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University of Wyoming

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An honorary degree from the University of Wyoming recognizes individuals who reflect the university's high ideals and values and exemplify the concepts of excellence, service, and integrity.

For more information about Honorary Degrees at the University of Wyoming and the nomination criteria, go to www.uwyo.edu/honorarydegree.

Nomination submissions are due no later than October 23, 2009.
CONTRIBUTORS

Tom Lacock
There was a time in Tom Lacock’s life when he wanted to be a farmer on the same piece of ground in Iowa where he grew up. Those thoughts were quickly dispelled when he grew into his allergies. Sensing the need to avoid all things hay and ragweed-related, he has since settled into the life of a freelance writer and photographer who works around Wyoming for a variety of outlets and businesses. Lacock moved to Wyoming in 2003 and has worked for The Wyoming Business Council, the Casper Star-Tribune and now owns his own company, which returned to Casper in June 2009. Lacock spent his college years in Storm Lake, Iowa, where he donated his mind to the Buena Vista University mass communications department (2000 graduate), lent his body to the Buena Vista football team. He makes time daily for his wife, Traci—a 2006 UW Law School grad—and his two dogs, Kinnick and Griffin.

Milton Ontiveroz
After working 60-hour weeks as an award-winning newspaper reporter/photographer for about 15 years, Milton D. Ontiveroz came to the University of Wyoming Division of Public Relations 15 years ago. He specializes in community relations and, for each of the past 10 years, he has led the successful Wyoming Rendezvous Tour—a program that gives new UW faculty the chance to explore this great state. The tour has visited coal and trona mines, the men’s and women’s state prisons, and included a ride in a Black Hawk helicopter. Milton’s features for UWyo magazine are usually UW athletics profiles. He is a devoted follower of the UW men’s and women’s teams, and is a life-long brainwashed fan of the New York Yankees and Oakland Raiders. He has a shrine in his UW office honoring both teams.
VIEWPOINT

With this issue, UWyo readers will learn a little bit more about the High Plains Gasification-Advanced Technology Center. A year ago, a joint project between the University of Wyoming and GE Energy was announced. We’ll tell you about the project and introduce you to the process of coal gasification and what it means for the state’s coal industry. A site in East Cheyenne, Wyoming has been selected for the demonstration project. This project continues to advance UW’s position as a leader in energy research.

I will take this opportunity to introduce you to two key members of our magazine team.

I am very pleased to announce that Dave Shelles is the magazine’s new editor. Dave comes to the university after more than a decade in newspapers, and with this job he returns to Wyoming; he was the assistant sports editor at the Wyoming Tribune-Eagle in Cheyenne from 2003 to 2006.

The new look of the magazine is the work of Jim Fuerholzer, who has brought 20 years of print, Web and multimedia experience for a variety of clients to UW. He’s a graphic designer in Student Media.

We’re delighted with these staff additions, and we know you will be, too.
With 27 percent of the student body voting in April’s Associated Students of the University of Wyoming elections, new president Matt Haigler (above right) and vice president Dane Hunzie were elected thanks to the highest voter turnout in recent memory.

Hunzie says the docket of strong candidates helped get the word out, more so than anything she and Haigler did in campaigning.

“Our big thing was putting the ‘student’ back into student government,” she says. “That was our slogan we ran on. We went to places where students were and that’s something we want to do now. We promised if we were elected, we would work for you and we will come to you. We did that through our campaign and we’ll keep to that promise.”

They also promised to use wisely the student fees that will pay for many things in the coming year, including an on-campus radio station. The Web-based station was established by outgoing ASUW President Kelsey Day and Vice President Jonathan McBride.

“One of the neat things about ASUW is that even with the downturn in the economy, ASUW’s budget is shielded a little bit in that it’s student fees and not state money,” says Haigler, a mechanical engineering major. “But when student groups come to us to get money for programming through the Recognized Student Organizations funding board, that money will still be available, where it isn’t through departments.”

Haigler, Hunzie elected to top ASUW posts

The two have strong ties to the university. Haigler grew up in Laramie, attending Cowboys football and basketball games, while Hunzie hails from Kemmerer and remembers making the long trip to see sporting events in Laramie. The two also campaigned to UW students living off campus, hoping to build a bridge between the community and the university.

“There’s a lot of potential for the Laramie community to take advantage of the intellectual wealth that’s here at UW,” Haigler says. “There’s a lot of young people, creativity and ideas flowing here in Laramie, especially on campus. The more we can spread that out to the community and into the state, the better off we’ll be. Whatever role ASUW can play in that is really important.”
Students enjoy shuttle

The shuttle arrived a few minutes after Deborah Hutchinson stepped into the shelter. The driver greeted her with a cheerful smile, and she sat down into a soft seat for the five-minute ride from the Classroom Building to the parking lot where her car awaited her return.

Hutchinson, a senior in psychology and journalism, has ridden the University of Wyoming bus system since its launch in the fall of 2002. The shuttles arrive on time, take her to most campus locations, and she says she is impressed with the service improvements.

“I find it most reliable that the buses are color-coded and it makes using them so much easier for people in a rush. It’s also nice that the majority of the drivers will wait for you when you are running late,” Hutchinson says. “They’ve also added more routes, which is very helpful.”

The UW shuttle system was designed to accommodate the students, resolve parking problems during campus construction and make the UW campus more sustainable.

UW’s shuttle system has gained popularity within the Laramie community. The total daily average of riders for all shuttles is more than 3,000 people—nearly 70 percent higher than last year. New routes are being developed while demand keeps growing.

The bus routes take riders to most spots on campus, but the bus system’s services keep getting better. The recently added South Express shuttle, which operates from 7 a.m. to 6 p.m. on university business days, takes riders who live on Laramie’s south side to the Wyoming Union every five minutes.

“The best thing UW transportation has done was to put the bus stop at Spring Creek. I don’t have to ride my bike when it’s cold out and don’t want to waste gas anymore,” says Deidre Neumann of Worland, Wyoming, a senior in international studies and Spanish. “New shelters at shuttle stops around campus are also very helpful; I’m able to stay warm while I wait for the shuttle.”

Another shuttle service between the residence halls and the Park and Ride lots located along 30th Street was added to reduce parking difficulties in the residence hall parking lots, while the Night Owl Express shuttle was added for riders who need to go somewhere at night.

—Alisa Somova
Royal Swedish Academy honors economist again

Having already served a president and a king, and shared the coveted Nobel Peace Prize, UW’s Jason Shogren (above) appeared to have accomplished the two major achievements in environmental economics.

But Shogren’s international prominence in his profession came to the forefront again last fall, when he was appointed a lifetime member of the Royal Swedish Academy of Sciences, the group that annually awards the Nobel Prizes in physics, chemistry, literature and economics.

“To be a member of the Royal Swedish Academy of Sciences is an unexpected honor that just goes to show you can find a Wyoming graduate just about anywhere,” says Shogren, UW’s Stroock Distinguished Professor of Natural Resource Conservation and Management in the College of Business’ Department of Economics and Finance. “I am proud to be invited to join this prestigious institution.”

Shogren was inducted into the academy in a ceremony in January in Stockholm.

Shogren is one of three professors worldwide selected this year as foreign members of the academy. The Swedish academy chose him based on his published works and expertise in his specialty fields, which include microeconomics, the political economy of environmental and natural resources, the public economy, and paleoeconomics.

In addition to voting on the Nobel Prizes, Shogren’s academy duties include participating in science policy debates and dialogues and serving on award-nominating committees.

The Royal Swedish Academy of Sciences is an independent, non-governmental scientific organization that promotes the sciences, primarily the natural sciences and mathematics. It seeks to be a forum where researchers can explore different angles of scientific issues, offer unique research environments, support young researchers, reward outstanding contributions to research, promote science and influence research policy priorities and, among other things, disseminate...
scientific information in various forms.

Shogren has served as an economic policy advisor during the Clinton administration. During the 2007-2008 academic year, Shogren served a royal appointment as Sweden’s King Carl XVI Gustaf’s professor of environmental science, an honor Shogren says likely led to his nomination.

—Alisa Somova

Fueling the future

An important milestone was reached in September for the University of Wyoming’s School of Energy Resources, setting the foundation for its promise of extraordinary things to come.

UW has secured nearly $20 million for the design and construction of a home for the energy school.

“A new facility is a major step toward fulfilling the vision the Wyoming State Legislature endorsed when it gave us the go-ahead and the funding to start putting together a world-class School of Energy Resources,” UW President Tom Buchanan says.

“While buildings aren’t as important as the people and programs in them, the new building is important because it provides an environment in which UW faculty and students can excel in teaching and learning and translating knowledge into ways to help extend the long-term energy future for Wyoming, the region and the nation,” he says.

The school and the facility allow UW to recruit a world-class faculty that can expand understanding of current sources of energy and discover how to move past traditional use of fossil fuels to the energy sources of the future.

The $20 million for the SER building is part of $75 million UW has raised to support energy teaching and research since the Wyoming State Legislature in 2006 committed $12 million to start the energy school. The total includes nearly $55 million in private and corporate gifts, some of which are among the largest in the university’s history. These include monetary gifts from Jim Nielson of Cody, and corporate donations from EnCana, Shell, BP America, Marathon and Anadarko, plus software contributions from Schlumberger and Halliburton.

The university is also celebrating more than $20 million raised through matching endowment and facilities funds created by the state legislature, doubling the impact of private-sector gifts.

While most of the gifts support the energy school, other equally important gifts have been given to develop and enhance labs in the College of Engineering and Applied Science and the Enhanced Oil Recovery Institute, as well as to strengthening teaching and research initiatives in the departments of Geology and Geophysics, and Petroleum and Chemical Engineering.

“The school isn’t about the building,” Chuck Brown, president of the UW Board of Trustees, says. “It’s about expertise the SER is pulling together from disciplines across the UW campus—engineering, law, geology and geophysics, natural resources, economics, mathematics and finance. It couldn’t succeed without them. As trustees, we expect great things from the university, and we’re getting them. Now we expect more.”
The University of Wyoming’s research enterprise is growing. In each of the past 10 years, external awards to the university have been increasing. External awards are grants—mostly from the federal government—UW receives to fund a portion of its work.

“This is a notable achievement considering the size of UW, the current federal research and development picture, and the fact that UW does not have a medical school,” Bill Gern, UW vice president for research and economic development, says.

“Let me put the $78 million into a different context. Let’s assume these funds belonged to a private business operating in Wyoming; we’ll call it ResearchCo,” Gern says. “A significant amount, about $52 million, was from federal or industrial sources, allowing ‘new’ money to flow into the Wyoming economy. Roughly two-thirds of a grant is salary, so $37 million went to employees of ResearchCo.

As a matter of fact, about 1,200 UW employees received all or part of their salary from external awards.”

The impact of $37 million to the state’s economy is larger than its face value. Using a very conservative multiplier of 1.75, that sum will generate about $64.75 million in spending from purchases made by employees of the fictitious ResearchCo. That money will drive the creation of an additional 1,800 employees in the secondary economy to provide the goods and services to ResearchCo and its employees.

“That is to say nothing of the 30 patent disclosures which were generated last year or of the spin-out companies created,” Gern says.
Planning what the Laramie campus of the University of Wyoming will look like in two decades is the idea behind UW’s Long Range Development Plan.

As UW continues to grow and as the needs of the university community change, the campus environment needs to change with it.

“We hope we will have a framework defined for the Long Range Development Plan soon,” UW Facilities Planning Director Roger Baalman says. That means a use plan for the Laramie campus will be developed that takes into account sustainability; the location and development of open spaces and transportation corridors for people who walk, bike or drive to and across the campus; where new buildings should go; and how they should look.

The planning process involves community meetings, focus groups, and the work of both advisory and policy committees, as well as the work of hired consultants.

The public portion started in November with community and campus meetings. A campus meeting was scheduled for early March. A third round of meetings is coming up.

“We’re focusing early on the Summit View Apartments,” Baalman says. In February, UW officials announced the phased demolition of the outdated barracks-style housing units would start later in the year. Work is under way to relocate students who are living there.

The last time such a planning process was undertaken was the 1960s; that led to the construction of the Arena-Auditorium among other buildings.

For more information about the Long Range Development Plan, visit its Web site at www.uwyo.edu/facilitiesplanning/lrdp.
Ford Motor Company’s Made in America Program commissioned composer Joseph Schwantner to compose a piece to be performed by 58 smaller-budget orchestras in each of the 50 states. His composition, “Chasing Light...”, made its debut in September 2008, performed by the Reno Chamber Orchestra.

The University of Wyoming Symphony Orchestra wins the honor for the state of Wyoming performing the piece sometime during the 2009–10 academic year, conductor Michael Griffith (above, with the score of “Chasing Light...”) says.

Sponsorship for the program comes from the Symphony Association for the University of Wyoming, the fund-raising arm for the symphony. Griffith says these funds make this performance possible.

“Usually a composer who has the stature of Joseph is way out of our budget possibilities,” he says. Schwantner is a Pulitzer Prize-winning composer. “So this program is way to get orchestras to perform a new piece by a well-known composer. There’s lots of nice PR for UW and the UW symphony.”

Griffith won a 2005 American Society of Composers, Authors & Publishers/League of American Orchestras Award for Adventurous Programming for his work with the UW symphony, something that might have put the orchestra on the map for this project.

“Since the League of American Orchestras is the administrator for the [Made in America] program, it’s a possibility,” he said.

The Made in America Program started in 2005. For that performance, composer Joan Tower composed a piece titled “Made in America,” performed more than 80 times by 65 orchestras in each of the 50 states. The program’s goals include offering resources that allow smaller orchestras to build relationships with their communities and allow the musicians learn contemporary works.

The national program is funded by the Ford Motor Company Fund and sponsored by the League of American Orchestras.

—Dave Shelles
New degrees prepare students for energy’s future

Starting in the fall, University of Wyoming students will be able to embark on two new energy-related undergraduate degree programs, designed to provide a well-trained workforce to help develop conventional and alternative energy sources while addressing growing social and environmental concerns.

Energy Resource Science and Energy Systems Engineering will require students to meet rigorous academic requirements, UW Provost Myron Allen says. “Both degree programs will prepare students to meet the challenges of a complex energy future, in which we will have to develop new science and technology to meet the world’s needs.”

The Department of Mechanical Engineering in the College of Engineering and Applied Science is the home of Energy Systems Engineering program, which includes study of political, economic, social and environmental issues related to energy development, Rob Ettema, dean of the engineering college says.

“For example, in considering new energy projects, engineers are frequently confronted with permitting issues, aspects of environmental law, and analyses of energy economics,” Ettema says. “Energy Systems Engineering graduates should be well-positioned to immediately evaluate these considerations while also determining the technical feasibility of proposed projects.”

The interdisciplinary Energy Resource Science program is offered through the School of Energy Resources collaborating with the colleges of Arts and Sciences, Engineering and Applied Science, Agriculture, Business, Education and Law, and the Haub School of Environment and Natural Resources.

“The goal of this degree is to offer a diverse curriculum that combines engineering, science, business, law, and natural resources content to build a fundamental understanding of interaction and tradeoffs between energy, environment, policy and the economy,” says School of Energy Resources Director Mark Northam.

“Society faces many difficult decisions regarding production and consumption of energy,” Northam says. “Many of these decisions will require analysis by people with strong, multidisciplinary scientific backgrounds.”

UW computers put to use in Nigeria

Thanks to a donation from the University of Wyoming, the University of Nigeria, Nsukka, has 13 computers for students to use.

Eight laptop and five desktop computers formerly used on UW’s campus ended up in West Africa thanks to Chikwendu Christian Ukaegbu, a former UW sociology professor who came up with the idea in 2005.

“I knew that the University of Nigeria did not have computers even though they were anxious to expand their computer literacy programs for their students,” he said. “But they didn’t have enough computers.”

Ukaegbu mentioned the idea of such a donation to arts and sciences dean Oliver Walter, who suggested he meet with UW president Tom Buchanan. Buchanan liked the idea and called a meeting of UW provost Myron Allen, UW Vice President for information technology Robert Aylward, UW Director of International Programs Anne Alexander and Ukaegbu. The group endorsed the program, and then set about assembling the order for the Nigerian university, which included power cords and other hardware.

Ukaegbu says Aylward became the leader of the effort from that point.

Last July Ukaegbu traveled to his native country and saw the computers, set up and ready for use. He sent photographs to Aylward, who says he was happy to see them in place so quickly.

“You could tell they were highly valued in their university and that they were very pleased to get them,” Aylward said. “I’ve seen other pictures of the university and you can tell that they live on a very bare-bones budget with no computing and very limited resources. So we were grateful we could help in a small way, grateful that Christian had the idea to try to do it and put these used computers in an environment where they will continue to be used for several more years.”

Ukaegbu says UW did a good thing in helping the University of Nigeria improve its technology.

“... I’m very, very grateful to President Buchanan and Robert Aylward and the entire staff for being this kind to a computer-starved, information technology-starved university in a developing country, which happens to be my country of origin,” says Ukaegbu, now a professor at Northwestern University in Evanston, Illinois. “I’m really very grateful for the kindness bestowed on my university at home.”

—Dave Shelles
Chance brought Ingrid (Indy) Burke to the University of Wyoming to complete her doctoral study.

Or maybe it was fate.

“I came to Wyoming quite by accident. I started my Ph.D. at Dartmouth College with [Professor] Bill Reiners, and he moved here after one year of my Ph.D. I just said, ‘Cool, where you go, I go,’” Burke says. “It just fit me so much better than back east, culturally and environmentally.

“It’s one of those examples of how serendipitously things happen in life. I always tell my graduate students, ‘There’s part of your future that you can really control and then there’s the little things that can change your entire career.’ Who knows whether I would have even stayed in science if I hadn’t come to Wyoming? I just love it here!”

Twenty-one years after finishing her doctoral degree in botany at UW, Burke returned to Laramie in the fall of 2008 as director of the Haub School and Ruckelshaus Institute of Environmental and Natural Resources. She succeeded Harold Bergman, who served as director for more than a decade and helped develop the school from 20 students in 1994 to more than 130 today. Bergman remains on staff as a professor of zoology and physiology.

As director, Burke oversees interdisciplinary programs and faculty development at the Haub School, the Wyoming Conservation Corps, and the Ruckelshaus Institute’s applied research efforts and outreach programs.

A renowned ecologist with a distinguished career in teaching and research, Burke left Colorado State University in Fort Collins, Colorado, and joined the UW faculty as a Wyoming Excellence Chair, funded through an endowment established by the Wyoming State Legislature in 2005. She has a joint appointment between the departments of botany in the College of Arts and Sciences and renewable resources in the College of Agriculture.

“My goal is to position the University of Wyoming in a national leadership role in a variety of fields pertaining to the environment and natural resources,” Burke says.

To accomplish that, Burke says UW must enhance educational, research and public service opportunities on campus—particularly for students, whom she calls our “future thinkers and leaders”—and stress the differences between fact, theory and opinion in the study of environment and natural resources.

While Burke’s job requires her to undertake research and coordinate various university initiatives, she plans to continue working in the classroom.

“It’s not often people become full professors and discover they really love teaching freshmen. I love teaching freshmen!” Burke says. “You can have a much bigger impact by teaching freshmen than you can by writing a paper. My 100th peer-review journal article was accepted, but I just don’t feel like any of those papers will ever matter as much as teaching or doing the kind of outreach that’s associated with the (environment and natural resources studies) here.”

Before earning her Ph.D. at UW in 1987, Burke received her bachelor of science degree in 1980 from Middlebury College in Vermont.
On a recent drive from Denver International Airport to Laramie, Jolyn Zwemer nearly took an unexpected detour.

Not because of inclement weather or slick roadways, though.

“When I found out about it, I had just dropped off a friend at the Denver airport and I almost missed my exit coming back home,” recalls Zwemer, the University of Wyoming’s first recipient of the most generous graduate scholarship in the United States. “I was just like, ‘Oh, my gosh!’ And I was freaking out.”

A first-year law student from Frannie, Wyoming, Zwemer is just the second person from the Cowboy State to receive a graduate scholarship from the private independent Jack Kent Cooke Foundation, established in 2000 and dedicated to helping young people of exceptional promise reach their full potential through education.

The first Wyoming recipient, Angela Harrison-Urlacher of Powell, won her graduate scholarship in 2004 while attending the University of South Dakota. She continued her education in cultural anthropology at the University of Michigan.

“It’s an honor for the university and the state to have such a remarkable woman among us,” Duncan Harris, director of the UW Honors Program, says of Zwemer.

Remarkably, Zwemer is no stranger to the Cooke Foundation scholarship program. Before her 2006 graduation from Central Wyoming College (CWC) in Riverton, Zwemer was awarded an undergraduate transfer scholarship from the foundation and chose to attend UW.

A 2004 graduate of Rocky Mountain High School in Byron, Zwemer graduated last spring with a bachelor’s degree in criminal justice and enrolled in the UW College of Law in the fall.

“The Cooke Foundation has made a world of difference in my life,” says Zwemer. “When I applied the first time, I knew I was facing long odds because there were going to be about 700 applicants and only 30 would get a scholarship. But I just put my name in the hat because I thought, ‘How else am I going to go school without taking out loans?’”

As she works toward her goal of becoming a juvenile court judge, Zwemer hopes her story will motivate other Wyoming students to pursue Cooke Foundation scholarships. One of 62 winners of the graduate scholarship for 2008, Zwemer will receive up to $50,000 to continue her education.

She’d also like a little company at the foundation’s annual pizza party that brings together scholarship winners in each state. Since Zwemer is the only Wyoming student in the program, however, she attends the Colorado state celebration.

“I don’t think a lot of people in Wyoming know about this scholarship and everything that it can do for you,” says Zwemer. “Don’t let the odds scare you. If you’re applying for it, you’re worthy of winning it. Take a chance and do it!”
Tim Considine

The University of Wyoming is making a habit of recruiting minds from prominent research universities around the country.

Economics professor Tim Considine is a case in point. The Chicago native started at UW in time for the fall 2008 semester, coming to Laramie after 22 years at Penn State University in State College, Pennsylvania. Considine cites the university’s commitment to education and research in environmental sciences and economics as things that drew him to UW.

Considine says UW is becoming known as a great place to do research in alternative energy forms. It helps that the state has thrown its financial support behind the sciences, he says, and that’s reflected in part in the people the university has hired—faculty members such as Ingrid Burke in biology and Cynthia Weinig in botany and ecology, and Western Research Institute CEO Don Collins.

“The state has made a significant investment in the School of Energy Resources, and we’re just ramping up now with close to a dozen faculty members who have joint appointments,” Considine says. “I don’t know if the word has gotten completely out on Wyoming and energy research, but I’m sure it will, given the people we’ve hired.”

After finishing at Cornell University, Considine worked for the U.S. Congressional Budget office and then for Bank of America before joining the faculty at Penn State, where he worked for 22 years until arriving at UW. He says the biggest difference between academe and business is the time frame he had to do research. Whereas the private sector had daily deadlines to meet, he has months to work on projects while on faculty at a university.

Between teaching courses in applied econometrics and the economics of electricity, he has a number of projects in the works, including a study with a colleague at the World Bank on the economics of the European Union emissions trading system for carbon dioxide, and how utilities use carbon permits.

“I’m also working on a study of the contributions of Powder River Basin coal to the U.S. economy, and a study that began when I was at Penn State last year on the economic impact of developing the Marcellus natural gas play in Pennsylvania. It’s a very large unconventional shale natural gas plot in Pennsylvania,” he says. “I may be doing a study of what impact the renewable portfolio standards in California will have on electricity rates in that state. That’s just kind of getting out of the gates.”

Considine also has done research on an energy source Wyoming has in droves: Wind. He wrote a study of wind energy projects while working on his doctoral degree at Cornell University in the early 1980s, but he says he’s hoping to further research alternative energies and the economics associated with them.

“Wind (energy) has come a long way since then. The problem back then was the turbines would cut out and not produce a stable flow of power, especially when it got too windy, but those problems have been ironed out,” he says. “But wind still requires heavy production subsidies to be economic with coal or nuclear power or natural gas-fired power.”

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Gatua wa Mbugwa wrote his dissertation in his native language, Gikuyu, but he’s not content to stop there.

The University of Wyoming instructor in African-American studies wants to publish Gikuyu language scientific text books based on his dissertation and other scientific works, so his people in Kenya might learn about agriculture in their native language.

Recently, he submitted his dissertation to the Department of Plant Sciences and the Graduate School. Wa Mbugwa, who belongs to Kenya’s Gikuyu tribe and teaches the Global Impact of African Cultures and Agriculture Rooted in Diversity courses, says the dissertation focuses on a self-regenerating winter annual plant species called Laramie medic. Most libraries and colleges in Kenya are English, the language of the people who colonized Kenya. Wa Mbugwa says he wants his people to use what he learned during his research, and use it in Gikuyu. While he wrote the original dissertation in Gikuyu, he also provided an English translation. He changed or coined some Gikuyu words. He added footnotes on each page where such words appeared to clarify their meanings.

“When you translate from a foreign language to your language you can generalize,” he says. “The words don’t have to be specific. You just want to carry the meaning, and you can do so in so many words. But when you are creating in your mother tongue, then you want to use the same words to mean the same thing everywhere. And that is hard. The process, however, makes your mother tongue more creative and adds more words to its vocabulary.”

Wa Mbugwa also wrote his master’s thesis about the impacts of biointensive cropping with a focus on Kenyan collard greens in Gikuyu.

“I would like to start a college in Kenya that actually teaches in (Gikuyu),” he says. “My tribe has more than 6 million people, (so) why can’t we do this?

“What happens is that people go to school after being supported by their parents or their villages or extended families, but once educated they do not help those who helped them,” he says. “Further, the knowledge the students develop does not always have applications at home. So I decided I wanted my knowledge to be used by my own folks.”

Dr. James Krall, his dissertation supervisor, says he was happy to be part of the project, as wa Mbugwa truly wanted to help his people and distribute information that hadn’t been available in Gikuyu until now.

“He always said he felt like something that was really limited for the people in Kenya was a lot of ag information and educational information that has been published throughout the world, but virtually none in the language that people could use in his country,” Krall says. “That’s why I was excited and encouraging him to go ahead and do this, and I’m glad he did it.”

Wa Mbugwa’s dissertation was big news in Kenya, earning front-page mention in the East African Standard, a major newspaper in Kenya and East Africa, and it was the cover story of its Sunday magazine. As groundbreaking as his agricultural research was, the bigger news is his pioneering of scientific language in Gikuyu.
Crowds spill out of the meeting room on the third floor of the Wyoming State Capitol in February 2008. Legislators and state officials leaning in at the doorways strain to hear what their colleagues seated and standing inside are hearing.

Partway through the legislature’s busy budget session, they make time nonetheless to hear the presentation on a proposed joint project between GE Energy and the University of Wyoming with funding from the state of Wyoming that will become the High Plains Gasification - Advanced Technology Center.

Coal is a mainstay of the state’s economy. Powder River Basin coal generates nearly 40 percent of electricity consumed in the United States. It’s plentiful and it has low sulfur, which makes it attractive. But it has its drawbacks: It’s high in moisture, and it’s located at a relatively high elevation, which means burning it is less efficient. What’s more, national policymakers are beginning to consider imposing limits on the amount of carbon dioxide that’s emitted by industrial processes—including electrical power generation fueled by coal.

The goal of the High Plains Gasification - Advanced Technology Center project is to build a coal gasification plant that will use a chemical process to turn Wyoming’s abundant coal resource from a solid fuel to a gas that can be burned more cleanly to make electricity, or converted into fuels like gasoline and diesel.

The promises aren’t new. Many coal conversion projects had been proposed and discussed, but few progressed any further.

This time, though, the equation is different.

“This is a real collaborative effort,” says Monte Atwell, general manager of gasification at GE Energy. Atwell is heading up the GE Energy side of the collaboration. “There are benefits to GE Energy and to the university and the state of Wyoming and ultimately people around the world who rely on coal for their electricity.”

Electricity, particularly coal-fired electricity, is at the core of the U.S. energy portfolio.

In the world of regulated utilities, under which most of the United States lives, ratepayers bear a share of the cost of building and maintaining power plants, Atwell says.

Those costs include scrubbers to remove particulates from the air and technology that captures mercury and sulfur, among other things, and that can increase consumer costs considerably.

“If you take the cost out and can generate power reliably, when we pay our bills that’s something we can afford,” he says. “It’s always a journey, especially when we’re generating electricity with new technologies.”

“In the past and now to a great extent, coal is being used for base electrical load,” says Bill Gern, UW vice president for research and economic development. Base load is the amount of electricity required for most uses.

“Natural gas has been used for peak loads,” when demand for electricity suddenly spikes, Gern says.

Natural gas, widely used for home heating, has been used to generate electricity. In some areas of the country it’s preferred because it’s a cleaner-burning fuel and less carbon dioxide is produced than in burning coal. Burning gas also doesn’t require the additional work of adding technologies that can remove particulates and heavy metals.

A coal gasification plant, Gern says, will produce synthesis gas, or syngas, which, like natural gas, is a clean-burning fuel used to generate electricity.

“What we hope gasification does,” Gern says, “is make a coal-fired plant look like a gas-fired plant in terms of carbon dioxide production.”

The interests of GE Energy and UW intersect naturally over plentiful Powder River Basin coal, but what drew GE Energy’s attention was the UW School of Energy Resources, with its emphasis on clean-coal technology.

“Things work best when there is a shared need, a common vision for really trying to do the right things. We felt Wyoming was taking some steps with the School of Energy Resources, the university, and the support from the governor’s office,” Atwell says.

In October, negotiations between UW, state officials and GE Energy result in the first of a series of agreements that spell out the basics of the venture. UW is to own the facility and to conduct research, both on the coal before it’s gasified and the synthetic fuel that results. GE Energy officials are interested in testing at a higher elevation the technologies resulting in gasification of Powder River Basin coal. The company will lease the facility from UW.

GE Energy is a world leader in Integrated Gasification Combined Cycle (IGCC) technology. Company officials have an interest in solving the technical problems of IGCC and gasification of the plentiful coals of the Powder River Basin. The
research at the High Plains Gasification - Advanced Technology Center will contribute to making coal and IGCC plants marketable and valuable worldwide.

The University of Wyoming has significant existing expertise and research interest in treating high-moisture coal to remove hazardous elements and increasing energy efficiency, as well as reducing carbon emissions produced by the IGCC process and producing synthesis gas for other useful products.

“What we know is that gasification is proven clean-coal technology,” Gern says. He heads up the UW division that’s keenly interested in the science behind preparing coal for efficient gasification and using the products that result.

“The reason it’s clean-coal technology is that it doesn’t combust coal, it gasifies it. It creates this other product called synthesis gas, or syngas. Syngas can be cleaned up because it’s mostly hydrogen and carbon monoxide,” Gern says.

“It can be combusted in a much cleaner way, because when you combust hydrogen, you make water. And because this is actually a chemical plant, you can handle the carbon dioxide that’s produced easily. It can be sequestered, put in a pipeline and used for enhanced oil recovery, or if it’s pure enough, you could even make industrial-grade carbon dioxide.”

UW researchers want to understand how to treat the coal before it’s gasified to achieve the greatest efficiency, and they want to understand what can be done with the products of gasification. They are specifically interested in syngas and the uses it can be put to.

“By taking carbon monoxide and hydrogen in the presence of a metallic catalyst fleet fuel, and other products, such as acetate—which is used in making...
plastics—can be derived.

“The beauty of syngas is that it’s highly reactive,” Gern says. “You can do a lot of chemistry with it to make a whole bunch of very useful products, some of which are fleet fuels.”

GE Energy’s interests lie in between.

“What we’re looking at is partnering with UW,” Atwell says from his office in Houston. “We want to take the technology we’ve invested in heavily over the last several years, get a site, and test this stuff out.

“It’s one thing to test individual components, but when you add them all together, it adds a whole different dimension.”

The goal, Atwell says, is generating as much power for as little money possible and making it extremely reliable.

By early January, the request for proposals to secure the site is ready; on January 5, it’s sent out statewide. The criteria are spelled out in the request: The land must be at least 35 acres in a square or rectangular dimension; it must be at least 4,000 feet elevation; it must be an undeveloped site, flat and with minimal vegetation; and it must be free of encumbrances, both above ground and below.

The research that is expected to take place at the High Plains Gasification - Advanced Technology Center is intended to accelerate developing and validating innovative technologies that GE Energy has developed and

“The reason it’s clean-coal technology is that it doesn’t combust coal, it gasifies it. It creates this other product called synthesis gas, or syngas. Syngas can be cleaned up because it’s mostly hydrogen and carbon monoxide.”
continues to develop. The result should be a source of energy derived from coal that is more marketable, even as regulations on emissions increase and regulations for carbon dioxide become reality.

One of the uncertainties is how to make this technology work at higher elevations. Most such plants operate at or around sea level.

“As policy starts to be generated, carbon is something we’ll regulate, tax, and create a value for. And there will be legislation about what you will do with it. A facility like this gives us the option to make a plant run, create electricity, and create a syngas stream. And it gives us an opportunity to work on technology that deals with effluent streams,” Atwell says.

There are, he adds, some unique challenges that require focus.

“We’re going to the land of Powder River Basin coal to do it,” he says. “It’s physics. You lose efficiency the higher you go. Whatever you produce, you produce less at higher elevations. How do you mitigate that?”

In February, 11 proposers submit 15 sites in nine counties for consideration. They are judged against the listed criteria and three sites, one each in Campbell, Goshen and Laramie counties, are identified for further investigation. Site visits started in March and further evaluation continues into the spring.

UW and the state of Wyoming are interested in other elements of this relationship as well.

“We’re interested in maintaining Wyoming coal sales,” Gern says. “We understand that Powder River Basin coal is used to produce about 38 percent of the nation’s electric power. With carbon legislation, we know there’s going to have to be technologies that deal with the carbon dioxide. We think it’s possible. Researchers can surmount technical problems, continue the coal sales, and basically use coal in a very clean way.”

The issue, he says, is moving coal up the value chain.

“We’re going from an economy where we mine it and ship it somewhere to where we mine it and use it within Wyoming and create valuable products with coal,” Gern says. “It’s very important for creating an economic robustness in Wyoming.”

“Another really important byproduct of our relationship is our students will get to work in a state-of-the-art facility that will look like a production facility,” Gern says. “And so our students will have an opportunity that’s unavailable probably in the United States. Our students are going to be here, they’re going to be learning about these processes and we hope that draws industries to the state.”

After lengthy review, a site in Cheyenne is selected. Other agreements that spell out pieces of this project are being negotiated. Building the facility is expected to take two to two-and-a-half years.
Construction employment is estimated at 300 jobs. Engineering and construction estimates are still being calculated, but the plant is expected to cost between $100 million and $120 million.

When it’s up and running, the facility is expected to require about 15 skilled and semi-skilled workers on a continuous basis.

Both Gern and Atwell are optimistic about the future for coal.

“Too many people look at coal negatively today. I want to help change that,” Atwell says. “People need to understand the issues with coal and the opportunities. It’s too much an integral part of our world economy to just walk away from completely. We have the technology today to utilize coal while reducing the polluting emissions. We need to advance that technology, make it even more efficient on a wider variety of coals. The research we do with this center is expected to help us do that.”

As the United States moves toward an energy-secure future, Gern says, coal has to be part of it.

“It has to remain an important part of the nation’s electric production, and this will help us secure that in an environmentally acceptable manner,” he says.

“UW is a major energy university, and now we will become much more so. We have enhanced-oil recovery, carbon dioxide capture, and a reclamation center. Now this will help us understand coal, and that’s important for a state that produces more coal than the next four states put together.”

The gasification process can use a number of feedstocks including coal to make a number of products including synthesis gas.

Illustration courtesy of GE Energy.
What, me worry?

(Should I?)

Anne Kugler isn’t worried.

Sure, she recently graduated from the University of Wyoming with a degree in finance, a business hit hard by the recent economic malaise.

But the Casper native has a plan.

by Dave Shelles
She’s currently spending four months traveling and sightseeing in South Africa and Botswana, where she studied abroad during the fall semester of 2008. When she returns home she hopes to find a job in Seattle or Chicago or another large city. Failing that, she says she has options in Casper. And if that backup plan doesn’t work, she’ll take a year to prepare for the Law School Admissions Test.

At any rate, she has options, most notably the option to not brave what some career counselors and academics are calling the worst job market they’ve seen in decades.

“I’m lucky that I don’t have to look and start my career right now, because I’d think it would be impossible, almost, if you wanted to go to a big city, and you wanted to get a great job,” she says. “Right now, you have to start at the bottom—you have to start in the Rocky Mountain area, and then hopefully move (to a big city), because those opportunities don’t exist there right now.”

**Weathering a rare storm**

Kugler spent part of her spring semester talking to people such as Steve Farkas, director of the Johnson Career Center at UW’s College of Business, and Jo Chytka, director of the Center for Advising and Career Services at UW.

She also says she spent time talking to her professors about the current market, which associate professor of economics and finance Rob Godby said is the toughest he’s seen in years. Throughout the past school year Godby took great pains to warn his students that there is no bad time to start thinking about a career, and the earlier the better.

Still, more than 2,000 graduates from UW entered the market in May, casting their fates to an ever-shifting economic wind. Godby said even the Wyoming economy, usually shielded from the forces of the world and national economy, is seeing a bit of decline, meaning jobs and internships in Wyoming can be as hard to come by as they are elsewhere.

“For people that are going to find internships or other types of jobs like that, it will be more difficult,” Godby says. “If they’re looking for general employment, particularly if they’re leaving the state, it’s probably going to be much more difficult.

“I’ve been telling them since last fall, I used to make a point in my class—I taught intermediate macroeconomics—and we spent all of [the fall 2008 semester] looking at the credit crisis, the financial crisis turning into a recession. So it was all unfolding in front of them.”

In no uncertain terms, Godby sometimes forced tough love on his students.

“Occasionally, I would say, ‘The numbers came out. How many of you are looking for a job?’ No hands would go up; there’d be very few,” he says. “I’d say, ‘You know, this is a number you should be aware of because this means you guys, and it just doubled.’ It’s a difficult challenge across this university to get people to think about the fact that—particularly if they’re graduating—the job search starts long before [the senior year]; they should be thinking about it in their junior year.”

Even academe, long thought to be insulated from the reality of a down economy, is affected. Associate professor
of macroeconomics and applied economics David Aadland, also the director of graduate studies in economics, says while applications to UW’s graduate programs in economics are up 50 percent from previous years, it’s worthy of note that other universities being forced to make budget cuts and often do so by not hiring faculty.

‘Reengineering the thinking’
While Godby says he wants his students thinking about life after college by junior year, Farkas recommends starting earlier. So he’s been talking to sophomores about their career plans, right?

“Freshmen. It’s got to start at the freshman level,” Farkas says. “I’m a big believer that you can never start too early. Specifically, what we’ve been doing is getting the messaging out through our internship programs, classroom presentations and working with College of Business student organizations in the interest of exposing them to what we mean by ‘meaningful work experience’ and preparing for their careers.”

Internships, summer jobs and creating general opportunities for securing employment during their college experience that aligns with the student’s career choices fall under Farkas’ definition of meaningful work experience, something he says it’s never too early for students to acquire.

After almost 20 years as an executive in the private sector, Farkas came to UW in November to fill the newly created Director position for the College of Business’s Johnson Career Center. The Johnson Career Center offers career advising services specifically to business undergraduate and graduate students. He says he tries to impart the importance of being open-minded about recognizing opportunities, from the immediate plans for after college and the field of endeavor they’re choosing to mining networks for internships and regular job opportunities.

“It’s all part of reengineering the thinking,” he says. “It’s something they (other companies or industries) might not have thought about, but taking advantage of the current market allows you to opening your students’ minds to consider other options that might be available to them. They tend to be inclined to stop and pay attention to what’s happening.”

One of those options is graduate school. In addition to the increase in graduate school applications in economics, Aadland says more students have sought out his counsel with it in mind to further their education. Two years of graduate school might be long enough to let the economy stabilize and possibly land a better job with a masters degree, he says.

“The only thing I can say is most of the students who come to visit me tell me, ‘The reason I’m doing this is because I can’t find a job,’” Aadland says. “Of course, when people apply and haven’t yet visited here, they usually don’t say why they’re doing it, whether it’s an increased interest in economics or whether they can’t find a job. Those who have come into my office, almost all of them have said it’s because they don’t think they can find jobs.”

Regardless of the reason, graduate school remains an option for those with “money-driven” degrees such as finance, economics or business. Kugler’s future involves law school, but not necessarily to follow in the footsteps of family members who are lawyers, and not necessarily in the immediate future. She says she’s wanted to go to law school, after majoring in finance, since high school, and while her tunnel vision concerns some around her, she sees it as an asset that she has a strong focus.

“I still feel like this is the right path for me,” she says. “People kind of question this. ‘You’re so set on this. Maybe you need to take off the blinders and look around.’ I’m not necessarily going to law school to be a lawyer. I have a finance teacher right now and he has his law degree. He says it opens so many doors, but you don’t necessarily have to be a lawyer.”

Even still, Farkas says he’s taken great pains to tell his students to keep their options open, and not just hang on to one post-graduation plan. He refers to it as a marketing strategy, the better to illustrate that job-seekers must sell themselves to an employer.

“So since Plan A isn’t playing itself out, I’m concerned about, ‘What do I do next?’ I draw upon where I’ve been and having worked in different environments, knowing what employers look for in their top candidates, and really help them think about how they develop a strategic marketing plan for themselves,” he says.

“Freshmen. It’s got to start at the freshman level. I’m a big believer that you can never start too early.” —Steve Farkas
The hidden door: Networks
While Kugler had planned her trip to Africa for quite some time, she also investigated work opportunities, checked job postings online and attended job fairs. The majority of what few jobs were presented, she says, were for engineering majors. Almost all the jobs—engineering or otherwise—were with smaller companies in Wyoming or elsewhere in the Rocky Mountain region.

Kugler says she was struck with how few openings were posted, but it makes a certain amount of sense. In this day and age, it’s all about who you know.

“Usually you see job postings, and right now’s the time for summer internships. There’d be posting after posting after posting. Those postings don’t exist anymore,” she says. “No one posts jobs. You just have to see what kind of job opportunities [companies] have because no one posts them. They just work within their little network and that’s it. So if you can get in there, yeah. But if you can’t you’re completely limited by this economy.”

Farkas says the importance of networking can’t be overstated. Kugler speculated as to the percentage of job openings that aren’t listed, but Farkas had an actual number, estimated in recent months.

“Well, [forming networks is] extremely critical,” he says. “There’s a report I read a while back that with the current hiring environment being what it is, approximately 80 percent of jobs that are available aren’t even advertised. That means jobs are being filled through networks and who you know.

“So network formulation is huge—not only formulation but understanding what a network really is. A lot of our students understand they’ve got pretty good networks already established, but what they don’t know is how to leverage the network, how they can make that work for them. Often you think, ‘Well, a network’s has to be all business people.’ Not necessarily. It could be family, friends, your professors, me, connections you have on campus. Everybody is part of this web of individuals, and those individuals all have different types of connections.”

Kugler says Chytka has helped her find UW graduates in cities where she wants to work, such as Seattle, Boston and Chicago. E-mails were sent, connections made. And just about every person in every city told Kugler the same thing.

“’It’s just limited here,’’ Kugler says, relating the common refrain.

Looking ahead, looking up
Kugler maintains a positive attitude about the future—her future in particular—even while remaining skeptical of that optimism.

“I think it’s a false sense of hope, really,” she says. “My teacher gives me a hard time because I’m really optimistic, and I think maybe going to Africa has caused that.

“I think it was being in Africa, where you see the ultimate worst, so you want to shake people and say, ‘Hey, trust me, it can get worse.’ ♦
NCAR, UW and four HBCUs join to form an array of scientific expertise

by Dave Shelles
On the surface, the University of Wyoming doesn’t have much in common with four historically black colleges and universities (HBCUs).

Investigate a little more, and a recent agreement with the National Center for Atmospheric Research (NCAR) shows UW is the right choice to join forces with these four other universities to increase diversity in the field of atmospheric sciences.

With that goal in mind, the five universities entered into a memorandum of understanding with NCAR in August. The memorandum lays out several activities designed to accomplish the increased diversity; notably faculty exchanges between the schools, graduate student research and internship opportunities, and NCAR scientists serving as visiting faculty at the member institutions.

“What we hope it’s going to mean is that we’ll have more exposure to those types of institutions that have historically educated African-Americans,” says Nell Russell, UW’s associate vice president for diversity. “Hopefully that exposure is going to lead to our having an ability to recruit from that group in order to create a more diverse community.

“This is not just students. We’re talking about faculty and hopefully administrative positions also.”

The efforts to expand diversity have not gone unnoticed among UW’s partners in the agreement. Quinton Williams, a professor of physics at Jackson State University in Mississippi, says he is impressed with UW’s commitment to this agreement.

“I’m really excited that University of Wyoming took it up on its own will to look at this consortium that was put together with NCAR and several HBCUs and say, ‘Hey, we’re committed to diversity and we should be a part of this.’ That sends a very strong message out there,” Williams says. “They’re looking for active opportunities to engage this problem of lack of diversity and really hitting it head on by finding which institutions they can partner with to basically work this problem out of existence.”

Along with Jackson State, UW enters into the agreement with Hampton University in Hampton, Virginia; Washington D.C.’s Howard University; and North Carolina A&T, located in Greensboro, North Carolina.

Hampton University and Howard University are private schools and the other two are state schools, budding research universities that have strong programs in all the sciences—particularly earth sciences. They all offer affordable educations.

All four HBCUs are represented to NCAR by professors who have taken the lead in producing research focused on the atmospheric sciences.

Dr. James H. Russell III, (no relation to Nell Russell), joined the academic world after serving as head of the chemistry and dynamics branch and the theoretical studies branch in the NASA Langley Atmospheric Sciences Division. He is a professor of atmospheric and planetary sciences and
co-director of the Center for Atmospheric Sciences at Hampton University. He says he’s been associated with NCAR for most of his professional career, so it’s a natural thing for Hampton to be in on this agreement.

“We have a very extensive program in atmospheric sciences. As a matter of fact, we formed a new department in November 2006, which is the department of atmospheric and planetary sciences,” he says. “Prior to that time, we were part of the physics program, and we had a center for atmospheric sciences. So we—I’m talking about my partner Pat McCormick and I—have been here for about 13 years. We came from NASA-Langley and set up a program in atmospheric sciences here at the university with the goal of increasing the number of minorities in our field. We now have our own satellite mission to help us train students.”

Gregory Jenkins is the chair of Howard University’s department of physics and astronomy, and past director for the program in atmospheric sciences. He has done extensive research on hurricanes that begin off the coast of Africa, and he has advised several summer research projects aimed at getting minorities involved in the atmospheric sciences.

Solomon Bililign, a professor of physics at North Carolina A&T University, says Jenkins made the call to get him involved with NCAR. Already North Carolina A&T was involved with the National Oceanic and Atmospheric Administration’s center in Boulder, Colorado, so Bililign had an “in” with NCAR.

“That was one of the programs that we’re looking into in terms of developing collaboration to enhance our capacity and obtain summer research positions for our students, and a faculty exchange, so that’s where NCAR comes into play,” Bililign says.

“The other point is our center is aligned with the research lab in Boulder, which is next door to NCAR. So that’s one of the motivations because we have lots of common activities going on between the NOAA lab and NCAR and our centers. It made sense to be part of that direction.”

Jenkins says the HBCUs have had a loosely organized alliance to involve minorities in the atmospheric sciences, both at the undergraduate and postgraduate levels. Those alliances have involved NCAR, as all four faculty representatives and their respective schools have been involved with NCAR for years. This formalized agreement, Jenkins says, will only strengthen their programs.

“We all felt there had to be a coalition. Our programs are small, we’re not necessarily big enough to compete with the giants out there,” Jenkins says. “But as it relates to underrepresented students, we are doing as much as any large institution for graduating students. We are in a sense creating the next generation of students that won’t be in isolation and who will make a much deeper impact on a national scale—at universities, at labs, and in private industry.”

Williams says he’s continuing an association between NCAR and Jackson State—he became the school’s academic affiliate representative to NCAR in 2003. That association has benefited Jackson State because Williams has helped establish a degree program in earth systems science.

But Williams says the sky is the limit with this current memorandum of agreement.

“That particular program is in its early phases, and there are all sorts of opportunities for outside institutions to come and hopefully partner with Jackson State to help make that program as strong as it can be to produce those qualified students that will one day go out there [to NCAR in Boulder] and obtain Ph.D.s in geosciences, and maybe some will ultimately end up working at NCAR,” he says. “But we look for strong partners to help us achieve our goal and objective of becoming the definitive source of diversity in the atmospheric sciences and geosciences over the next few years.”

From the science standpoint, UW is a natural fit for this agreement as its programs in the earth sciences are on par with the other four universities and among the best
in the country. But from the diversity standpoint, even Nell Russell admits UW doesn’t come immediately to mind.

“Wyoming tends to kind of be on the periphery to the HBCUs,” she says. “People just don’t really think about Wyoming when they’re thinking about going off to school, professional school, or pursuing a faculty position. I think that [NCAR] connection is going to serve us well because Wyoming is a fabulous school, and I think we’re sort of like a sleeper. They don’t realize we have great faculty, great programs, great environment. That’s what we’re hoping to have.”

Maura Hagan, the deputy director of NCAR, says she sees strength in numbers. Rather than one school joining with NCAR to solve the lack of diversity in atmospheric sciences, five schools well-known for their programs in these areas will pool their resources to forge a better future.

“The result will be greater than the sum of the parts, in terms of the fact that we really do share a common vision regarding the promotion of education in the atmospheric and related sciences,” she says. “Each of us brings unique expertise as well as experiences to the whole issue, and by working together we can really leverage the individual efforts and go much further.”

Nell Russell says she sees an even greater opportunity for UW—even greater than the scientific research going on at NCAR.

“Diversity is a movement similar to civil rights,” she says. “Wouldn’t that be incredible for Wyoming to be at the forefront of that movement? It can only be a positive in the long run.”

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About the Universities

**Howard University**—Enrollment 10,623; Founded in 1867; notable alumni include former Chief Justice Thurgood Marshall and novelist Toni Morrison

**Hampton University**—Enrollment 6,154; Founded in 1868; notable alumni include inventor Booker T. Washington and comedian Wanda Sykes

**North Carolina A&T**—Enrollment 10,383; Founded in 1891; notable alumni include civil rights activist Jesse Jackson Sr., Illinois Sen. Jesse Jackson Jr., and NFL Hall of Famer Elvin Bethea

**Jackson State**—Enrollment 8,351; Founded in 1877; notable alumni include NFL Hall of Famer Walter Payton, Weather Channel meteorologist Vivian Brown, and jazz singer Cassandra Wilson

**University of Wyoming**—Enrollment 12,875; Founded in 1886; notable alumni include former vice president of the United States Dick Cheney, sports announcer Curt Gowdy, and former U.S. Army chief of staff Peter Schoomaker.

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**About the National Center for Atmospheric Research**

NCAR provides the university science and teaching community with the tools, facilities and support required to perform innovative research. Through NCAR, scientists gain access to high-performance computational and observational facilities, such as supercomputers, aircraft and radar—resources researchers need to improve human understanding of atmospheric and Earth system processes. NCAR and university scientists work together on research topics in atmospheric chemistry, climate, cloud physics and storms, weather hazards to aviation, and interactions between the sun and Earth. In all of these areas, scientists are looking closely at the role of humans in both creating climate change and responding to severe weather occurrences.

Source: ncar.ucar.edu

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Dr. James Russell of Hampton University
Deconstructing the writing process

UW writers take different paths from idea to publication

by Dave Shelles
An idea hits in the shower, on an exercise bike or knee-deep in a river with fly-fishing rod in hand.

Perhaps the writer finds inspiration in a place that’s near and dear, such as a hiking trail in a nearby mountain range or at a horse track at dawn.

Maybe hearing the platitudes of a politician’s speech inspires the gears of creativity.

Then it’s a matter of pulling out a notepad and scrawling that idea with good, old-fashioned pen and paper or sitting down at a computer and hammering out a phrase or several.

For the University of Wyoming’s well-known writers, writing is the one thing they have in common—that and a general creative process.

How they get from concept to publishing press is another matter altogether.

Poetry professor Harvey Hix’s latest work involved downloading 8,000 pages’ worth of former President George W. Bush’s speeches from the White House’s Web site. He incorporated elements of those speeches into a series of poems for the compilation God Bless (Etruscan, 2007).

Alyson Hagy, who teaches fiction in the MFA program in creative writing, had a flash of inspiration as she strolled around Keeneland Racetrack near Lexington, Kentucky. After writing a short story about what she saw, heard, smelled, and felt, she expanded it to a novel, Keeneland (Simon & Schuster, 2000).

Creative nonfiction professor Jeff Lockwood follows a more winding path to the printed page. He starts with the skeleton of an idea, follows this by adding flesh to the outline of that idea, and then writes several drafts to carve out the fat before finally landing an essay in a magazine (For example, “The Nature of Violence,” Orion, January/February 2006).

Getting physical

The three writers also derive inspiration from their avocations. All three are physically active in pursuits ranging from fly-fishing to tennis, but while Hix says ideas hit in his living room rocking chair, they also emerge while working out on his Schwinn Airdyne exercise bike. He says the physicality and rhythm are conducive to the creative process—therefore pen and paper sit nearby for those moments of inspiration.

“I have a little stack of pieces of paper that I’ve torn into quarters. I keep scrap paper and pen there and scribble away on the exercise bike,” he says. “Those scraps of paper go over to the computer and get keyed in to whatever file is appropriate.”

Ask Lockwood about the genesis of his ideas and he’ll say, “In the shower.” Press him a little more and he’ll also talk about a combination of physical activity and reading prodigiously.

“ideas come in the shower, but the best place to get ideas is hiking or skiing. There’s something about that repetitive, rhythmic motion that gets you thinking deeply,” says Lockwood, whose most recent book, Six-Legged Soldiers, was published by Oxford University Press in October. “So lots of ideas begin and die on a single trip or a single outing.”
“And a lot of them ultimately come from reading very widely, and picking up bits and seeds and germs, and then planting them and seeing if any of them go anywhere. And they come from my experiences in the sciences, and my reading incubated in the course of biking and skiing.”

Hagy quoted her friend Madison Bell, who calls writing a “semi-hypnotic state,” a state helped along by the repetitive motions of running and walking. Hagy says she’s addicted to daydreaming in that way, and anything she can do to foster that state of being she’ll do for hours at a time. In the end, it comes down to getting words to the page.

“Moving through the world—literally—can be a really important link to moving with your characters,” Hagy explains.

“A lot of ideas never grow into anything.”
Jeff Lockwood in Hoyt Hall’s Matheson Library.

“Ultimately you have to chain yourself to the desk at really, really regular intervals. I’ve been fortunate so far. It’s not been hard for me. The writing, when I sit down, is hard. I’ve never had a shortage of ideas. The early stages of writing something, particularly a novel, are really difficult. There’s so much going on.”

Kicking it old-school
Writing is one of many pursuits headed for a paperless world but each of the three Wyoming writers likes to keep it simple. Hix, Hagy, and Lockwood each say a paper and pen or pencil find their way into the creative process. Hix in particular keeps notepad and pen handy because, he says, inspiration pops up on its own.

“An idea could happen anywhere, so I carry around this wallet with a little notepad and a little pen,” he says. “I can be walking to work and just stop there on the sidewalk, take out the little notepad and jot things down. Certainly ideas can come anywhere.”

Hagy wrote out almost all of Keeneland before going to the computer. She says her physical style of writing keeps her pace deliberate, the better to truly absorb what she’s writing.

“I handwrite everything ... [with] just a pen and one of these white, college-ruled pads. After a first draft when I’ve made more revisions than I can correct, I’ll usually type it out,” Hagy says. “Handwriting keeps things slow for me. I’ve got this version of writing that’s basically printing, so it doesn’t go very fast, and that’s good for me. I have to kind of think my way through the sentence.”

While Lockwood prefers to go to the computer, hand writing at some stage is not out of the question. If he’s in a place where there is no computer and an idea hits, he says he’ll reach quickly for anything to record that idea.

“I’m really bad at remembering my ideas, so a lot of times I have sketches and notebooks. Yes, I’ve got to get this down on a notebook, or a 3-by-5 card, or napkin or anything else to get this idea saved. Then, let it sit there and see if it grows. A lot of ideas never grow into anything,” he says. “Fairly early on I get to the computer. That’s just because a lot of times my work is moving things around—cutting and pasting. In the old days you did that with cards and pages and cut-out sentences, but nowadays its electronic shuffling. The cut-and-paste function, if those keys were to burn out it would be the end of my writing.”
Location, location, location

Hagy sits at a metal desk in her office at Hoyt Hall, with high metal shelves behind her, stacked with books she likes to have within reach. However, despite spending her workdays in that office, she says she hasn’t written anything of significance there, preferring instead to write in an upstairs room at her house.

There’s also a sanctum—a cabin in the Sunlight Basin near Cody, Wyoming where Hagy says there’s little to do but write and commune with nature.

“We usually go to northern Wyoming to a cabin for a week or so ... and I have done some significant work on the 7D Ranch, which has been a wonderful touchstone for me,” she says. “But mostly [I write] in my study at home. It’s quiet, I have a window that faces east so I get this soft morning light, there’s a spruce tree so I can see squirrels and birds occasionally. The world goes by slowly in that Laramie way.”

Although Lockwood does write in his cozy office just down the hall from Hagy’s, he too, is often inspired by the quiet of home and a window into nature, namely his kitchen table, which boasts a view of the Snowy Range. He says a comfortable place to write can make a big difference.

“I don’t need to do my writing all in one place... But finding these sanctuaries (or special places or havens or oases), whether it’s in your house or setting up the place at work, for me, is pretty important,” he says.

Feeling a draft

With the ideas in place, the creative process then becomes a matter of assembling them in an orderly fashion, then revising. And revising again.

Hagy estimates she made scores of edits to each scene in Keeneland. Published as a short story in 1993, the novel Keeneland rolled off the press in 2000.

“Every day, every section, every scene, every chapter, I would go through 10 to 20 times at least,” she says. “I wish I could pull those up. The numbers would be interesting.”

Lockwood says scientific discourse often comes down to semantics and jargon, though his goal is to decode scientific concepts, making them as accessible as possible—not always the easiest proposition.

“Once you’ve got that first draft done, the real work starts, and that’s revision, revision and revision,” he says. “Only one time have I had the good sense to do this, but I kept all the revisions of one piece. It was an essay for Orion [magazine]. I think there were 13 revisions.

“Now, admittedly the last three or four are going back and forth about single words.”

Then came the end

Each writer says few things are more satisfying than putting the finishing touches on a draft, or seeing one’s work in concrete form, whether it’s a book in one’s hands, or seeing one’s byline in the table of contents in a magazine. It’s also a bit scary to have poured one’s heart and soul into a project – only to finish it.

“Every writer I’ve talked to about this agrees that when you come the end of a project, there’s some sense of nervousness and disorientation until you’re really immersed in the next project,” Hix says. “Having a project gives momentum and direction, some marker of daily progress. Without a project, you’re just hanging out there. It’s frightening.”

Lockwood says sometimes the long wait between finishing a piece and seeing it in print gives a writer enough time to pick up another project, but that makes seeing the finished project that much sweeter.

“You have to be able to delay gratification for a pretty long period of time,” Lockwood says. “It really is nice to have a product in your hands that represents the culmination of all this work.”

“...at home...The world goes by slowly in that Laramie way.”
Alyson Hagy at home.
Alone office light shines on the second floor of the Rochelle Athletics Complex at 5:30 on a mild January morning. Dave Christensen is busy at his desk, jotting down his game plan for the day. Coming to work this early is now a habit for the University of Wyoming’s new football coach, because when you’re being counted on to revive the Cowboys football program with a new system, there is no time to waste.

Christensen has taken up almost-permanent residence in his office since being named the program’s 31st head coach Dec. 1. The former University of Missouri offensive coordinator was formally introduced at a media event a week later, but then returned to Columbia, Missouri, to fulfill his promise to stay with the Tigers until his former team completed a successful postseason run with a Dec. 29 win over Northwestern in the Alamo Bowl.

He arrived in Laramie after New Year’s Day and immediately began the task of assembling his coaching staff. He hit the recruiting trail late but says he feels he had a successful few weeks on the job, his first leading a major college football program.

“My life has changed in a lot of ways; more so in the office. I used to spend most of my time working on strategies and football. Now I’m the CEO of a corporation. I spend a lot of my days where football does not even come into play. I have to organize things so we are all on the same page in order for us to have success in this program,” Christensen says. “We fill every minute of every day with something.”

Because Christensen was hired in December and was still assembling his coaching staff, UW was late getting on the competitive recruiting trail. The coaches worked hard to sell their vision of UW’s football future to potential student-athletes.

“We’ve had some good kids come in; they meshed well and got to know each other,” Christensen says. UW is one of the few schools in the country to have a big recruiting weekend in January because school starts earlier in Laramie. “That’s always important when kids are deciding where they want to go to school. When you get a bunch of those kids excited about being in one place and playing together, they start to jump in.”
Offense a draw
By Feb. 4, the NCAA’s signing day for fall sports, Christensen and his coaches managed to entice 24 future players to commit to UW. His first class is now in place and the future of Cowboy football is under way. How did Christensen do it?

Many players were aware of Christensen’s reputation as an offensive guru, a fact recognized by the Web site Rivals.com, a nationally known high school and college sports Web site, which named Christensen the 2007 National Offensive Coordinator of the Year. He also was runner-up for the 2007 Frank Broyles Award, which each season honors the nation’s top assistant coach.

He helped lead Missouri to the Big 12 championship game each of the past two years, and this season the Tigers offense averaged 45 points a game to rank fourth in the nation in scoring offense. Missouri averaged 344.3 yards passing this season, also fourth-best in the country. The Tigers gained 509 yards of total offense a game, ranking sixth in the NCAA. All those numbers stand out compared to the Cowboys’ offensive woes in 2008, when the team finished among the bottom nationwide in most offensive statistics.

Could recruits also be attracted to his wide open, no-huddle spread offense that has been called the “greatest show on turf?”

“We have to sell a vision. We have not done anything here yet, but we have created a vision of what we want to get done and how we are going to do things. And we have to sell that vision to these kids to get them to buy in and believe in what we are going to do for this program,” Christensen says.

The main factor in selling UW to recruits, he says, is that the “University of Wyoming is a great academic institution, so selling education is a simple thing because of the school’s reputation.”

From an athletic standpoint, players also want to look at the facilities, he adds.

“Our facilities here are second-to-none. We have a brand-new indoor facility, and our offices and meeting rooms, training room and weight room are six to seven years old,”
Christensen says, “We have a beautiful stadium, and we’re adding luxury suites and club seating to that. So our facilities are there to recruit kids.”

He adds the third element of selling UW to potential student-athletes is the importance of introducing those who are “going to affect their lives for the next four to five years,” notably the assistant coaches, academic administrators, and strength staff.

“That’s really what we try to sell—the people aspect. We’re trying to build a family-like atmosphere around here,” he says. “When parents bring their son here, we want them to be very, very comfortable with the people that are going to be around their kids when they leave.”

**Recruiting a coach**

Before he accepted the top football coaching job at UW, Christensen was one of the most sought-after assistant coaches in the nation, an object of desire for several other programs seeking a head football coach. But the Cowboys proved to be the best fit for the architect of Mizzou’s wide-open offense.

Tom Burman, UW’s director of athletics, says one of the things that first attracted him to Christensen was the former offensive coordinator’s ability to lead the Tigers to a top-10 finish two years ago and a top-20 finish in 2008.

“I have been aware of Dave for a couple years. He is known in the industry as a guy who is a leader in offensive football,” Burman says. “I have contacts throughout the country who were able to provide me more insight into Dave and his background as we moved through the search process.”

And just like Christensen has to sell UW to potential recruits, Burman did the same to hire his new coach.

“Personally, I think UW is an easy sell. We have a great university and a great community in which to raise a family. I showed Dave how supportive the state has been with our recent facility enhancement projects and the like,” he says. “He wanted to coach at a place that was passionate about football. The Wyoming fan base may not be as large as many other Division I programs, but they are absolutely passionate about Cowboy football.”

Christensen smiles when he thinks about coaching in the Cowboy State after leaving a successful program and the comfort of having a secure job at a perennial top-20 school.

“After eight years it was, I wouldn’t say, difficult to leave. The hardest part was leaving the players, but I told my children that this would be the year I would leave if it was the right opportunity,” he says.

The offer had to be just the right one to uproot his wife, Susie, and youngest daughter, Emily. His oldest daughter, Katie, attends college in Missouri and his son D.J., is a high school junior who will stay in Columbia for his final year. Emily is now an eighth-grader at Laramie Junior High School.

Christensen says the top factor in choosing UW was making sure the football program had support from the top down, which starts with Burman and President Tom Buchanan. Christensen was impressed that Buchanan flew with Burman for the formal interview in Columbia.

“In my first six or seven years at Missouri, I never even met the president—never shook his hand,” Christensen says “When Tom Buchanan flew into Columbia to interview the possible head football coach, right then and there I knew that was the type of person and university I wanted to be involved with.”

He says the UW facilities attracted him, too. Facilities play a big part in getting the types of players needed for UW to compete against Mountain West Conference rivals.

“I wanted to go to a place where football was important and was not a second thought, but a first thought. When we were in Missouri it was the only show in the state. I looked at Wyoming and went ‘wow there it is, it’s the only major college football program in the state,’” he says. “People are passionate about what’s going on here, they want a winner. That was really important to me. I wanted to go to a place where people were excited about their program, proud of their university, proud of their football program. That was probably more important than anything. I want to be here because this state has such a passionate fan base.”

And winning will take care of bringing the crowds back to War Memorial Stadium.

“We have a foundation and a plan for everything in our program and we are laying the ground work for that foundation. We’re implementing that same plan here in Wyoming that we had in Missouri, whether it’s recruiting, player development, or academics—we have a plan for every phase of our program that we are trying to develop.”

Whether Christensen and his staff can produce a winner right away remains to be seen. Players must adapt to a coaching change, but the basic defensive scheme will not change. The noticeable difference will be on the offensive side of the ball with Christensen’s wide-open offense.

“We will tinker with the offense to meet our personnel strengths, and we’ll continue to recruit the type of personnel to run it the way we did at Missouri,” he adds. “All I can say is that you’d better stay in your seats when we’re on offense or you’ll miss a lot of plays.”

It’s his job to make sure the Cowboys faithful are satisfied. ♦
It turns out the benefits of buying in bulk aren’t limited to wholesale clubs, and for that matter, the benefits of buying in bulk aren’t limited to those doing the buying. Because of the repeal of the Wool Act (a federal program subsidizing wool growers) and market penetration from Australia, the sheep industry in the western United States found itself on life support during the late 1990s. Glenrock rancher and University of Wyoming alum Brad Boner spearheaded an effort to reform the industry in the West through his position as the president of the Wyoming Wool Growers Association.

“We came to a point in time where we were going to have to sell our sheep and do something else or change the way we did things,” says Boner, who graduated in 1982 with a degree in Agricultural Business. “A group of us got together and started exploring our options. With a lot of luck and perseverance, we came up with the Mountain States Lamb Co-op.”

Boner says the co-op started in 1999 with 127 family farms and ranches in 11 western states, pooling an inventory of 250,000 lambs. Those numbers allow Mountain States Lamb Co-op significant negotiating power with buyers around the country.

“Inventory has been the big thing we can bring to the table in negotiating with buyers,” Boner says. “It is amazing what power we have if we get on the same page and pool our supply.”

Boner was born in Laramie in 1959 to Bob and Ann (Scott) Boner, who were both attending UW at the time. After Boner earned his degree, he moved back to the family ranch. He’s the sixth generation of his family to live in Converse County, where he still ranches sheep and owns 100 registered Black Angus cows. Boner’s wife, Laurie, is a 1987
UW graduate with a degree in Food Science. She is the author of the state Department of Agriculture’s Biosecurity Plan. Brad and Laurie have three kids—Braden, a senior at Glenrock High, as well as twins Megan and Ryan, who are high school freshmen.

Boner credits some of his success to his time at UW, offering high praise for his former academic advisor—Professor Larry Held in Agricultural and Applied Economics—as well as the exposure to business education and accounting.

“My advisor was just great,” Boner said. “He really took a serious interest in me. He never steered me wrong, which is like a lot of things—you never fully appreciate it until later in life.”

UW’s animal science program also claims some measure of the Mountain States Lamb Co-op’s success. Boner says he still participates in the ram tests performed by UW, which help producers identify rams offering strong physical traits.

“The rams we use in our purebred flock are certified rams that come out of (the ram test program) for the last 10 or 15 years,” he says.

During the early development of the Mountain States Lamb Co-op, the prevailing thought was to avoid being a packing plant and to create a pull in the market based on demand. After looking at past attempts at integration with the market, a business model was found in a farming and ranching organization called US Premium Beef. US Premium Beef’s Web site says the company started in 1995 with 21 producers and now processes nearly 12,000 head of cattle a week in 36 states. The negotiating power of US Premium Beef resulted in producers averaging nearly $25 a head over the cash market.

The co-op was formed with similar hopes: Control the inventory, control the prices you get for the commodity and add stability to the market.

“Before Mountain States, lamb prices fluctuated tremendously,” says Frank Moore, a fellow Mountain States Lamb Co-op member and organizer. “Now our highs aren’t quite as high, but our lows aren’t near as low. Our prices remain more or less steady on a seasonal basis.”

Moore, who also is a partner with Boner on a lamb-feeding business and a fellow member of the Wyoming Wool Growers association, says Boner has a lot to do with the success of their co-op.

“We’ve known each other for a long time,” says Moore. “Until we started this project with the co-op, we hadn’t spent much time together, but I have known the family for the last 15 to 20 years. Since we started doing the co-op, we found out we work real well together. Brad is an easy guy to do business with. He is a straight shooter. He speaks his mind and communicates what he is thinking, which I really appreciate.”

Since its inception, Mountain States Lamb Co-op has bought its own wholesale company and distribution firm located in Bronx, New York. Lambs are slaughtered on a custom basis in Greeley, Colorado, at a fabrication facility leased by Mountain States. All lambs are processed and shipped “case-ready” meaning they’re individually packaged and ready to be put on a store shelf to the East or West Coast for distribution.

Boner maintains his relationship with a very successful Mountain States Lamb Co-op as the vice chairman of the board. The organization sold lamb No. 1,000,000 this year and now has 140 farms and ranches in 12 states—with 65 of those ranches in Wyoming. As of 2008, Mountain States has returned a 7 percent return on investment to investors, and prices for the live animals are running 4 to 6 cents a pound over what a producer can receive at the buying station. The organization has also gone natural, offering a 5- to 7-cents-a-pound premium for lambs raised without hormones or antibiotics.

Boner says the co-op’s products can be found under various names in Albertson’s stores throughout the Rocky Mountain region as well as the Denver division of Safeway, while certified natural lamb is in HEB stores of Texas as well as other grocery store chains. A division of Sysco Food Service in the Midwest also carries Mountain States Lamb.

“We haven’t got to where we envisioned this thing yet, but we are very comfortable with the direction we went,” Moore says. “I think we have surprised a lot of people. It has been a huge success story and continues to improve.”
NEW ACQUISITIONS

The University of Wyoming Art Museum expands its art collection, thanks to corporate giant JPMorgan Chase

(above) Augusto Marin (Puerto Rico, b. 1922), Armonia Campestre, not dated, oil on canvas, 40 ½ x 49 ½ inches, 2008.1

(below) Edwin Ruda (America, b. 1922), Untitled, not dated, Liquetex on canvas, 58 ½ x 118 inches, 2008.5
In 2007, the UW Art Museum received seven works of contemporary art through a pilot program initiated by the Association of College and University Museums and Galleries. In partnership with the Business Committee for the Arts, an organization that works with corporations divesting their art collections, pieces of the JPMorgan Chase Art Collection were offered to university art museums. The UW Museum was one of five art museums nationwide to receive objects.

The JPMorgan Chase Art Collection began under the leadership of David Rockefeller, who in 1959 created an art program to collect art for the company. With a mandate for high quality and originality, the program became a model for corporate art collecting. Today, the JPMorgan Chase Art Collection, contains 30,000 objects in 450 company locations worldwide, is internationally known for its focus on museum-quality works and its commitment to supporting emerging and established artists.

Artists whose works were donated to the UW Art Museum are: Larry Zox, Enrique Castro-Cid, John Koegel, Tad Savinar, Sue Fuller, Edwin Ruda, and Augusto Marin. All are new to the museum’s collection and represent a range of artistic style and media prevalent in the 20th century.

Ruda’s (*Untitled*) and Zox’s (*Untitled*) pieces are examples of color field-based works. Ruda, whose work was included in the Guggenheim Museum’s seminal Systemic Painting exhibition in 1966, explored simple geometric forms and color. Zox used color to reference nature, music, or urban life.

Fuller (*String Composition #202*), a painter, etcher, and sculptor, was inspired by fabric textures in printmaking which led to a series of experiments with string compositions.

Additions to the Art Museum’s works on paper collection are Castro-Cid’s *Dragonflies*, Koegel’s *Untitled*, and Savinar’s *Pursuit*.

Savinar is an artist, playwright, and urban planner. His studio work is conceptual in nature, combines visual language and text in enigmatic and provocative imagery. Castro-Cid used mathematics as an underlying structure for his work and employed the computer to explore spatial concepts for this paintings and drawings. Koegel worked in a stream-of-consciousness manner, creating mysterious, dense compositions of emotionally charged characters that elicit a narrative which is just beyond the grasp of the viewer. His drawing-and-erasing creative process creates a multi-layered effect.

Editor’s note: After a yearlong closure, the UW Art Museum reopened March 6 with the exhibit *The Disappeared/Los Desaparecidos*.
Maxine “Mickie” Wonka
Custodian

“In Fine Arts we’ve got them [students] here 24 hours a day, seven days a week. I thoroughly enjoy my job and I thoroughly enjoy our people….That’s why I’m still here.”
JULY

July 7-12
7:30 p.m., The Last Five Years, Fine Arts Studio Theatre

Through July 17
All day, The Fourth Annual Women’s Photography Exhibit, ASUW Gallery, UW Union

Saturday, July 25
7:30 p.m., Festival Gala Dance Concert, Arts and Sciences Auditorium

AUGUST

Friday, August 14
2:30 p.m. Cowgirl soccer vs. Colorado, Louis Madrid Field
Through Saturday, August 15
Monday 10 a.m.-9 p.m., Tuesday-Saturday 10 a.m.-5 p.m., Thomas Moran in Wyoming, UW Art Museum

Friday, August 21
All day, Registration for incoming students
10 a.m., Body Prints, ASUW Gallery, UW Union

Through Saturday, August 22
Monday 10 a.m.-9 p.m., Tuesday-Saturday 10 a.m.-5 p.m., Tracy Linder: Tractor Hides; Lia Cook: The Embedded Portrait; Ralston Crawford: Lithographs and Photographs, UW Art Museum

Monday, August 24
First day of classes

Friday, August 28
10 a.m., Cowgirl volleyball vs. Rutgers, UniWyso Sports Complex
4 p.m., Cowgirl soccer vs. Hartford, Louis Madrid Field
7 p.m., Cowgirl volleyball vs. South Dakota State, UniWyso Sports Complex

Saturday, August 29
7 p.m., Cowgirl volleyball vs. Idaho State, UniWyso Sports Complex

Sunday, August 30
Noon, Cowgirl soccer vs. Western Michigan, Louis Madrid Field

SEPTEMBER

Friday, September 4
10 a.m., Cowgirl volleyball vs. Montana State, UniWyso Sports Complex
6 p.m., Cross country, Wyoming Invitational, Jacoby Golf Course
7 p.m., Cowgirl volleyball vs. North Dakota, UniWyso Sports Complex

Saturday, September 5
1 p.m., Cowboy football vs. Weber State, War Memorial Stadium
7 p.m., Cowgirl volleyball vs. Fresno State, UniWyso Sports Complex

Monday, September 7
Labor Day, offices closed, no classes

Thursday, September 10
3 p.m., President’s Convocation, Yellowstone Ballroom, UW Union

Friday, September 11
4 p.m., Cowgirl soccer vs. Princeton, Louis Madrid Field

Saturday, September 12
1:30 p.m., Cowboy football vs. Texas, War Memorial Stadium

Sunday, September 13
Noon, Cowgirl soccer vs. Idaho State, Louis Madrid Field

Diana Kopulos, Kitschen #1
Part of the Fourth Annual Women’s Photography exhibit
Thursday, September 24
7 p.m., Cowgirl volleyball vs. Texas Christian, UniWyo Sports Complex
7:30 p.m., Chamber Winds concert, Fine Arts Concert Hall

Friday, September 25
Ag Appreciation Weekend
Family Weekend 2009
4 p.m., Cowgirl soccer vs. Gonzaga, Louis Madrid Field

Saturday, September 26
Ag Appreciation Weekend
Family Weekend 2009
1 p.m., Cowboy football vs. Nevada-Las Vegas, War Memorial Stadium

Sunday, September 27
Ag Appreciation Weekend
Family weekend 2009
1:30 p.m., Cowgirl soccer vs. Cal-Riverside, Louis Madrid Field

Tuesday, September 29
7 p.m., Cowgirl volleyball vs. New Mexico, UniWyo Sports Complex

October

Thursday, October 1
7:30 p.m. Music, New York Voices with Jazz Ensemble I and Vocal Jazz, Arts and Sciences Auditorium

Friday, October 2
7 p.m. Volleyball, Colorado State, UniWyo Sports Complex

Sunday, October 4
1 p.m. Women’s soccer, Northern Colorado, Louis Madrid Field

Thursday, October 8
7:30 p.m. Music, UW Symphony Orchestra, Fine Arts Concert Hall

Saturday, October 10
Homecoming
Noon. Football, New Mexico, War Memorial Stadium

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OUTTAKES

A snow covered bench on the south side of the A&S building is illuminated by early morning light peering through the clouds.
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Welcome
to UWyo, the magazine that showcases the people who make the University of Wyoming great.

Our blend of features, news, and photography highlights members of the university community, its alumni, and friends who make the university a leader in research, teaching, service, and outreach.

Thank you for supporting UWyo and the University of Wyoming.

LOOK AHEAD TO UWyo

Five western states join forces to create the next generation of doctors
A world-renowned mime brings devised theatre to UW and much more