's Elinor Hitchcock Mullens Historic Clothing Collection to show clothing styles typical over the past 90 years on the UW campus. The bookstore provided clothing from its current inventory for the Now portion of the show. The show commentary highlighted the history of the bookstore and UW in general.

The Indian Fabric Design Show and Art Auction was in the Union Ballroom in November. In early October, 29 pieces of black and red Indian fabric were provided to students, faculty



Professor
Sonya Meyer

members, and local community members interested in the project. Participants were asked to create fashion items that were then sold in a silent auction to raise funds for the Keep Girls in School Project, Aarti Home in Kadapa, India. Aarti Home houses approximately 100 children of various ages, mostly girls, whose parents either could not or did not want to support them. The Keep Girls in School Project, supervised by Professor Bonnie Zare of the Gender and Women's Studies Department, works to raise funds and awareness for Aarti Home in Laramie and throughout Wyoming and Colorado. FCS graduate student **Michaela Kazuba** was instrumental in organizing the event. She traveled to India during UW's winter break as part of Zare's study-abroad course to work with Aarti Home. Students in the department's student organizations Phi Upsilon Omicron and American Association of Family and Consumer Sciences

also helped organize and sponsor the event.

Associate Professor **Enette Larson-Meyer**'s research on the health and performance implications of vitamin D in athletes is gaining national recognition and appears to be of increasing interest with the approach of the 2012 Summer Olympics in London. In August, Larson-Meyer was an invited speaker at the International Sports Medicine and Sports Science Conference in Newcastle Upon Tyne, England, where she spoke with Dr. Kassim Javaid of Oxford in a symposium entitled "Vitamin D and the athlete: A medical issue or a nutritional issue?" In September, Larson-Meyer spoke on "Vitamin D in Athletes" to a select group of sports dietitians at the U.S. Olympic Training Center (OTC) in Colorado Springs as part of a sports nutrition conference sponsored by the international group Professionals in Nutrition for Exercise and Sport (PINES), Power Bar, Nestle Nutrition, and the U.S. OTC. Most recently, she was an invited speaker at Idrettsmedisinsk Høstkongress 2011, a sports medicine conference in Oslo, Norway, in November. Following the congress, she spent a few days at Olympiatoppen (an organization that is part of Norwegian Olympic and Paralympic Committee and Confederation of Sports) consulting and developing collaborations with the Norwegian Olympic Committee's sports medicine team.

MOLECULAR BIOLOGY

Microbiology students won awards in undergraduate and graduate competition at the fall meeting of the Rocky Mountain Branch of American Society for Microbiology in October at Colorado College in Colorado Springs.

Cameron Finley of Green River placed second in the undergraduate oral presentation with "Myxobacteria as biocontrol agents of agricultural plant pathogens." Finley's adviser is Associate Professor Daniel Wall.

In graduate oral presentation competition, **Darshankumar Pathak** of Vadodara, India, placed third with "Identification of trans-factors required for protein transfer between *Myxococcus xanthus* cells." Wall is his adviser.

In graduate poster competition, **Peter Holmquist** of Laramie placed second with "Apparent Twist States of Active Promoter DNA; Very strong evidence of natural numbers for the twist of supercoiling." His adviser is Professor **Mark Gomelsky**. **Cindy Fang**, Hanzhou, China, placed third with "The degenerate EAL domain protein YdiV acts as a multivalent, c-di-GMP-independent anti-activator of *Escherichia coli* transcriptional factors controlling motility and colanic acid production." She is also advised by Gomelsky.

PLANT SCIENCES

The Department of Plant Sciences looks forward to a doubling of its horticultural power this spring as two members join the department's horticulture group, notes Associate Professor **Steve Herbert**, head of the department.

Sadanand Dhekney will start as an assistant professor in the E.A. Whitney Professorship in Horticulture. The position is based at the Sheridan Research and Extension Center (SREC). Dhekney earned his doctorate in horticulture from the University of Florida and is now project manager of a trait evaluation program for grape, pomegranate, and guava germplasm operated from Fort Valley State University, Georgia. In Wyoming, Dhekney will direct his unusual expertise in the genetic engineering of wine grapes toward improving their cold tolerance and disease resistance – traits that could prove valuable to the nascent Wyoming wine industry. Dhekney will also contribute to the emerging 3+1 undergraduate degree program in horticulture being developed with Sheridan College. Among other classes, he plans to teach an undergraduate course in viticulture.

Chris Hilgert will join plant sciences this spring. He will fill an academic professional extension educator position in horticulture and have responsibility for coordinating the Wyoming Master Gardener program. Hilgert has an extensive background in horticulture and horticulture extension. He is an urban

PROGRAM NOTES



*Associate Professor
Stephen Herbert*

horticulturist at Washington State University, working from the Spokane County extension office. Hilgert earned his bachelor's and master's degrees in horticulture from Oregon State University and spent five years working in extension at the University of Illinois. He and Dhekney will join **Karen Panter**, extension horticulturist, and Associate Professor **Valtcho Jeliazkov**, director of SREC, to form a small but robust group providing horticultural research, teaching, and extension to UW and Wyoming.

ECOSYSTEM SCIENCE AND MANAGEMENT

The renewable resources department now has a new name: Ecosystem Science and Management. This year-long process is the culmination of many discussions with faculty and staff members, students, and across campus. We believe the new name more accurately reflects the many and varied programs within the department – rangeland ecol-



*Professor
John Tanaka*

ogy, watershed management, soil science, and entomology, notes Professor **John Tanaka**, head of the department. "Our degree programs have not changed. The conversion of all of our materials and website will take some time, but the new name is official."

The students have been busy. Nineteen undergraduate students attended the joint meeting with the Wyoming Section of the Society for Range Management (SRM) and the Wyoming Association of Conservation Districts. Dean Frank Galey was the emcee for the SRM awards luncheon at which UW students were recognized. Please see the article on page 6 to see the outstanding efforts by the students.

VETERINARY SCIENCES

Will Laegreid will join the department in January as department head and director of the Wyoming State Veterinary Laboratory (WSVL), replacing interim head and director Associate Professor **Todd Cornish**. Laegreid comes to UW from the

University of Illinois, where he serves as a professor in pathobiology. He has prior experience as a research leader within the Agricultural Research Service branch of the USDA working on a variety of food animal disease and food safety research projects.

Jeff Adamovicz joined the department as an assistant professor and immunologist in August. He earned a Ph.D. in microbiology from the Uniformed Services University of Health Sciences in Bethesda, Maryland, and served as the chief of bacteriology at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) in Frederick, Maryland. At USAMRIID, he supervised more than 80 scientists working on vaccine development projects for diseases such as anthrax, plague, melioidosis, and brucellosis. Prior to this, he served as the deputy bacteriology division chief, department chief, and senior research investigator at USAMRIID, among other things working on the innate immune response to bacterial threat agents. Adamovicz recently was featured with other scientists and former USAMRIID senior investigators on the PBS program *Frontline* ("The Anthrax Files").

At UW, Adamovicz will split his time between research and teaching in the department and diagnostic and administrative service in the WSVL. His primary research interest is studying wildlife and livestock immune responses to infection with *Brucella abortus*, and he will collaborate with other faculty members in the department and college, including Associate Pro-



*Assistant Professor
Jeff Adamovicz*

fessor **Gerry Andrews**, Assistant Professor **Brant Schumaker**, Assistant Professor **Scott Lake**, and brucellosis research coordinator **Walt Cook**, on research that eventually should lead to improved brucellosis vaccines for livestock and wildlife. He also will serve as the scientific director and faculty lead for the new biosafety-level 3 laboratory at the WSVL, spearheading research and diagnostic activities on brucellosis, plague, tularemia, and other diseases.

AGRICULTURAL EXPERIMENT STATION

As the seasons change, so do things in the Wyoming Agricultural Experiment Station. The transition from autumn to winter (or the end of road construction season for most Wyomingites) marked a similar change in our office, notes Bret Hess, director and Associate Dean. **Kathleen Bertoncelj** decided to retire after 38 years of service to the University of Wyoming. She spent the last



AES Director Bret Hess

16 years working in this office. Kathleen's corporate knowledge of the office and the university as a whole has been sorely missed, says Hess. However, the office was fortunate enough to keep afloat thanks to the dedication of long-time employee **Joleen Pantier**, student worker **Kaitlyn McRann**, and part-time employee **Kristin Herman**. The office had another stroke of fortune by hiring **Joanne Newcomb**. "Joanne's first day on the job was November 10, and, as would be expected with anyone needing to fill Kathleen's shoes, we sensed Joanne was feeling a bit overwhelmed as can often occur during a typical November blizzard," remarked Hess. "However, time has passed and we move deeper into winter, Joanne has learned to weather the storms and settle into the office. Not surprising since Joanne brings a wealth of relevant experience and knowledge to the office. Feel free to call us at (307) 766-3667, stop by room 110 Ag C, or email aes@uwyo.edu to welcome Joanne to the Wyoming Agricultural Experiment Station team."

UW EXTENSION

Stacy Madden joined the Weston County extension team as 4-H youth educator January 4. Stacy received a bachelor's degree in women's studies and criminal justice from UW in December 2007. She has been employed with the UW School of Pharmacy as an office associate for experiential education the past three years. A 10-year 4-H alumnus, she first became involved with 4-H in Sidney, Nebraska, when she was 5 years old as a Pee Wee member. She will bring great enthusiasm and energy to the youth program.

INTERNAL COMPETITIVE GRANT AWARDS

UW extension announced recipients of its 2011-2012 competitive grants program, which focuses on extension and outreach and encourages projects and programs that are new and innovative and enhance extension's integration with research.

Projects addressing the following cross-initiative issues received the highest priority for funding.

- Develop the capability of UW Extension to educate using the Web or other electronic media.
- Energy extension – specifically energy efficiency, reclamation, and renewable energy production.

Funded projects and monetary amounts include:

Construction and development of a public interactive website on financial literacy – submitted by Cole Ehmke, Mary Martin, and Bill Taylor.



Stacy Madden

The authors will work with the Community Development Education financial literacy issue team; \$57,000.

Exploring cost-effective renewable energy in Wyoming: Developing Web-based feasibility tools – submitted by Milton Geiger and team Ben Rashford, Tom Foulke, Ashley Garrelts, and Sandy Frost; \$42,000.

Enhancing UW Extension educational outreach efforts through the creation of interactive educational bulletins accessible through mobile devices, tablets, and websites – submitted by Tana Stith and Communications and Technology staff members Bernadette van der Vliet, Stan Skrabut, and Steve Miller; \$55,000.

UW Extension and Experiment Station Web presence restructure and update for agriculture and natural resource-related material – submitted by Rachel Meador for team members Jennifer Thompson, Dallas Mount, Ashley Garrelts, Jeff Edwards, Doug Zalesky, and Michael Smith; \$46,000.



Mandie Corcoran

ACADEMIC AND STUDENT PROGRAMS

Mandie Corcoran joined the office in December as senior office associate for student recruitment. A Moorcroft native, she graduated from the University of Wyoming in 2009 with a degree in criminal justice and a minor in women's studies. She had previously worked as an admissions representative in the UW Admissions Office.

"I traveled all over the northeast corner of Wyoming and into the southwest region of South Dakota recruiting students for the University of Wyoming," says Corcoran.

She had started her student career with a double major in agroecology and criminal justice. "Although I did not graduate from the College of Agriculture and Natural Resources, it has remained near and dear to my heart," Corcoran says.

While attending UW, she completed a National Student Exchange at the University of Hawaii at Hilo studying marine science. She married UW gradu-



AG NEWS

College of Agriculture and Natural Resources

Department 3354

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ate and Dayton native Skyler Corcoran last year in Hawaii. “We live in Laramie,” she says, “and are proud to call ourselves Wyoming Cowboys. Go Pokes!”

COLLEGE RELATIONS

In talking with alumni and prospective students, I am sometimes asked, “What is it like in the College of Agriculture and Natural Resources?” Of course, the answer is as varied as our students and our programs. For those who have not been on campus recently, those who have children who are looking at colleges, or, if you just want to get insight into today’s college experience,



*Director of College Relations
Anne Leonard*

our College of Agriculture and Natural Resources student ambassadors have launched a blog.

Each week, an ambassador writes about his or her current

experience, what is happening in their degree programs, or other news. These are posted on the Web and can be accessed at www.wyomingextension.org/agambassadors or via the link on the left-hand column of the main college Web page www.uwyo.edu/uwag/. The topics they have chosen to write about are as varied as the ambassadors. **Noah Hull**, who plans to seek a Ph.D. in epidemiology, writes about a new class in epidemiology offered by Assistant Professor **Brant Schumaker**, one of our newer faculty members. **Lauren Schiermiester** talked about being a student worker with our Office of Academic and Student Programs and her

academic adviser, Associate Professor **Warrie Means**. **Mandy O’Donnell** shared her impressions of helping with the alumni breakfast at UW Homecoming and what she does to relieve the stress of mid-term exams.

When the idea for a blog was first brought up, the students were excited to share their personal experiences at UW and, hopefully, to hear back from alumni and future students. Contact them through the blog site or, if you have not been to campus recently and would like a tour, please contact me at aleonard@uwyo.edu, and we will arrange a tour with a student ambassador.