

UW COLLEGE OF AGRICULTURE AG NEWS

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Dear Friends and Colleagues,

Spring is starting to “spring” in parts of the state. Some have had good winter moisture, others of us (especially in the southeast) are hoping for a wet early season. As of late March, snowpack in much of the state was normal to above normal, which I hope bodes well for you.

In previous columns, I have mentioned the college has an advisory board. This board is comprised of stakeholders representing different parts of our mission of sustainability in agriculture, natural resources, applied life sciences, and our rural communities. Many of our board members are also supporters of the college, engaged to help us achieve our missions of teaching, research, and outreach.

Over the past few years, it has become obvious we have not utilized the board to its fullest potential in helping further our mission. So, this past fall we began to reorganize the board into subgroups that will focus in three areas. These include developing financial support for the college, marketing the college and recruiting students, and placement of students into internships and jobs.

The development group is chaired by John Clay from Cheyenne. John’s team is working to help the college with its private as well as public fund-raising. Helping John are Anne Leonard from my office along with our new development person, Stephanie Anesi.

The marketing group is chaired by Kara Brighton, also of Cheyenne. This team will investigate how we are communicating with all of you and will also look at ways we can better reach people who might be interested in our programs. A special part of this group’s task will be to help find ways for us to identify and recruit top-notch students into our programs.

In placement, Tom Davidson, a long-time and avid college supporter, is interested in identifying how other colleges serve their students through internships and job placements. Once he has completed that task, this team will identify ways we can do a better job of bringing our students and the many opportunities in the state together.

This team of supporters will work to refine the membership of the entire board over the next year, defining its missions, and identifying a chair for the overall board of advisers. The board and committees will meet later this spring. We will keep you apprised of the board’s progress.

Among the stories in this issue are articles about the Department of Agricultural and Applied Economics producing a report for the Bridger-Teton National Forest planning process, the Ag Ambassadors promoting the college, a study of the River Njoro watershed in Kenya, a father and daughter both earning graduate degrees this spring from the Department of Renewable Resources, a study whether economics plays a part in obesity, and Department of Family and Consumer Sciences classes attracting students from outside of the college.

I hope you have a productive late spring and summer. Thank you for your continued support of your college! We can be contacted at (307) 766-4133, or e-mail agrdean@uwyo.edu. Our Web site is <http://uwadmnweb.uwyo.edu/UWag/>.

“If we do what is necessary, all the odds are in our favor.”

Henry Kissinger



Dean Frank Gale

F I R S T C U T



Joining Professor Stephen Ford, right, at the program were College of Agriculture Dean Frank Gale, left, and Wyoming Senator John Barasso.

Those attending Washington, D.C., event see UW's fetal programming research

Stephen Ford, professor and Rochelle Chair in the Department of Animal Science and director of UW's Center for the Study of Fetal Programming, presented fetal programming center activities occurring at UW and with partners across the nation at a Washington, D.C., program March 5.

The research, "Optimal Nutrition in the Womb: Key to Reducing Offspring Obesity, Insulin Resistance, and Type II Diabetes in Animals and Humans," was featured along with 37 others during the Nutrition and Health Exhibition/Reception.

The event is sponsored by the Board on Agriculture Assembly and Council on Governmental Affairs of the National Association of State Universities and Land-Grant Colleges (NASULGC).

"Wyoming Senator John Barasso visited our exhibit and expressed lots of support for our college's land-grant activities," said Frank Gale, dean of the College of Agriculture. "It was very helpful to have Senator Barasso's support. The exhibit on Capitol Hill helps exemplify some of the impacts of federal support. This year's theme was oriented along nutrition and health."

The Chronicle of Higher Education blogger features UW student farm

UW's student farm and agroecology program was featured in a recent online edition of *The Chronicle of Higher Education*. The address is <http://chronicle.com/blogs/architecture/1806/should-a-liberal-education-include-an-agricultural-education>.

The Chronicle's Building & Grounds blogger Scott Carlson wrote about the Agricultural and Community Resources for Everyday Sustainability (ACRES) project in his blog "Should a Liberal Education Include an Agricultural Education?"

The blog featured a photograph of Assistant Professor Rik Smith and students Katelyn Parady, a political science/environment and natural resources major from Rock Springs, and Nate Dittman, majoring in agroecology, from Omaha, Nebraska.

Carlson had seen a photo of Smith and the students in the farm plot, taken when the Eat Well Guided Tour of America travelled through Laramie last year. Carlson



Mary Huerter, left, of Omaha, Nebraska, and Willa Mullin, of Albuquerque, New Mexico, work in the student farm plot.

wanted to know the history of ACRES, how the students had been involved in its inception, and what they were learning from it, says Smith.

"When I told the ACRES students, they were really excited to be recognized in the *Chronicle* and that, of all the colleges and universities across the country that have well-established student farms, Scott chose us to feature in his blog," says Smith, in the Department of Plant Sciences. "The students are the key to the success we've seen with ACRES. It was their idea. They've done everything from writing grants to planting, harvesting, and selling to meeting with administrators on campus."

T I N G



Carlson ties a story about the underground seed vault established in the arctic by Norway, Great Britain, Australia, Germany, and the United States to whether anyone could cultivate the seeds if there was a catastrophe.

“I think the *Chronicle* blog is further evidence of the shift in awareness among Americans of where our food comes from and the rising interest in reconnecting the consumer – or should I say the eater – and the producer,” says Smith. “When you look at the multiple-page supermarket ads that come in Wednesday’s paper, even the big stores like Safeway are highlighting local and regional produce when they have it available. There are a lot of reasons people give for their interest in local foods – freshness, transportation energy costs, and carbon footprints – but the one that seems to resonate with most of the people I’ve talked to is supporting local farmers.”

Adds Smith, “This is a great group of students with a lot of energy and ideas I’m confident will build ACRES into both a very productive farm and a great experiential educational opportunity at UW.”

UW research studies migrant worker impact on Teton County economy

Immigrant influence on Teton County’s economy is being studied by the Department of Agricultural and Applied Economics and the University of Wyoming Cooperative Extension Service (UW CES).

The request came from the Teton County Board of County Commissioners and Town of Jackson to the UW CES, says Mary Martin, UW CES educator in Jackson.

The research is studying the economic impact of foreign workers in Teton County, says Martin. “The outcomes are a better understanding of how immigrant spending impacts the community, and as a workforce how it contributes, how and where spending occurs, the impact on local businesses, and the associated benefits and costs to government,” she notes.

Leland Christensen of Alta, who has been a commissioner for three years and who is also vice-chair, says the survey will provide a snapshot of the community. “We will use

it for planning and perspective,” he says. “It plays into planning, to see where the dollars are going and where the needs are.”

He says Jackson over the past 15 years has seen an increase in the number of non-resident work force. Immigrants are coming from Central and South America, New Zealand, Europe, and Canada.

“There are costs and benefits associated with it,” he says. “We are trying to get a clear understanding of what those are. I think that will help play into the long-term planning in Teton County.”

A Jackson town councilor also says Jackson and the county see value in knowing the community more thoroughly to better plan for social services and infrastructure needs. “I also think it will help our community members value one another’s contributions and to all get involved in the community and live together,” says Councilor Melissa Turley.

Household information was gleaned this tax season through volunteers who help foreign-born workers file taxes, says Martin. Business owners are also being asked to fill out a survey from their 2007 records.



Mary Martin



David “Tex” Taylor

Households will be asked about occupation, months worked, household size and spending patterns, says David “Tex” Taylor, a professor in the Department of Agricultural and Applied Economics in the UW College of Agriculture. Businesses are being asked about number of employees, payroll, benefits provided, and costs.

F I R S T C U T

Ag students place in international competition

College of Agriculture students garnered a first in one category and a second in another, and they swept the public speaking competition at the joint Society for Range Management and American Forage and Grassland Council International Conference in Louisville, Kentucky, January 26-31.

Jordana (Jordge) LaFantasie of the Department of Plant Sciences placed first in the Ph.D. oral paper competition. She was also the coach of the plant identification team that competed.

Students swept first through fourth in the Undergraduate Public Speaking competition. Rives White of Daniel placed first, Abigail Martin, Dixon, Illinois, second, Leena Horton, Riverton, third, and Lucas Bindel, Greeley, Colorado, was fourth. Only four students from each school are allowed to participate in this competition.

The Undergraduate Range Management Exam team, comprised of Department of Renewable Resources students, placed second out of 20 teams competing from the United States and Canada. Sarah Hanlon of Cheyenne placed fifth individually. Jeff Beck, an assistant professor in the Department of Renewable Resources, coached the team.

“Their diligent study habits and exam scores represented well the strong program in rangeland ecology offered at the University of Wyoming,” says Beck.

The UW team consisted of 17 of the 143 students who took the exam. UW team members were Sage Askin, Douglas; Bindel; Jessica Boyd, Laramie; Sarah Hanlon; Horton; Dean Houchen, Jonesville, Michigan; Reese Irvine, Lander; Cole Lambert, Osage; Martin; Elizabeth Parrish, Denver; Mae Peterson, Pinedale; Meghan Reedy, Vale, South Dakota; AJ Royle, Amherst, Nebraska; Moriah Shadwick, Douglas; Landon Smith, Holyoke, Colorado; White; and Ashley Whitman, Kinnear.



College of Agriculture students swept the Undergraduate Public Speaking contest. They are, from left, Lucas Bindel, fourth, Rives White, first, Abigail Martin, second, and Leena Horton, third.



Jordge LaFantasie of the Department of Plant Sciences won the Ph.D. poster competition. She was also the coach of the plant identification team.



Sarah Hanlon placed fifth in the Undergraduate Range Management Exam.





Alumni associations honor Doug Hixon

The Wyoming Student Alumni Association (WyoSAA) and the University of Wyoming Alumni Association (UWAA) have presented this year's Outstanding Faculty Award to Professor Doug Hixon, head of the Department of Animal Science.

WyoSAA is the student organization of the UWAA.

Stacia Berry of Cheyenne, a senior majoring in animal and veterinary science, nominated Hixon for the award, which recognizes UW faculty members who are dedicated to student success and make significant impacts in students' lives.

In her nomination letter, Berry stated, "Dr. Hixon is passionate about student success."

Hixon serves as an adviser and mentor, helps connect students with internship opportunities, and assists students who are segueing into the job marketplace, according to her letter.

"He is characterized as a dedicated faculty member, student learning advocate, and trusted adviser," Berry stated. "His motto for students should be 'Learn, Lead, and Succeed' because that is what he sets them up to do!"

Hixon says, "I am very humbled to even be nominated for something like this, and to be selected as the recipient is an extreme honor even though I'm sure there are many others who are just as deserving."

The award comes with a \$500 check.

Known as someone who will work long hours to benefit students and his department, Hixon demonstrates his commitment to excellence daily, according to a release from the UWAA and WyoSAA.

Berry wrote, "His job never stops, and neither does he. I am a testament to the benefits a hardworking, caring faculty member can provide for students." Hixon advises Berry, who is actively involved in several student organizations and has received national recognition for her academic and



Professor Doug Hixon

extracurricular achievements at UW.

Hixon earned bachelor's, master's, and doctorate degrees from the University of Illinois at Urbana-Champaign.

His research interest is in beef cattle production and management, focusing on the interaction between reproduction and nutrition.

Hixon says he is specifically interested in the future production effects of heifer development and management on 2-year-old, first-calf heifers under range conditions. The research is directed toward evaluating the effects of management and cow herd winter nutrition programs on production and reproductive efficiency.

UW ag group honors Wheatland rancher, university president

A long-time rancher near Wheatland and the president of the University of Wyoming were honored by the UW chapter of Gamma Sigma Delta, an international honor society of agriculture.

Outstanding students in the College of Agriculture also received awards at the March 1 program for their academic performance.

Juan Reyes of Wheatland, whose family immigrated to the United States in 1962, was honored with the Outstanding Agriculturist Award for his service to agriculture. UW President Tom Buchanan received the Friend of Agriculture award.

Reyes owns MR Angus Ranch, with feedlot facilities to feed up to 7,000 head. The ranch has 500 registered Angus with another 400 head at a unit at Saratoga. The ranch also sells about 250 bulls each spring.

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F I R S T C U T



Animal science Professor Steve Horn, left, and Wheatland rancher Juan Reyes share a moment before the start of the Gamma Sigma Delta program in Laramie. Reyes received the Outstanding Agriculturalist Award.

“I believe the key to Juan’s success is that he first produces an excellent product, and he stands behind it,” says Professor Doug Hixon, head of the Department of Animal Science, who nominated Reyes. “Furthermore, Juan contributes significantly to the organizations he has chosen to offer his time and services. Juan’s fortuitous journey from Cuba to a life as a successful farmer and rancher and leader in Wyoming agriculture is an amazing story.”

Reyes was born in Cuba. In 1962, his parents relocated him and his two sisters from Cuba to a refugee camp in Florida when Juan was 11. They knew no one and did not speak English. After eight months, they were moved

to Colfax, Washington, by the Catholic Church. Their parents were not able to join them from Cuba until four years later.

Reyes enrolled at Eastern Washington State College. He helped a friend move to Laramie, liked the area, and transferred to UW. While outfitting, he met someone who said he would like to buy a ranch in the area. The person purchased an operation near Tie Siding and asked Reyes if he would manage it. Reyes agreed, and, in 1983, they sold that ranch and purchased what would become MR Angus Ranch. Reyes later bought out his partner.

Reyes, concerned with water issues, is on the board of the Wheatland Irrigation

District and a member of the UW College of Agriculture Dean’s Advisory Board, among several other groups.

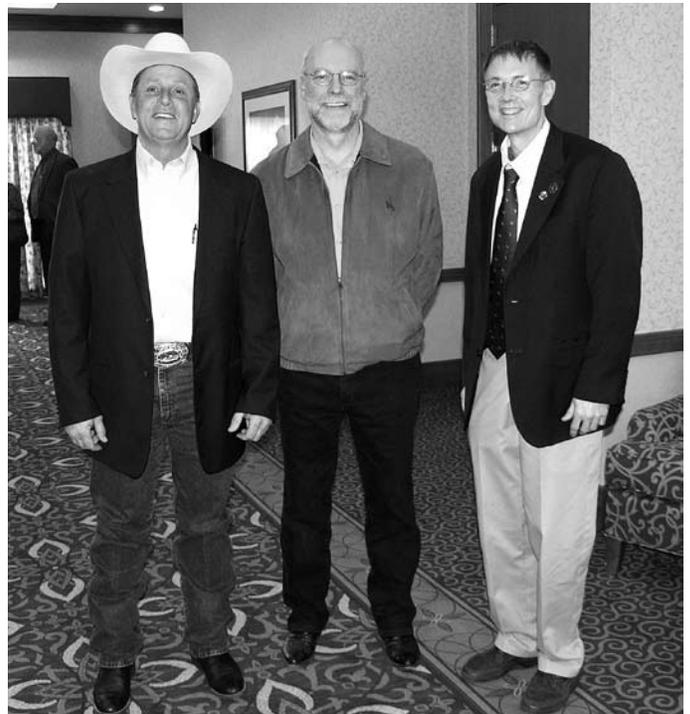
Various student awards were also presented during the brunch. “For me, the two most important issues are youth and water,” Reyes said during his acceptance speech. “After today, I’m a lot less concerned about the youth.”

Buchanan received the Friend of Agriculture Award for support of the College of Agriculture and Wyoming

agriculture in general. He stated agriculture is the heart and soul of the state and the university.

The purposes of Gamma Sigma Delta, “the Honor Society of Agriculture,” are to recognize and promote the achievements of individuals who excel and to the promotion of agriculture in all its phases. The society was founded in 1906, and UW has had a chapter since 1961.

On the Web: <http://uwadmnweb.uwyo.edu/GSD/>



University of Wyoming College of Agriculture Dean Frank Galey, right, with Juan Reyes, left, Outstanding Agriculturalist Award winner, and UW President Tom Buchanan, Friend of Agriculture Award winner.

T I N G



UW ag students receive academic honors from international honor society

Outstanding students in the College of Agriculture received awards for academic performance from the University of Wyoming chapter of Gamma Sigma Delta, an international honor society of agriculture.

The honors were presented March 1.

Receiving outstanding student awards were:

Outstanding freshman female – Jessica Larsen, Emigrant, Montana

Outstanding freshman male – Todd Small, Wheatland

Outstanding sophomore – Amy Berry, Cheyenne

Outstanding junior – Travis Allen, Cheyenne

Outstanding senior female – Stacia Berry, Cheyenne

Outstanding senior male – Doug Watt, Upton

Outstanding master's student – Marjorie MacGregor, Englewood, Colorado

Outstanding doctoral student – Keith Underwood, Shallowater, Texas.

On the Web: <http://uwadmnweb.uwo.edu/GSD/>



Doug Watt



Travis Allen



Amy Berry



Todd Small



Stacia Berry



Keith Underwood



Professor Steve Horn and Marjorie MacGregor



Jessica Larsen

Ag college team part of international

by Steven L. Miller,
Senior Editor
Office of Communications
and Technology

The caution from smartraveller.gov.au carries the edginess of recent political unrest in Kenya:

“We advise you to exercise a high degree of caution in Kenya at this time due to the high risk of terrorist attack, civil unrest and high crime levels...”

The push and pull of political movements trample across at least a portion of the landscape of the River Njoro Watershed being studied by a truly international group headed by Scott Miller, assistant professor and spatial processes ecologist in the Department of Renewable Resources.



Researchers from the College of Agriculture say young children often observe the scientists conduct field work.

An agreement in February between rival political movements in Kenya was expected to lower the intensity of civil unrest in that country. That, after Egerton University in Egerton, Kenya, the primary research partner university, was shut down for several months and finally reopened in February. “Our academics and technicians have not even



Photograph by Tracy Baldyga

A resident uses a water tap installed near the river by the Sustainable Management of Rural Watersheds. This enables river water to be drawn without having to go to the river. The water must still be boiled, but, the water tap is a more convenient way to collect water. A water trough for livestock has been placed near the tap.

been in the watershed the last several months,” says Miller. “We are extremely anxious to see how dynamics of the watershed have changed.”

There’s been no lack of change in the watershed that stretches about 31 miles in the Rift Valley. The 105-square-mile area helps feed the River Njoro, which eventually winds into Lake Nakuru National Park, best known for bird populations, most notably flamingos. Professor Patterson Semenyé, the project coordinator in Kenya, notes there are an estimated 1 million flamingos that splash the countryside with color.

Officially titled the Sustainable Management of Rural Watersheds (SUMAWA), the team has been studying the hydrology, ecology, stakeholder involvement, and gender-economics of the watershed, says Miller. The project’s Web site is www.uwo.edu/sumawa/.

Funding, running between \$220,000 and \$350,000 a year the past four years, is from the Global Livestock Collaborative Research Support Program (GL-CRSP) through the University of California-Davis (UC-D).

More than 30 people are involved in the project from

the University of Wyoming, Boise State University, UC-D, Utah State University, Egerton University, Moi University (Kenya), the Kenya Fisheries Department, and Kenya Wildlife Service. Tracy Baldyga, a doctoral student in the UW Department of Renewable Resources, and Carrie Chitty, a master’s student, are also involved.

Miller is co-principal investigator with Professor William Shivoga, senior lecturer/head of Department of Environmental Science at Egerton University.

Miller says running such a large project is challenging, but, “The landscape involved is fascinating from the ecological and human dynamics change.”

Semenyé, who had worked as a freelance consultant on agriculture and livestock research and had also previously worked with the GL-CRSP, started with the project in 2005.

“I got involved because of the project’s objectives of addressing environmental problems in a watershed that is so representative of other watersheds in the region,” he notes from Kenya. “The common problem is to increase water quality and quantity against rapidly increasing

group studying Kenya watershed

population coupled with new settlements and destruction of indigenous forests and loss of biodiversity.”

The deforestation and removal of vegetation creates more runoff, sending the water downstream more rapidly. “With less nutrients and less soil, you get yourself in the position the long-term sustainability of agriculture is at-risk,” says Miller. “In the past, water was present most of the year, even in the dry season. Now, there are long periods the river dries up in large sections.”

A mosaic of land use weaves through the watershed. Grazing and large agricultural lands patchwork the upper watershed bordering indigenous forests. The river winds downward through deforested areas patched with agriculture fields of various sizes before entering Lake Nakuru. Crops grown include wheat, barley, sorghum, maize, tomatoes, cabbages, and potatoes.

Political changes in the 1990s opened the area to settlers. A rapid influx transformed the plantation forests to agricultural land. People have moved into areas that were, historically, not densely populated.

“The rapidity of change in the watershed is



Photograph by Tracy Baldyga

Geoffrey Bundotich, left, research scientist with the Kenya Wildlife Service, stands with Professor Scott Miller of the Department of Renewable Resources in front of Lake Nakuru in Lake Nakuru National Park, best known for bird populations. Miller is project manager of the Sustainable Management of Rural Watersheds study.

remarkable,” says Miller. “There is a strong desire to own land. The land pressure is so high there, and there are

“In the past, water was present most of the year, even in the dry season. Now, there are long periods the river dries up in large sections.”
Scott Miller

not that many places to go now.”

Even so, entire villages have popped up. “There is a comparison to the Front Range (of Colorado),” says Miller. “Every couple years, you look and a new community has dropped in there.”

In 2006, just “over the hill” from the watershed area, notes Miller, the government forcibly removed people from land.

Those with the SUMAWA refuse to become involved in the politics. “We have remained steadfastly

neutral,” says Miller. “We want to provide knowledge and information to the communities so they can make better decisions.”

That, adds Semenyee, is the key to reversing adverse trends in the country. Most of the inhabitants limit water problems to surface water, he says. “They have a perception problem of not linking surface to ground water.”

Researchers have highlighted the consequences of poor recharge lowering water

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Tracy Baldyga, a doctoral candidate in the Department of Renewable Resources, downloads the data logger from the River Njoro flow gauge on the Egerton University campus in Kenya.

tables and, in some cases, drying of boreholes. “Developing monitoring tools and indicators of the watershed trends are vital for proper management,” says Semenye. “In short, training and capacity building of the project will be the best legacy for the people of Kenya.”

Significant governmental reform the last 10 years has allowed people to take more control and authority, notes Miller. Organizations for water development and infrastructure projects have been created. One of the first water users’ associations in Kenya, the Njoro River Water Resources Users Association, was formed.

“It is a government-authorized body on the local level of stakeholders of the watershed,” says Miller. “The board has the authority to identify project needs. The water association is active and takes a role in the undertaking and development of water resources within the watershed.”

The formation of the users group transcends politics. “When our researchers interview the watershed residents, they view the exercise with pride because they see it as recognition of their resources and involvement,” says Semenye. “With the community, the project has initiated interventions such as water filters, tree

nursery establishments, tree planting, and construction of water troughs for livestock.”

The unique nature of the project also includes traditional medicine. The Ogiek, Kalenjin, and Kikuyu are the three major tribes within the watershed. The Ogieks do not have as much access to formal education as the other two, says Semenye. “For example, they rely more on herbal than conventional medicine. The project has a graduate student who is identifying medicinal plants and trees, cataloging and mapping them.”

Semenye notes the project has trained more than 30 post-graduate students and,

informally, more than 2,000 Kenyans.

Grant funding for the multi-pronged project is ending this year, but Miller says the group will begin aggressively looking for other donors to continue to support data and field monitoring.

“We don’t anticipate the project to continue in its present form but to keep funding coming in so hydrological and ecological changes can be tracked,” he says. “We have so much data, it will be years before all the publications are out.”

Ag Ambassadors work to promote College of Agriculture

by Robert Waggener, Editor
Office of Communications
and Technology

When Micki Paris was considering the University of Wyoming's College of Agriculture, she says the college's Ag Ambassadors helped her decide.

"As a transfer student, they helped me to feel welcome here at UW, and now, as an ambassador myself, I strive to help all students – transfer and freshmen – to have the same experience I have had," says Paris, a senior from Hemingford, Nebraska, who is majoring in animal and veterinary science (ANVS).

Paris is one of 19 members of the Ag Ambassadors this school year. She and Kenna Freeburn, a senior family and consumer sciences major from Fort Laramie, are Ag Council representatives to the group.

Ag Ambassadors chair is senior Stacia Berry of Cheyenne, who is an ANVS major, and secretary is senior Abigail Martin of Dixon, Illinois, a rangeland ecology and watershed management major.

"The Ag Ambassadors is a select group of students charged by Dean Frank Galey to promote the college in



Members of the College of Agriculture's Ag Ambassadors include, from lower left, clockwise, Amy Berry, Rives White, Emily Feuz, Jessie Berry, Elizabeth Parrish, Jon Fessler, Kelsie Speiser, Micki Paris, Joslyn Dyer, Justin Uhrig, Stacia Berry, Nigel Miller, and Kenna Freeburn. Not pictured are Kassi Bauman, Brittany Epler, Dietric Hennings, Abigail Martin, Corey Schuknecht, and Kevin Sun.

various ways to both internal and external audiences," says Laurie Bonini, recruitment coordinator for the college's Office of Academic and Student Programs.

Paris says, "My experiences with the Ag Ambassadors have been nothing but wonderful."

Paris attended Chadron State College, Chadron, Nebraska, and Briar Cliff University, Sioux City, Iowa, before transferring to UW. She got involved with Ag Ambassadors because she was welcomed by the group and wanted to give back.

"The College of Agriculture's motto, 'Students – The Reason We're Here,' is personified by the group of students and staff members who represent the ambassadors."

Paris adds, "Every event we attend and everything we do is to help make things better for the students here in the College of Agriculture and sometimes even in the university as a whole."

Berry says, "We are dedicated to serving the agriculture industry and serving as leaders to our peers while attending UW. Our group is comprised of students

pursuing a diverse group of degree programs, and we aim to assist the college to recruit and, more importantly, retain quality students."

Among the eligibility requirements, a student's primary major must be in the College of Agriculture.

Bonini says members of the Ag Ambassadors help with student recruitment and retention, act as liaisons with the general public, participate in alumni and donor relation activities, and share College of Agriculture student experiences with diverse audiences.

"We work very hard at recruiting new students by attending Campus Pass and Discovery Days," Berry says. "Additionally, we travel to high schools across Wyoming, Nebraska, and Colorado." Campus Pass and Discovery Days are events to educate students and others about opportunities available at UW.

College of Agriculture students interested in becoming part of the Ag Ambassadors may contact Bonini at (307) 766-4034 (lbonini@uwyo.edu) or Kelly Wiseman at (307) 766-4135 (kellywis@uwyo.edu).

More information is at <http://uwadmnweb.uwyo.edu/agPROGRAMS/Ambassadors.asp>.



Ag and applied economics scientists lend expertise to Bridger-Teton National Forest study

by Steven L. Miller,
Senior Editor
Office of Communications
and Technology

You never know what will fall out of the trees when you shake a forest.

The 2-inch thick, daunting-looking “An Economic Profile of the Bridger-Teton National Forest (BTNF)” filled with tables and graphs emanates a high yawnability factor. Even the report’s 11-page executive summary has a summary.

Data collected by Department of Agricultural and Applied Economics researchers puts flesh and blood on the numbers and draws a picture of not only the forest’s impact on four affected counties but an economic snapshot of each.

Professor David “Tex” Taylor, research scientist Tom Foulke, Assistant Professor Benjamin Rashford, and department head and Associate

Professor Roger Coupal spent a year collecting information that culminated this February in the three-ring binder report, prepared for the U.S. Forest Service’s revision plans.

This was the fourth such study of national forests in Wyoming for Taylor and Coupal; for Foulke and Rashford, their inaugural report.

The BTNF covers parts of Fremont, Lincoln, Park, Sublette, and Teton counties. A forest map of the forest superimposed on the state slightly resembles a side view of a dog with its two front paws up on a step. The BTNF covers 3.4 million acres and has three designated wilderness areas. Park County was viewed as being more associated with north central Wyoming and was not included in the study.

Such a study is a broad brush for an economist, says Rashford, who contributed information for the impact of carbon sequestration. “We

look at key economic indicators of a county and try to account for what portion is a result of the BTNF,” he says.

Adds Foulke, “When we get done with it, we have a good understanding of what makes a county tick.”

The forest study request came from the governor’s planning office – something routinely done when the Forest Service begins planning – and was paid for by the Governor’s Planning Office. “The Forest Service is required to look at how they are managing the forests every 10 years,” says Foulke. “UW is involved in the socio-economic element of it.”

Unbiased Information

The report provides the Forest Service and the cooperators unbiased information, something the researchers take pride in.

“I feel it’s important to get the information into the hands of the people,” says

Taylor. “At the end of the day, when the BTNF supervisor makes a decision as to what is to be in place the next 10 to 15 years, the warm fuzzies come when we know we contributed to the decision with unbiased information.”

Policy makers will take the process from there. “When it comes to information, it’s just that. Information,” says Rashford. “Information is never perfect. You need to provide the best information science can provide and inform the policy makers as to its limitations.”

Whatever action taken on the national forests in Wyoming affects the associated communities and counties. The study gives the state a chair at the table of cooperators, provides unbiased information to policymakers, and also helps address the human dimensions of forest planning, adds Taylor.

Researchers draw demographic data, such as

population and personal income, from various existing reports. “The second part is the income and job generation that occurs because of the forest,” says Taylor. That data includes the number of board feet of timber harvested, the number of recreation days on the forest, the cubic feet of natural gas produced, and the months of livestock grazing, among other information.

Data also includes the economic importance of wildlife, including elk, mule deer, and pronghorn antelope and fishing resources.

The draft report was presented last June to the co-operator’s group and the Forest Service. The cooperator’s group is comprised of other federal agencies, county commissioners, state agency personnel, and representatives from resource conservation districts. Representatives of Wyoming’s congressional delegation also attend the meetings.

Report Reviewed

Input was received and the report given to four outside economists of the group’s choice for review. The plan was revised – the summary of the summary was one addition – and the researchers gave their presentation to the BTNF and the cooperator’s group in mid-February.

Some of the data surprised Foulke and Taylor. For example, Foulke believed mineral development had more of an impact on the forest itself than what it actually

does. There were 14 natural gas wells on the forest when the study started but many more on nearby Bureau of Land Management land.

Oil and gas development always plays a part in the economics of Wyoming, but so do public lands. “The management policy and processes are entirely different,” says Rashford.

Commercial recreation’s importance drew Taylor’s attention. Activities like guiding, outfitting, and ski areas generated about 1,400 jobs and contributed \$57 million to the economy. Natural gas accounted for about \$822 million and generated 248 jobs.

Taylor also saw the resiliency of agriculture. “The total ag employment was fairly level in the region,” he says.

The report showed that the frenetic growth in Teton County had calmed. “Teton

County slowed in growth since 2000,” Taylor says. “The 25 years of rapid growth seemed to be slowing down. Is it catching its breath, or has it hit a plateau?”

Dotcom Bust

The slowdown coincided with the dotcom bust, adds Foulke. “People were building right up to 2002 then start-ups started to slow. They are growing but a lot slower. Land is expensive and hard to get.”

Carbon sequestration has captured attention across many levels of society, and forests play an important part. Rashford determined the BTNF stores about 3.8 million tons of carbon per year. For perspective, he notes, a 500 megawatt pulverized-coal power plant emits about 2.7 million tons annually. The 3.8 million tons is about 9 percent of the yearly carbon stored in the Rocky Mountain Region.



Department of Agricultural and Applied Economics researchers, from left, Professor David “Tex” Taylor, research scientist Tom Foulke, and Assistant Professor Ben Rashford.

Here are other highlights:

- Total jobs in Teton County exceeded the county population by 25 percent
- There are about 60,000 jobs in the four-county region
- Total regional employment in forest-related industries (FRI) was 14,854 in 2004, or about one-fourth of all jobs in the region
- Total personal income for the region in 2004 was \$3.3 billion
- The average earnings per job for the area was \$32,558, ranging from \$37,978 in Teton County to \$26,969 in Fremont County
- The total average earnings per FRI job was \$28,716
- The total regional labor earnings for FRI were \$426 million in 2004, or about 22 percent of the total labor earnings in the region. Travel was \$201 million, mining was \$152 million, agriculture \$22 million
- The BTNF represents 20 percent of employment and 15 percent of labor earnings in FRI industries. In Sublette and Teton counties, FRI represented more than 30 percent total employment. In Sublette County, FRI was 41 percent of total labor earnings.

To view the report online, see <http://agecon.uwyo.edu/econdev/BridgerTeton.htm>.

Father-daughter know best

by Robert Waggener, Editor
Office of Communications
and Technology

Madison Ellison strives to solve research problems on her own. If she can't work out a kink, she usually consults with her adviser – or the fellow graduate student occupying the adjacent desk.

That fellow student is Chris Ellison, who happens to be Madison's father. Perhaps it's a case of *Father Knows Best* during these father-daughter consultations.

But Chris quickly points out he often seeks Madison's advice as they are both finishing similar rangeland ecology and watershed management



Madison Ellison analyzed water quality data collected by the Wyoming Department of Environmental Quality from approximately 80 sites on 30 streams in the state.

(REWM) research projects in the Department of Renewable Resources.

They graduated together this spring, Chris earning a Ph.D. and Madison a master's degree. Perhaps it's *Father-Daughter Know Best*.

"Our relationship was good before, and this has made us even closer," Madison says. "We spend every day together in the office, and we had to get along otherwise we wouldn't have lasted two years together."

How did a father and daughter end up in the same degree program in the same College of Agriculture office, both researching under the same major adviser, retired Professor Quentin Skinner?

Chris was a year into his Ph.D. program in 2006 when Madison graduated from the University of Wyoming with a bachelor's degree in biology.

"Maddi wanted to earn a master's degree after she finished her biology program, and I kind of talked her into this," Chris says. "I told her what we were doing was fun. I like the statistical analysis we do; I like trying to find improvements in watersheds based on the efforts of conservation districts and others by incorporating best management practices."

Madison was intrigued so she applied and was accepted to graduate school. Soon, she was conducting similar research as Dad. And soon, she discovered she wasn't quite as fond of statistics as Dad.

"I learned I liked the fieldwork a lot better than the statistical part of the research, but I know the work is very important," Madison says.

Analyzes Water Quality Data

Madison is analyzing water quality data collected by the Wyoming Department of Environmental Quality (DEQ) from approximately 80 sites on 30 streams in the state.

Samples were taken from streams in the Wyoming Basin – the area of southern and central Wyoming dominated by sagebrush interspersed with shortgrass prairie.

They were also collected from the Wyoming portion of the Northwestern Great Plains (NGP). This is the grasslands area stretching from Douglas to Gillette; it includes the Thunder Basin National Grassland.

Madison says DEQ sampled water from "reference" and "non-reference" sites in the two areas to gain a better understanding of how human

activities – housing developments, septic systems, roads, farming, grazing, recreation, mining etc. – are impacting water quality in streams.

She describes reference sites as those portions of a stream least impacted by human activities, while non-reference sites are areas more heavily impacted.

The goal is to produce sound data that will allow government agencies, municipalities, counties, water districts, and others to develop plans to better protect water resources – and to help Wyoming meet federal mandates of the Clean Water Act.

"I'm spending about 30 hours a week analyzing data. It often seems like I take two steps forward and one back," Madison says. "It is very labor intensive."

When Madison finds herself taking a step back, she turns to Dad and Quentin Skinner. She first worked for Skinner – and alongside Dad – during her junior and senior years at UW when the father-daughter team conducted stream classification surveys in Goshen County for the Goshen County Conservation District.

"It was fun being outdoors looking at bugs and fish



Chris Ellison, right, and his daughter, Madison, graduated this spring with rangeland ecology and watershed management degrees from the College of Agriculture. Chris earned a Ph.D. and Madison a master's degree.

sampling,” says Madison, who notes the surveys were to determine if designated streams could adequately support the cold-water fisheries (trout) based on existing habitat conditions.

That fieldwork provided her important perspective to the analytical research she is now conducting on the computer, and it is also helping Chris with his Ph.D. project.

Chris is analyzing water quality data from the Muddy Creek watershed near Baggs, which is near the Wyoming-Colorado state line southwest of Rawlins. His research is based on 20 years of information collected by the Bureau of Land Management, Little Snake River Conservation District, and College of Agriculture.

“I am trying to determine if improvements made to the watershed incorporating best management practices by the Little Snake River Conservation District have made a difference to the water

quality,” Chris says.

According to his analysis to date, Chris emphasizes, “The water quality has improved significantly.”

Among the changes were modified livestock grazing practices and prescribed burning to promote better range conditions, and improvements were made to wetlands, which trap sediment and other materials contained in irrigation runoff, Chris says.

Make Progress Towards Goals

“Madison and I both come to work each day with the hopes of doing everything we can to make progress toward meeting our project goals,” he says. “It’s easy for us to discuss our projects. We are familiar with how each of us thinks. We are open about what we’re working on. We’ve had a lot of discussions about some of the common-sense things.”

Chris retired from the Air Force in 2001. F.E. Warren

“We have gotten along great throughout this whole process. Our relationship was good before, and this made us closer as a family.”

Air Force Base in Cheyenne was among the places he and his wife, Carolyn, and their two children, Lucas and Madison, lived.

“We were looking at colleges for Madison and Lucas to attend, and we liked the University of Wyoming so we decided to move back to Wyoming,” says Chris, who was stationed at Barksdale Air Force Base in Louisiana when he retired.

Lucas opted to join the Marines instead of going to college. “He decided to go to the school of hard knocks,” Chris says, and smiles.

It was Chris who instead enrolled in UW, earning a master’s degree in REWM in 2005.

He was then accepted into the Department of Renewable Resources’ Ph.D. program. A year later, Madison earned her biology degree and decided to follow in Dad’s footsteps.

“We have gotten along great throughout this whole process,” Chris says. “Our relationship was good before, and this made us closer as a family.”

Madison adds, “We’re a lot alike in the ‘right’ areas. Some people are too alike so they butt heads. We are not that similar, but we’re

enough alike to get along well.”

The two grab their gym bags. It’s time to head from the office to Half Acre, where they run together Monday through Thursday and play racquetball on Friday.

Today, it’s racquetball Friday.

Who typically wins?

“He does,” Madison says, pointing her thumb toward Dad.

“Not all the time. You win sometimes,” Chris says to Madison.

As they begin walking away, Chris turns around and quietly says, “This has been a great experience for both of us.”



Chris Ellison analyzed water quality data collected from the Muddy Creek watershed near Baggs, which is near the Wyoming-Colorado state line southwest of Rawlins.

FCS classes a big hit for traditional



Laura Shockley, a junior technical theater major at the University of Wyoming, sews a costume for the UW performance of Chorus Line. Shockley was awarded the regional “Meritorious Achievement Award” in costume design for her work in UW’s production of The ‘M’ Word. (Photo by Josie Lorimer, UW journalism student)

*by Robert Waggener, Editor
Office of Communications
and Technology*

Laura Shockley is an award-winning theater major in the College of Arts and Sciences. Much of her success stems back to high school in Green River and the inspiration she’s received in the Department of Theatre and Dance (T&D).

But, like many other students (both traditional and non-traditional) outside the College of Agriculture, much credit for that success goes to faculty members in the Department of Family and Consumer Sciences (FCS).

Classes in apparel construction, fiber arts, flat pattern, drafting & draping, textile sciences, and interior design are attracting many FCS majors and minors, but they are also drawing art, theater, history, and English majors, University of Wyoming employees, and members of the Laramie community.

“A lot of students are taking these classes as general electives because of their interest in the subject matter, and it’s not unusual to have faculty and staff members, community members, and life-long learners,” says FCS Associate Professor Sonya Meyer.

and non-traditional students

Shockley is one of them. Her goal is to become a professional costume designer, and she's taken several costume design classes in T&D.

In an effort to expand her costume design knowledge and creativity, Shockley took a flat pattern course last year with Meyer and was in this semester's fiber arts class instructed by Professor Donna Brown.

"The classes have really taught me now to build costumes," says Shockley, a junior majoring in technical theater with an emphasis in costume design and construction.

"There are really great people here at UW. There are really wonderful and supportive faculty and staff members," adds Shockley, who then named several faculty members in T&D as well as Brown and Meyer in FCS.

Shockley says she hopes she can take additional classes in FCS.

Among the classes that draw many students from outside the department include flat pattern and drafting & draping taught by Meyer, fiber arts and apparel construction taught by Brown, textile sciences taught by Associate Professor Bruce

Cameron, and interior design taught by Assistant Lecturer Treva Sprout.

Meyer says the classes continue to attract a broad range of traditional and non-traditional students within and outside the College of Agriculture, and many of the students are winning a variety of awards relating to their work in the classes.

Shockley designed costumes for T&D's productions of *Chorus Line* (April 24-30) and *The 'M' Word*, which was earlier this year.

Shockley won the regional "Meritorious Achievement Award" in costume design for her work on *The 'M' Word*. The award was announced at the Region VII Kennedy Center American College Theatre Festival and Northwest Drama Conference hosted by UW in February.

Shockley says instructors at Green River High School and UW, including faculty members in the Department of Theatre and Dance and FCS, have been instrumental in her success to date as well as her desire to pursue costume design as a profession.

"I love what I'm doing, and I will be happy as long as I am working with costumes," says Shockley, whose

application was accepted for an internship this summer with Hangar Theatre in Ithaca, New York. She will be constructing costumes for the theater (www.hangartheatre.org/).

Meyer says students

taking the FCS classes are typically talented, hardworking, and energetic, and Shockley is one of the many students who exemplify this.

"Laura is very creative and was a fun student to have in class," Meyer says.



Laura Shockley works on a costume for Chorus Line. The University of Wyoming theater major, like many other traditional and non-traditional students outside the College of Agriculture, have taken classes in the Department of Family and Consumer Sciences. (Photo by Josie Lorimer, UW journalism student)

Multidisciplinary research team tackles

by Steven L. Miller,
Senior Editor
Office of Communications
and Technology

Are there economic behaviors prompting Adam Smith's invisible hand to reach for Cheetos instead of carrots in American homes?

Researchers in the Department of Agricultural and Applied Economics and the Department of Family and Consumer Sciences (FCS) have melded economics with fitness to collect data to answer whether healthy foods are being passed over for unhealthy foods.

How a family's resources are allocated and how that may lead to increasing incidences of obesity in some households and not others is being studied, says Mariah Ehmke, assistant professor in the Department of Agricultural and Applied Economics, and who is heading the research.

Smith, considered the father of modern economics, used the invisible hand metaphor to explain how competition guides markets.

Experiments in the multidisciplinary research aren't in kitchens but through game playing in the experimental economics laboratory in the College of Agriculture,



Project manager Lindsey Simpson, left, is told how long a blood pressure check was by Elizabeth Halbach, daughter of Marsha, right, during tests prior to exercising at Half Acre Gymnasium.

through surveys taken by Kari Morgan, and fitness tests at the Half Acre Gymnasium track by Enette Larson-Meyer, both assistant professors in FCS. Assisting them are Lindsey Simpson, a part-time employee and project manager, doctoral student Travis Warziniack, who is running the economic experiments, and Heidi Henderson, an undergraduate research assistant in family studies who is helping with economic experiments involving the children.

Only mothers and one of their children up to 10 years old are involved in the studies,

says Ehmke. "In general, mothers are more involved in what their children are going to eat," she says, "and children 8 to 10 are old enough to understand economic game playing, but they're not yet in puberty, which could complicate the Body Mass Index (BMI) measure."

Morgan worked with Ehmke and Larson-Meyer to develop a set of questions for mothers to answer. "The questions focus on a range of variables that will help us better understand family dynamics," says Morgan.

The survey takes about

15 minutes to complete, notes Morgan, who adds she saw the study "as an exciting opportunity to participate in a multidisciplinary research team working together to gain a better understanding of the complex dynamics around the issue of childhood obesity."

There are three economic experiments, says Ehmke. The first game the mothers play measures how willing they are to accept uncertainty. "One of the complications we think is that, even though being obese can bring heart problems and other health issues, people give up a lot of pleasure to

obesity questions

maintain a healthy lifestyle.

“One hypothesis we have is: are overweight people less willing to accept uncertainty? Are they willing to invest in a safe investment or a risky investment?”

In another game, the mother gives money to her child to be spent on food. The experiment looks at her generosity and the child’s willingness to control the parent. “Some children are more controlling in the relationship, and, if so, they are getting more from their parent,” she notes.

The third game looks at understanding how the mother views the future by looking at whether they have a preference for a return on money in the short term or if willing to put off receiving a return.

“Ninety-percent of Food

“One of the complications we think is that, even though being obese can bring heart problems and other health issues, people give up a lot of pleasure to maintain a healthy lifestyle.”

Stamp money is spent in the first three days of the month,” says Ehmke. “Some families have a hard time budgeting over the month. Families may need incentives to buy food over a month rather than the first three days. They eat fine the first week but eat Cheetos the end of the month. It causes diet irregularity.”

Larson-Meyer measures the BMI of mother and child. In adults, she says, a BMI greater than 26 is considered overweight and BMIs more than 30 are obese. Children are compared against BMI-for-age charts that provide a percentile ranking. Children are no longer called obese but “at risk for overweight” and “overweight.”

Participants undergo a six-minute walk test. “We ask them to walk as many laps as they can,” says Larson-Meyer, whose background and training are in exercise and nutrition-related research.

“The exercise physiologist follows them in the inside line and periodically assesses their perceived exertion.”

A marker is placed where the person is at the end of six minutes and the distance measured. A fitter person will walk farther. “We are also measuring their oxygen uptake and carbon dioxide

production using a portable metabolic cart that will help us assess their fitness level,” she says.

The volunteers walk at a fast pace on their own rather than being measured at a set, but accurate, pace on a treadmill, she says.

The track has its advantages and disadvantages.

“It is easier to do and less intimidating to the participant but does not allow us to measure their maximal oxygen uptake, which we could do in the laboratory,” notes

Larson-Meyer. “Maximal oxygen uptake

is our gold standard for assessing aerobic fitness. It doesn’t, however, give us an idea about how comfortable a participant is doing the normal everyday activity of walking, which is also a mark of fitness.”

Children BMI percentiles have ranged from 32 - 98.6. BMIs of the mothers were not available. Data from the study will probably not be available until fall.



Lindsey Simpson adjusts the mask of a portable metabolic measuring unit on Elizabeth Halbach. Participants walk as far as they can in six minutes.



Kyle Chitty, singing, and guitarist Bevan Frost perform at Open Mic Night at Coal Creek Coffee in downtown Laramie. Open Mic Night is held the first Wednesday evening of the month and is open to a variety of performers, from musicians to poets. (Photo by Amy Welch, UW photojournalism student)

*by Robert Waggener, Editor
Office of Communications
and Technology*

By day, Kyle Chitty researches the production of recombinant canine thyroid stimulating hormone in a College of Agriculture laboratory.

It seems only fitting Chitty would turn to music at night to balance the daily challenges of life in the lab.

For the past 10 years, Chitty and other area musicians have gathered at Coal Creek Coffee in downtown Laramie the first Wednesday of each month to share their talents with the public during Open Mic Night.

Chitty has been hosting the popular event for the past two years.

“Open Mic Night is a

Kyle Chitty balances challenges of scientific research with music

great way to meet other musicians and to play music with them,” said Chitty shortly after completing a folk tune March 5 with local guitarist Bevan Frost. “You can hear some of the talent we have right here in Laramie.”

Chitty admits, “Open Mic is also a good place to come and relax after a hard day in the laboratory.”

Chitty is an assistant research scientist in the Department of Molecular Biology. He works in the laboratory of Professor Don Jarvis.

“To better explain the focus of my research, my main project involves the production of recombinant canine thyroid stimulating hormone (TSH) using the baculovirus expression system and insect cell lines engineered with humanized glycosylation pathways,” Chitty says.

In lay terms, he explains, “A recombinant source of canine TSH would be useful in the diagnosis of hypothyroidism in dogs.”

Chitty says he has always enjoyed puzzles and problem solving.

“The nature of basic science, to me, is the constant challenge of fitting all the pieces together to form a

cohesive solution,” he says. “When you are doing things nobody has ever done before, there are always unforeseen obstacles. It is the ability to work through these problems in a rigorously empirical way that makes a good scientist.”

Chitty fits pieces together in his scientific work, and he also fits pieces together as he writes music and then performs that music in front of others.

John Guerin, who co-owns Coal Creek Coffee with his wife, Jodi, says Chitty has done a wonderful job hosting Open Mic.

“He’s a very talented musician, and he is very well

connected to the local music scene, the music culture here in this area,” Guerin says.

Open Mic starts at 7:30 p.m. the first Wednesday of the month. In addition to music, there have also been readings, poetry, and comic acts.

Chitty invites musicians and others to share their talents.

“I know there are many good musicians hiding among the Laramie community and among the faculty, staff, and students at UW and in the College of Agriculture. I would encourage them to come and share their talents,” he says.



Kyle Chitty is an assistant research scientist in the Department of Molecular Biology. He works in the laboratory of Professor Don Jarvis.

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Roger Coupal

Agricultural and Applied Economics

Associate Professor **Roger Coupal**, who served as interim head of the Department of Agricultural and Applied Economics since spring 2005, was named permanent department head in March by College of Agriculture Dean **Frank Galey**.

“Roger did a great job as interim department head, and he has the confidence of the faculty and administration. He’s strong in research and extension so he brings a lot to the university and to the public,” Galey says.

Coupal says, “I do like the leadership aspect of the position, trying to put a vision together for the department. I have a great group to work with on that vision.”

He adds, “I view us as applied economists. We apply economic tools to resource and agricultural issues around the state and country.”

Among the important issues in Wyoming is balancing energy development with wildlife, agriculture, and open spaces. Coupal’s extension, research, and teaching programs have focused on natural resource policy and community development within the state.

Coupal and fellow faculty members have collaborated with others on studying the impacts of energy development in the Pinedale area, the economic impacts that various forest and Bureau of Land Management plans have on Wyoming communities, and the role private lands in the state have on providing wildlife habitat, open spaces, and fiscal stability in counties.

Coupal joined the department in 1997 as an assistant professor.

He earned a bachelor’s degree in forest and recreation resources from Utah State University in 1979, a master’s degree in agricultural economics from the University of Arizona in 1985, and a Ph.D. in agricultural economics from Washington State University in 1996.

Coupal says his professional work relating to Wyoming’s small communities, open spaces, the environment, and wildlife overlaps into his personal life as he is partial to living in

rural communities offering outdoor recreational opportunities, wildlife viewing, and plenty of space to roam.

“I enjoyed a run at Happy Jack before coming into work this morning,” says Coupal, who takes regular jogs on trails at the popular recreation area in the mountains east of Laramie.

Animal Science

The Department of Animal Science honored two graduating seniors as Honor Book recipients at the Gamma Sigma Delta (GSD) brunch March 1. GSD is an honor society of agriculture.

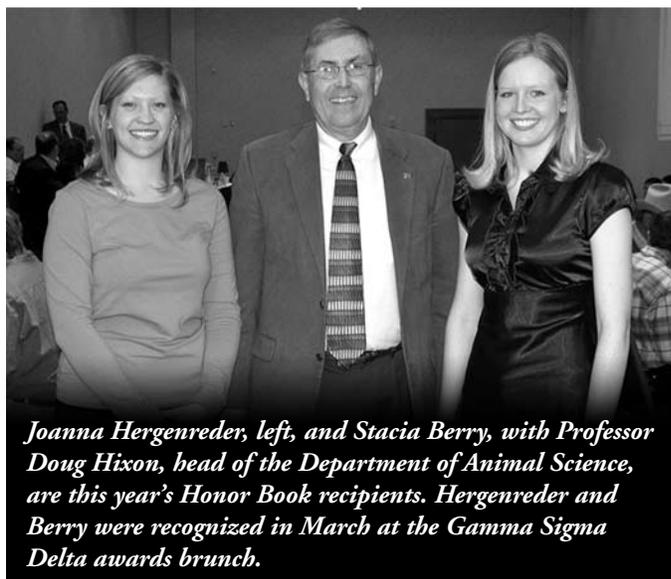
Honored were **Stacia Berry** of Cheyenne and **Joanna Hergenreder** of Nunn, Colorado. The awards are given to the top senior students in the department for academic excellence.

Berry is completing a business and communications double option in the animal and veterinary science (ANVS) major.

“Stacia has a near perfect GPA and has been extremely active in external organizations as well as campus activities throughout her career at UW,” says Professor **Doug Hixon**, head of the Department of Animal Science.

Berry was this year’s outstanding graduating woman. She served as Wyoming FFA president and national FFA secretary, is a College of Agriculture Ag Ambassador, and has served in various leadership positions in Delta Delta Delta Sorority including president.

She was also named the outstanding senior female student by GSD at its 2008 awards ceremony.



Joanna Hergenreder, left, and Stacia Berry, with Professor Doug Hixon, head of the Department of Animal Science, are this year’s Honor Book recipients. Hergenreder and Berry were recognized in March at the Gamma Sigma Delta awards brunch.

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“These are but a few of the activities in which she has been involved as well as a few of the honors she has received,” says Hixon, who notes Berry hopes to attend graduate school.

“Joanna was similarly outstanding with a perfect GPA after graduating with an associate degree in equine science and a similar academic record from Laramie County Community College in May 2005,” Hixon says.

Hergenreder then transferred into the business option of the UW ANVS major.

“Joanna has worked various employment opportunities throughout her academic pursuits, often working multiple part-time jobs simultaneously,” Hixon said. This included serving as a technician in the Center for the Study of Fetal Programming, under the direction of Professor Steve Ford, her first semester at UW.

“Joanna has a strong interest in the equine industry with plans to include graduate study in the near future,” Hixon says.

“The Department of Animal Science is extremely honored to name two such outstanding young women as its 2008 Honor Book recipients,” he says.



Karen Williams

Family and Consumer Sciences

The Department of Family and Consumer Sciences hosted members of the Wyoming Association of Teachers of Family and Consumer Sciences (WATFCS) February 1. Paula Hoopes, current president of WATFCS, and Michelle Aldrich, past president, requested the second annual event, commenting, “It is a great way to stay connected.”

The junior and high school teachers who braved the Wyoming weather were treated to departmental updates and hands-on activities from faculty and extension program staff in each program unit, says **Karen Williams**, head of the department. “Comments from participants indicated their enjoyment of the event: ‘Exceeded expectations!’ ‘The mini presentations and hands-on activities were very useful,’” Williams notes.

Participants unable to attend were sent handouts about the activities. “Those who attended encouraged the faculty to come to their schools, saying ‘we’d enjoy having them (FCS faculty) shadow us to see what we are doing in the classroom,’” says Williams. “We all are looking forward to next year’s event.”

The annual Family and Consumer Sciences newsletter was mailed mid-March. This year’s edition focuses on outreach and engagement. Articles highlight extension activities statewide such as AgrAbility, Dining with Diabetes, the Food Safety/Hazard Analysis and Critical Control Point grant project, Cent\$ible Nutrition Program, and Enterprising Rural Families.

Student organization projects also dealt with connecting with the local community. Key examples were the Habitat for Humanity project through the student chapter of the American Association of Family and Consumer Sciences. The Student Dietetic Association provided nutrition education sessions at the University of Wyoming Early Care and Education Center, distributed groceries monthly to a local church, and helped patrons with grocery selection and delivery on distribution Saturdays. Members

of Phi Upsilon Omicron volunteered at the Wyoming Children’s Museum and Nature Center in Laramie, assisted with Salvation Army bell ringing, and made healthy goodie baskets for the Regency Retirement Residence in Laramie.

Molecular Biology

One of the most intriguing revelations of modern molecular genetics has been the finding that many genes appear to be non-essential for normal growth and development in living organisms, says **David Fay**, an associate professor in the Department of Molecular Biology.

Although there are many potential models to account for this phenomenon, one widely accepted explanation is that many genes carry out overlapping or redundant functions with many other genes, Fay says.

“Thus, in the absence of gene ‘A’ activity, gene ‘B’ can still function to



Natasha Kirienko

ensure 'A's' normal duties are carried out," he explains. "Nevertheless, getting at the underlying molecular and mechanistic bases for these kinds of genetic redundancies has proved difficult."

A paper scheduled to be published this year in the prestigious Public Library of Science journal, *PLoS Genetics*, provides novel insights into the mechanisms of functional overlap between genes.

For this work, **Natasha Kirienko** of Rostov-on-Don, Russia, a fourth-year molecular biology graduate student in Fay's laboratory, used a variety of genetic, genomic, and molecular approaches to reveal the underlying nature of a genetic redundancy between two genes in the nematode *C. elegans*.

Another former student in the Fay laboratory, **John David McEnerney**, also contributed substantially to the project and co-authored the paper with Kirienko and Fay.

"The paper is unusual in that Natasha had to do a tremendous amount of difficult digging to come to her final conclusions. Most people would have given up before they even got there, or they just wouldn't have been capable of tackling the diversity of methodologies required," Fay says.

In addition to providing findings relevant to basic genetics, the work has implications to human health as one of the genes under study, *lin-35*, is the *C. elegans* version of an important tumor suppressor gene in humans, Fay says.

"The phenomenon of genetic redundancy is thought to be highly pertinent to understanding human diseases that depend on multiple interacting genes or foci," he adds.

Plant Sciences

Plant sciences graduate student **Jordana LaFantasie** received first place in the oral paper competition for Ph.D. students held by the Society for Range Management during its 61st annual meeting in Louisville, Kentucky, in January. LaFantasie is co-advised in plant sciences by Assistant Professor **Stephen Enloe**, who was formerly with UW and now with Auburn University, and **Stephen D. Miller**, associate dean and director of the Agricultural Experiment Station. Her paper was entitled "Interspecific interactions between black henbane and three native grasses." According to Assistant Professor **Andrew Kniss**, weed scientist in plant sciences, "This is a very prestigious award and Ms.



LaFantasie deserves recognition for her achievement."

The Plant Diagnostics lab operated by plant sciences for many years has been formally closed. Recent departures and reassignments of plant pathology faculty members made it impossible to offer plant diagnostics services reliably, says **Steve Herbert**, head of the plant sciences department. General inquiries about plant health should now be directed to Herbert for referral to appropriate specialists in plant sciences and other academic departments. Commercial samples will be redirected to private diagnostics labs outside the state.

Faculty members from plant sciences and from the agricultural science program at Sheridan College met in Sheridan January 31 to plan a cooperative undergraduate degree in horticulture to be shared by the two institutions. When

fully implemented, students in Sheridan can complete three years of the degree at Sheridan College taught by a combination of Sheridan College and UW faculty members. The students will then transfer to UW in Laramie for the fourth year of the degree. The shared program is made possible by endowment of the E.A. Whitney Professorship in Agriculture, a new horticulture position in plant sciences that will be at Sheridan and contribute to teaching the new program. Plant science department member **Justin Moss**, director of the UW Sheridan Research and Extension Center, and Sheridan College Dean of Technical Programs **Jim Binnacle** deserve recognition for the success of the first planning meeting, says Herbert. A target date of fall 2009 was set for the first course offerings.

Anowarul Islam of the Samuel Roberts Nobel Foundation has been hired to fill the forage science faculty position in plant sciences vacated by the retirement of Professor **David Koch**. Islam begins in June. The Nobel Foundation is the world's leading forage research institute. Stronger ties between the Nobel Foundation and plant sciences department are one of many benefits from this new hire.

PROGRAM NOTES



Ginger Paige

Renewable Resources

Ginger Paige, University of Wyoming Cooperative Extension Service water resources specialist and assistant professor in the Department of Renewable Resources, and **Jeff Soltis**, a graduate student in the department, organized workshops in Sheridan and Rawlins in March for landowners and persons interested in areas of coal-bed methane (CBM) development.

Topics included the *Land and Water Inventory Guide for Landowners in Areas of Coal Bed Methane Development* (LWIG), soil and vegetation monitoring, watershed approach to permitting for CBM water discharge, legal issues, extension resources for landowners, and an explanation of the Wyoming Department of Environmental Quality (DEQ) watershed permitting approach. The 77-page LWIG provides guidelines for

understanding and monitoring soil and water issues of concern in areas of CBM development.

Lachy Ingram, a post-doctoral researcher in the department, and **Jay Norton**, extension soil specialist and assistant professor in soil fertility, are participating in the development of written and online materials for the reclamation and restoration of disturbed areas due to energy development.

About 40 representatives from government agencies, industry professions, and UW met in Laramie in March to begin formation of the materials. "It's an interesting project in that it involves a range of people – agency, energy industry, reclamation/restoration practitioners, university, and consultants – who are coming at it from different perspectives," says Ingram.

Norton facilitated the Laramie meeting and developed the idea for the reclamation bulletin series.



Jay Norton

Veterinary Sciences

Graduate students and faculty members in the Department of Veterinary Sciences continue to collaborate with the Wyoming Game and Fish Department (G&F) to identify toxins in lichen that weakened elk in the Red Rim area southwest of Rawlins to the point they were unable to stand.

The G&F was forced to kill approximately 80 elk in March. When warmer temperatures arrived and snow began to melt later in the month, the surviving elk dispersed to areas with better feed.

A similar die-off occurred in early 2004, when more than 400 elk unable to stand were found in the Red Rim-Daley Wildlife Habitat Management Area (WHMA) south of Interstate 80.

"We were hoping we would never see this again, but we are. It seems to be reoccurring this year," says **Becky Dailey** of Cheyenne, a Ph.D. student in the department.

Dailey, who visited the site twice in March, adds, "The elk are alert, but they are not able to get up. It's pretty depressing to see." Researchers are confident the culprit is *Xanthoparmelia chlorochroa*, a lichen common to many areas of



Becky Dailey

Wyoming and the West.

Dailey, who is focusing her research on the lichen, is working with Professor **Merl Raisbeck** to identify and quantify secondary metabolites in *X. chlorochroa*.

In explaining the secondary metabolites, Dailey says, "They have no known primary function in the metabolism of the lichen, but it's thought these compounds serve to protect the lichens from herbivores, many insects, and ultraviolet light. They are also thought to play a role in rock mineralization."

Assisting in the laboratory studies are Associate Professor **Todd Cornish**; Ph.D. student **Dave Edmunds** of Roanoke, Virginia; master's students **Amanda Fluegel** of Dakota, Illinois, and **Laura (Linn) Meadows** of Wilson; and G&F personnel including **Cynthia Tate**, assistant state G&F veterinarian stationed at the Wyoming

State Veterinary Laboratory, which is managed by the Department of Veterinary Sciences.

“We have devoted a lot of resources to this,” Dailey says. “It’s important to the G&F, for the elk themselves, and to the people of Wyoming and elsewhere to find answers.”

Academic and Student Programs

Fall 2007 enrollment numbers for the College of Agriculture prove to reinforce our motto, “Students – The Reason We’re Here!”

“With 884 students enrolled in our graduate and undergraduate programs, we just missed our all-time record enrollment of 885 students in 1998,” says **Jim Wangberg**, associate dean and director of the Office of Academic and Student Programs. “All of our programs are either holding steady or increasing enrollment, and as of May we’ve already admitted 17 students in the brand new bachelor of applied science degree program.”

While the number of transfer students has decreased slightly, freshmen enrollment and intercollegiate transfers have increased.

“Our faculty and staff members continue to embrace our motto, giving



our current and prospective students the personal attention they deserve,” says **Laurie Bonini**, the college’s recruitment coordinator. “Our commitment to students does have a positive impact on our retention of those students in College of Agriculture programs.”

Bonini adds, “Our very generous scholarship program also has a positive impact on College of Agriculture enrollments. Students are not only attracted to our academic programs but also the opportunity to offset some of their educational expenses.”

The college’s scholarship committee awarded 200 individual scholarships totaling \$346,500 for the 2007-08 academic year, according to figures compiled by **Kelly Wiseman**, a staff assistant in the office.

Bonini says, “There will be even more scholarship money available for the upcoming academic year.

Our students and the college continue to reap the benefits of our very generous donors. In addition to helping our students meet their educational goals, we are also able to attract the most promising students.”

Faculty and staff members in the College of Agriculture strive on a daily basis to go the extra mile for our students, Bonini says. “Our college has truly embraced the motto: ‘Students – The Reason We’re Here!’”

Other members of the Academic and Student Programs office are **Teresa Jacobs-Castano**, counselor; and **Stephanie Russell**, office assistant.

More information about Academic and Student Programs is at <http://uwadmnweb.uwyo.edu/agPROGRAMS/>.



Agricultural Experiment Station

The College of Agriculture had another very successful year in obtaining external grant dollars to support research activities around the state, says **Stephen D. Miller**, associate dean and director of the Agricultural Experiment Station.

“The college brought in \$2 million more than the previous year, which brought our total FY 2007 (July 1, 2006, to June 30, 2007) to nearly \$12 million,” he notes. “This was the second highest total on campus; however, when expressed on a per-faculty basis, it was nearly four times higher than the nearest college.”

He says spring has brought lots of construction, planning, and improvement activities at research and extension (R&E) centers around the state.

At the James C. Hageman Sustainable Agriculture R&E Center (SAREC) near Lingle, bids were opened the end of March for the new congregate residence facilities (to house graduate students and visiting faculty) and state-of-the-art wet laboratory facilities. Construction may be completed in late fall.

At the Powell R&E Center, plans are underway

PROGRAM NOTES

for construction of a new building to house seed cleaning equipment, which is being moved from the Sheridan R&E Center. "This will move the equipment closer to the heart of the certified seed producing area in the state," Miller says.

At the Sheridan R&E Center, new high tunnels are being developed and installed to extend the length of the growing season by several weeks. In addition, planning has begun on improving office and laboratory facilities at the center.

At the Laramie R&E Center, the greenhouse facilities at 30th Street and Grays Gables are undergoing major renovation. These include finishing installation of a backup boiler, upgrading existing control systems on three improved greenhouse ranges, installing new control systems on three unimproved greenhouse ranges, furnishing ranges with higher capacity exhaust fans, installing improved capacity swamp coolers on all ranges, putting in an alarm system to immediately alert greenhouse personnel of impending problems, installing a backup generator system to operate during power outages, and purchasing a high capacity reverse osmosis system for improved water quality.



Kristi Cammack

A new state-of-the-art feeding system is in place and operating at SAREC feedlot facilities. This system will allow researchers to monitor individual livestock performance from their computers anywhere in the state. This acquisition is the result of efforts by **Bret Hess**, associate professor of animal science and assistant director of AES, and **Kristi Cammack**, assistant professor of animal science.

Cooperative Extension Service

Jenna Evans started January 2 as a 4-H/youth extension educator in Laramie County. This is a new position and is funded through a 4-H Military grant obtained by Laramie County Extension Educator Jeremy Green. Evans provides leadership in implementing 4-H programs on F.E. Warren Air Force Base

and with National Guard installations across the state. She is a 2006 graduate of the University of Wyoming with a bachelor's degree in family and consumer sciences.

Mary Louise Wood began work December 17 as the 4-H/youth extension educator in Albany County. Wood is a December 2007 graduate of UW with a bachelor's degree in microbiology. An alumna of the Park County 4-H program, Wood has been active at both the county and state level as a volunteer.

Jamie Mehling assumed the 4-H/youth extension educator position in Goshen County December 6. A graduate of the University of Northern Iowa, Mehling has a bachelor's degree in social science education. An Iowa 4-H alumna, Mehling also brings teaching experience to the position.

Kim Reaman began March 24 as the state 4-H

volunteer management specialist based in Laramie. She brings 20 years of 4-H/youth development experience, most recently as a 4-H educator with the University of Wisconsin. Reaman has a bachelor's degree in home economics education from the University of Nebraska-Kearney and a master's degree in extension education from Pennsylvania State University. Reaman will provide leadership for 4-H volunteer management training and development of volunteer programs for extension.

Ag Development and College Relations

There are exciting ways to support the College of Agriculture, have that gift matched dollar-for-dollar by the Wyoming Legislature endowment match program, and still receive income from the gift for your lifetime, says **Anne Leonard**, director of Ag Development and College Relations.

Under the Wyoming Legislature matching gift program, those making a qualifying gift to any permanent endowment are eligible to have the gift matched dollar-for-dollar – doubling the impact of your gift, Leonard says. Gifts of \$50,000 or more designated for an



Jenna Evans

Gillette native deputy director of development at UW ag college



Anne Leonard

from the Wyoming legislative match program,” Leonard says.

“Traditionally, the impact of planned gifts is not realized until well into the future. Under this program, the match dollars go to work immediately to support the College of Agriculture program you specify. Donors can support a wide range of programs – examples include graduate student research awards, scholarships, and departmental excellence funds.”

A gift annuity or charitable trust are just two ways to help College of Agriculture students, faculty members, research, and outreach programs. To learn more about planned gifts, visit the UW Foundation planned gift Web site at <http://uwyo.giftlegacy.com>, call the College of Agriculture Development Office at (307) 766-3372, or speak with your financial adviser.

endowment are eligible for state matching dollars, she notes.

“Many types of gifts are eligible for the match including ‘planned gifts’ such as charitable remainder trusts or gift annuities,” she says.

“These types of gifts can also provide you with an income stream for your lifetime or for a period of years. For example, if you create a charitable remainder trust with a gift of \$75,000 to the UW Foundation, the trust can ultimately benefit the College of Agriculture, and you can receive income from your gift for your lifetime. Plus, you receive many tax benefits from a gift of this type, including income tax savings and possibly capital gains tax avoidance.”

Why is this a win-win situation? “When you make your gift to the university, you could receive income from that gift, and the university receives \$75,000

A Gillette-area native who grew up on a ranch – and earned a degree in marketing and her juris doctorate from the University of Wyoming – is the deputy director of development in the College of Agriculture.

Stephanie Anesi began March 3.

“I think working in the College of Agriculture is a good fit,” says Anesi, who received her marketing degree in 1997 and her law degree in 2003. “The attitude here is happy. People like their jobs. I think it’s going to be a nice place to work.”

Anesi will work with alumni, corporations, and friends of the college to secure private support for programs.

“We are delighted to welcome Stephanie,” says Anne Leonard, director, Ag Development and College Relations. “Her knowledge of agriculture coupled with her legal training will be an asset to our programs. I am looking forward to introducing her to our alumni and constituents.”

Anesi was employed in the state Attorney General’s office in Cheyenne after receiving her law degree and worked for a time in the city attorney’s office in Laramie.

Her focus in the development office is major gifts. “Many of my skills can be applied to the development



Stephanie Anesi

office,” says Anesi. “I have good communication skills – both oral and written – and I have a good understanding of the more technical aspects, such as endowments, trusts and estate planning.”

She participated in 4-H as a youth, having horse, dog, and other projects.

Anesi has another country claim – she was the National High School Rodeo Association queen from 1991-1992, and traveled the nation.

“It was a phenomenal experience most high school teenagers don’t get,” says Anesi. “I was much more outgoing at the end. I was a fairly shy teenager before I had the experience. After, I was much more mature and more comfortable approaching people and engaging them in conversation.”

Her husband, Travis, earned his animal science degree from UW in 1997. He is a superintendent for Delta Construction, Inc., in Laramie.

Quentin Skinner retires after nearly 35 years of service to UW

by Robert Waggener, Editor

Office of Communications and Technology

Quentin Skinner, a professor in the Department of Renewable Resources, retired in April after serving the University of Wyoming, UW Cooperative Extension Service (UW CES) and College of Agriculture for just shy of 35 years.

Fellow faculty members, students, staff members and friends gathered April 10 in the College of Agriculture for a party honoring Skinner. They talked business, they shared laughs and they also did a little roasting.

Skinner started as an environmental specialist in the UW Water Resources Research Institute in September 1973. He became an assistant professor in the then Department of Range Management in 1978, receiving promotions to associate professor in 1980 and professor in 1986.

He also worked with UW CES in watershed management, water quality, plant identification, range, and best management practices for grazing of riparian zones.

"I enjoyed the excitement of learning something new everyday. That's what college professors should be doing," Skinner said.

Since 1996, Skinner focused his extension effort on water quality issues around Wyoming.

Skinner authored or co-authored three books and more than 100 publications on



Professor Quentin Skinner visits with University of Wyoming Cooperative Extension Service senior office associate Marie Hanson, left, and Cathy Shuster, UW CES office associate, during his retirement party April 10.

topics relating to grasses of Wyoming, habitat selection by cattle, grazing management, stream water quality, and plant utilization, among others. He also produced a deck of cards featuring Western grasses. Orders came from across the United States, and the cards quickly sold out – all 3,000 decks.

Skinner was raised in Pinedale, earned a bachelor's degree in biological science from UW in 1962, and served in the U.S. Army from 1962 to 1965.

Skinner and his wife, Arlene, have moved to Cumming, Georgia.

"We're close to family, and it's warm and green down here," said Skinner, who admits there is a downfall. "I'm the only one who talks strange in this part of the country."

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