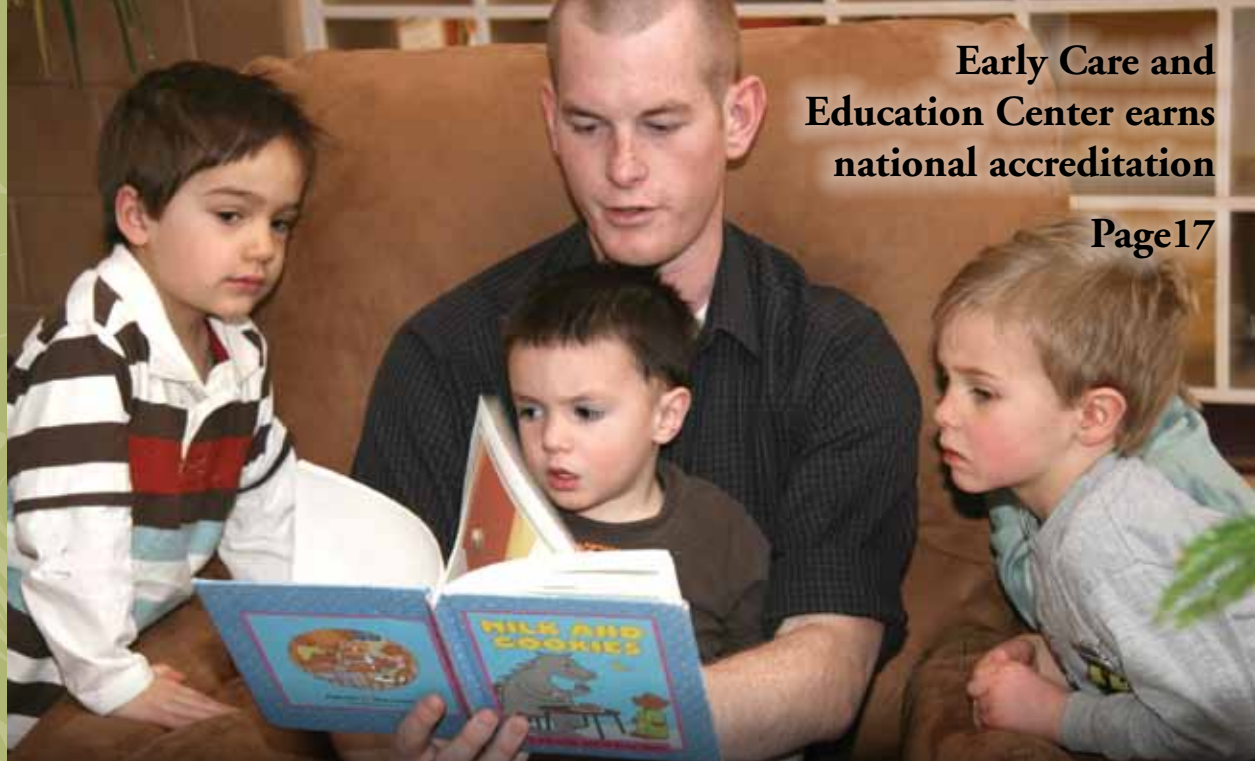


IN THIS ISSUE...

First Cutting	3
Environmental Simulation Laboratory	10
UW Polo team completes first year	12
Wyoming Excellence Chair in Prion Biology	14
ECEC earns national accreditation	17
Spicer Wyoming Excellence Chair in Environment and Natural Resources	18
Program Notes	20

**Early Care and
Education Center earns
national accreditation**

Page 17



COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

AG NEWS ^{UW}

VOLUME 19 • NUMBER 2 • SPRING 2010

"Coming
together is a
beginning;
Keeping together
is progress;
Working together
is success."

Henry Ford

Dear Friends and Colleagues,

Spring can be a wonderful season. Despite the clinging of winter, glimpses of warmer times appear. As I write this, calves, foals, and lambs are on the way or already here. The farm is waking up as well with plans for planting and the growing season; with warming, a flurry of activity will commence.

People in food production and natural resource stewardship know these cycles well. Unfortunately, many are generations away from understanding where our food originates. Though proposals for mandatory classes in food and environment in university settings like ours are largely ignored, sometimes there is good news.

At UW, and in UW research centers and extension offices around the state, that good news is community-based agriculture. We have organic farms on three of our research and extension centers, two of which are producing and very active in Sheridan and Laramie. In addition, we have hoop houses (greenhouse-like structures to give plants a good start and to extend the growing season in our high-altitude environment) going in at a number of locations due to a grant to our extension service to support master gardening and community-based agriculture.



Dean Frank Galey

(Continued on Page 2)



College of Agriculture and Natural Resources Dean Frank Galey, second from right, and Bob Kidd of Casper, second from left, met with Senators John Barrasso, left, and Mike Enzi in February in Washington, D.C. Galey and Kidd, who is a member of the Council on Agricultural Research, Extension, and Teaching, visited with the senators about the college programs in those areas and the positive effects funds have on Wyoming citizens.

Students formed the Agricultural Community Resources for Everyday Sustainability (ACRES) farm on the UW campus. Student-driven, dozens of volunteers maintain a small farm with a hoop house and composting facility at our Laramie Research and Extension Center greenhouse complex.

This student-operated farm is supported in kind by the Department of Plant Sciences and the Agricultural Experiment Station. The farm grows and harvests a variety of vegetables, which are then made available to the Laramie community in the summer to volunteers who help at the farm and occasionally at the Friday farmers market. This year, ACRES is planning to have a vegetable stand at the corner of Harney and 30th streets in Laramie Saturday mornings. Other produce is marketed to the UW Catering Service or donated to the Laramie Soup Kitchen. All proceeds help support the farm.

Volunteers from our student body and community operate the farm. It has been used as an educational resource for at least three classes and is involved in demonstrations for groups ranging from those with disabilities to community conferences. The beauty of this concept is that volunteers come from all aspects of

the student community and not just agriculture. Students from disciplines ranging from humanities to engineering are passionate, or becoming so, about the farm activities – and learning about the land and food as a collateral benefit.

In addition to its modest income, the farm also depends on the generosity of small grants from organizations such as the Associated Students of UW. Currently, ACRES is raising funds to build a much-needed shed and harvesting station at the farm. The shed was designed by the student members of the ACRES farm and architectural engineering students to be constructed using recycled materials from demolitions of old buildings during construction elsewhere on campus. Volunteer labor, donations, and a lot of student energy keep the ACRES student farm vibrant. If you have interest in learning more about the farm, please check out our Web site at www.uwyo.edu/uwacres/default.asp. If you have interest in supporting the farm, feel free to give my office a call or send an e-mail.

In this issue, we have features on two outstanding scientists we brought to UW using Hathaway Excellence Funding. One is Professor Hermann Schätzl. Hermann is one of the world's leading scientists studying the abnormal proteins that cause diseases like bovine spongiform encephalopathy of cattle, scrapie of sheep, and chronic wasting disease of elk and deer. The other is Steve Smutko. Steve is an expert in collaborative decision making. We are co-funding this position with the Spicer Chair funds in the Haub School of Environment and Natural Resources. Steve has extensive experience working with environmental processes involving affected communities and all constituents. Among other articles, you will also find news about our newly renovated Environmental Simulation Laboratory, which enables research about water and range science, and a large, new international grant program working in Kenya and Uganda.

Thank you for your continued support of your college! We wish you a productive spring and summer! We can be contacted at (307) 766-4133 or by e-mail at agrdean@uwyo.edu. Our Web site is www.uwyo.edu/UWag/.

Dean Frank Galey
College of Agriculture

Vance awarded 2009 American Association for the Advancement of Science Fellow

Professor George Vance in the Department of Renewable Resources is one of three from the University of Wyoming honored with the distinction of 2009 Fellow



Professor George Vance

from the American Association for the Advancement of Science (AAAS).

The AAAS is the world's largest general scientific society. Also receiving the honor are Professor Stephen T. Jackson in the Department of Botany and Professor Bruce Parkinson in the Department of Chemistry and the UW School of Energy Resources.

Vance was recognized for distinguished contributions to environmental issues/quality of agriculture, mine lands, and water resources associated with contaminant remediation/restoration, methodologies, and natural resource management. Vance says he is extremely grateful for being recognized by his peers for his lifelong research, teaching, and outreach activities.

The AAAS, founded in 1848, includes some 262 affiliated societies and academies of science and serves 10 million individuals. The association also publishes the journal, *Science* (www.sciencemag.org), as well as *Science Translational Medicine* (www.sciencetranslationalmedicine.org), and *Science Signaling* (www.sciencesignaling.org.)

College has record enrollment, Galey tells research and extension participants

Enrollment in the College of Agriculture and Natural Resources set a record this year, Dean Frank Galey told members of the research and extension centers during February planning meetings in Laramie.

Galey said 926 students were enrolled the beginning of the fall semester – the eighth consecutive year of increased enrollment. And, the college continues first among the colleges at UW in terms of grant funds per faculty member. More than \$12 million in grants was received last year.

Personnel from the Laramie, Powell, and Sheridan Research and Extension (R&E) Centers and from the James C. Hageman Sustainable Agriculture Research and Extension Center near Lingle provided updates from their centers and planning for this year.

The annual planning conference was the first for Bret Hess as director of the Wyoming Agricultural Experiment Station, taking over from Stephen D. Miller January 22. The R&E centers are under the administration of the AES.

"I don't know if I can match his passion for the R&E centers," said Hess, a professor in the Department of Animal Science. He served as AES assistant director for three and a half years. "That would be difficult. We have a similar philosophy. I think the R&E centers are critical to the mission of



Dean Frank Galey, left, and Bret Hess, director of the Wyoming Agricultural Experiment Station, joke before the start of planning meetings.

the research branch in our college."

Hess compared himself to a substitute who is suddenly called in to replace a star player. "I was nowhere ready to participate in that type of game," he says. "The game is going awfully fast for me, but I hope by next year things will slow down. Bear

with me. I feel strongly about an open line of communication. Feel free to contact me."

Hess said there is discussion to create a review committee for the Sheridan R&E Center, and that other initiatives include renewing, energizing, and reorganizing advisory boards at other centers, promoting and developing multidisciplinary projects, and working with Galey in fund-raising efforts.



Axel Garcia, assistant professor and irrigation specialist at the Powell Research and Extension Center, listens to Dean Frank Galey's presentation to start the AES annual meetings.

UW receives \$1.385 million grant to assist ag efforts in

Researchers in the College of Agriculture and Natural Resources and from the College of Business will use a five-year, \$1.385 million grant to become part of what they hope is a new green revolution in Africa.

Business management, economic, soil, and plant experts will try to help improve food production and supplies in Kenya and Uganda, countries deemed food insecure by the United States Agency for International Development (USAID).

Jay Norton, an assistant professor in the Department of Renewable Resources and one of five principal researchers in the project from UW, calls the new farm sustainability effort green revolution 2.0 – the new version of Norman Borlaug’s green revolution.

“Africa was bypassed in the green revolution of the 1960s and ’70s,” he says. “Supply chains for high-input agriculture had broken down with volatile political situations. We want to build soil quality so farm production is less dependent on off-farm inputs and to enable more production by small-holder farmers.”

Part of USAID Effort

The UW project in eastern Africa is part of the Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program, a world-wide effort by USAID with other grants awarded for projects in food-insecure regions in Southern and Western Africa, Latin America and the Caribbean, and Southern and Southeastern Asia (www.oired.vt.edu/sanremcrsp/).

“The goal is to develop, evaluate, and extend farming systems that build soils and are socially, culturally, and economically acceptable,” says Norton. “There has been a ton



Women in the Tororo district in eastern Uganda identify the community’s strengths, weaknesses, opportunities, and threats for the visiting UW team. Sitting on chairs facing the camera are, from left, Dennis Ashileje of Manor House Agricultural Center in Kenya; UW Professor Eric Arnould; UW assistant professors Melea Press, Dannele Peck, Urszula Norton, and Jay Norton; UW Ph.D. student Emmanuel Omondi; and Julian Nyachwo and Dr. Rita Laker-Ojok, both of Appropriate Technology in Uganda.

of work on this in Africa. Our first challenge is to talk to farmers, extension people, and scientists working there to determine how we can make a positive contribution.”

Other lead scientists from UW are Distinguished Professor Eric Arnould and Assistant Professor Melea Press, both of the Department of Management and Marketing in the College of Business; and Assistant Professors Dannele Peck of the Department of Agricultural and Applied Economics and Urszula Norton of the Department of Plant

Sciences in the College of Agriculture and Natural Resources.

The marketing and economic component will work to develop, evaluate, and extend farming systems that build soils and are socially/culturally/economically acceptable. “So we’ll work closely with local people to co-design systems that have potential to be adopted because they’re appropriate for local situations,” says Norton. “We definitely have the technology to improve production but, for many reasons – like the fact there is



Kenya, Uganda

no farm subsidy safety net – small farmers cannot adopt it.”

UW Ph.D. Students Crucial

Two Ph.D. students from Kenya in the College of Agriculture and Natural Resources were critical for the proposal receiving funding, says Norton. The grant requires the college to work with non-governmental organizations (NGOs) and universities in the two countries.

Emmanuel Omondi, in plant sciences, is from Kitale, and Eusebius Mukhwana, in renewable resources, is from Bungoma, both small towns in western Kenya. Omondi is director of the Manor House Agricultural Center NGO, and Mukhwana is director of the Sustainable Agriculture Center for Research and Development NGO, both in Kenya. The other NGO is Appropriate Technology Uganda.

UW is also working with researchers from Makerere University in Kampala, Uganda, and Moi University in Eldoret, Kenya.

Mukhwana in 2009 received the Borlaug Leadership Enhancement in Agriculture Program award. Both students will conduct post-doctoral work there as part of the project.

Omondi says the project parallels his NGO goals of alternative farming solutions to small-scale farmers by introducing them to farming practices that make efficient use of limited resources, require few off-farm inputs, and protect natural resources to increase food security.

“I see this project as a very significant and vital means to help achieve the goals and aspirations of my organization and Kenyan farming communities,” says Omondi.

He adds, “Our formal education system that every child has to go through is structured in such a way as to depict government agricultural extension programs as key to providing food security for the citizens, even though so-called modern conventional agricultural practices promoted by the government have failed to do this.”

Climate in Africa a Factor

Mukhwana says changes in climate have contributed to agricultural problems. “For some reason the impacts of climate change are more pronounced in Africa than in other places,” he says. “The rains have been erratic and drought is now occurring in many countries in three out of every 10 years. This has made farming more unpredictable and also a risky venture that is no longer profitable because of poor market organization, low prices of food commodities, and produc-



Assistant Professor Jay Norton

“The goal is to develop, evaluate and extend farming systems that build soils and are socially, culturally, and economically acceptable.”

Jay Norton

tion of little volumes of surplus food that is expensive to market.”

Norton is aware of the challenges.

“It’s a warm, humid climate,” he notes. “Organic matter decomposes rapidly and is lost, and crop residue is also used for other purposes, such as livestock feed and building materials, and is eaten up by termites.”

Little goes back into the soil. “Our task is to work closely with local farmers to find feasible ways to build soil organic matter by doing things like rotating crops, adding organic materials or incorporating crop residues, and then transfer that knowledge through extension and education,” he says.

The Africa effort will also help Wyoming producers, he says. “I think the more I can be involved and exposed to production systems everywhere, the more I can do for Wyoming producers. I think I’ll be exposed to whole new approaches I’ll be able to bring back to Wyoming. Our project can only be beneficial to Wyoming.”

The grant funds are being administered through Virginia Tech University.

FIRST CUTTING

Gamma Sigma Delta bestows honors

Students, former faculty members, and the outstanding agriculturalist were honored during the University of Wyoming Chapter of Gamma Sigma Delta (www.uwyo.edu/gsd) awards lunch March 27 in Laramie.

Gamma Sigma Delta is the international honor society of agriculture.

Those receiving awards, hometowns, and their majors, include:

Outstanding Freshman Female – Ryder Simeniuk, Opheim, Montana, rangeland ecology and watershed management

Outstanding Freshman Male – Dexter Tomczak, Longmont, Colorado, animal and veterinary sciences (ANVS) – business.

Outstanding Sophomore – Taylor Close, Mead, Colorado, agroecology

Outstanding Junior – Saralyn Van Knapp Jennings, Burbank, California, ANVS – business

Outstanding Senior – Nicole Steffes, Vale, South Dakota, molecular biology/microbiology

Outstanding Master's Candidate – Philipe Moriel, Sao Paulo Brazil, ANVS

Outstanding Ph.D. Candidate – Junxing Zhao, Shanxi province, China, ANVS

Outstanding Agriculturalist – Nancy Bath Woodard, Laramie

Faculty Award of Merit – Retired Professors Stephen Horn, animal science, and Stephen D. Miller, former associate dean and director of the Agricultural Experiment Station



Outstanding Master's Candidate Philipe Moriel



Outstanding Freshman Female Ryder Simeniuk



Nancy Bath Woodard, right, a Laramie-area cattle producer, receives the Outstanding Agriculturalist Award from Assistant Professor Kristi Cammack.



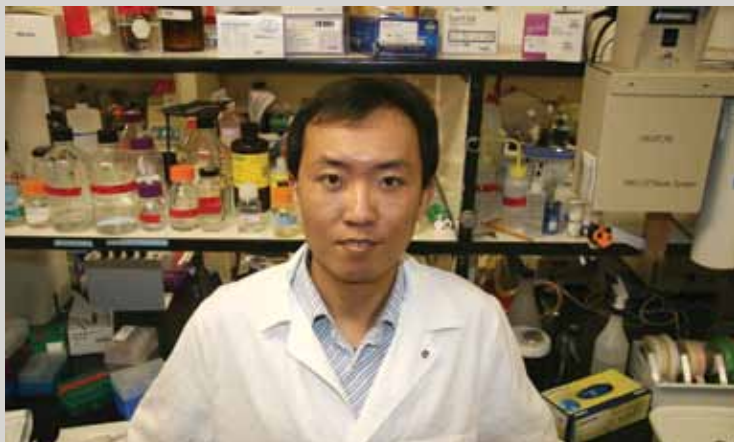
Outstanding Junior Saralyn Van Knapp Jennings



Outstanding Senior Nicole Steffes



Outstanding Freshman Male Dexter Tomczak



Outstanding Ph.D. Candidate Junxing Zhao



Outstanding Sophomore Taylor Close



Dave Wilson, lecturer in the Department of Plant Sciences, presents retired Professor Stephen D. Miller, right, the Outstanding Faculty Award of Merit.



Assistant Professor Kristi Cammack presents the Outstanding Faculty Award of Merit to retired Professor Steve Horn and former dean of the College of Agriculture and Natural Resources.

FIRST CUTTING

Staff, faculty members receive college honors

The Dean's General and Professional Staff awards, the Lawrence Meeboer Outstanding Teacher Award, and the Outstanding Adviser Award were presented at the annual college staff and faculty recognition program in December.

Dean Frank Galey announced Brandi Brewer, an accounting associate in the Department of Animal Science, received the Dean's Outstanding General Staff Award. Lindsey Moniz, coordinator of conferences and marketing in the Wyoming 4-H Program, received the Dean's Outstanding Professional Staff Award. Each will receive a \$500 cash award.

Other nominees for the general staff award included Virginia Alm, office associate in the Department of Plant Sciences; Laurie Bonini, senior office associate in the office of Academic and Student Programs; Lanny Hansen, accounting associate in the

Agriculture Administration Business Office; Sharon Kelly, office associate in the Washakie County office of the University of Wyoming Cooperative Extension Service (UW CES); Tressa Penrod, project coordinator in the Department of Family and Consumer Sciences; and Linda Rosa, accountant in the Department of Animal Science.

Other nominees for the professional staff award were Kelli Kilpatrick, 4-H educator in the Teton County office of the UW CES, and Jerry Nachtman, research associate at the James C. Hageman Sustainable Agriculture Research and Extension Center.

The Ag Council presents the Lawrence Meeboer Outstanding Teacher Award and the Outstanding Adviser Award to recognize outstanding teachers in the college. President Elizabeth Griesse and secretary/treasurer Lind-

say Smith presented the outstanding teacher honor to Alan Schroeder, associate professor in the Department of Agriculture and Applied Economics. Other nominees were Lee Belden, professor, Department of Veterinary Sciences; Dale Isaak, professor, Department of Molecular Biology; Kari Morgan, assistant professor, Department of Family and Consumer Sciences; Dannele Peck, assistant professor, Department of Agricultural and Applied Economics; and Jim Waggoner, associate professor, Department of Renewable Resources.

Kari Morgan received the Outstanding Adviser Award. Other nominees were Chris Bastian, assistant professor, and Ed Bradley, associate professor, both of the Department of Agricultural and Applied Economics.

Schroeder and Morgan both received a \$500 cash award.



Brandi Brewer, left, received the Dean's Outstanding General Staff Award from Frank Galey, middle. Also nominated were, from left, Linda Rosa, Lanny Hansen, Tressa Penrod, Laurie Bonini, and Virginia Alm. Not pictured, Sharon Kelly.



Frank Galey presented the Dean's Outstanding General Staff Award to Brandi Brewer of the Department of Animal Science.



Kari Morgan, right, received the Outstanding Adviser Award. Chris Bastian, second from right, was also a nominee. Ag Council secretary/treasurer Lindsay Smith, left, and president Elizabeth Griesse presented the award. Not pictured but also nominated was Ed Bradley.



Lindsey Moniz, left, and Jerry Nachtman, right, were nominated for the Dean's Outstanding Professional Staff Award. Also nominated was Kelli Kilpatrick, not pictured.



Lindsey Moniz of the Wyoming State 4-H Office received the Dean's Outstanding Professional Staff Award from Frank Galey.



Alan Schroeder, front right, received the Lawrence Meeboer Outstanding Teacher Award from the Ag Council. Ag Council representatives and nominees are, from left, Lee Belden, Ag Council secretary/treasurer Lindsay Smith, Dannele Peck, Ag Council president Elizabeth Griesse, Kari Morgan, Dale Isaak, Schroeder, and Jim Waggoner.



Professor John Tanaka



Professor Mike Smith



Professor Ann Hild

Society for Range Management honors faculty members

Faculty members of the Department of Renewable Resources received honors during the February 2010 Society for Range Management annual meeting in Denver.

Professors Mike Smith and John Tanaka, head of the department, received titles of Fellow, and Ann Hild received an Outstanding Achievement award.

The Fellow Award recognizes exceptional service to the society and its programs. Smith was recognized for his service to the SRM History, Archives, and Library Committee. He has served as chair for all but three years since the committee's inception in 1986. Smith was cited for helping foster the inventorying, organizing, and indexing of files in the SRM Archive Collection, making them useful for anyone interested in SRM history. He has also worked to collect appropriate materials for the collections.

Tanaka's service to the society started as a student serving as president of the Oregon State

University student chapter, and he has served at the chapter, section, and international levels. He was interim executive vice president from 2007-2008 and was on the board of directors, serving as president in 2006. "Dr. John Tanaka has been one of the primary leaders that have moved the society forward the last 10 years," the award announcement stated.

Hild was honored for her efforts in research and academia. She served as a SRM director from 2006-2009, but SRM specifically notes "her energy, creativity and moxie she provides to any effort."

"Everything she attempts has been entered into with her characteristic determination for success coupled with her rapport with colleagues," SRM states. "Such a combination of personal traits is rare and commendable." Hild's research has provided new tools and prescriptions for monitoring and managing rangelands and understanding the community ecology of shrublands, grasslands, riparian areas, and pastures, according to SRM.

Wiseman receives Sigma Alpha Agriculture Advocate Award

Kelly Wiseman is one of four women nationally who has received the 2010 Sigma Alpha Agriculture Advocate Award.

Wiseman, staff assistant in the Office of Academic and Student Programs, was nominated by the Sigma Alpha Chapter at UW.

"We wanted to honor a woman who promotes members in all facets of agriculture and strengthens the bonds of friendship among them," says Kendall Eisele of the UW Sigma Alpha Chapter and a national board director with the National Sigma Alpha Sorority.

"She has assisted all of the members of the Alpha Epsilon chapter and thousands of students by striving for achievement in scholarship, leadership, and service," says Eisele of Cheyenne, a graduate student in the Department of Agricultural and Applied Economics. "Kelly also has inspired many Sigma Alpha members (past and present) and other women in the College of Agriculture and Natural Resources to excel and further the development of women pursuing careers in agriculture. She has been a true success for our members to follow, and we could not think of anyone better than her for the award."

Wiseman says she is honored to receive the award. "My daily interaction with these amazing young women makes my work exciting and very rewarding," she says. "I am inspired by their work ethic, dedication toward their education, and their passion for agriculture."

The award recognizes Wiseman's contributions that parallel the National Sigma Alpha objective of promoting its members in all facets of agriculture, strengthening the bonds of friendship between them, furthering their development of excellence, and striving for scholarship, leadership, and service.

The award recipients were recognized at Sigma Alpha regional leadership seminars in February.

"This was our way of saying thank-you for all the years she has assisted the members of Sigma Alpha and other agriculture organizations on campus," says Eisele.



Kelly Wiseman

Researchers breathe new life into

A sleeping beast resuscitated into a beauty could nudge the college's research capabilities into the world-class arena.

The Environmental Simulation Laboratory (ESL) in the College of Agriculture building's first floor level has lain idle for more than 18 years. The ESL is a climatologically controlled room within which researchers can install soils and plants to examine soil-plant-water-energy interactions. Researchers had wanted at the time to build a much larger facility, but those plans fell through, and the ESL was left to slumber.

A group of researchers in the college in 2006 initiated efforts to see if the facility could be made operational.

"It was just sitting there being of no use," says Ginger Paige, assistant professor in the Department of Renewable Resources and spokesperson for the group. The ESL would allow researchers to glean data from a controlled environment in addition to data from a natural setting.

A steering committee was formed and a seed grant from the college, the Agricultural Experiment Station, and the Office of Research and Economic Development paid for an engineering company's determination of the needed modifications. That bid was

"The ESL is a truly unique research facility with tremendous potential to advance world-class research at the University of Wyoming."



Renewable resources master's student Brian Sebade is examining how plants exposed to growing with weeds compare to plants that have not in research inside the Environmental Simulation Laboratory.

let in February 2008, and renovations were completed in late 2009. Compressors were revamped, sensors wired, and monitoring equipment installed that allows control of the ESL at the college or from remote locations. Several feet of coarse material and then topsoil was scooped in by shovel. The intensive labor was provided by many graduate students from renewable resources led by Brian Sebade, a master's student.

The lab still needs and is receiving constant tinkering. "The original sprinkler system rains amounts and intensities similar to monsoons and heavy downpours. Such rainfall events, although common in the desert Southwest, are not characteristic of events in Wyoming. We would like to replace the sprinklers in the ESL to be able to control the rainfall events more precisely," says Paige. The lights generate a lot

of heat but not enough light for sufficient photosynthesis.

Now, invasive Russian knapweed and the native grass alkali sacaton bask under the lights in climate-controlled conditions as part of an experiment that compares grasses grown with weeds to those lacking a history of weed invasion.

The study by Sebade, Professor Ann Hild's graduate student in the Department of Renewable Resources, is a pilot project and allows for calibration and testing of the facility by the ESL committee.

"The ESL is a truly unique research facility with tremendous potential to advance world-class research at the University of Wyoming in the areas of hydrology, ecology, and earth system science. Studies in the facility will have direct application to problems in agriculture, rangelands and



dormant simulation laboratory

disturbed land reclamation,” says Hild.

Designed to investigate biophysical processes underlying ecosystem dynamics, the ESL is one of only several such facilities in the world.

“We are trying to find out if weed invasions eventually cause native grass populations to be selected to favor more competitive grasses,” she says. “We will document the growth and reproductive capacity of the grasses both with and without Russian knapweed in an effort to find differences in competitive ability to resist weed invasions.”

The ESL is being used in this study to simulate climatic conditions at sites near Crowheart, which are invaded by Russian knapweed, and is being compared to study plots at FE Warren Air Force Base near Cheyenne where Canada thistle has invaded grasslands.

“The ESL will allow us to control climatic factors, monitor below-ground activity, and more closely evaluate interactions with knapweed and alkali sacaton that cannot be achieved in a field setting,” says Sebade.

The ESL will be an excellent teaching and training facility, notes Paige.

“Because the ESL is conveniently located on campus, it provides great potential as a teaching facility for graduate and undergraduate students to learn about environmental simulation, state-of-the-art computer monitoring and control systems, as well as sophisticated measurement and data-logging equipment.”

The steering committee will lead future efforts in the ESL in collaboration with University of Wyoming scientists.

Laboratory offers precise monitoring

The Environmental Simulation Laboratory has the capability of a soil bed up to about 10 feet deep and has two research plot areas separated by a concrete divider for research; each is about 2,400 cubic feet.

The size of the two areas allows soil processes – runoff, deep drainage, nutrient transport, energy exchange, and gas fluxes – to be precisely monitored, says Associate Professor Ginger Paige. “This is not possible in the field using natural ecosystems. Bio-physical and ecosystem models developed using field observations often include considerable uncertainty in the estimation of important energy and material exchanges, and often depend on unrealistic assumptions about key variables and processes.”

Typical greenhouse or laboratory incubator experiments either compromise or do not capture the complex interactions and feedback operating at ecosystem scales, she notes.

“The ESL offers a unique set of experimental and measurement capabilities at a spatial scale large enough to capture processes representative of natural ecosystems,” says Paige. “The ESL is particularly useful for model development and integration and for testing hypotheses about ecosystem behavior and response in ways not feasible with other kinds of experimental systems.”



From left, Megan Taylor, Swainsboro, Georgia, Tony Perlinksi, Laramie, and Brian Sebade, Lander, spread topsoil into one of the laboratory chambers before the Christmas holiday break.

UW Polo team completes first year

No matter how muscular and quick the linemen that anchor UW head football coach Dave Christensen's squad, they won't match the line on this UW team.

This team's linemen are real horses.

The UW Polo Club that formed around a nucleus of former Colorado State University (CSU) players last year had its first-ever polo game last October against CSU and continued play through the academic year. The team competes in the U.S. Polo Association intercollegiate/inter-scholastic division that includes CSU, New Mexico State, Texas A&M University, Texas Tech University, Oklahoma University, and Washington State University.

Transfer students Drew Luplow of Banner and Amanda Diehl of Chicago got the horses going at UW.

Both had played at CSU.

"When we transferred here, I played hockey for the club team and missed playing polo," says Luplow, who started playing polo at about 16. "So, with a little push from Amanda, we got the ball rolling and started the team here. We started it to bring the equine sport of polo to UW."

"It gives you an adrenaline rush every time you get the horses moving as fast as they can run down the field. There is no other sport like it in the world. Another great way to describe polo is 'hockey on horseback.'"



The mallet bends as Drew Luplow attempts a shot.

Men's team members are sophomore Matt Huckleba of Big Horn, junior Anthony Kolos of Sheridan, and seniors Luplow and Peter Burgess of Wyrarno. Huckleba, who started playing polo at age 10, was selected this year to Team USA of the United States Polo Association.

"Team USA was designed to bring the top 18 men in the country evaluated by a committee together to showcase their skills and give them some time with pros to better their game," says Luplow, president of UW Polo. "This was a great opportunity for him and the others who made it."

UW competed in the western regional tournament in Santa Barbara, California, during spring break. UW lost to Westmont and CSU, "But we were recognized as a very well-established and competitive first-year team," says Luplow.

Each polo team has four players, and each team needs at least six horses for one game. Three players compete for each team in arena play. Players score by hitting a small white ball into the opposing team's goal using a long-handled mallet. No bands or cheerleaders entertain between periods – riders and helpers spend the time walking horses to help cool them down.

Competitors need excellent hand-eye coordination and great horsemanship skills.

"The game is very fast-paced on a polo saddle," says Luplow. "A polo saddle is basically a jumping saddle without any knee rolls or anything to lock you in the saddle."

Horses need to be competitive with special abilities. "A horse needs to be as fast as a race horse and as handy as a reining horse at the same time," he says. Horses are usually started at 3 years old into slow polo and, when 4, are pushed to the next level.

"Depending on how good they are, they can play for the best players in the world and be worth upward of \$250,000," notes Luplow. "Some of the best pros in the world have hundreds of horses they play and for breeding."

Not quite the multi-million dollar contracts of the National Football League, but when these four-legged linemen hit, it's called "bumps."

"It is legal to bump in polo," says Luplow. "This means knee-to-knee (usually about a foot behind or ahead is OK, too). The object is to push an opponent away from the ball and establish yourself on the 'line.' The line is the imaginary line between the point where the ball was struck to where the ball is. Most of the fouls in polo are based around this line."

The dangerousness of plays is evaluated by umpires – generally two on horseback and one in the stands.

"The sport is very physical and very fast-paced," Luplow says. "It gives you an adrenaline rush every time you get the horses moving as fast as they can run down the field. There is no other sport like it in the world. Another great way to describe polo is 'hockey on horseback.'"



Matt Huckeba prepares for action against Colorado State University at the Cliff and Martha Hansen Livestock Teaching Arena.



UW women's team competed last fall

The UW Women's Polo team competed last fall but not this spring. Drew Luplow, president of UW Polo, says he hopes there is enough interest this year so the team regularly competes. Team members are Amanda Diehl, Chicago, Illinois, Deborah Burley, Cheyenne, Tanya Halliday, Stow, Massachusetts, Sarah Iverson, Mill Valley, California, Francesca Cocco, Lorain, Ohio, and Annie Morabito, Chicago, Illinois.





*Hermann Schätzl holds
a culture medium
for cultivating prion-
infected cells.
(UW Photo)*

Wyoming Excellence Chair in Prion Biology

UW position
allows world-
renowned
scientist to be at
an epicenter of
prion research

A small laptop in the middle of a barren desk was the only equipment next to the scientist with an international reputation.

Hermann Schätzl's office in the College of Agriculture and Natural Resources had a definite not-yet-moved-into look. Computers and other hardware would later share hallway space on the sixth floor with laboratory equipment being shipped recently from Germany.

At the other end of the long sixth floor hallway – on the east side – a laboratory shared with Professor Lee Belden was being

remodeled and would not be functional for another month. No post-docs toiled in the lab; no technicians, no graduate students, and no undergraduates had been recruited and hired.

Yet, Schätzl, the Wyoming Excellence Chair in Prion Biology, was perfectly happy – he's where the action is in his specialty. His research group in Germany had been studying the molecular and cellular biogenesis and pathogenesis of prions since 1996, after returning from his postdoctoral work with Stanley Prusiner at University of California,



San Francisco. Schätzl had worked with Canadian and American groups studying chronic wasting disease (CWD) but, he notes, “The problem is it’s so difficult to bring any CWD material into Europe.”

He was professor of clinical virology and head of the Clinical Virology Section at Technical University of Munich (TUM) in Germany from 2002-2010. He was head of the Institute of Virology from 2006-2007.

“TUM is still a leading university in Europe, but it was no use to me,” says Schätzl. “I have to work where there is the ongoing infection. CWD is the most infectious and most interesting prion disease. I decided it was a good idea to work in the U.S. and not wait until it may show up in Europe.”

Endowment Creates Senior Faculty Positions

Funded by the Wyoming State Legislature, a \$70 million endowment created senior faculty positions for highly distinguished scholars and educators. The legislation states the positions must expand university instruction and research in disciplines related to economic and social challenges facing Wyoming.

No one will doubt diseases caused by prions, such as Chronic Wasting Disease in deer, scrapie in sheep, and bovine spongiform encephalopathy of cattle, is not relevant to the state.

“His scholarly reputation in the field of prion diseases will provide a solid foundation for ongoing and future research at UW to better understand these invariably fatal neurological diseases that affect humans as well as animals,” says Professor Don Montgomery, head of the Department of Veterinary Sciences.

“Much is unknown concerning the prion diseases. Schätzl’s research will lead to a basic understanding of the mechanisms that underlie the prion diseases, some important to the state of Wyoming including scrapie and chronic wasting disease.”

Schätzl learned of the UW position by chance – a colleague in Montana told him UW was looking for a prion biologist. “To me, Laramie is an historic place,” he says. He knew of the work by the late Beth Williams, a professor in the Department of Veterinary Sciences. She and her husband, Tom Thorne, a retired Wyoming Game and Fish Department veterinarian, were prominent experts on chronic wasting disease and brucellosis.

Laramie, he says, is the epicenter of CWD.

Interest Grew in Biology

Raised on a farm in Germany, one brother took over the operation (and now has a restaurant and hotel in addition to the farm) and another brother became a doctor. Schätzl was drawn to biology. He studied medicine at the prestigious Ludwig Maximilians University in Munich and received his medical degree in 1991 from the Department of Virology at the Max von Pettenkofer Institute for Microbiology and Hygiene, Munich. Schätzl was a post-doctoral fellow from 1993-1995 in the laboratory of Nobel Prize Laureate Stanley Prusiner at the University of California, San Francisco. Prusiner is known for his seminal work on abnormal prion proteins and the transmissible spongiform encephalopathies.

In addition to the basic science, Schätzl is interested in the social implications of prion diseases. CWD affects humans in non-medical terms: tourism and hunting

PRIONS: Infectious proteins

Prions (short for *proteinaceous infectious particles*) are infectious pathogens associated with some 20 different strictly deadly diseases in humans and animals, including mad cow disease, scrapie, CWD, and the rare human form, Creutzfeldt-Jacob disease. Prions, thought to be composed solely of protein, have the ability to reproduce despite the fact no nucleic acid genome has yet been found.

Mammalian cells normally produce what is known as cellular prion protein; during infection with a prion disease, the abnormal prion protein converts the normal host prion protein into a self-propagating, infectious and neurotoxic form.



in the Intermountain region, for example. He's also interested in human consumption of meat from animals with CWD. No one can yet exclude CWD is not zoonic – it might have the potential to be like BSE in humans, he says.

Depending upon an individual's susceptibility, a human may become infected, such as with BSE resulting in a variant of Creutzfeldt-Jakob disease, but not show symptoms for 10 to 20 or more years. Within an international collaboration, he is presently testing this possibility by infecting non-human primates with CWD material.

Adding to the scientific landscape, Schätzl says researchers at Colorado State University have detected the pathological form of the prion protein in two water samples coming from the mountains – probably from infected carcasses, feces, and/or urine. Fortunately, bioassays showed that the prion load was below infectious levels for mice.

Getting Lab Running First Priority

Schätzl's first priority is getting his laboratory up and running. Equipment was shipped from Munich, and additional equipment will be added. "It's critical to hire good people for the lab," he notes. "There will be post-docs and Ph.D. students. Most important is also the tech, who should already have experience. Next, you bring in inexperienced people who you educate and train, to start self-propagation of expertise."

Helping will be his associate, Sabine Gilch, who was head of his laboratory in Germany and is herself an experienced prion researcher. "Without her, I would not be here," he says. "Starting from scratch is tough."

Schätzl plans an international approach. Researchers and students will come from Spain, America, Canada, Europe, and

Japan, among other countries.

An overall theme in Schätzl's research comes from the molecular understanding of prion infections to therapeutic and prophylactic anti-prion approaches (see www.benthamdirect.org/pages/b_viewarticle.php). He has envisaged three main avenues of future research embedded in existing research activities on the campus. First, which other species are at risk to contract CWD? Second, is CWD transmissible to humans via the food chain? Third, can a wildlife vaccine be developed helping in containment of CWD in the long run?

Schätzl says he has four criteria to measure success. First is the number of publications and the quality of publications, and the second is grant dollars. He has about \$12 million in grant funds so far. "Without money, you can't do research," he notes.

Third is the success of the people working for him. "Have you had good people in the lab, and have you helped them move forward?" he asks. "Do they have good jobs? Stayed in active research?"

The fourth criterion is a compilation of all.

"I have to work where there is the ongoing infection. CWD is the most infectious and most interesting prion disease. I decided it was a good idea to work in the U.S. and not wait until it may show up in Europe."

"After you count them all, is it positive or negative?" Schätzl asks. "I'd say I'm pretty happy and was lucky to have such gifted co-workers. I prefer to have a good atmosphere in the lab compared to having lots of competition amongst co-workers. People should be happy, which makes them productive but not over productive. That can lead to fabrications. Our lab has been known for having always a good atmosphere. People had fun."

Schätzl research

For examples of research Schätzl has been involved with, see "Intracellular re-routing of prion protein prevents propagation of PrP^{Sc} and delays onset of prion disease" at www.ncbi.nlm.nih.gov/pmc/articles/PMC149175/?tool=pubmed, "In Vitro and In Vivo Neurotoxicity of Prion Protein Oligomers" at www.plospathogens.org/article/info:doi/10.1371/journal.ppat.0030125#aff4, or "Therapy in prion diseases: From molecular biology to therapeutic targets" at www.benthamdirect.org/pages/b_viewarticle.php



Claire Haney.

Early Care and Education Center earns national accreditation

The University of Wyoming Early Care and Education Center (ECEC) earned accreditation from the National Association for the Education of Young Children (NAEYC) – the nation’s leading organization of early childhood professionals.

“We’re proud to have earned the mark of quality from NAEYC and to be recognized for our commitment to reaching the highest professional standards,” says Mark Bittner, director of the ECEC.

The ECEC is administered by the Department of Family and Consumer Sciences and also supported by the Associated Students of the University of Wyoming and works in partnership with the College of Education, UW Apartments, and Residence Life as well as several other departments on campus.

To earn NAEYC Accreditation, the ECEC went through an extensive self-study process measuring the program and its services against the 10 NAEYC Early Childhood Program Standards and more than 400 related accreditation criteria, according to Bittner.

The program received NAEYC Accreditation November 19 after a site visit by NAEYC assessors to ensure the program meets each of the 10 program standards.

NAEYC accredited programs are also subject to unannounced visits during their accreditation, which lasts for five years.

“NAEYC accreditation lets families in our community know that children in our program are getting the best care and early learning experiences possible,” notes Bittner. “Nikki Baldwin (ECEC curriculum coordinator) worked an unbelievable number of hours with the teachers on creating classroom portfolios as well as child portfolios. She really was the impetus of helping us get through this rigorous process.”

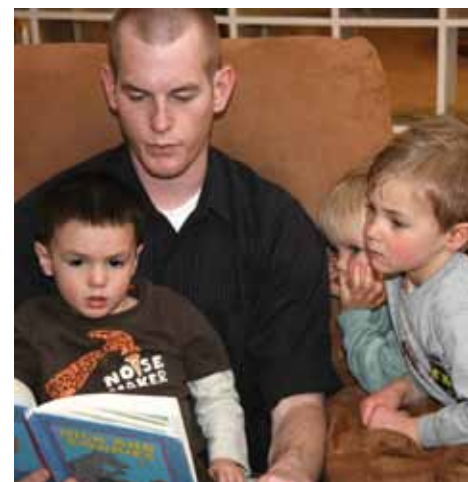
Bittner also stated much of the accreditation and self-study process involves documentation of policies and procedures, much of which was done with help from Tracy Goodspeed, ECEC administrative assistant.

“Mark, Nikki, Tracy, and the teachers at the ECEC are to be recognized for their exceptional programming, documentation of student learning, and social and emotional support they give to children in their care and their parents,” says Karen Williams, head of the Department of Family and Consumer Sciences.

The NAEYC Accreditation has become a widely recognized sign of high-quality early childhood education since established 23 years

ago. Almost 8,000 programs serving one million young children are currently accredited by NAEYC – approximately 8 percent of all preschools and other early childhood programs.

“The NAEYC Accreditation system raises the bar for preschools, childcare centers, and other early childhood programs,” said Mark Ginsberg, executive director of NAEYC. “The UW Early Care and Education Center’s NAEYC Accreditation is a sign they are a leader in a national effort to invest in high-quality early childhood education and to help give all children a better start.”



Teacher Keenan Mumm with, from left, Evan Crum, Alan Geerts, and Beckett McCoy.

LET'S TALK

Professor with worldwide reputation for

The Western landscape continues to call to this Colorado Springs, Colorado-native despite a 20-plus year hiatus to North Carolina.

Professor Steve Smutko says the allure of the Intermountain region never left him. Now, the landscape's environment is integral to his work as the Spicer Wyoming Excellence Chair in Environment and Natural Resources – the first in the nation devoted to collaborative decision making.

The position is based in the Haub School and Ruckelshaus Institute of Environmental and Natural Resources (ENR), and he also is a faculty member in the Department of Agricultural and Applied Economics in the College of Agriculture and Natural Resources.

The Spicer Chair, created to link teaching, outreach, and research in collaborative processes, will reach all disciplines in natural resource science and policy, says Indy Burke, ENR director.

"Steve is familiar and experienced with the important issues facing the state and the West," she says. "He not only will be

a member of our team but an integral part of our campus community representing the university and bringing effective collaborative processes to the state's citizens and decision makers."

Liked Position's Requirements

The UW position's appeal is the opportunity to work in critical environment and natural resource issues with the Ruckelshaus Institute and the agricultural and applied economics department.

"I grew up in the Rocky Mountains," Smutko says. "When you grow up in a place, you bond to it – the sights, the smells. I had lived in Colorado and Montana and left for the southeast for 20 years, but I kept thinking 'I'll get back here.'"

Support for launching the position came from the Excellence in Higher Education Endowment, says Nicole Ballenger, UW associate provost. "In keeping with the goals of the endowment program, the position expands university research and outreach in disciplines related to economic and social challenges facing Wyoming."

Good work is being done at UW in the environment and agricultural and resource economics, Smutko says.

Smutko especially likes the experimental economics lab in the agricultural economics department. "There is opportunity to use some of the tools being developed by UW economists to analyze what is being done with respect to the real-world issues I work on," he notes. "We can really push the envelope on applying experimental designs to applied situations. I think we can learn a lot about how groups make decisions."



Professor Steve Smutko

Cooperation across colleges at UW is also a pleasant surprise. "I'm amazed at how well faculty members have cut across disciplines," he says. "That isn't the case at a lot of universities. It makes things easy."

Hit Ground Running

Smutko joined UW in January and put abilities to work immediately. The Wyoming Department of Environmental Quality asked if he would work with the agency and stakeholders to change the process of permitting discharge from coal-bed methane operations. He's working with the government, those with energy interests, ranchers, environmentalists, and other state agencies.

"A lot of issues with natural resource

"Steve has extensive experience and a worldwide reputation in collaborative decision making and community development."

*Frank Galey
Dean, College of Agriculture
and Natural Resources*



collaborative decision making joins UW

management are complex and contentious,” he says.

He draws upon a number of disciplines to bring groups together and work toward solutions – economics, mediation, and decision science. Procedural issues are tackled first so all parties have potential to gain. Next, relationship issues are solved. Then, the substantive issue is worked.

“I like to find ways all parties get interests met,” he notes. “Groups bring different values and resources to the table. We look for stakeholders who can potentially gain by sitting together and working through a problem. It’s an exploration of whether you can do better coming together and solving the problem or by exercising a prior option. My objective is to engage the parties in a learning process that helps them develop efficient and effective solutions.”

Will also Develop Training Courses

Smutko will develop training courses for professionals in natural resource management, industry, environment, and non-profits on negotiation and group problem solving. He developed then presented a course in May on facilitation, and will have seminars for environmental negotiation in August and environmental communications in the fall. For UW students, he’ll offer a course in negotiation analysis this fall semester and will advise students in the agricultural economics department.

“Steve has extensive experience and a worldwide reputation in collaborative decision making and community development,” says Frank Galey, dean of the College of Agriculture and Natural Resources.

“The university and Wyoming will greatly benefit from a UW program in collaborative process and with Steve leading this effort.”

While an extension specialist in the Department of Agricultural and Resource Economics at North Carolina State University in Raleigh, he helped communities tackle difficult environmental problems. “North Carolina is an industrialized state and has tough problems pertaining to water quality,” he says.

One of those issues was hog confinement operations.

“In a lot of cases, much of the disagreement centers on data,” he says. “What it often came down to is what does science say, and each group would bring “scientific evidence” that favored their position to the table. The strategy in those cases was to design an educational process that allows stakeholders to define the information they need, where they will get it, when they need it, and what they will do with it.”

Smutko also has a 40-percent University of Wyoming Cooperative Extension Service assignment.

“I view my role in leading collaborative decision forums as my extension work,” he says. “It is something extension can and should be known for – bringing

“I view my role in leading collaborative decision forums as my extension work,” he says. “It is something extension can and should be known for – bringing stakeholders together to solve tough issues in a community.”

*Professor Steve Smutko
Spicer Wyoming Excellence in
Environment and Natural Resources*

stakeholders together to solve tough issues in a community.”

He may also provide training to extension’s economic development initiative team.

“Extension’s role in that area is well deserved,” he notes. “The public trusts extension educators to be non-partisan and are able to bring people together to resolve issues in a community.”

Smutko received a bachelor’s in outdoor recreation from Colorado State University in 1978, a master’s in community and regional planning from North Dakota State University in 1982, and a doctorate in economics from Auburn University, Alabama, in 1995.

PROGRAM NOTES

Agricultural and Applied Economics

Cole Ehmke was named to the Casper Star-Tribune's (CST) Top 20 Under Forty class in March. Ehmke is an academic professional in the department and an agricultural entrepreneurship and personal finance specialist with the University of Wyoming Cooperative Extension Service.

The edition honors outstanding individuals under age 40 in Wyoming. In its sixth year, the edition was pared from 40 individuals to 20 this year and is designed to tell the stories of the most impressive and inspiring young people, according to the CST. "Though each has a unique story, they have at least two things in common: a record of achievement and the demonstrated potential to help lead Wyoming in the decades to come," notes the CST. "The list doesn't aim to identify Wyoming's 20 smartest young people, or the 20 most power-

ful, or the 20 most successful. Instead, with help from our readers, it simply recognizes 20 inspiring standouts among the many young people whose talents are hard work and helping to build Wyoming."

Ehmke's story is at www.trib.com/business/20underforty/article_9aae7ac0-31e6-11df-bca7-001cc4c002e0.html. All the honorees are at www.trib.com/business/20underforty/.

Animal Science

Professor **Stephen Ford**, Rochelle Chair Reproductive Biology, Fetal Programming, received the Sydney A. Asdell Award for Distinguished Scholarly Contributions in Reproductive Biology from Cornell University. Along with receiving the award February 24, Ford presented the university-wide Sydney A. Asdell Memorial Lecture entitled "Maternal Nutrient Restriction or Dietary Excess Differentially Programs Placental, Fetal, and Postnatal Development in the Sheep." Asdell was a pioneer in the science of reproductive biology, and his fundamental research findings are recognized for their contributions to the development in this field. His early experiments helped establish the basis for a number of major advances, including artificial insemination, superovulation, in vitro fertilization and embryo transfer, and estrous cycle regulation.



Professor Stephen Ford

Several members of the department received honors from the University of Wyoming Chapter of Gamma Sigma Delta (www.uwyo.edu/gsd). **Dexter Tomczak**, Longmont, Colorado, received the Outstanding Freshman Male award; **Saralyn Van Knapp Jennings**, Burbank, California, received the Outstanding Junior award; **Philippe Moriel** of Sao Paulo, Brazil, received the Outstanding Master's Candidate award; and **Junxing Zhao**, Shanxi province, China, received the Outstanding Ph.D. Candidate award. Gamma Sigma Delta is the international honor society of agriculture. The awards were presented at the Gamma Sigma Delta awards ceremony March 27 in Laramie. Associate Professor **Paul Ludden** is the 2009-2010 president.

Stephanie Schroeder of Douglas completed an internship in the equine department of the National Western Stock Show, Rodeo and Horse Show in Denver. She was a recipient

of the National Western Stock Show Livestock Leadership Internship Scholarship through UW. The internship focused on the organization, planning, and execution of all the equine-related events that take place at the stock show.

Family and Consumer Sciences

Karen Williams, professor of child development, stepped down as department head June 1 seven years to the day from the start of her appointment. She will return to her nine-month faculty position in the Department of Family and Consumer Sciences. "It's been a wonderful experience for me, but, at this time in my career, I feel it's important to get back to my own research and teaching and contribute in a different way," she says. "The department is in wonderful shape, and I know there are talented faculty members who would benefit from taking this leadership opportunity."

Williams will continue to direct the Bachelor of Applied Science program for the College of Agriculture and Natural Resources and will devote more time to state-level early childhood policy work.

The department had its annual student recognition event April 22. The theme was "going green" with faculty members and student projects highlighting green design, recycling, and energy efficiency on



Cole Ehmke



Professor Karen Williams

display. Outstanding freshman, sophomore, junior, and senior awards were presented, as well as special awards such as the Phoenix Award, which goes to an outstanding student who has overcome obstacles in their lives to become successful students, and the Outstanding Distance Student Award.

Molecular Biology

Spider silk research in the laboratory of Professor **Randy Lewis** is being featured in two broadcasts.

Crews taping for an episode of the soon-to-be material science documentary “Stuff” – part of NOVA – filmed the spider silk research from milking transgenic goats through fiber production. The presentation about bio-based materials will be the final segment following manmade fibers, says Lewis. Lewis and other lab members were interviewed by **David Pogue**, host of the series. Pogue is the personal-

technology columnist for the *New York Times*. The segment may air in October.

The lab’s work is also featured by the National Science Foundation, says **Marsha Walton**, who produced her segment for NSF. Science and technology reporter **Miles O’Brien** reports the stories, which appear on the NSF Web site (www.nsf.gov/news/special_reports.science_nation/index.jsp) as well as a growing number of PBS stations, says Walton. “The story appeared in mid-May. I chose Randy’s work because it shows a general audience a fascinating, but understandable, look at genetic research and also because folks can understand the likely positive applications for spider silk for medical uses such as sutures, artificial ligaments, and tendons.”



Professor Randy Lewis and friend

Photo by Joie Lortimer

Plant Sciences

Many of the challenges faced by agriculture are common to nations around the world, and agricultural research and education tend to be international activities. In the Department of Plant Sciences, the international character of agronomic research is reflected in the students pursuing graduate degrees in agronomy. Current and recent graduate students in the agronomy program include five Kenyan nationals, four students from India, one from Turkey, one from China, and one from Japan. Each of these individuals has a unique story behind their interest in agronomy and each contributes to a growing international character in plant sciences.

Tsering Youdon is pursuing a master’s degree under the supervision of Professor **Gary Franc**. She is a member of the exiled Tibetan community based in northern India, and her training at UW is underwritten by the Tibetan government in exile. Youdon’s study abroad is part of a larger effort by Tibetan exile communities to become self-sustaining in food production, a charge given them by the Dalai Lama. Youdon’s research topic is to test whether genetically modified sugar beets resistant to the herbicide glyphosate become sensitized to a fungal pathogen upon glyphosate exposure. Her results will have immediate implications for disease management in the sugar beet fields of

Wyoming but also for the larger activity of integrated pest management, which is the science of managing crop production such that control of disease, insects, and weeds is maximized with a minimum use of agricultural chemicals.

“We are fortunate to have a growing international representation in both our graduate students and our faculty,” notes department head Associate Professor **Steve Herbert**. “Our undergraduate students benefit from exposure to international perspectives in their classes and our faculty members have begun to win grants for research in the home countries of our graduate students. I look forward to working in an intellectual environment without borders.”

Renewable Resources

The Wyoming Reclamation and Restoration Center (WRRC), along with the School of Energy Resources and the Haub School of Environment and Natural Resources, hosted a meeting in Laramie at the Hilton Garden Inn April 6-7 to bring together people working or interested in the field of land reclamation. The WRRC Symposium was the first meeting of its kind in Wyoming and was intended to facilitate communication, discussions, and sharing of ideas on reclamation and restoration of lands affected by human activities, says **Pete**

PROGRAM NOTES



Professor Pete Stahl

Stahl, professor and director of the WRRRC. The symposium featured speakers from industries such as mining, oil and gas production, pipeline installation and power transmission, wind energy, highway construction, land reclamation and restoration contractors, seed and plant materials producers, as well as federal and state regulatory agencies, such as the Bureau of Land Management and the Wyoming Department of Environmental Quality. “The goal of the symposium was to provide a forum for land reclamation professionals to discuss the state of our profession in Wyoming as well as recent advances and current challenges in our work,” says Stahl. Invited speakers from industries and agencies gave half-hour talks followed by discussion sessions. For more information about the WRRRC, visit www.uwyo.edu/WRRRC/ or call Stahl at (307) 766-2179.

In competition at the national Society for Range Management conference in Denver in February, the UW Range Club’s Undergraduate Range Management Exam team placed second out of 24 teams, the Rangeland Poster Cup team was third out of eight teams, **Andrew Telander** of Laramie placed third overall, and **Ryder Simeniuk** of Opheim, Montana, received the \$6,500 Masonic Range scholarship.

Veterinary Sciences

Brisket is a disease familiar to most Angus producers in Wyoming. It is a form of heart failure seen in susceptible blood lines at elevations above 6,000 feet. The genetics of the disease are complex and currently there is no commercial DNA-based test to confirm the disease and eliminate carriers. Brisket disease is rarely reported in dairy cattle. Beginning in 2007, veterinarians in Wyoming, Colorado, and Washington began to recognize a brisket-like disease in Holstein cattle along the Colorado Front Range. Cattle are backgrounded at 5,500 feet. This is just below the elevation at which brisket disease is typically seen. Recognition of the syndrome coincides with concerns in the feedlot industry that brisket disease is increasingly recognized in lower elevation feedlots in Nebraska, South Dakota, and elsewhere.



Professor Donal O'Toole

Professor Donal O'Toole, a pathologist in the Wyoming State Veterinary Laboratory, is working with clinicians to characterize clinical and morphological aspects of the syndrome in Holsteins. To date, he examined tissues from eight affected cattle. As with brisket disease in beef breeds, affected Holsteins present signs of right-sided heart failure. At necropsy, hearts exhibit marked dilatation of the right ventricle and right atrium of the heart along with an abnormally thick ventricular wall and a large, congested liver. Histological changes in pulmonary arteries resemble those of brisket disease. Ultrastructural examination and morphometric examination of vessels is underway, says O'Toole. “Studies by collaborators at Colorado State University confirm a proportion of heifers introduced from lower elevation states to the Front Range develop high blood pressure in pulmonary arteries, signaling susceptibility to the disease,” notes O'Toole.

“The role of genetic factors in affected Holsteins is unclear. It is most likely a form of brisket disease, possibly compounded by dietary or other factors.”

Agricultural Experiment Station

Bret Hess became director of the Wyoming Agricultural Experiment Station (AES) January 22, taking over from **Stephen D. Miller**, who retired.

Hess, a professor in the Department of Animal Science, served as AES assistant director for three and a half years. He joined UW as an assistant professor in 1996, coming from the University of Missouri. “Former director Steve Miller is an outstanding mentor, and he exuded such enthusiasm for the research and extension (R&E) centers that I have developed a similar passion to ensure their vitality,” says Hess. “We have a similar philosophy. I think the R&E centers are critical to the mission of the research branch in our college.”

Hess notes the position allows him greater leadership responsibilities, although his research activities will be reduced. His research efforts have focused on nutritional management strategies to improve production efficiency of forage-fed ruminant animals with primary emphasis on strategic supplementation regimes and secondary interest in alternative forages. The research program consists of three primary foci:



AES Director Bret Hess

1) dietary lipids for ruminant animals; 2) protein nutrition of ruminant animals; 3) the use of alternative forage crops and cropping systems in ruminant animal production systems.

At the annual planning conference for the R&E centers in February, Hess said there is discussion to create a review committee for the Sheridan R&E Center, and that other initiatives include renewing, energizing, and reorganizing advisory boards at other centers, promoting and developing multidisciplinary projects, and working with Dean **Frank Galey** in fund-raising efforts.

The R&E centers are under the administration of the AES. In addition, the office administers the AES competitive and Global Perspectives grants programs, the college's federal projects, and the college's livestock inventory; assists college personnel with extramural funding; oversees the college research magazine *Reflections* and department reviews in the

college; and serves as a mentor for faculty on the Association of Public and Land-grant Universities Experiment Station Committee on Organization and Policy/Academic Programs Committee on Organization and Policy Leadership Development Program.

Cooperative Extension Service

Josefina Ibarra started with extension September 16 as the West Area assistant university extension educator for nutrition and food safety based in Sweetwater County. Ibarra has a bachelor's degree in dietetics from the University of Texas Pan-American and holds certification as a registered dietitian. A native of Mexico, she is fluent in English and Spanish, which will enhance teaching opportunities in the West Area.

Milton Geiger joined extension September 14 as energy extension coordinator. This new position is a partnership between the UW Cooperative Ex-



Josefina Ibarra

tension Service and the School of Energy Resources. Geiger is an August 2009 graduate from UW with master's degrees in agricultural and applied economics and environment and natural resources. He has a bachelor's degree from Colgate University in Hamilton, New York. Geiger will provide leadership and coordination for energy extension outreach efforts building partnerships across campus, with external agencies, and organizations in the state.

Megan Brittingham began as the Goshen County assistant university extension educator for 4-H youth development April 1. She received a bachelor's degree in June 2007 from Wright State University in Dayton, Ohio. Brittingham brings experience as a 4-H program assistant in several counties in Ohio over the past four years.

Academic and Student Programs

Possibly an oddity for the College of Agriculture and Natural Resources but beneficial for many, Counseling and Student Services provides individual counseling and academic assistance within the college, says **Teresa Jacobs-Castano**, who is a licensed clinical social worker and a licensed addiction therapist in the office. "Students in the College of Agriculture and Natural Resources do not have to venture beyond the college itself to receive help with personal



Teresa Jacobs-Castano

or academic issues," she says. "I am qualified to provide individual counseling on a variety of issues, and I am qualified to deal with substance abuse issues. My office assists students struggling with individual problems, such as death of a loved one, relationship issues, or traumatic events. I help students cope with depression, anxiety, and overall stressors associated with college and life."

Academic services provided by the office include helping students manage their time, developing appropriate study skills, and managing test anxiety. The office also provides a tutoring program for students. This program benefits students who need tutors and provides some financial assistance to students who are qualified to tutor. Financial support is provided by the departments in the College of Agriculture and Natural Resources to maintain the tutoring program. Group presentations on preparing for final exams are another service available.

P R O G R A M N O T E S

(Continued from page 23)

“Faculty can benefit by referring students to this office when they notice students are struggling academically or personally,” she notes. “Often, students confide in faculty members because they are comfortable, so please offer to accompany students to my office. The goal is to help students be successful in college and in life. Sometimes, asking for help in a “cowboy up” environment is difficult; however, the longer I live, the more I am certain it is easier to cowboy up with a partner.”

Ag Development and College Relations

The University of Wyoming Foundation continues to work closely with the College of Agriculture and Natural Resources on its fund-raising

priorities, notes **Stephanie Anesi**, major giving officer with the University of Wyoming Foundation.

A major focus of the college is finding corporate partners to help support the Wyoming Reclamation and Restoration Center (WRRC). The WRRC is an interdisciplinary program housed within the College of Agriculture and Natural Resources. Its mission is to develop, collect, and disseminate impartial, scientifically based information related to reclamation, rehabilitation, and restoration of disturbed lands in high-altitude arid regions of Wyoming and the western United States.

College of Agriculture and Natural Resources faculty members are nationally and internationally known for their work with disturbed land and water resources. The center trains



Stephanie Anesi

students in reclamation ecology, researches best practices in reclamation of disturbed lands, and provides extension and outreach for practitioners of reclamation ecology in the energy industry, state agencies, and other interested agencies and businesses. The WRRC promotes interaction among numerous academic faculties and units at UW. The center works

closely with the School of Energy Resources, the Wyoming Geographical Information Science Center, the Haub School and Ruckelshaus Institute of Environment and Natural Resources, the Wyoming Conservation Corps, the Wyoming Natural Diversity Database, and the cross-college Program in Ecology. Off-campus, the WRRC has strong working relationships with companies in the gas, coal, wind, and mining industries, federal government units like the Bureau of Land Management, and U.S. Forest Service, the Wyoming Department of Environmental Quality, the Wyoming Oil and Gas Conservation Commission, and the State Forestry office.

By partnering with corporations to provide private funding for the WRRC, its success and relevance are guaranteed for many years to come.