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Cover: Photoillustration by Diana Whaley—photo courtesy WSU Manuscripts, Archives, and Special Collections.
I am: Ben James, a junior engineering major, and someday I will be a pilot in the Air Force.

What inspires me: My dad retired from the Air Force and always stressed the importance of education. I plan to serve once I finish school.

On scholarships: I wanted to attend WSU ever since junior high. Scholarships are helping me and my family afford my education.

Read Ben’s full interview: campaign.wsu.edu/impact/benj

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The Community of the Oyster :: On a Saturday night in late August, the oyster community of Willapa Bay has gathered in the Raymond Theater to watch themselves on the screen. Local boy Keith Cox had gone off to Hollywood, but then returned to document his home and the life of Willapa Bay and its oystering.

Every seat in the elegant old theater is full, and the room is buzzing.

Cox is premiering the eighth in a series of documentaries on the bay, on oyster farming, on the oystermen themselves. What started out as an innocent project intended to summarize the industry has led to over 130 interviews, over 350 hours of new footage, and seven hours of documentary.

Sitting next to me is Dorwin Fosse, a retired boat builder. In addition to running the South Bend Boat Shop, which started in 1926, his family has owned an oyster bed for over a hundred years.

“I see three and four generations here,” he says. “It’s a pretty close-knit community.”

The final installment of the documentary runs for two hours, but the audience is rapt as they take turns on screen talking about the oyster life.

With half its volume changing with every tide, the 260-square-mile Willapa Bay is one of the most pristine estuaries in the United States. It is hard to find a better place to grow a healthy and luscious oyster. Nearly 10 percent of the oysters produced in the United States come from Willapa Bay.

The morning after the premiere, Cox and I visit in the closed-in porch of his father’s house overlooking the bay. We can see open ocean beyond the tip of Long Beach.

“I grew up seeing the tide come in and out and all the boats out on the water,” says Cox. “People comment, ‘I never realized what all took place out there.’ That was me. Before I started the project four years ago, I would have said that.”

Cox’s father Dave ’71 bought him his first camera when he was 10 years old. With it began an obsession with visual imagery and storytelling.

When Cox and his wife Rachel graduated from WSU in 1998, they loaded up their jeep and headed straight for Los Angeles. He put in a stint as a seating host in a restaurant in order to pay the bills, but by 2001, he had produced the documentary that comes as an “additional feature” on the second DVD for The Pianist. Since then, he has worked on 150 movies.

But he wanted to do something of his own. So he started visiting his hometown and talking with his neighbors. One interview led to the next, to several more, as he sought stories and understanding. Over the next four years, he got “a college education in the oyster process.”

“I have to understand it in order to tell it,” he says.

In spite of the apparently exhaustive coverage in his documentary, Cox is acutely aware of how much did not make it into the final product.

“What I did is like that one little stake out in the estuary,” he says, pointing to a marker, a half-mile out, indicating an oyster bed.

“We’re not only talking about 160 years,” he says, referring to the commercial history of the bay. The Chinook people had lived on the bay for centuries and undoubtedly enjoyed its native Olympia oysters.

Beyond the history are the ecology of the bay, the effects of tides on its topography, and effects such as the “fattening line,” the imaginary line marking the more nutrient rich part of the bay that is steadily moving northward.

Obviously, Cox did not produce a seven-hour documentary for the money.

“My goal was to do something for the community,” he says.

Indeed, the story of his storytelling is one of continuity, of community, of family, of the value of embracing history.

The audience at the Raymond theater understood that as they gave him a standing ovation for telling their stories.

Tim Steury, Editor

Watch the oyster farming documentaries and find out how to order DVDs at wsm.wsu.edu/extra/oyster-documentary.
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Glenn Terrell served as Washington State University’s seventh president, from 1967 to 1985. He passed away in August at his home in Sequim. He was 93.

Terrell earned his bachelor’s degree in political science from Davidson College in North Carolina, his master’s degree in psychology from Florida State University, and his doctoral degree from the University of Iowa. He served in the U.S. Army during World War II and was one of the American soldiers who marched down the Champs-Elysee with Charles de Gaulle.

He began his academic career as an instructor in psychology at Florida State, later moving to the University of Colorado where he headed the Department of Psychology. In 1963, he became dean of the College of Liberal Arts and Sciences at the University of Illinois, Chicago Circle campus. Two years later, he became dean of faculties there. In 1967, he became president of WSU.

His presidency saw increased growth in international programs, instructional innovations, research, and outstanding teachers. The WSU Foundation was started under his tenure, in 1979.

President Terrell is survived by his wife, Gail, of Sequim; two children, Francine and William Glenn Terrell III, both of Seattle; and two grandchildren.
Glenn Terrell almost did not become the seventh president of Washington State University. When first asked, he said he didn’t feel ready to leave his current position, but about a year later, the regents called again and he accepted immediately.

Just thinking about Dr. T., as I called him, makes me smile. There was a sense of peace in the soft accent of that Florida-born gentleman with the tall stature but approachable manner.

His first years at WSU were filled with historic issues: civil rights, the Vietnam War, Cambodia, and student unrest. There also were the Martin Stadium fire, lettuce boycotts, and financial worries. Later, Mount St. Helens and a growing student body.

Dr. T. listened to all our concerns.

“I told everyone to treat the students kindly,” he reminisced by phone just a few months ago with retired University Relations director Bob Smawley ’52. “I knew what the students were feeling; I believed in many of the same things they did.”

Students recall meeting the president everywhere.

“I was on a Cascade flight from Pullman to Seattle when I was a freshman,” Dave Pridemore ’86 says. “The tall guy in front of me turned around and said, ‘Hi, I’m Dr. Terrell.’

“He looked like a professor and we talked a little. A couple weeks later friends and I were walking on the mall when that same guy came by and said ‘Hi Dave.’

“You know that was the president of WSU,’ a fraternity buddy with me said,” Dave remembers. “No, I didn’t…”

The student leader had many meetings with the president as the years passed.

“My diploma has the signature of two presidents,” says Dave. “After commencement, I went to Dr. Terrell’s home and asked him to sign the diploma.”

Dr. T. would disappear from an event and many times from the president’s box at a Cougar football game. You would look for the nearest group of students to find him. He finished many games on the sidelines of Martin Stadium.

“I wanted our athletes to know they could compete with the best,” the president said. Many times the athletes felt they were not at the level with other Pac-10 teams. “I felt it was my job to help them think otherwise,” the president said in his oral history.

Terrell’s success with students led to success with alumni, too.

“He was wonderful with our alumni and volunteers, too,” retired alumni association director Keith Lincoln ’61 says. “When you were talking with the president, you knew it was a one-on-one conversation. You had his attention. He listened.”

“Not every time would we get what we asked for,” Keith adds. “But he had a nice way of saying no.”

When Dr. Terrell came to WSU, it was to be president of WSU… Pullman.

“My priority was WSU in Pullman,” he stressed. “We worked hard to build the campus and lose nothing.”

Notice “we.”

President Terrell believed in cooperative efforts. One time a state council recommended dropping WSU’s pharmacy school. After all, the state had another at the University of Washington.
How exciting it was to watch WSU pharmacy alumni blow away that idea. Who were operating pharmacies across the state? Cougar pharmacy alumni! WSU administrators, college leaders, alumni, and friends stopped that idea cold.

I cannot exaggerate Dr. Terrell’s experiences with students. “He was the greatest,” says his long-time assistant Gen DeVleming. “He would always take care of students first.”

The president left many meetings, stating “Gentlemen, I must leave the room” or “Please excuse me. I have a student in trouble,” Gen reminds me. “Dr. Terrell asked us to get him when a student was really upset,” Gen says. And many times Dr. T. would walk the student to financial aid director Lola Finch.

“For many (students), the walk to our office with the president made it all fine,” Lola says. “He could make them feel better about their situations even before they got to our office.”

We admired our president greatly.

Gen would not schedule meetings early in the morning or shortly after lunch. “I remember Gen for Dr. Terrell to arrive at the office either in the morning or after lunch,” says Sonia Hussa, who began her WSU service in the President’s Office. “We might have even called the president’s house to be told that he had left quite some time ago.

“He walked in all sorts of weather,” says Sonia. “He used to tell us that he loved walking to work. It gave him a chance to meet casually with the students.”

Invariably, he would run into a few students on his route and spend an extra 5–10 minutes chatting with whomever he ran across, Sonia says. “He would come strolling in the office like he didn’t have a care in the world (even though a very busy day was ahead of him). He’d give us a big smile and say ‘Hi’ and then stroll into his office,” she says.

Gen would go in and try to rework the schedule given that Dr. T. was a half hour late getting into the office. “She was used to that happening as visiting with the students was almost always a higher priority than what was on his calendar,” says Sonia.

Dr. T. taught by example. “I learned how to deal with people in general,” says Gen, who managed his schedule. “He tried to please everyone.”

The president made friends wherever he was. He had few enemies. “I think he loved every person he ever met,” she says. “It was a great life for those of us that associated with him,” Gen says. “A tremendous, tremendous man.”

Wendy Peterson ’82, WSU director of admissions, was a student during the Terrell years. “President Terrell would always stop and talk,” she says. “He cared about your response. He listened.”

The president could make everyone feel like he or she was the only one who deserved his attention. “He didn’t seem to get rattled,” Wendy says. “That soft, southern tone in his voice lent a sense of calm to every conversation.”

Dr. T. was the right president at the right time. “It was a thrilling time,” says Lola. “His effectiveness was highlighted during those years.”

She reminded me that Dr. T. was a leader first, “but he was the students’ president.”

“He was very open with administrators,” she says. “We were encouraged to walk right into his office anytime with an issue worthy of his immediate attention.”

Alumni contacted President Terrell often for advice over the last 20 years, too.

President Terrell was comfortable with his actions and abilities, says Dan Peterson ’82. “He was not afraid to bring in top flight to move the institution forward.

“I might not have seen it so clearly as a student, but now I know: Dr. Terrell empowered people long before the term was so popular,” Peterson says. “Many leaders are not able to assemble talented individuals and then step out of the way.”

“Hiring Dr. John Slaughter and Albert Yates, both men of color, was the most important to him and to the university,” says Felicia Gaskins ’73, who retired after 40 years in WSU administrative positions. The two served as outstanding leaders and role models for the WSU community, especially for students of color, she says.

The president said he didn’t do anything by himself. He brought people together into leadership roles. Gaskins brought her music performance degree to the directorship of international education. Connie Kravas came from the grant and research development office to boost the fledging foundation.

“Dr. Terrell had an amazing capacity to make you feel valued, and not just by remembering your name but things that were most important to you,” Connie says. “He was curious about you, wanted to know what you were thinking, what was gnawing at you, what made you laugh. There wasn’t a pretentious bone in his body.”

“WSU was moving from being a college to a university attitude when Dr. Terrell arrived,” says retired plant pathologist Jack Rogers.

The faculty was ready for shared governance and more money, and the new president was supportive. A university senate and later a faculty senate organized.

The president paid a good deal of attention to a private group, the Association of Research Professors, Jack says. The ARP and Dr. Terrell spent time correcting an injustice of budget allocations to research funding, among other issues.

“He had a remarkable effect on this university,” says Jack. “He loved WSU.”

In his oral history interview, Dr. T. said a disappointment that he remembered often was he didn’t get the university to AAU status. “But I hope we made strides.

“And I know the university goals include this most important recognition,” he said.

Quite a man, a good man, his son Glenn III’s friend, Gary Boone, remembers.

“I remember hearing Pres. Terrell in the living room talking to a group of students about tuition hikes,” Gary says. “He listened to those guys, whose comments were loud and boisterous at times, but the president listened.”

Then suddenly, in a soft, but firm voice, Dr. Terrell said, “But until you get your act together... get your story straight, I cannot help you.”

Boone and the group of Pullman teens thought they always knew when the president was home or away.

“One day I picked up a horse from the vet school and drove to the Terrells’ for a quick visit. I looked and smelled like a guy who had just
loaded a horse into the back of a truck. But the president was supposed to be out of town so I banged on the front door...

"And President Terrell answered the door," Boone says. "And he was hosting a formal dinner party."

"That's okay, Gar," the president said. "Go on up. Glenn is upstairs."

"He treated us great," Boone said. "He was a regular parent to us."

The boys knew the back way upstairs, but they also didn't miss chances to meet university guests, including Washington senators Scoop Jackson and Warren Magnuson.

"Good times," Gary says.

Staff members remember the good man, too.

"I really missed him when he left," says long-time university photographer Norm Nelson. "I would go by his office and if he heard me, he would call me in."

Fishing with author Pat McManus '56, '59 and the out-of-doors were favorite topics for the president and the photographer. However, busy schedules kept the president, the popular author, and the photographer from visiting a favorite fishing hole. "I always regretted that," Norm says.

"He could put you at ease," says Norm. "Maybe the easiest man I ever worked with."

During Dr. T.’s presidency, more than 3 million square feet of new construction was added to the Pullman campus: 21 academic buildings, nine residence halls, Beasley Performing Arts Coliseum, Martin Stadium, and a remodeled Mooberley track. At that time, one-third of all WSU graduates received their degrees during the Terrell years.

Soon after he retired, regents named the central mall area the Glenn Terrell Friendship Mall. This was a perfect tribute for a man who spent great amounts of time there during his presidency with his favorite people: students. A year earlier, the WSU Foundation began a campaign to fund the Glenn Terrell Presidential Scholarships, a centerpiece of the university’s scholarship program. Since then 834 student scholars have received the prestigious award.

When the new addition to the library became the centerpiece of the mall, its name became the Terrell Library.

I think he might have been most honored when the Associated Students of WSU made him an “honorary student” when he retired as president. Years later he would emphasize how grateful he was. (He was named an honorary alumnus of WSU in 1977.)

In his 1967 inaugural address, Dr. T. talked about an element of WSU, its character.

There is an informal, uncomplicated, yet very sophisticated straightforwardness about the people associated with Washington State University—its regents, faculty, student, administrators, and alumni. It is this character which has contributed so substantially in the past to its success, the president said.

“And I feel comfortable in depending heavily on it as we grapple with important, complex problems associated with change," he said.

“He embodied the values that are Washington State University—friendly, approachable, genuine, hard-working (I don’t remember him ever taking time off), down-to-earth, persistent, gracious, kind," Connie adds. "Being a Cougar was never a job to him; he was all-in from the first moment he stepped onto the Palouse to his last hours on the Olympic Peninsula."

Faculty, staff, students, and alumni continue to build on that unique quality, that character and spirit that can only be known as being Cougars. Go Cougs!
Water to the Promised Land

I thoroughly enjoyed the article on the Columbia Basin Irrigation project in the recent issue of WSM. It brought back so many memories. I farmed for a year (1953) with a partner, Vern Divers, a bit south of Quincy. Subsequently, while a research associate in the Agricultural Economics department, I did research on the economics of different systems of irrigation in the Basin.

Interesting to read of the research by Whittlesey and Butcher. I was a member of the Agricultural Economics faculty with them and always respected them, professionally and personally. I retired in 1986.

Ralph A. Loomis
Edmonds

An even playing field

Thank you for writing the article. When I graduated in 1975 in Computer Science there were no ASL (American Sign Language) classes offered and I can’t recall meeting any deaf students. We are pleased to see that WSU is providing interpreter services, offering a few ASL classes, and accepting high school students with ASL for the foreign language requirement. I contribute to the lifeprint.com website and with Dr. Bill Vicars, professor in deaf studies, CSU Sacramento, created a website for learning ASL online at asl.tc. In the past worked for Purple Language Services who provide video relay service for the deaf.

John Feagans ’75

Something Old, Something New: A history of hospitality

I was intrigued by the notes about the creation of a separate course in Hotel Management in which I was the only person enrolled in 1930. (This is from a autobiography that he wrote in 1939.)

He goes on to say “Under the direction of the late Miss Ethel Clarke, the course was improved constantly. In 1931, five boys were enrolled, but the freshman class of 1930–40 totals 33. … Miss Trump succeeded Miss Clarke as head of the Hotel Management Department, while Miss Velma Phillips is Dean of the School of Home Economics. Both … are working earnestly and diligently to improve the course and to secure as much outside interest as possible, especially the interest of hotel men.” Ward became a charter member of the W.S.C. Greeters Club, which was organized to help promote interest in the Hotel Management Department so that special courses desired by the student would be justified. This also led to the opening of positions for graduates of the course. “Men graduating are given a Bachelor of Science degree from the School of Home Economics, although a large percentage of their work is taken in the School of Business Administration. In June 1934, I graduated, being the first from the Hotel Management course of W.S.C. and in fact, so far as known the first in Hotel Management this side of the Mississippi, as at that time, Cornell, Michigan State, and W.S.C. had the only Hotel Management Courses recognized by the American Hotel Associations.”

Later, after becoming Manager of the Washington Hotel in Pullman, Ward provided practical work experience at the hotel to many boys in the program, and even taught a class. Ward went on to manage, among others, the Desert Caravan Inn, with its popular dining room on Sunset Hill in Spokane.

Ward Walker Jr. ’70
Ottawa, Canada
Tiny seed, big prospects

by Eric Sorensen :: As small, relatively obscure seeds go, quinoa has a lot riding on it.

It measures about 3 millimeters across, and its worldwide production is about 1/20,000th of wheat, but foodies, researchers, farmers, grocers, and food policy experts can’t get enough of it. Packed with protein, adaptable, and hardy, it’s an emerging option in the quest to improve farm incomes while feeding a growing planet with impoverished soils and warming temperatures. The United Nations General Assembly has even given it its own year: 2013, the “International Year of Quinoa.” UN Secretary-General Ban Ki-moon last February said it is “truly a food for the Millennium Development Goals,” which include cutting worldwide hunger in half by 2015.

Sure. No pressure.

Rising to the task is Kevin Murphy ’04 MS, ’07 PhD, a WSU plant breeder and director of a four-year, $1.6 million project to develop varieties and practices for growing quinoa in diverse environments. Sponsored by the National Institute of Food and Agriculture’s Organic Agriculture Research and Extension Initiative, the project is one of the largest yet to bring quinoa from the Andean highlands to North America and the rest of the world.

The effort has the usual challenge of finding varieties best suited to the climate, soils, and other growing conditions of, say, the Palouse or western Washington, while at the same time setting up some sort of processing system. The market for quinoa is already eager and growing, with the price rising five-fold since 2005.

“The increased interest of the market has now become global,” says Sven-Erik Jacobsen. The Danish scientist, who has quinoa projects on three continents, was a keynote speaker this summer at the International Quinoa Symposium held in Pullman and organized by Murphy.

But the world interest in quinoa brings up an additional challenge: how to satisfy international markets without dominating and driving poor South American growers deeper into poverty.

Andean growers have worked with quinoa (pronounced: keen-WAH) for 7,000 years, says Murphy, with a diverse number of varieties adapted to the region’s poor soils and high altitude. Murphy himself first ate quinoa in 1993 while living for five months with an Ecuadoran family that served a soup of quinoa, potatoes, and pork fat most nights of the week.

Back in the states, he grew it on an organic vegetable farm in Port Townsend, where it did so well that Community Supported Agriculture subscribers wanted to make the seed heads part of their free flower bouquets.

“They always wanted to pick the quinoa because it was so beautiful,” he says. “We had to fight them off.”
In 2009, he heard a Bolivian agronomist talk about Andean farmers meeting a rising demand for quinoa by shifting from a rotation of llama grazing, potatoes, and quinoa to successive years of quinoa. The soil was being degraded, yields were dropping, and pests and diseases were on the rise.

“When I heard him describe the situation, I thought we should really try growing it up here to see if U.S. farmers can grow it and alleviate some of that pressure,” Murphy says.

He and his colleagues now have test plots of various sizes on the Palouse and the Olympic Peninsula, as well as in Prosser, Oregon, Idaho, and Utah, where Utah State University’s Jennifer Reeve ’03 MS, ’07 PhD is screening quinoa breeding lines for salt tolerance in the state’s high saline soils.

“Quinoa is coming,” he says. “We’ve figured that out. It’s not going to go away. But we have to figure out how to grow it here responsibly and on a scale that will let Andean farmers continue to grow it and sell it profitably. And we also need to help figure out ways that Andean farmers can label and market their quinoa so that, like the Walla Walla onion, there’s name recognition and added value to traditionally grown Andean quinoa.”

Watching the sea

by Hannelore Sudermann :: The paint has barely dried at the new Salish Sea Research Center near Bellingham, but the $2.2 million facility is already in use. Student scientists dip into a freezer full of recently collected shellfish, a Zodiac boat and a collection of waders are drying in the back mud room, and several projects to study acidity in the water and the health of the aquatic organisms are already underway.

The Northwest Indian College was established in 1973 to train technicians who would work in Indian-run fish and shellfish hatcheries throughout the region. More recently it has expanded to include two- and four-year college degrees. And today it is the only accredited tribal college in the Pacific Northwest, serving Indian students from around the country.

The one-story research center right in the middle of the NWIC campus, just a mile from Lummi and Bellingham bays, is an American Recovery and Reinvestment Act project and was started with a $1.5 million grant from the National Science Foundation. It’s already a valuable tool, says Susan Blake, water agent for WSU’s Whatcom County Extension. With farming, fishing, rivers, and ocean, water is a key and complicated issue in the region, which extends north well into Canada. Lately there are concerns about two Chinook salmon species that are very low in population, she says.

As the WSU component of the research center project, Blake serves as liaison to organizations and governments in the county that are doing related work. She also connects the research findings from the students and scientists at the center with the broader community of residents, farmers, and fisheries.

During a recent visit to the new research center, the college’s first four-year degree graduate, Jessica Urbanec, explained some of the research and its reasons. About a decade ago, Lummi fishermen noticed problems with the number and health of their catches. So with NWIC help, they started collecting data in Bellingham Bay on a variety of issues including dissolved oxygen, which affects where organisms and fish can live.

Above: Farmers threshing quinoa near Puno, Peru. Photo Wikimedia. Below: Kevin Murphy with quinoa. Photo Janet Matanguihan, courtesy Kevin Murphy
While the center’s focus is the environment and natural resources, it’s also more personal, says Urbanec. “We get so much food from our intertidal area,” says Urbanec. “This is about our diet and our health.” Seafood from the area waters provide many of the Lummi members their livelihoods as well as their daily calories. At a meal, says Urbanec, the Lummis wouldn’t go back for seconds on broccoli, “But we’d go back for seconds on fish.”

This new center puts the students to work assessing their samples of water and shellfish. They can check nutrient levels, study harmful algal blooms, and run DNA sequences for plankton. In the process, the students learn lab techniques, participate in and run research projects, and expand their understanding of marine systems. Training at the center can lead to jobs in the field, provide preparation for graduate school, and create a new generation of trained scientists and ecologists.

The center is at the heart of a dynamic ecological region that straddles international boundaries and includes both dense urban areas and wild uninhabited spaces. The Salish Sea makes up the second largest tidal estuary in North America and contains the largest Pacific salmon run in the United States, says Jeff Campbell, the project lead and NWIC fisheries instructor. “This research facility was conspicuous by its absence,” he says. “But now it can put the technology into the hands of people being educated there. And they can go back to their tribes and work on these issues.”

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**Gabriel Fielding**

_by Tim Steury_ :: A night at the Barnsley house on Monroe Street guaranteed that the guest would be entertained, enlightened, and well fed. For the couple of decades following his joining the English faculty at WSU in 1966, Alan and Edwina Barnsley hosted the liveliest salon in Pullman. Both were erudite and funny, full of wit and counsel. Dina died just last year, and Alan in 1986.

But Alan lives on as Gabriel Fielding, the pen name under which he wrote many marvelous novels. Three of those novels—_Pretty Doll Houses, The Birthday King, and In the Time of Greenbloom_—were released in digital form this August by Bloomsbury Publishing. Of his work, Dorothy Parker once wrote, “It is a matter for grave doubt that Mr. Fielding could write anything from a postcard to a lexicon without perception and grace and brilliance.”

Shortly after the Barnsleys came to Pullman, they met close neighbors Flo and Robert Feasley, and Robert, a member of the fine arts faculty, painted Alan’s portrait. The Barnsley family recently donated the portrait to the Bundy Reading Room, which is part of the English department.

Robert Feasley died last spring. Flo Feasley recounts first meeting Alan, aka Gabriel Fielding. She had recently read _The Birthday King_, which describes Hitler’s Germany from the perspective of a wealthy Catholic and Jewish industrialist family, and was very impressed. And then one night, she was at a party and standing there was the author!

She introduced herself and told him that after reading his novel, she wasn’t able to sleep for three weeks. “That’s exactly what he liked to hear,” she says, laughing.

Read more about Gabriel Fielding’s books at gabrielfielding.com and bloomsbury.com.
If all roads lead back to Pullman...

represent.

#GAMEDAYKHAKIS
by Hannelore Sudermann :: On home game weekends during football season, WSU’s Pullman campus goes through a rapid and dramatic transformation. As soon as students and staff vacate their parking lots, a new community, equipped with hibachis and hot dog buns, motors in. These RV-driving Cougar fans come with their families, friends, and sometimes their cats and dogs, too. They set up outdoor living rooms, roam through campus, and share food and fun with the friends and strangers around them.

“It really is its own culture,” says Bridgette Brady, director of transportation services. “What we have here is very important to WSU. And we are unique in how many RVs we accommodate and how comprehensive our program is.”

Brady has a fairly long view of the football parking scene, having started with the campus transportation office as a student twenty years ago. She watched the game scene go from a single parking lot of RVs to a complex community. There were campers then, but they numbered around 100 and mostly filled the Yellow parking lot in front of Beasley Coliseum. Campers would drop $20 in an honor box to pay for a weekend. Some of those folks haven’t changed, says Brady. “We’ve seen that same core of people come back every year.”

But other things did change. Now, demand to park an RV on campus is so high, eight lots fill with more than 400 recreational vehicles, massive land yachts and tiny trailers alike. In recent years, the University has gradually increased the RV rules, to meet both safety concerns and the growing interest in overnight space. Where the RV drivers once parked where they pleased, they’re now assigned defined spots, to offer more organized room and provide fire lanes for emergency vehicles.

Very few schools offer overnight options, says Brady. The UW, for example, opens its parking lots at 6:00 a.m. on game day and closes them just a few hours after the game. Overnight parking is not allowed.

In a recent comparison of Big 10 and Pac-12 schools with lively tailgating scenes, nearly half did not allow overnight parking. Only three, WSU, Stanford, and Texas, offered two nights of parking from Thursday night. That in itself contributes to the sense of a community, of regular neighbors who see each other over entire weekends.
About 10 years ago, things started changing dramatically. RV-ing to games grew more popular, and the parking scene became something of a free-for-all. “We had to make some changes,” says Brady, “particularly for safety.”

The changes now include pre-season communications with the regulars, a command center where people can ask questions or air concerns, improved security, and more bathrooms and dumpsters. Visits from Butch and the spirit squad have helped soften discontent with the changes, particularly with long-term tailgaters who weren’t thrilled that the cost for a season parking pass had risen to $500.

Last year was the big season of change, says Brady. Anticipating even higher demand because of the new athletic director and the new football coach, her office started working closely with the Athletics Department to control and improve the parking environment and, at the same time, keep those elements of RV overnighting that the regulars so loved.

Brady recently wrote about the WSU phenomenon for The Parking Professional, a trade magazine. She focused her story on how transportation services and athletics have teamed up. “We have become an example for other schools,” she says.
History Develops, Art Stands Still: An art historian journeys into the Renaissance

by Hannelore Sudermann

Maria DePrano meets me in Florence just outside of Santa Maria Novella, a church consecrated in the early Renaissance. While the green and white marble façade is spectacular, we’re here to look into the mysteries of the basilica’s interior frescoes.

A 2013 fellow with Harvard University’s Villa I Tatti, DePrano has traded her post in Pullman for a year in Italy to research and write a book featuring a family of fifteenth-century Florence who appear in one particular set of the church’s frescoes. The Tornabuoni were art patrons who commissioned and were featured in artworks from some of the most significant Renaissance artists, particularly Domenico Ghirlandaio and Sandro Botticelli.

“The family is really ancient stock in Florence,” she explains. Records trace them back to the 1220s. Giovanni Tornabuoni, the paterfamilias, lived in Rome for decades working for the Medici bank. He was also part of a Florentine delegation to Pope Innocent IV. Tornabuoni bought the rights to decorate the main chapel at Santa Maria Novella. He commissioned Domenico Ghirlandaio, lauded for his portraiture, to create frescoes with the themes of the births and lives of the Madonna and of John the Baptist. The design was to tell their stories in a series of panels and include representations of himself and his family and friends.

Michelangelo was at the time a young apprentice in Ghirlandaio’s workshop, and may have been involved in the chapel work. Another art historian notes that the apprentices or assistants helped in the chapel project by transferring the designs, grinding colors, and performing other mechanical tasks.

As we stand inside the church facing the main chapel, the left wall tells the story of the Virgin Mary and the right wall of John the Baptist. DePrano moves into the space and looks up smiling, pointing out some familiar faces. “There’s Ludovica,” she says gesturing to the Nativity of Mary scene. Giovanni’s daughter is in full Florentine dress and not yet married, DePrano noting that it’s signified by her hair being down.

“And there’s Lorenzo,” she says pointing to the neighboring panel where Giovanni’s adult son stands with a friend in a biblical scene, but in a setting that features buildings with the look of fifteenth-century Florence. On the central wall the praying forms of Giovanni and his wife Francesca Pitti flank the stained glass windows.

Other identifiable members of the family as well as a self-portrait of the artist and images of other well-known members of the city inhabit the scenes. While the stories are biblical, the frescoes also depict clothing, furnishings, and architecture of the day. DePrano turns to the right wall and points to Giovanna degli Albizzi, a young woman from another powerful Florentine family who was married to Lorenzo when
they both were 18. She bore a boy in 1487, but died a year later during pregnancy. She stands in profile, her elegant dress a rich rust and gold brocade. Going even deeper into her examination, DePrano points to the young woman just behind her as Ginevra Gianfigliazzi, Lorenzo's second wife.

Where most who gaze at Giovanna simply see a beautiful Florentine woman, an example of virtue and beauty, DePrano sees more, even noting one of the insignias of the family tucked into the folds of her sumptuous dress. The painting was completed after Giovanna’s death, she says, and the artist seems to have made note of that in the work. “Look how drawn and tired she looks.”

What’s so special about Giovanna is that there are at least five known representations of her, says DePrano. They include bronze medals or coins that feature her likeness on one side and the three graces on the other. The medals may have been made to commemorate her marriage to Lorenzo. It is rare, she explains, to link an extant medal to an actual woman whose name we knew. Many women in pieces from this era are impossible to identify.

We slip out of the cool church and head down a narrow street into an even older part of the city.

The Tornabuoni were wealthy, but not like the ultra-rich and ultra-powerful Medici, she explains. Still the families were intertwined. Giovanni’s sister Lucrezia married Piero de’ Medici and was mother to Lorenzo the Magnificent, grandmother to Pope Leo X. Both Giovanni and his son appear at the Vatican in Calling of Peter and Andrew, a Sistine Chapel fresco painted by Ghirlandaio in 1481-1482.

“But here I am able to look at the family compared to the rest of Florence,” she says. With the art and the written records, just a handful of households from that time have materials as extensive. DePrano plans to use this year to complete her book on art and family, which will both flesh out the story of the Tornabuoni and enhance the view of families, particularly the women, in Florentine society.

While deep into describing the city from the time the chapel was painted, DePrano suddenly stops and points up. “That,” she says, “is where the Tornabuoni lived.” A massive three-story building dating to the fifteenth century looms. Lower level rusticated stone walls and arched doorways give way to stucco and tall windows crowned with pediments. DePrano points out the family crest on the side of the building. The street-level storefronts bear names like Dior and Bulgari.

We cross the street and move through a set of tall wooden doors into a courtyard. To our right are glass doors behind which a wide staircase leads up. “This is as far as we can go,” says DePrano, admitting to a longing to peek into what were once the Tornabuoni family’s private quarters and are now exclusive luxury apartments. Just a few years ago, the building was modernized with a $150 million restoration. “I guess it’s fitting,” she says. “It has come back to what it was when the Tornabuoni lived here.”

This year DePrano is spending most of her days just outside the city in her offices at Harvard’s Villa I Tatti. Her one-year fellowship is to further her own research and expand the overall understanding of the Italian Renaissance. Her project is a continuation of work she started as a graduate student on a Fulbright year in Florence, uncovering and studying details about this particular family so connected to both the history of the period and the artwork.

DePrano travels back and forth between written documents and the art. Digging through letters, she has found some that have yet to be transcribed from the old Florentine script. But she is excited about what they will reveal.

Beyond the paintings and personal letters, the family’s tragedies have left a trail of materials. Their story is sometimes cruel, but for an art historian very useful, says DePrano. In 1497 Lorenzo was arrested for taking part in a conspiracy to return the Medici to Florence. They had been deemed too powerful and were driven from the city in 1494. For their involvement in the plot, Lorenzo and four others were beheaded. His death orphaned the Tornabuoni children and prompted a formal accounting of the family’s household. The list, written in a beautiful Florentine hand, details each room of the palazzo. “We know what instruments they had and what art and furniture were where,” says DePrano. This gives us so much detail, she says. “We know what some of the rooms were used for... It gives us a fuller picture of what their lives in this space would have been like.”

Below, left: The Visitation depicts the Madonna meeting with her cousin Elizabeth, but at the far right you can see the fifteenth-century citizens of Florence including Giovanna degli Albizzi at the front of the group. Courtesy Chiesa Santa Maria Novella. Below, right: Art historian Maria DePrano in the Tornabuoni Chapel. Staff photo
A poor showing in children’s books

by Larry Clark ’94 :: Jane Kelley pulls a picture book from a shelf in her office and, flipping through the pages, shows a story of a little girl living in a graffiti- and trash-covered apartment complex. The book, Something Beautiful, tells how the girl takes charge of her own environment and cleans up her home to make it more beautiful.

Such depictions of poverty in realistic children’s fiction are unfortunately rare, says Kelley, an associate professor in the College of Education and a scholar of children’s literature. Despite the historically high prevalence of poverty in the United States, that fact of life for many kids is underrepresented in the books they might read.

According to the U.S. Census Bureau, more than one in five children under 18 lives in poverty. The Census Bureau defines poverty based on household income; for a family of four that threshold was about $23,000 in 2012. The number of people in poverty rose for four consecutive years, likely exacerbated by the financial crisis after 2008.

Not only do few children’s books reflect the reality of poverty, says Kelley, but the messages about poverty are often about fate or luck. “It’s either good luck or bad luck that you’re poor. They say, ‘With a little luck I’ll be able to get out of poverty and everything will be ok.”

In a two-year project, Kelley and her doctoral student Janine Darragh ’10, now at the University of Idaho, studied children’s realistic fiction picture books that have poverty as a central theme. They analyzed 58 such books printed from 1990 to 2009, identifying the demographics of the characters and the type of action.

They found that many of the books do not accurately show some aspects of poverty, like people who are poor in rural areas. The two researchers were heartened to see more books in recent years featuring main characters in poverty.

“What I have noticed with some of the books coming out recently is showing people in poverty who also have agency,” says Kelley. In Something Beautiful, the main character takes action to improve her environment, a powerful message that even small acts can make a difference.

Opening another book called Those Shoes, Kelley shows an example of a young character taking positive action. A boy who lives with his grandmother discovers his heart’s desire, a pair of popular name brand shoes, at a thrift shop, but they are too small for him. He ends up giving the shoes to his friend whose own shoes are held together with tape.

Children’s books can give kids several ways to understand the world, including differences in wealth, says Kelley. She describes books as mirrors, windows, and doors.

Books can also be windows for young readers to see a different experience or culture. Finally, says Kelley, children’s books can be doors to possibilities.

“It might not be what’s happening, but it can be a ‘what if.’ We do it all the time with science fiction. Someone imagines this other world, this other possibility. The same thing could happen in children’s books about poverty,” she says.

Kelley began studying poverty in children’s literature in graduate school, applying critical multicultural analysis to help identify themes. But she also had firsthand experience with poverty in classrooms as an elementary school teacher for ten years.

“The students I worked with in inner city Houston, the first graders, they knew about poverty. It was part of their everyday. When I taught in other schools, they didn’t really know much about it,” she says.

Back then, in the late ’80s and early ’90s, Kelley says she can’t think of any books that realistically depicted poverty. Now with more books that show children in poverty, teachers have more options to address the issue.

“I think what’s great about some of those books is that they can help teachers bring up some of those tough subjects without the teacher fumbling through. They can just read the story.

“It also gives kids a chance to talk about the issue, not about themselves, but they can talk about this little girl rather than say ‘This is what’s going on in my neighborhood,’” says Kelley.

In her classes for future teachers, Kelley encourages her students to not just critique...
children’s books for their topics, though. The books have to grab the reader’s attention.

“Number one, a book has to be engaging,” she says. “It has to have really quality writing. There are a lot of books out there that might be about poverty, but they’re not engaging. So they’re not going to do what we want them to and get kids interested in talking about the topic.”

Kelley also heads up WSU’s Reading Endorsement Program, allowing her to work with teachers to find books that can represent poverty, homelessness, and other touchy topics like assumptions about people who are poor. Then, depending on the context of the class, the teachers can bring those books into their classrooms where the children will find them.

Read Jane Kelley’s list of children’s picture books that present the complexities of poverty at wsm.wsu.edu/extra/poverty-childrens-books.

Ask Mr. Christmas Tree

by Eric Sorensen :: If you’re looking for Gary Chastagner around this time of year, you would do well to put out an all-points bulletin to Wherever Christmas Trees Are Sold. He’s perused trees up and down the West Coast, as well as in Massachusetts, Rhode Island, Wisconsin, Illinois, Michigan, Arizona, and Texas. Just look for the cheerful fellow taking clippings, bending needles, and chatting up the owners about things like moisture content and needle retention.

“My family knows that if it’s Christmas time, I’m usually around looking at Christmas tree lots,” he says.

Chastagner, officially a plant pathologist with the WSU Puyallup Research and Extension Center, is better known as “Mr. Christmas Tree.” For more than 30 years, his pursuit of new knowledge about the trees has been so thorough that it would be called obsessive, were it not science. He has studied tree diseases, analyzed species from around the world, deconstructed tree stands, and grappled with that bane of the Christmas tree consumer, needles on the carpet.

Now he is helping lead the largest Christmas tree research project in U.S. history, a $1.3 million effort bringing genetic analysis to bear on a devastating root disease and that pesky needle problem.

Other researchers may be better versed in growing trees, says Chastagner, but he and his colleagues are pretty much the international authorities on what happens to a tree after it’s cut.

“We’ve probably done more post-harvest Christmas tree research than anyone worldwide,” he says.

If this strikes you as a quirky scientific niche of little social impact, keep in mind that Christmas trees are a $1 billion industry, with some 15,000 farms employing 100,000 full- and part-time workers. One-third of the nation’s trees come out of the Pacific Northwest.

Production numbers are largely unchanged over the past century, but sales are in decline as the trees face growing competition from artificial trees and dissent from people who vacuum.

Over the decades, Chastagner has consistently been looking out for growers, “trying to figure out a better mousetrap, so to speak,” says Ed Hedlund ’75 Forestry, who has operated a tree farm in Elma since around the time Chastagner started his tree research. He’s provided two official White House Trees, to the Clintons in 1999 and the Bushes in 2002.

“The industry has been around a long time, but a lot of it was natural, Douglas fir from clearcuts,” he says. With the rise of Christmas tree farms, tree growing “became a whole different animal as far as diseases and the culture techniques. It got to be a lot different from what Christmas trees were back in the ’40s. Gary has been good as far as when something new comes up, and there’s always something new.”

Chastagner became a Christmas tree researcher by accident after arriving at WSU in 1978 to study ornamental bulb crops and turfgrass diseases. The state legislature issued a mandate for WSU to study Swiss needle cast, a fungal disease attacking Douglas firs, and an administrator visited from Pullman to offer $30,000 in funds.

“There was no one doing disease work on Christmas trees at the time,” Chastagner says, “and I was sort of the new kid on the block.”

He took on the task and found the disease could be controlled with a single fungicide application. At the same time, Chastagner wondered what the infection was doing to the trees post harvest. He put trees in two vacant rooms at Puyallup, simulating conditions in a home, and sent trees to California for similar tests.

He found infected but otherwise healthy looking trees were drying out twice as fast as other trees and losing significantly more needles while on display. Two trees in particular shed most of their needles in California. Checking his notes, Chastagner saw both were drier than any of the other trees before they were displayed.

This set him on an odyssey of measuring moisture levels in trees shipped to points down the West Coast.

“I visited retail lots from here to Los Angeles,” he says, “and I would measure the moisture contents of trees and what we found is, in western Washington, no problem, western Oregon, no problem, northern California, down to the Sacramento area and the Bay Area, no problem. Southern California, totally different situation.”

There, he says, a large percentage of the trees on retail lots had already dried below the moisture threshold that damaged them.
You can probably guess that the warmer, drying climate of southern California was causing the trees to dry out faster. Chastagner also saw trees being displayed on wooden stands with no overhead spraying, causing them to dry out further.

He set up a simulated Christmas tree lot in Tempe, Arizona, one of the driest cities in America. He displayed some trees dry, some with their bases in water, some with a sprinkler wetting the foliage at night, and a set with both water and irrigation. The dry trees didn’t fare well, but even a sprinkled tree held up. As a result, many retailers in southern California and the southwest now use some system to keep their trees hydrated.

He went on to test how different varieties of trees react to drying. Some, even if displayed in water, last only three weeks or so. But a watered noble fir can last eight weeks, while Nordmann and Turkish firs in one test lasted three months.

Through repeated experiments, Chastagner has found that whatever the variety, and regardless of whether the tree is from a U-cut farm or gas station lot, the single best preservative for a Christmas tree is water.

And lots of it. Each day, a tree needs a minimum of one quart of water per inch of diameter at the base. Of 30 tree stands Chastagner tested, roughly one in four fail to hold enough water for even the smallest tree they could otherwise accommodate. Only two could provide enough water for all the tree sizes they could hold.

“One time I did a story with the Wall Street Journal on Christmas tree stands,” says Chastagner, who has also appeared in the New York Times, the Los Angeles Times, and on National Public Radio. “Their conclusion was, someone who invents the perfect Christmas tree stand is going to have a corner on the market.”
Chastagner is now in the midst of his most industrious work yet, a USDA-funded project to identify just what properties consumers want in a Christmas tree and the genetic traits behind them. The effort has the backing of eight state and regional Christmas tree associations, as well as the National Christmas Tree Association and Weyerhaeuser, which grows seedlings for tree farms. Jeff Joireman, an associate professor of marketing in the College of Business, is working with the national association and will conduct a consumer survey. Researchers in North Carolina, California, Pennsylvania, and Michigan will help with other aspects.

The research team plans to identify genetic markers of firs with desired properties, as well as resistance to Phytophthora root rot, a major scourge, and use the genetic information to screen trees for the most promising sources of seed.

Technically, Chastagner could retire. But the trees keep calling him.

“Research leads to additional research,” he says. Especially, “When you’re curious about things—why is this happening and how can we modify this so it doesn’t happen?”

Of mice, men, and wheat

by Tim Steury :: Although varieties abound, wheat can be more simply considered as either hard or soft, hardness being a measure of the kernel’s resistance to crushing.

All wheat originally was soft-kerned. And there is, so far as we know, no evolutionary advantage to either the hard or the soft trait.

But clearly, somewhere along the line, that section of genetic material that determines the hardness of the kernel underwent a random mutation. Specifically, the Puroindoline a or Puroindoline b genes, which have long been a focus of Craig Morris’s research.

In order to understand the hard/soft divide, Morris, a plant physiologist, suggests that we consider the historical relationship of wheat and humans.

Or rather, wheat, humans, and mice.

“Hexaploid wheat never existed until about 8,000 years ago,” says Morris, referring to the genetic structure of modern wheat. “Ploidy” refers to the number of sets of chromosomes that make up an organism’s genetic material.

“Almost certainly what happened,” says Morris, “Neolithic farmers were growing a tetraploid ancestor. Goatgrass, a diploid, was a weed in the field.”

Goatgrass can cross with wheat, but the union rarely forms a stable cross. Although
they can form a hybrid, it generally is sterile.

In fact, a fertile cross between goatgrass and ancestral wheat, resulting in offspring that can reproduce, has probably been captured by farmers only twice through history, says Morris.

But cross they did.

“Some Neolithic farmer had it figured out,” says Morris. “And hence, the world grows wheat.”

But wheat’s origins shed no light on why some is soft and some hard.

Given its appetite for grain, the house mouse has likely been an unwelcome companion to humans since the day humans started storing grain. In earlier work, Morris and his colleagues had observed that the house mouse “showed a marked (up to fivefold) preference for soft wheat kernels over hard.” Although the hardness mutation in wheat is rare, if mice preferred the soft wheat, the number of hard kernels in a given batch would increase. When the farmer planted his wheat in the spring, he or she would plant an inordinate number of hard wheat kernels, which would in turn increase the likelihood of more hard kernels in the next harvest—which the mice would ignore in favor of the soft kernels. Thus, Morris formed his hypothesis: “The house mouse, due to feeding preferences, exerted phenotypic selection for hard kernel texture in wheat, thereby increasing the frequency of the hard mutant Paroindoline allele at the Hardness locus.”

To test that hypothesis, Morris and his colleagues conducted a series of trials wherein mice were fed a mixture of hard and soft kerneled wheat. The proportion of the hard kernels initially was 0.9 percent to 10 percent.

After “allele selection” by the mice, the proportion of hard kernels averaged 31 percent overall. In other words, the mice shifted allele frequency by as much as 10-fold.

“One can envisage,” write Morris and his colleagues in a recent report in the journal Ecology and Evolution, “that within a limited number of planting/harvesting cycles, mouse predation would indeed shift the population of a theoretical landrace to the hard allele. Once fixed, there would be little opportunity for the Paroindoline gene to mutate back to the soft phenotype.”

Although determining how long it took the hard wheat to evolve is difficult, the researchers estimate, conservatively, that the allele frequency could have reached 99 percent in a mere few centuries. <<
I was determined to know beans.”
—Thoreau, Walden

HAVING ABANDONED journalism and returned to her family’s farm on Whidbey Island, Georgie Smith ’93 started gardening, and one thing led to another. Smith had at least two things going for her, family land and a knack for farming. Farmer’s markets sales led to supplying restaurants, and ten years later, she’s still in business, farming 20 acres on Whidbey’s Ebey Prairie outside of Coupeville with four full-time employees and the same number of three-quarter time workers.

Even though Smith grows multifarious crops—greens, alliums, potatoes, tomatoes, carrots, whatever—at the heart of her enterprise right now is a lovely little bean called the Rockwell.

Besides its superb taste, the Rockwell is noted as growing well in a climate not particularly conducive to dry beans. It germinates well in cool soil and matures up to three weeks earlier than other dry beans.

The Rockwell is what we call an “heirloom” bean, a label generally attached to crops that have been saved and passed down through generations because of their value, whether that be flavor, adaptability to a region or climate, or other factors, including attractiveness.

Indeed, heirloom seeds are generally much prettier, often unusually so, than commodity beans, or beans you buy in a bag at the supermarket. Such is certainly the case with Rockwells. They are a light ivory color, overlain with mahogany, which varies in surface coverage from just a few small spots to nearly the whole bean.

The bean was introduced to Whidbey Island by Elisha Rockwell in the late 1800s. The pioneer came to Washington from Maine, by way of Colorado. It is uncertain where he got the beans.

Vegetable historian William Woys Weaver believes the Rockwell came from a very old Hungarian bean called the Rote van Paris or Piros Feher.

The Rockwell gained favor among church ladies on Whidbey who competed as to who brought the best beans to church potlucks. Smith is adamant that her grandmother made the best.

Brook Brouwer, a graduate student in horticulture, and Carol Miles, professor of horticulture at WSU’s Mount Vernon Research Station, are conducting variety trials of heirloom beans they have collected from a 12-county area of western Washington.
When he talks with gardeners and farmers about the seeds they save, says Brouwer, “They say they want something that grows well, tastes good, and ‘we love them because they’re beautiful.’” In other words, growers of heirloom beans will select not only for hardiness and flavor, but for looks.

The Rockwell is one of 20 heirloom beans in Brouwer’s variety trials. Others include the Swedish brown bean brought by Jungquist ancestors in the 1880s; a cranberry bean grown in Skagit County since the 1920s; the Henderson, a pole bean grown in Snohomish County since the 1930s; and two different soldier beans, one grown in Skagit County since the 1920s and the other in Clallam County since the 1940s.

For comparison, Brouwer is also testing commercially available beans and the Orca, a variety developed by USDA breeder Phil Miklas at Prosser. Brouwer and Miles believe that demand for locally produced foods has opened a market opportunity for dry beans in western Washington. Although eastern Washington grows approximately 115,000 acres of dry beans, which is about 10 percent of total production nationally, western Washington has never seen any large commercial production of the legume.

Miles, who has promoted dry bean production on a small scale for years, in Africa as well as the Olympia and Vancouver areas, does not envision beans as a major high-value crop for small farmers. Rather, they provide an important niche in a viable farm system, building nitrogen in the soil and breaking disease cycles.

They also taste good and are very nutritious, angles that graduate student Kelly Atterberry is pursuing (see sidebar).

Atterberry and scientist Carol Miles also focused on working with Washington farmers to establish a local market (the schools) through the grassroots Farm to School organization. In partnership with Willowood Farms on Whidbey Island, the Rockwell heirloom bean has taken root in the school gardens. The ultimate vision is to source locally grown beans to lunchrooms around the county, says Atterberry.

Atterberry is optimistic that this broad approach will provide a better understanding of bean potential in school lunchrooms and the effectiveness of hands-on education. In mid-September students will sample the bean dishes for the first time. Atterberry hopes that by growing and understanding the legumes, and having tasty choices, if the kids try them, they just might like them.

Julie Thayer is responsible for maintaining 17,284 accessions of beans. Thayer ‘11 MS is the interim curator of the Phasolus collection of the Western Regional Plant Introduction Station, one of four regional stations in the United States maintained by the USDA Agricultural Research Service as the National Plant Germplasm System. The stations are responsible for maintaining plant genetic resources and making them available to researchers. The Pullman station also maintains collections of cool season legumes, cool season grasses and safflower, horticultural crops, and temperate forage legumes.

For more about the Phasolus collection and the National Plant Germplasm System, visit wsm.wsu.edu/extra/seed-house.

Find Grandma Smith’s recipe for baked beans at wsm.wsu.edu/extra/baked-beans-recipe.
Perhaps the most venerable of tree fruits, the pear is luscious, but can be difficult.

Maybe, say some, the Washington pear needs some new blood.
Ray Schmitten ’85 and I stand on a grassy bench above the Wenatchee River Valley, a forest of Anjou pears at our back, as he points and talks about the interplay between his family and the landscape of the valley.

In 1897, his great-grandfather had a sawmill up Brender Canyon. He started out taking the mill to the timber.

“He moved up to that ridge and logged it out. Finally in 1921, he moved the mill and everything down here and bought that old logging truck in my driveway.

“Great-grandpa was not much of a farmer. He would buy timber in the flats out here, log it, plant apples and pears, then sell the orchard. So there are a lot of orchards around that my family started.”

Schmitten’s grandfather and great uncle then took over the family operation. They also hated the farming part of it, he says. They liked the industrial part, the milling. Then Schmitten’s father joined in. He liked the farming part, a preference that has played a major part in the Wenatchee River Valley in defining the Anjou pear—and in the Anjou defining pear production in the valley.
Over the years, Anjou has become the dominant variety for the valley, for a number of reasons. For one thing, it stores well. Even before refrigeration, says Schmitten, the Anjou would store for six to eight months.

But the Anjou’s appeal goes far beyond storability. What gives the Wenatchee growing district its advantage over other areas in growing pears is the same thing that gives it the advantage for apples and grapes and just about any other crop. And that’s control of water.

Here in the eastern foothills of the Cascades, the climate is desert. But desert supplied by abundant water. Three separate irrigation systems feed the orchards along the Wenatchee. Even up here, a thousand feet above the valley floor, irrigation canals wind their way around the convoluted slopes.

Because of the area’s climate, fire blight, the bacterial scourge of pears, is not such a dramatic problem as elsewhere. Which means fewer chemicals to control it. Mildew, which occurs in more humid growing areas, is almost unheard of in the area, says Schmitten.

The earlier ripening Bartlett is a fine pear. For many people, the Bartlett defines pear taste. But they do not winter well up here. Temperatures below zero will damage a Bartlett tree.

“After a bunch of winter freezes, we ended up with more Anjous than Bartlets,” says Schmitten.

Which is how the slopes and benches above the Wenatchee River came to be Anjou heaven.

“So well are the Anjous entrenched, in fact, that it can seem that the entire valley and its orchards are stuck in the past.”

“Those trees are right around 80 years old,” says Schmitten, nodding toward a block of gnarled, wizened trees.

In contrast to the younger trellised apple orchards downriver, the orchards of the Wenatchee Valley are like another country. And when you harvest fruit from 100-year-old trees, which many do, you think differently, at least in terms of time.

Also, much in contrast to the large apple orchards to the southeast, much of the pear acreage is on steep slopes. Two acres here, five acres there, half an acre there. Twisting narrow lanes lead to ever higher patches of orchard.

Dad bought this block, it was all apples and pears intermixed.”

Anjous are not entirely alone up here. Pears, under ideal conditions, can be self-fertile. That is, they do not, technically, need another pollenizer variety to bear fruit. But another variety helps.

Which is why the Bartlett is interspersed amongst the dominant Anjous.

Along with the control of water come the temperature swings. Hot days and cool nights mean great sugars.

And then, whether it’s a complicated combination of these factors or something yet unidentified, the Washington Anjou has the smoothest finish.

Any pear aficionado understands “melting.”

And when the Anjou is perfectly ripened, the melting finish is perfectly smooth.

The Anjou did not conquer the Wenatchee Valley all at once.

“If you were here a hundred years ago, you would see sage, some alfalfa, some pears, apples, a little bit of everything,” says Schmitten. “When
“It’s a management nightmare,” says Schmitten, “so it takes people who’ve got a little more patience. They’ve got to understand a little bit about everything.

“They’ve got to understand differences in water pressure at the top, they’ve got to understand soil variations.”

Apple growing and pear growing are about as different as, well, apples and pears. But because of this difference, some Washington growers fear the pear industry is losing its grip.

The key to the success of the modern apple industry is the dwarfing rootstock.

Neither apples nor pears “breed true.” The only way to propagate a variety, say the Anjou or Golden Delicious, is to graft a piece of “scion” wood from the chosen variety onto a separately grown rootstock. Although the scion determines the variety, the rootstock generally controls the tree’s vigor and other traits.

Although dwarfing rootstocks have been used for centuries to control the size of apple trees, the super-dwarfing ones generally were developed in the last half-century. The occasional standard-size orchard still exists in central Washington, but most orchardists have moved to trees so dwarfing that they are grown on trellis systems like grapes.

The primary advantages are they are easy to manage, they produce apples quickly (often within the second or third “leaf”), and because there is far less wood and long branches, they are far more efficient in terms of fruit produced in a given space. Although an apple variety may take 12 to 14 years to develop, once it meets the breeder’s expectations, it can be introduced within a few years on dwarfing rootstock. If the market’s taste for a certain variety changes, that variety can be grafted onto dwarfing rootstock and quickly, at least relatively speaking, propagated.

Most pears, on the other hand, are planted on a limited number of only semi-dwarfing rootstock. Pears grafted to the commonly used OHF87 rootstock, for example, will produce a tree that is about 80 percent the size of a standard pear tree and will mature and pay for itself in about 14 years.

Most of the pear trees around Cashmere and throughout the Wenatchee Valley were planted on standard size seedling rootstock as long as 100 years ago.

Also, because of their age, many of the orchards were laid out to accommodate horse-
Kate Evans was hired to be a “pome” breeder. Pomes are, generally speaking, the fruits of flowering plants within the Rosacea family. But for all practical purposes, pome breeding means apples and pears. And in Evans’s case, for all practical purposes, this has meant apples.

Although Washington is the largest producer of pears in the United States, apple production far surpasses that of pears, which means apples get most of the attention. And research dollars.

What money there is, the Yakima Valley growers would like to see dedicated to developing new varieties. The Wenatchee Valley growers, some of them, anyway, would like new rootstocks.

And then there is a contingent of pear farmers, primarily in the Wenatchee Valley, who see no need for new rootstock or varieties. Eighty-year-old Anjous on seedling or OHF rootstocks have served them quite well, thank you very much.

Schmitten, who is director of research for pear growers in the Pacific Northwest, says he’ll go into a Cashmere coffeeshop, and there will be a table of pear growers, and they’ll say, “You haven’t found a new rootstock yet? We don’t want a new rootstock.”

Schmitten is not entirely unsympathetic. Back at his house, he gestures toward a block of pears adjoining his yard. He’s been wanting to take it out and replant it with smaller trees, primarily to address labor issues.

But then he can’t bring himself to do it. “How can I take out a producing block that’s making me money, only to have no income for 7-8 years and investment paid back in 14 years?”

Evans, who has been very busy developing and releasing a line of new apple varieties, looks a bit weary as she expresses her desire to work on pears. But like so many things, it boils down to a question of money.

“She also understands the pear culture as a curious conundrum.

“We’ve got this issue, growers here are making money, but not making the huge amount of money that would allow them to reinvest in new orchards. While these orchards are productive and continue to make some money and a reasonable living, why change them?”

But she also sympathizes with the need for change. A major issue within existing pear orchards is labor, which is multi-problematic. The largely Hispanic labor force is aging and shrinking. The need for apple pickers competes with pears. The shorter, trellised apple orchards are far easier to pick and better paying. Pear orchards still require ladder work. Pears are heavier than apples. And the one major pest of the Wenatchee Valley orchards, the pear psylla, can make picking miserable. Pear psylla produce a sticky honeydew. Picture perching on a 12-foot ladder with a very heavy bag of pears hanging from your shoulders and everything is coated with honeydew. Who wouldn’t rather move down valley and pick apples off a six-foot-high trellised tree?

All of those problems could be corrected with smaller pear trees. Management is an additional, and overwhelming, issue.

“Spraying in these big trees is a nightmare,” says Evans. “You can’t target your spray, so the volume of spray is horrendous.

“Integrated pest management systems, all the things that have developed on the apple, you can’t really do so well in a pear orchard, because the whole pear orchard culture, the whole structure of the tree” is not amenable to modern practices.

There is some movement on the horizon. In August, Stefano Musacchi will be joining Evans at the Tree Fruit Research Station in Wenatchee. A plant physiologist from Italy, Musacchi has bred some pear scions and rootstock and will bring some of his material with him.

Meanwhile Evans has tried to source material from breeding programs in France and Great Britain.

Amit Dhingra will be conducting comparative genetics work in a move to characterize that material.

“Where we are,” says Evans, “is very much foundational.”
THE PEAR AND THE APPLE, though of the same biological family (Rosacea), are two completely different fruits. In fact, if we thoroughly understood our fruit as a culture, we might express dissimilarity by comparing “apples to pears” rather than “apples to oranges.” Though admittedly, the apple/pear comparison would hold more delicious ambiguity.

The apple is approachable, friendly, and immediate. You can pick an apple ripe from the tree or buy one at the grocery store and bite into it and be immediately rewarded. Most modern varieties of apples are straightforward, rewarding one primarily with varying proportions of sweet and tart and a bracing mouth feel. Apples make you feel good.

So of course will the pear. But the pear, in contrast, can be elusive and mysterious. Sophisticated. One must carefully time the eating of a pear. Whereas an apple is, ideally, picked when ripe, a pear actually ripens better when picked mature, but not ripe. In order to achieve perfect ripeness, it must ripen off the tree in storage.

Most commercial apples are young. The popular Honeycrisp was released in 1991. Even the seemingly venerable Granny Smith was introduced to the world a mere 90 years ago.

Pears are earthy and old. The two dominant varieties grown in Washington are the Anjou and the Bartlett. The Anjou, or Beurre d’Anjou, is believed to have been introduced in the early to mid-19th century; the Bartlett, more properly known as the “Williams bon chretien,” probably in 1765. Newer varieties have simply not caught on.

The pear demands, but then rewards, patience. It does not generally offer immediate gratification. But the payoff is luscious and profound.

To ripen a pear, simply leave it out at room temperature. If you want to hasten ripening, you can put it in a bowl with bananas, which produce a lot of ripening ethylene, or in a paper bag, which will concentrate the pear’s own ethylene.

Wondering what to do with your Washington pear? Check out The Crimson Spoon: Plating Regional Cuisine on the Palouse, a new cookbook highlighting Washington’s bounty of good ingredients. Readers can feast their eyes on beautiful pictures and cleverly uncomplicated recipes from Executive Chef Jamie Callison, who trains WSU College of Business students in culinary arts and serves meals for WSU’s visiting dignitaries and guests. Read more about The Crimson Spoon cookbook in our holiday gift guide, wsm.wsu.edu/crimsongifts.
Chuck Peters '61, '65 MS is frustrated to no end.

He has targeted “RosBreed,” a multi-university genetic initiative aimed at improved breeding of fruits within the Rosaceae family. Apples, raspberries, … sweet cherries, sour cherries.

“Sour cherries!” says Peters, astounded. No, he has nothing against sour cherries. But they are hardly a significant crop for Washington. But sour cherries and no pears?

Yes, pears have disappeared from the RosBreed prospectus.

“We’re years behind the rest of the world,” he says.

At 75, Peters is officially retired. But he is still active in oversight of his orchards, in following fruit research and breeding worldwide, and most definitely, letting his opinion be known.

Peters ’61 and his wife Cathy live in a lovely 1920s cottage style house in the Yakima Valley, just up the road from Wapato, in the midst of orchards, which he would prefer be more pears.

The pear block that was until recently across the road is now an open field. It was originally planted to pears in 1888.

“That should be pears,” he says of the empty field. “But no, it’s going into apples, and it’s going into red delicious!

“That should be back into an enhanced elite pear variety with good consumer demand on a precocious rootstock that will increase productivity, reduce production costs, and reduce labor inputs. Or the potential for mechanization.”

The pear orchard that is now gone was actually planted two years before the irrigation systems were available, says Peters. The landowner hauled water from the Yakima River in wooden tanks and kept them alive until irrigation arrived.

“This is a homestead ranch, 1876. Pears were planted here in 1927. My father farmed it until I took over.”

After finishing his master’s in horticulture at WSU and working for four years at Colorado State, Peters returned to the farm in 1966. His son joined him in the early 1990s.

In 2002, they downsized to the original homestead of 60 acres, three-quarters of which is pears.

Like most pear growers in the Yakima Valley, Peters grew primarily Bartletts for processing and drying.

But canneries are closing, says Peters. The only market for canned pears anymore is institutional.

Canned pears can be quite good, often much better certainly than the off-season “fresh” pears that we consumers are assumed to insist on.
“U.S. per capita market for pears is 3.2 pounds per year,” says Peters. “I don’t know why there isn’t concern about the future.”

Throughout history, pears have seen a very inelastic market. “A little bit extra volume, you’ve got to reduce prices to sell product.”

The best way to generate a larger market for pears is to develop new varieties, says Peters. But there is only one pear breeding program in the country, a USDA program in, of all places, West Virginia.

The vast majority of U.S. pears are grown in Washington, Oregon, and northern California.

“The two pears sitting over there, we bought on Sunday,” says Peters. Now it’s Thursday, and they’re not yet ripe.

“They’ve got some product on them that doesn’t let them ripen well,” he says. “That’s not what the consumer wants.”

Cathy slices the two Anjous and brings them over to the table.

The flesh is nicely melting for a pear in July. But it has no flavor.

“Tell Ray about this,” jokes Cathy.

As a matter of fact, Ray had retrieved a couple of pears from his house at the end of our orchard tour. Anjous, of course, they represented the latest attempt to provide a delicious pear after months of storage. Each was encased in a separate clear plastic clamshell to concentrate the ethylene production of the pear and enhance its ripening.

They were indeed delicious.

Unfortunately, stored pears are not always so good. Storing a pear presents enormous challenges, and the tradeoffs are clear.

Indeed, at the heart of the pear’s problems is that of ripening after storage.

Amit Dhingra plans to solve that problem.

“Industry wants to store fruit longer,” says Dhingra, who is a molecular biologist and plant genomicist, “so they started applying 1-MCP.”

1-MCP, short for 1-Methylecyclopropene, is a synthetic plant growth regulator that is used to slow down fruit ripening. It is related to the plant hormone ethylene, which is used to hasten the ripening process.

The growth regulator has been used successfully in apples. That is, the treated fruit remains crisp and juicy. Unfortunately, the apple’s aroma disappears.

“If you go to the apple aisles right now,” says Dhingra, “you smell Pinesol. You don’t smell apples.”

Even so, goes the thinking driven by our desire for year round availability, pears are like apples. Let’s try some 1-MCP.

“Lo and behold,” says Dhingra, “pears never ripen once you put on 1-MCP. The primary reason, in our analysis, they’re picked mature, but not ripe

“Let a pear ripen a little bit and then apply 1-MCP, it might work. But then they turn mushy.”

So Dhingra and his lab discovered compounds that can reverse the effect of 1-MCP.

“We went back to the pears, found all the genes, and then tested which ones are blocked.”

1-MCP blocks aromatic pathways in the pear. Their compound reactivates the pathways and reverses the impact of 1-MCP. The compound is being tested commercially.

There is hope.

There is hope also in the genomicist’s toolkit for speeding up the process of creating new varieties and rootstocks. Dhingra and colleagues have already released a map of the pear genome.

With a good map of the pear’s genes in hand and further mapping of flavor, resistance, and other trait markers, breeders like Evans can proceed with their exploration with a little more confidence and speed.

Dhingra’s laboratory is also developing methods of micropropagation and other tools, which have been commercialized into a company.

“Everything is directly available to farmers,” says Dhingra. One of his graduate students is director of operations.

Having laid out the need for change, however, let us at least briefly consider another perspective, one that is suggested by some farmers’ reluctance and even the ambivalence of Evans and Schmitten and others.

There is something at least nostalgic, if not romantic, even magical, about those lovely 100-year-old pear trees above Cashmere. There is also something romantic about anachronism, in this case not only the orchards themselves, but the way of thinking that they produce and are a result of.

Schmitten talks about a neighbor who continues to plant pears on OHF97 rather than the more dwarfing OHF87 because production of the trees on the latter starts to fall off after about 30 years. In a culture seemingly in continuous flux, such a long-term way of thinking is refreshing.

“I think that’s why I gravitated to pears,” says Dhingra. “The older culture. It’s interesting that pear farmers will grow apples and cherries, too, but call themselves pear farmers.”
BERNICE “BUNNY” LEVINE ’51 IS FREE FOR LUNCH. She thinks. But first she has to call her agent to make sure she doesn’t have an audition.

The last time I checked in with her, the 80-something actress was on her way to shoot a Hooters commercial. Her life has gotten so much more interesting since she retired, she says. Especially now that she has moved to California and thrown herself into her lifelong dream of being an actress.

Levine grew up in East Orange, New Jersey. She had a sister whom she describes as the pretty one, but, she admits, she got the attention. “I’ve been performing from my earliest memory,” she says, explaining that she loved to sing for people the popular Oscar Hammerstein song “When I Grow Too Old to Dream.”

When Levine walks across to the plaza to meet me at the Sherman Oaks Galleria for lunch at the Cheesecake Factory, I get the impression of a Jewish grandmother with great skin, who does yoga and dresses stylishly. Her purse is over her arm, her once foxy red hair now a beautiful white—with her agent’s approval. Her eyes are bright blue, her features are soft, malleable, full of expression. She turns on a smile.

You’ve probably seen her somewhere. Most recently, she’s made appearances on the sitcoms Raising Hope and 2 Broke Girls. “I think of myself as a very unfunny human being,” she says, explaining that her husband’s jokes were often over her head. “But I’m almost always cast in comic roles.”

In the Adam Sandler comedy You Don’t Mess with the Zohan, she plays Older Lady in Salon #3, a customer to Sandler’s Israeli commando turned hairdresser. She is content to be typecast. Often her parts are described as “Old Lady,” “Kindly Older Woman,” “Mabel,” “Enid,” “Hilda,” “Grandma,” and “Mrs. Rosenbaum.” “I’m the old lady, often Jewish, with an edge and comic undertones,” she says. Besides Sandler, she has worked with Robin Williams, Eddie Murphy, Dave Chappelle, and Warren the Ape.

“Bunny,” as the directors call her, has a sweet open face that easily amplifies her expressions: joyful, dour, befuddled, chagrined, and amused. All float across it as we talk. We start with her childhood in East Orange, singing and performing for her parents’ friends and later falling for Bernie Levine ’52 and “running after him until he caught me.” Bernie was advised to go study at Washington State College, so they married and landed in Pullman for a time. “It was culture shock at first,” says Levine, a far cry from city life in East Orange. They lived in married student housing, and then took a little apartment on Maidenhair Lane. While Bernie studied math, Bernice made friends and pursued English, dramatic arts, and psychology. “I actually did a lot of theater there, too.”

But, “In college, it began to dawn on me that I wasn’t a good leading lady,” she says. “There were other women who were just as good as me, but tall. And beautiful.” So she turned her efforts to education, which led to a library career at schools back in New Jersey. It was often fulfilling, she says. But not always.

After retirement, she turned back to acting. “I was doing community theater and went right in to whatever I could. The first television show that I spoke on was Law and Order,” she says, explaining that every talented actor who works in New York has at least one Law and Order credit. “I was a witness in a lineup who couldn’t be sure. My line was ‘I think it’s number two.’” She also landed a spot on Sex and the City. “But the lines were cut. I was so disappointed.”

Overall, she delighted in the experiences, seizing chances to work with other actors and new directors, whether on stage or in front of a camera.

In the 1990s, Bunny looked west and saw more opportunities in Southern California. So for a brief time both Levines were spending time on both coasts. But then Bernie was diagnosed with pancreatic cancer. “It was hard after my husband died,” says Levine. Acting kept her going. “It was my salvation to get out of the house.”
Bunny Levine’s life is a movie—and she’s in charge of the script—one where her dream of becoming a screen actress comes true, where one day she is acting for free in a local theater production, the next she’s wearing a nun’s habit on set, and the third she’s in a crowd of older women doing water aerobics for a commercial. Hers may be a lively, unpredictable life, but Bunny Levine is onto something.

Retirees who return to work often have a greater sense of control and fulfillment than their non-working counterparts, says WSU economist Bidisha Mandal. As a result, they have better mental health. Mandal specializes in health economics at the WSU School of Economic Sciences. Several years ago she co-authored a study on job loss, retirement, and the mental health of older Americans. The initial study used data collected for the National Institute on Aging and the Social Security Administration to compare people who lost their jobs involuntarily and those who retired voluntarily. But as she reviewed the Health and Retirement study data, Mandal was also able to look at the impact of re-employment on depressive symptoms. The group was around 60 years old, and most had at least 12 years of education.

There was a gender difference in the results. Men reported more negative well-being after retirement, while women reported less. It seems that women adapted to retirement faster, says Mandal. But with both groups, a return to work improved their health.

Generally, the results were mixed because the retirees found themselves needing to adjust to a different lifestyle, often feeling less in control. On the other hand, some showed lower stress levels due to greater autonomy after leaving a workplace. Nonetheless, re-entering the labor force is overall beneficial, says Mandal. Retirees find work gives them a social network, a focus, and as it improves their mental health, it reduces their health expenditures. “It is important for us to look at this as a society, at the benefits of having this be a working population,” she says.

The Merriam-Webster version of retirement includes “the withdrawal from one’s position or occupation or from active working life.” But today it has come to mean something very different. A few decades ago companies had mandatory retirement ages and people were forced to leave their jobs, whether they were personally or financially ready to do so. Today, people are seeing retirement as a fresh opportunity to follow a passion, to leave a legacy, to make a positive difference. “I tell people I failed retirement,” says Nancy Talbot Doty ’50. After “retiring” from her job at the Department of Health and Social Services, she has been called back to work nine times. When she wasn’t back interviewing clients for eligibility, she devoted new energy to her involvement in local Republican Party politics. And then, just in the past few years, something new. Inspired by the Washington State Heritage Center’s legacy project to collect oral histories from Washington state leaders, she seized the opportunity to visit with local figures and collect their histories. It put her DSHS interviewing skills to use. “I love history and I love to write,” says Doty.

She turned her attention to Duane Berentson, a longtime state legislator and former head of the State Department of Transportation. She had managed his campaigns in the 1960s and already knew a lot of his story when they sat down together for a series of interviews. The published result, Duane Berentson: Life as a Team Player, provides an accounting of his life, with special attention to his years as a politician and public servant. Doty didn’t take the task lightly. “He was a very good subject,” she says. “I did a bunch of additional research and recorded our interviews on a plain little old cassette recorder.” And then, she rolls her eyes, “countless hours of transcribing.”

Berentson died in July. But thanks to his and Doty’s work, his story and memories are preserved for his family, for his hometown of Anacortes, and for those interested in the history of our state.

Looking around her community, Doty found other opportunities to capture local memories. In 2007 she sought out the stories of the Mount Vernon High School classmates of her late husband, Jack Doty ’50. Many of them served in the armed forces during World War II, some drafted just days after graduation. They served in Europe, Guam, and Iwo Jima.
Ray Harnden returned home and studied engineering at WSU before going to work for Boeing. The collection of memories was a project Doty completed in time for their 65th reunion.

“And you haven’t even asked me about what I spend most of my time on,” says Doty. The daughter of two WSC alumni who met in Pullman, she grew up singing the Cougar fight song at the dinner table. Now, when she’s not writing in the small office at the front of her house, she’s taking part in WSU events as a charter member of the President’s Associates, as mother and grandmother to several WSU alumni and students, and as a participant in the WSU Impact program, an alumni effort to support civic advocates. “I’d say, even with everything else I do, WSU is my main activity,” says Doty. “It’s difficult to imagine Cougars sitting around looking at the walls. Cougs don’t retire. They just keep on working.”

In the past, older people were seen as a burden to society. There was hardly any emphasis on the positives of aging, says Cory Bolkan of WSU Vancouver’s Human Development department. Part of her work is exploring personality, health, and aging. There used to be no recognition that there are benefits to working after retirement not only for older people, but for society as a whole. “As we age, we tend to get more generative, we have a greater drive to give back,” she says. “People do that in different ways. Some focus on their children and grandchildren. Some are mentoring and volunteering. Some are involved in civic efforts.”

Former Oregon State Senator Mike Thorne ’62 and his wife Jill x’62 left public service in the Portland area to return to their hometown across the state in Pendleton. Back living on the family cattle ranch, they have helped revive the Pendleton Roundup and bought and restored a historic property downtown. They’re eager for new challenges in serving their hometown. Mike Thorne most recently signed on to serve on the city’s airport commission, and Jill Thorne has joined Travel Pendleton, an initiative to draw more visitors.

It’s important for retirees not to lose sight that during their work-lives they have done things and learned things that would be of value to their communities, says Mike Thorne. “We can bring some stability to a community in flux.”
TIM THOMSEN ’77 decided not to wait until retirement to follow his dream. Three decades ago he paddled his way into a kayak guide business in the San Juan Islands. One morning this summer, just a few days shy of his 65th birthday, he stood on the beach giving directions to a group about to explore some hidden coves. It’s all pretty awesome, he says of his sea-worthy life. “I have paddled every inch of every island in the San Juans.”

Someday he’ll sell the business, says Thomsen. But not yet. It’s bringing him money, providing him a role in his community, and keeping him healthy.

Thomsen majored in horticulture at WSU and in the mid-1970s found a job as a nursery manager at Friday Harbor. Several years in, a friend took him out in a sea kayak and he was smitten. “It’s one of the most amazing vantage points you can have,” he says. “It’s silent. You’re just off the water. You can hear the snort of a seal, the little blow of a porpoise, or the honk of a heron.”

When he started the business, hardly anyone knew what sea kayaking was. Now there are at least three kayak guide businesses in the San Juans, and thousands kayak around the islands every year. Thomsen enjoys seeing paddlers return year after year. “I have clients that were young couples the first time and they’ve come back with their 21-year-old children,” he says. “My summers are very hectic and crazy... But I love it, the beauty of it, the exercise.”

How we age is an issue of both genetics and the environment, says Bolkan. Genetics are only 25 percent of it. The other 75 percent is environmental, the where and how of living. “We have some control over it,” she says. Through our behaviors, we can potentially minimize some of our problems including things like diabetes, heart disease, and dementia. And attitude seems to be key.

“Those with more positive views about aging tend to age better, even on a physiological level,” says human development expert Bolkan. She is looking at how setting and pursuing goals can affect late-life experience. She has looked at how goals may affect well-being, interviewing 85 adults aged 60 to 92. Addressing the questions “Who am I?” and “What do I find to be meaningful?” in the Wiley-Blackwell Handbook of Adulthood and Aging, she writes, “people become who they are via the ongoing activities, projects, or goals in which they engage over the course of their lives.”

Crista Claar Whitelatch ’72 and her husband had successful Navy careers before retiring and eventually opening Claar Cellars at the farm her parents homesteaded near Zillah.

Enlisting right out of WSU, Claar Whitelatch started as a legal officer with a helicopter squadron in San Diego. She later served on the staffs of several admirals managing personnel and in Washington, D.C., worked for the Secretary of the Navy as a member of the White House liaison staff.
"I picked the Navy because the tours changed every 18 months, and sometimes the leadership changed," she says. She liked the challenge of the new assignments, as well as the travel and adventure.

Her husband Bob was eligible to retire from the Navy in 1983, which prompted them to look back to Washington. She continued working through the Navy reserves until her retirement 12 years later. But they were already working on the foundation of the winery. Her dad had planted the farm’s first grapes in the 1970s, and Crista and Bob improved the vineyard, eventually replacing the apple orchards with 120 acres of wine grapes.

For years they were told the alchemy of soil, weather, and location on the high banks above the Columbia River gave their fruit some unique qualities. Their whites, for example, "had a really great balance of flavor to acidity," she says. "They can be sweet, but not cloying."

They had tasted it for themselves. After some careful planning, the Whitelatchs decided to go a step further and make their own wines. Their labels today include Claar Cellars, Le Chateau, Ridge Crest, and Kelso. Now they are moving the operation into a more sustainable way of farming by reducing chemical inputs and fostering wildlife habitat. The business is certified "Salmon Safe" as well as certified as "Limited Input Viticulture and Enology." This life after retirement is far from relaxed, says Claar Whitelatch. "You don’t own the winery. The winery owns you."

The pursuit has allowed them to blend their children into the business. Today, older son John focuses on sales and marketing and James handles the vineyards. "It has been great. And Bob and I have been able to travel with it, going to New York, Massachusetts, and Florida," to represent their wines at shops and restaurants, says Claar Whitelatch. Still her favorite part of the business is "making a quality wine and seeing people taste it and respond to it."

As the business matures, the Claar Whitelatchs plan to transfer the day-to-day duties to their sons and keep the most enjoyable parts for themselves: expanding the business, making wines they’re proud of, and adapting to whatever nature and industry sends their way. “So much changes in the seasons and with the winery,” says Whitelatch. “It’s never the same.”

**"WE’RE LIVING SO MUCH LONGER,"** it gives us a lot of freedom to make something new and create a new meaning for aging,” says Bolkan. “Despite a lot of negative perceptions, most older people are happier. Older people are better at managing their goals and are more focused on doing what is meaningful.”

Late life has at times been viewed as a period of decline and disengagement rather than creativity and contribution, writes Bolkan. It’s something that is reinforced in the media. These aging stereotypes can have a negative effect. But there is also a way to look at aging, identity, and adaptability (for example the ability to negotiate physical losses like strength and flexibility) that can highlight the resilience of older adults. We sometimes forget that throughout our lives, and well into being older adults, we are continually refining and can be redefining ourselves, says Bolkan.
Some scholars have determined that by knowing ourselves and by integrating age-related changes into our identity and maintaining a positive self-image, we can age more successfully. “Nothing in our psychology supports the idea that you just check out and laze about,” says Bolkan. “If you are more active, the better off you will be—and happier. That’s the new future of retirement.”

Bunny Levine will be the first to say that while her Hollywood life is lively, it isn’t entirely glamorous. She competes with a pool of talented actors. There are some women, when she sees them at an audition, she knows they’ll get the part. “The rest of us might as well leave,” she says. And in the past few years with the recession, fewer shows were being made and parts were harder to come by. Often actors who before would only take lead roles were seeking supporting parts on TV shows, pushing the character actors like Levine out of jobs.

Still, her credits include Everybody Loves Raymond, Gilmore Girls, Community (as Pierce’s mother), Southland, Criminal Minds, a Disney Channel show, and a score of commercials (think Capital One—she’s the lady swinging her purse at a Viking in a checkout line). When it comes to identity, Levine has no problem defining herself. “I look sweet, but I’m not sweet,” she says. “The real me is sort of tough.”

When Levine isn’t acting, she’s meeting a friend for brunch and a movie, swimming twice weekly at the Motion Picture Home, attending her book club, and often flying back to the East Coast to visit her family. The secret to a good retirement is finding and doing things you love, says Levine. “And most of all, have fun.”
The Beguiling Science of Bodies in Motion

by Eric Sorensen

illustration by Bruno Mallart
Despite its many mysteries, biomechanics serves up surprises about strained muscles and bones broken and mended.
Earlier this year, at the ripe age of 38, Bernard “Kip” Lagat ’01 became the fastest American ever to run two miles indoors. It was a feat of both speed and longevity, helped in large part by a fluid, seemingly effortless running form the New Yorker describes as “perfect.”

It was not always so. In fact, Lagat’s performance, as well as two Olympic medals and several other American records, may never have taken place without the long tutelage of James Li MS ’87 MS, ’93 PhD, who recruited Lagat from Kenya’s Rift Valley Province in the mid-90s.

“He was pretty good,” Li recalls “but I would venture to say that he was not as smooth as he is now.”

Li, who continues coaching Lagat while serving as a coach at the University of Arizona, has a résumé that includes more than ten years with WSU’s track and field and cross-country programs, as well as the collegiate 800-meter title in his native China.

It also helps that his WSU master’s degree is in biomechanics.

Biomechanists, as they are sometimes called, straddle the worlds of engineering and biology. Like engineers, they study the physics of objects in motion or under strain, but their objects are living things. That introduces a host of complications. An engineer can design a vehicle on the known properties of steel, wheels, a motor, and so forth. A biomechanist will wrestle with muscle cells of varying power and body parts articulating under the direction of their owner’s neurology, not to mention personal style.

Seemingly simple questions quickly get complex, like, “How do we hold up our head?”

“Scientists don’t really understand that,” says Anita Vasavada, an associate professor of bioengineering and neuroscience who has made one of the most sophisticated models of neck musculature.

David Lin, a biomedical engineer and Vasavada’s husband, is currently struggling to model how a human trips and falls, a sort of Lagat gone bad. It’s a complicated process, with lots of parts—arms, legs, a torso—moving in three dimensions and sometimes acting against each other. For simplicity’s sake, his model has no spine or arms.

“You’ve got to pick your battles,” he says, “and you’ve got to make a hypothesis about what you think is important and then you create a model that provides a representation of whatever that is. Then you run your model and try to make some conclusions.”

In spite of the challenges, biomechanists are indeed managing to draw conclusions, or at least some striking intermediary insights.

In a Moscow, Idaho, symposium earlier this year, WSU biomechanists discussed with other Northwest researchers the pigeon-toed running style of grizzly bears; ways accelerometers can detect dyskinesia, a side effect of Parkinson’s disease treatment; and how a concussion might affect the torso of an adolescent.

There is the one of the most sophisticated models of neck musculature.

A curved, narrow post, it has to hold up a head that weighs more than a gallon of milk and keep it stable enough for consistent vision and hearing. At the same time, it needs to make large movements, like looking over your shoulder.

It does all these things quite well, but its dual purposes make it inherently flawed.

“You have these conflicting demands of mobility and stability,” says Vasavada. “When you have too much or too little of those, most likely you’re going to have pain.”

Vasavada came to study the neck by way of the leg, which had been extensively modeled by her Northwestern University doctoral advisor, Scott Delp. His model helped analyze problems like the crouch gait that has children with cerebral palsy walking with excessively bent knees. His work pointed the way for surgeries to remedy the problem. Vasavada came to Delp after several years working with cadavers and implants in a spinal biomechanics lab, so he suggested she try modeling the neck.

She ended up developing the first musculoskeletal head and neck model based on the neck’s actual anatomy. With 20 color-coded muscles in play, it looks like a scaffold of multicolored pick-up sticks set on their ends and running at odd angles among the shoulders, spine, chin, and head.

She has since used her model in an extensive study of whiplash. It is the most common motor vehicle injury, as well as the most poorly understood. This is largely because the neck offers plenty of parts to be injured, with three joints on each of its seven vertebrae, as well as ligaments, discs, nerves, and arteries. Focusing on the neck muscles, Vasavada collaborated with forensic engineers who had volunteers sit in a car seat and experience a five-mile-an-hour rear-end collision. High-speed video documented their body movements, while electrodes recorded their muscle reactions.

As Vasavada replays the video in her McCoy Hall lab, it’s easy to see a participant’s head snap backwards as the collision thrusts his body...
forward. Earlier research tended to focus on this motion and the strain it places on the large sternocleidomastoid muscles that run from the collar bone toward the ears.

“Most people have focused on the early phase of whiplash and the sternocleidomastoid,” says Vasavada, “but most of the pain that people report is on the backside of the neck.”

The video suggests why as the crash victim’s head rebounds and shoots forward. Vasavada put these movements into her neck model, which could then calculate the forces and potential strains on other neck muscles.

Muscles are generally injured when they are lengthened too far while tensed. “It’s called an eccentric contraction,” says Vasavada, explaining that it releases chemicals like creatine kinase, which lab tests can use as a measure of muscle breakdown. It can also rupture muscle cell membranes.

Vasavada’s analysis showed significant lengthening of the sternocleidomastoid. It also showed that the strain rate was higher in the muscles behind the neck, possibly explaining the soreness that whiplash victims report there.

Vasavada has also tackled another neck enigma: The inordinate percentage of women who experience neck pain.

Estimates vary, but women are as much as three times more likely than men to experience chronic pain after a whiplash injury. There could be cultural reasons, says Vasavada. They could drive smaller cars that absorb less of a collision’s energy. They could more often be passengers and less aware of an impending rear-end collision. They could have different reactions to pain or a higher threshold for seeking medical attention.

Or it could be biomechanical.

With that in mind, Vasavada measured the neck length and neck strength of 90 subjects and found 14 pairs of men and women with heights and neck lengths within half a centimeter of each other. The women ended up having heads that were only slightly smaller in circumference—about 3 percent—than their male counterparts. But their necks were on average 16 percent smaller. In other words, their small necks were being made to work 33 percent harder than the thicker necks of their male counterparts.

“They’re kind of closer to their limit and possibly more likely to fatigue just by the simple act of holding up their head,” says Vasavada, “much less than when you put them in the Army and put a heavy helmet on them, those kinds of things.”

Most recently, Vasavada and Lin have been pondering how all our necks will fare in the rapidly dawning age of the tablet computer.

In some ways, users interact with them much as they have with old-school technology like books and newspapers, says Vasavada. But newspaper readers might move more, reducing fatigue, she says. Also, “It may be that tablets force you to stay in that same position, you’re just so enthralled. Especially with games, and that’s where people have the great potential to get neck pain.”

“People report being on their iPad for hours, six hours a day,” adds Lin. “Most of us aren’t reading a book six hours a day.”

Vasavada and Lin photographed subjects using iPads in a variety of postures: with the iPad flat on a table, on a stand, on a user’s lap. Because necks vary from person to person, with the actual positions of vertebrae hidden by muscles and other tissues, they also took x-rays.

Sure enough, they saw the tablet user’s heads move forward, activating more neck muscles to hold up and balance their 10-pound heads.

“When you’re in this head-forward posture,” says Vasavada, “your muscles need to be anywhere between two and a half to three times more active.”

Over the years, scientists and regulators have determined the best ergonomics for desktop computers. But despite their growing popularity says Vasavada, “There are no guidelines for tablet PCs at this point.”

“So that’s why these studies are important,” says Lin.

Lloyd Smith is one of the nation’s leading experts on bats and balls and what happens when they collide. His Sports Science Laboratory has tested bats for the National Collegiate Athletic Association and blown away some of baseball’s storied assumptions, like the myths that a corked bat hits the ball farther and that baseballs today are livelier than, say, the late ’70s.
Modeling the properties of bats was easy, he says. Modeling the properties of a ball, less so. And things really get tough when you introduce the human element and ask how to improve player safety.

“There’s a number of questions you can ask,” he says one afternoon.

“One is: If you get hit by a ball, when does injury occur? What is being injured? Are you breaking bone? Are you bruising? Are you causing internal injury? And if you have that injury, what are the criteria for when something is injured? Is it based on acceleration? Is it based on rate of deformation? Is it based on force or stress? Even trying to figure out what the right injury criteria are is a challenge and not something that people know.”

To get started, Smith has called on Derek Nevins ’10 BS, ’12 MS Engineering. A former Vasavada graduate student and now a research project engineer, he has repeatedly slammed a ball into a virtual human head.

The head comes from the Total Human Model for Safety developed by the Toyota Motor Corporation and Toyota Central R&D Labs. Based on data drawn from cadavers and high-resolution CT scans, the color-coded model gives a detailed look at the properties of not only an adult human head as a whole, but components like teeth, eyeballs, skin, skull, meninges, even different sections of the brain.

“Play this model so he can see the brain slosh around,” Smith says to Nevins. “I’m always amazed when I watch this.”

Nevins raps his keyboard and soon a softball is careening in slow motion toward the forehead. The ball compresses as the head lurches back, then forward. Indeed, the brain moves slightly behind the head, sloshing ever so slightly inside the cranium.

In some ways, the video is largely for scientific street cred.

“Many of the people we work with have no idea what we’re doing,” says Smith. “We’re working with softball coaches and baseball coaches. So actually the video for them is very helpful because they believe very little by providing bone stresses that the researchers can compare with known stresses from actual cadaver and impact studies. They can also see the stress contours of balls with different stiffnesses as they hit the forehead.

Already, the work has shown that two outwardly identical softballs, each approved for the same level of play, can vary so much that one can have a 63 percent greater impact on a head.

Their work has also yielded a striking, counterintuitive revelation: If you are going to get hit in the head by a ball, you may be better off if you don’t see it coming.

A fielder caught unawares is more likely to be facing the ball. He or she might lose some teeth or break a nose, or the ball might hit the stiff forehead, in which case a softer ball will cause less damage.

But a player who sees the ball coming might turn his or her head, exposing the softer temporal area. Ray Chapman, the only professional baseball player killed by a pitched ball, was hit in the temple.

“The injury that is most severe, a temporal impact, really isn’t affected by the stiffness of the ball,” says Smith. “So for a federation, if their goal is to reduce injury, OK, then lower the stiffness of the ball and you reduce injury in this case. If your goal is to reduce fatalities, well, reducing ball stiffness isn’t going to help.”

Ten years ago, Washington State Magazine had a cover story on the work of engineering professors Amit Bandyopadhyay and Susmita Bose. The cover had a picture of their son Shohom and the headline, “It’s not easy to mimic nature.”

It remains a recurring theme of their work, if not biomechanics in general, but they have been having remarkable success nonetheless.

Since meeting at Rutgers University in the late-’90s, they have spent much of their careers creating a synthetic bone, with Bandyopadhyay focusing on its engineering and Bose on the chemistry and application to human health. At first glance, it might seem easy. Bone is mostly calcium phosphate. Shape it, bake it into a ceramic, and you’re good to go.

But chemistry, physics, and biology, particularly at the cellular level, soon get in the way.

“There are many issues,” says Bandyopadhyay. “It’s really fishing in a big ocean.”

Ideally, a physician can tailor some replacement bone to the size and shape of a break and insert it into the body. The body will then use the replacement as a scaffold on which it will build new bone as the replacement
dissolves. Throughout the process, the replacement will perform like regular bone, providing structural support until its natural replacement takes over.

If the replacement dissolves too fast, the bone breaks again. If it doesn’t dissolve, a patient can get too much new bone, even cancer.

“It can actually kill a patient,” says Bose.

One challenge is that bone has, in addition to calcium phosphate, trace elements whose function can be largely a mystery. By adding just half a percent of strontium oxide, which is already in use as a drug to treat osteoporosis, an OK bone material becomes exceptional. Similarly, Bose and Bandyopadhyay have found the addition of silicon and zinc more than doubles the fake bone’s strength.

Another challenge: Depending on where they are placed, different materials heal at different rates. Healing that takes three to six months in a jawbone can take nine to 12 months in the spine.

All while patients tend to want quick results. Basically, says Bandyopadhyay, Mother Nature has 10 to 20 years from a baby’s birth to grow and mature a bone.

“However,” he says, “when there’s a bone fracture, you cannot tell a patient, ‘I’ll put in something and it’s going to be healed in 20 years.’ The patient wants the fracture to be healed if possible in six days... Essentially we need to learn from what Mother Nature has done but we also need to learn how we can accelerate the process so things happen faster than the natural kinetics.”

In spite of all these challenges, they’re starting to make it work. Two years ago, the couple drew national attention when, with the help of a $1.5 million National Institutes of Health grant and equipment support from the M.J. Murdock Charitable Trust, they produced their bone-like material on a 3D printer. The work bolstered the possibility that doctors will be able to custom order replacement bone tissue in a few years. In vitro lab tests showed the material was biologically compatible, as have later tests involving rats and rabbits.

“So far the compositions we have done in the animal model show significant promise in terms of bone formation in the scaffold as well as some blood vessel formation,” says Bose.

That said, it’s still hard, she says.

“We will always keep doing as scientists or engineers the research that needs to be done to solve the problems related to human health,” she says, “but it will still be difficult to mimic Mother Nature.”

The work of WSU’s current biomechanists is a world removed from James Li’s master’s studies in the mid-’80s, when he had none of the high-speed video and computing power behind today’s biomechanical models. Using 35-millimeter film, he analyzed steeplechase hurdleurs by focusing on a dot on the hinges of their moving joints.

A decade later, he started videotaping Bernard Lagat and analyzing his form. He relied on observation, not scientific measurements, but he could detect several flaws that on the track translated into crucial seconds: a high knee lift that would affect the landing angle of the foot, a long hang time that suggested too much energy going up, not forward.

Li suggested changes so small and subtle, they might not have yielded any significant data if he could have measured them. As it was, he couldn’t.

Still, he says: “A biomechanics education, the background there, was extremely important, because it gave me the basic principles, the basic science of it, when you have Newton’s laws and angular forces, torque, momentum, and all those things.”

For his part, Lagat earlier this year told Track and Field News that biomechanics has prolonged his career.

“[If] I could credit one person with that, it’s my coach,” Lagat said, recalling videotaped sessions on a treadmill and repeated suggestions to tweak his technique.

“I wasn’t the guy who knew how to run really good like that,” Lagat said. “Coach Li was the one, back in Pullman.”

Li is reluctant to take credit for Lagat’s longevity. But he does say that, now, Lagat’s form is, “efficient, light—it’s like he’s flowing. The flow is just very smooth and he’s known in the track community as probably the most smooth runner.”

Thanks in part to biomechanics, Lagat is one of the world’s great bodies in motion.
Show me where it hurts: To begin calculating the forces of a ball on a human head, WSU’s Sports Science Laboratory turned to the virtual head of Toyota's Total Human Model for Safety. Based on data drawn from cadavers and high-resolution CT scans, the color-coded model helped researchers determine that two balls approved for regulation play can have vastly different effects on a head. They also saw how where the ball hits can make a huge difference in its potential for injury and death.
Three Great Ways to Belong to One Great Organization.

There are over twice as many members of the WSU Alumni Association (WSUAA) today than there were just a few short years ago. They joined to support student scholarships, take advantage of all the incredible member benefits, and connect with other Cougars. We extend our thanks to all the alumni, students, friends, faculty, and staff whose membership has helped the WSUAA claim its rightful place among the finest and fastest-growing alumni associations in the country. We salute our Annual, Life, and now Platinum Life Members.

New: Platinum Life Membership.

Platinum Life Membership is the newest way to belong to the WSUAA. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. Platinum Life Members enjoy all the same great benefits and services as Annual and Life Members, plus a growing suite of extras.

If you have not yet joined, or you are a current member interested in one of the other membership types, please sign up today. Your membership—regardless of which type—is vital to the continued success of the WSUAA and WSU.

1950s
Nancy Turnquist Sandbloom ('53 For. Lang. and Lit., Ed.) and her granddaughter Allison Dore ('13) celebrated reunions and graduations on their recent trip to Pullman.

1960s
Steven D. Aust ('60 Ag., '62 MS Dairy Sci.) has been named as the Preston, Idaho, Citizen of the Year for his dedication to local community service. Carol Lemon Allen ('61 Eng.) and her husband, owners of Arizona Boating and Watersports and Western Outdoor Times have won the "Media of the Year" award from the Arizona Game and Fish Department and the Award of Merit from the National Water Safety Congress. Allen has also been awarded Outstanding Adjunct Faculty for Arizona's Maricopa County College District.

Ken ('65 Bus. Ad.) and Bonnie Miller ('65 Home Ec.) were named 2013 Washington Tree Farmers of the Year.

1970s
Dr. Marvin Slind ('72 MA History, '78 PhD History) retired from teaching at Luther College and has earned the title of professor emeritus. Slind taught at WSU from 1989 to 2000 in the history department after serving in the WSU Office of International Education from 1977 to 1989.

Dave Lester ('73 Com.) retired from the Yakima Herald-Republic after 37 years of service.

Dr. Alan Gross ('79 PhD Psych.) was awarded the newly established "Award for Excellence in Graduate Teaching and Mentoring" at the University of Mississippi graduate school where he is a professor of psychology.

Steve Lutz ('79 Com.) has joined Washington tree fruit marketer Columbia Marketing International as vice president of marketing.

1980s
Peter Anderson ('81DVM, PhD Vet. Med.), director of pathology undergraduate education in the School of Medicine at the University of Alabama at Birmingham, has been selected for a Fulbright Specialists project. Anderson will lead faculty-development programs and hands-on workshops at the Tzu-Chi University College of Medicine in Taiwan for two weeks.
Atop towers of power

Dan Rottler ’92

by Eric Sorensen :: On a windy night, when some of us might worry about things going bump in the dark, Dan Rottler ’92 frets over 20-ton boxes of gears turning more than 200 feet above the ground. The gearboxes are like outsized automobile transmissions, capable of cranking the energy of the slowly turning 16-rpm blade of a wind turbine up to 1,800 rpm.

As plant manager of Puget Sound Energy’s Wild Horse Wind and Solar Facility, Rottler has 149 of these beasts to lose sleep over. Not to mention wildfires, lightning strikes, microbursts of changing weather, blizzards, ice-covered power lines, and even more unexpected things, like the time the Kittitas emergency dispatcher said homeowners were calling “about the mountain flashing.” A switch in a power substation had malfunctioned, creating a blindingly bright three-foot arc.

“So I came up in the middle of the night and I felt like Frodo going to Mount Doom,” he says. “There was smoke everywhere and this flashing light in the center of it… I called the load office and said, ‘Shut it down!’ Not good.”

Oddly, Rottler tends to thrive on moments when things don’t go quite right. Sure, he would much prefer things go smoothly, and understands that a plant manager needs “to have a little more paranoia than other people.” But when things do go wrong, they also get interesting.

“My job has always been to minimize how many things go wrong,” he says, “but it’s also to troubleshoot and correct anything that does.

Wild Horse is one of Washington’s largest wind-power facilities, as well as one of the most visible, with 262-foot rotors mesmerizing drivers on I-90 between Ellensburg and the Columbia River. At full capacity, it can power 80,000 homes, or nearly all the households in Spokane.

But while Rottler keeps a weather eye on the electricity produced by the facility, he was trained as a mechanical engineer, and the mechanical side of the operation is daunting. It’s hard to overemphasize: The wind turbines are huge. Even from the top of a nacelle, the bus-sized unit holding the blades, transformer, gearbox, and generator, a blade may look to be, say, 40 feet long. But it’s actually 129 feet long. It weighs seven tons. That slow-looking blade tip can be moving 150 mph.

The towers weigh more than 100 tons. When they were being erected, contractors built a concrete plant and quarried rock on the site for the tower foundations. The foundation bolts alone can be 28 feet long and weigh 150 pounds.

The towers had to be put up in sections with a massive crane. Their interior ladders were installed while they were still on the ground. To avoid stressing the structure, they’re attached by magnets.

A gearbox is the most expensive part to replace in the nacelle, and installation requires a
149 turbines turn on Whiskey Dick Mountain in Kittitas County. Courtesy Puget Sound Energy

Dan Peterson ('82 Hist.) has been serving as the vice chancellor for institutional advancement at the University of Illinois in Urbana-Champaign since December 2012.

Craig Cheek ('84 Broad.) has been promoted at Nike Inc. to be the new vice president of men’s training, which oversees the company’s training, baseball, and football businesses, including the relationship with the NFL.

Laurie Leland ('84 HRA) was named president of the Assistance League of Seattle, taking over from fellow WSU alum Becky Bates-Shull.

Brett Wiggins ('84 Arch.) was promoted to principal at Global Architecture and Design Firm in Seattle.

Loretta Tuell ('88 Pol. Sci.) has started her own company, iNative Consulting LLC, which started operations on July 1.

1990s

Kevin Cash ('94 Land. Arch.) and Steele Fitzloff ('98 Land. Arch.) have been hired as a landscape architect and landscape designer, respectively, at the landscape architecture department of Bernardo-Willis Architects.

Keith Tyacke ('95 Bus. Admin.) joined Natural Molecular Test Corp. as chief financial officer.

Dr. Susana Reyes ('96 Elem. and Sec. Ed., '07 EDD) was appointed by Governor Jay Inslee to the Washington Student Achievement Council in May.

Stacy Pritt ('97 DVM) became one of three charter diplomats by examination for the American College of Animal Welfare. Stacy is at the University of Texas Southwestern Medical Center.

2000s

Tom Cowan ('00 Architecture) has been hired as the Oregon sales consultant for Saxton Bradley Inc.

Laura Grunenfelder ('03 Bio., '05 MS Hort.) has been named as the Northwest Horticultural Council's science policy specialist.

Ana Cabrera ('04 Broad.) has joined CNN as a correspondent based out of Denver, Colorado.

Navy Seaman Christopher N. Franzese ('08 Eng.) has completed U.S. Navy basic training at Recruit Training Command in Great Lakes, Illinois.

Jim Brown ('10 Pol. Sci.), a sergeant in the Washington Department of Fish and Wildlife, has been named as the regional director for the agency’s North Central region based out of Ephrata.

Blake Jones ('12 Com.) joined Fidelity Associates Brokers in Spokane last December.

IN MEMORIAM

1930s

Ruth Hazel Cook Gleason Westbrook (x’37), 96, July 20, 2013, Pullman.

Errett Deck ('38, '45 Ag.), 95, May 8, 2013, Tumwater.
Though she fled Hungary in 1956, author Helen Szablya has ceaselessly worked to help her homeland. Photo Matt Hagen

Helen Szablya ’76

Living in interesting times

by Hannelore Sudermann

Only seven when World War II came to Budapest, Helen Szablya remembers that December night in 1944 when she woke to the sound of bombs. The Soviet air raid was just the beginning of a siege that lasted more than a year and led to a Soviet occupation that culminated in a bloody attempt at a revolution in 1956.

At one point during the siege, all 22 members of Szablya’s household took shelter in a little room that was normally used for ironing. It was on a lower floor and the safest place in the house. The family and their workers stretched their supplies, eating soup made from flour, lard, and water from melted snow. “Thank God for the snow,” says Szablya.

In her family’s summer home in the hills of Buda, they were trapped between Russian soldiers and German and Hungarian soldiers. For a brief time both sides left the family untouched because Szablya’s father was a doctor, and the soldiers worried they might need his help. By February of 1945, the city surrendered. But little Helen, and her home city, had another 11 years of Soviet rule to endure.

Szablya spent her earliest years between her grandparents. Her grandfather owned a pharmacy and made perfumes, soaps, deodorants, and cosmetics. She had a governess, a chauffeur drove her to school, and two angelic little sisters awaited her return. Though she fled Hungary in 1956, author Helen Szablya has ceaselessly worked to help her homeland.
Hungarian revolution. Her mission, she says, is to share her story and that of her natal country so people will know the history and the details of life under the tyrannies of fascism and communism.

As a teen she helped her mother keep the remaining family together and in Budapest, where her grandfather couldn’t survive without them. The effort involved her mother divorcing her father, who had since moved from Paris to Canada, so she could marry another doctor. Then other families had to adopt the two younger girls, and Helen needed to get married. “My mother used to say our life was just like a musical, only we had to keep rewriting the script,” she says.

The communists shipped the capitalists out of the city, but out of necessity they kept the engineers and doctors in town. John Szablya, an engineer and the bright and handsome son of a family friend, became Helen’s primary suitor. Though the plan was for her to find an engineer to marry and stay in the city, it was John who sought her out. “He asked me,” she says, then with a giggle, “Actually three asked me.”

They married in a civil ceremony when Helen was just 16. Then four months later, they married in a secret church ceremony. It was a clandestine event late one evening, because the communist leaders wanted to eliminate religion and its ideas. When Helen arrived at the church, she found it full of friends and family, all who had spread the word of the wedding without it leaking to the government officials.

In the following three years, she had three babies. John moved to a job teaching at a university, and Helen was a student there. The Szablyas

Barbara F. Browning (’51 Home Econ.), 83, May 29, 2013, Fairfield.
Stanley Morgan Miller (’52 Animal Sciences, Lambda Chi Alpha, ROTC), 84, January 20, 2013, Eastside.
William S. Roberts (’54 General Studies), 83, July 26, 2013, Mercer Island.
Donald E. DeFeyer (’56 Mech. Eng.), 81, August 1, 2013, Klamath Falls, Oregon.
Raymond W. Loan (’58 DVM, Beta Theta Pi), 82, June 28, 2013, Bryan, Texas.
Gerald Richard Fox (’59 Chem. Eng.), 76, July 29, 2013, Walnut Creek, California.

1960s
Judy Ann Harder (x’60), 73, May 18, 2013, Hooper.
Thomas Frederick Jackson (x’60, Tau Kappa Epsilon), 75, June 20, 2013, Seattle.
Mary Louise Evans Conrad ('61 Mus.), 75, May 16, 2013, Shoreline.
Ronald Lee Garrett (x'61), 72, June 3, 2013, Endicott.
Michael L. Standley ('65 Pharm.), 73, July 26, 2013, Boise.
Edward L. Wells ('65 Mathematics), 71, March 27, 2013, Pasco.
Judith Ann Porter ('69 German), 67, August 2, 2013, Deer Park.

1970s
Thomas Bennett Lopp ('71 Ag.), 64, May 28, 2013, Tumwater.
Roberta M. Smith-Kosin ('71 MA Home Econ.), 89, April 13, 2013, Seattle.
Charles Benton Searcy ('72 MED), 72, June 1, 2013, Moose Jaw, Saskatchewan, Canada.
Fred L. Bess ('76 HRA), 61, June 22, 2013, Edmonds.
Leslie Diane Sundberg ('78 CCFS), 58, May 25, 2013, Everett.

1980s
Charles D. DeJong ('82 English), 52, June 9, 2013, Edmonds.
Steven S. Covert ('85 Chem. Eng.), 50, June 11, 2013, West Richland.

1990s
Shannon Kathleen Connall ('93 Social Science), 44, July 24, 2013, Portland.
Cornell Knight ('93 Soc.), 58, August 3, 2013, Kent.

2000s
Gary R. Shintaffer ('00 Comm.), 36, June 25, 2013, Mill Creek.
by Tim Steury :: David Cox’s life seems equally divided between his South Bend pharmacy and hunting. And family encompasses both.

Cox is the second generation of a three-generation dynasty of pharmacists in South Bend, the county seat of Pacific County, just upstream on the Willapa River from Willapa Bay.

Don Cox ’46 graduated from Washington State University twice, first in chemistry before joining the Army during World War II, then in pharmacy in 1946. He began his career in Long Beach, then started the South Bend Pharmacy in 1958. The business is difficult to miss. Just off of U.S. 101, it is painted a tasteful gray with crimson trim. The bathroom, for those slow to understand the allegiance, is distinctively WSU-themed.

Upon graduation, Dave bought out his dad.

“I have been there for 43 years,” he says as we visit on his enclosed porch overlooking Willapa Bay, “and we’ve been open 43 Christmas days. We’re open Sunday twelve to one.

“Matt will work today,” he says, this being Sunday. Matt (’05 Doctor of Pharm.) is the third generation. His wife Kinnarone is a tech with the pharmacy.

While there today, Matt will fill 40 to 50 prescriptions.

“Customer service is everything,” says Dave. Whether that customer service will help the independent pharmacy survive remains to be seen.

“It’s all up to the government,” says David. “We’re operating on a 3 to 4 percent profit margin right now. The only way you can make anything is on volume.”

Even so, he dismisses the notion of chain stores as competition.

“People will drive to Aberdeen to Walmart maybe twice. They’ll sell you a four dollar prescription. Twice. The third time it will be $30.

“You’ll pay me $15.50. That’s my minimum charge, because it cost me $12.50 to fill. Our overall price is way cheaper.”

He then observes that his real advantage over bigger stores is South Bend has only four doctors. “That’s only four doctors to deal with their handwriting.”

The pharmacist in a town of 1,700 has a unique perspective.

With Matt on board, David has more time to hunt. Although he’s proud of the trophies he brought back from South Africa and elsewhere, his “big passion is bird hunting.” It’s as much about the time in nature as the hunt.

He recalls an experience several years ago, when the bay was covered by Spartina, an invasive cordgrass.

One of the worst spots was right below the house.

“Taylor [a son currently at WSU] and I went down on opening day.”

They settled on a hummock, hidden by the Spartina.

“I said, ‘don’t shoot. Just sit here.’ There were probably 20,000 ducks, all sides of us.”

Then he had Taylor fire one shot.

They didn’t shoot a single duck. But the effect of 20,000 ducks taking off all at once was spectacular.

“There’s a sight you’ll never see again,” he told his son. ✎
Catching up with Ken Locati ’85

Ken Locati ’85 rediscovered his Cougar side at a football viewing party. He had lost touch for a while after moving to California. But at McGregor’s Grill and Ale House in San Diego he recaptured the pleasure of watching a game with fellow WSU fans, made some new friends, and rekindled his feelings of connection to the campus in Pullman more than 1,200 miles away.

Before college, WSU had been a big part of his life. The Walla Walla boy was a Coach George Raveling fan and often went to Pullman for games and concerts. “It was just kind of a natural progression that I would go to school there,” he says.

After graduation, he moved to Seattle and started his career in marketing. That led to a move to California in 1998, where he is now vice president of client services with a market research firm in San Diego. He’s passionate about golf and cycling, having completed several century rides, as well as enjoying time with his wife Patricia.

That viewing at the ale house led to volunteering with his local alumni chapter, which led to leadership roles and regular trips back to Washington for alumni meetings as well as football and basketball games. In his best year Locati attended nine football games and 22 basketball games.

Through the Alumni Association he found greater involvement with the University as a whole. It has broadened his world of acquaintances to include alumni around the country, campus leaders, students, coaches, and faculty. “There is a great group of people who care about WSU,” he says. “There are a lot of universities where you never get to meet these people. But at WSU, you meet everyone.”

With 500 events a year, the WSUAA can reach as many as 65,000 people. “And I’m not really counting the viewing parties, where the number of attendees doesn’t always get captured,” says Locati. Many want to give back to the school. “We help our alums support the student body with scholarships and connect with student leaders and other alumni for professional opportunities.” As WSUAA president, Locati wants to expand outreach so that younger alumni don’t lose their connection when they leave Pullman and so older alumni are even better served. “We’ve doubled membership over the past 10 years with nearly 30,000 members,” he says. “Now we’re looking to top 40,000.”

“WSU has always been a family,” says Locati. “We help that family bond extend beyond the years on campus.”

For more information about WSUAA and alumni chapters visit alumni.wsu.edu or call 1-800-258-6978.
Battered Women, Their Children, and International Law
by Taryn Lindhorst ’84 and Jeffrey L. Edleson
NORTHERN UNIVERSITY PRESS, 2012 :: Review by Julie Eckardt ’13 :: The 1980 Hague Convention on the Civil Aspects of International Child Abduction ruled that any child taken from one parent by another across international borders must be returned to their home country for custody to be properly and legally determined. While this saves parents who are victims of child abduction, it doesn’t account for those, especially women, who felt the need to emigrate to free themselves from domestic abuse and save their children from suffering. Because of the 1980 ruling, children taken by their mothers from abusive homes still have to follow the guidelines established at the Hague Convention.

Taryn Lindhorst, who graduated from WSU in 1984 and now works as an associate professor in the School of Social Work at the University of Washington, and Jeffrey L. Edleson, Dean of the School of Social Welfare at the University of California, Berkeley, have written a book that offers an alternative examination of the ruling. Battered Women, Their Children, and International Law looks into the other side of the Hague Convention ruling, examining instead the taking parent, that is, a mother taking her children out of an abusive home. Their book is a collection of interviews with these battered women and their attorneys, as well as analyzing cases where the Hague Convention is called into question.

The book brings to light the negative consequences of the Hague Convention, exposing a new side that wasn’t considered in the original ruling. It also goes into detail explaining the effect of domestic abuse on children and their mothers, the response to the Hague Convention in the context of domestic violence, and how “abduction” shouldn’t be used as an umbrella term because it doesn’t take into account all the different reasons why a child was taken away by one of their parents. This book is informative and exposes the flaws in making blanket statements and rulings without considering all of the justifications for such actions.

The Barbless Hook: Inner Sanctum of Angling Revealed
by Dennis D. Dauble ’78 MS
FISHHEAD PRESS, 2013 :: Review by Tim Steury :: In the tradition of Patrick McManus ’56, ’59, Dennis Dauble ventures into that conjoined alternate universe of outdoor sport and humor, the difference between the two being that Dauble tends to catch more fish. Perhaps that is because Dauble was a fish biologist and McManus was an English major.

Regardless, Dauble sets the tone for the book with an epigram by yet another piscatory alum, Ray Troll ’81: “Fish worship. Is it wrong?” Midway through The Barbless Hook, Dauble directly addresses the relationship between science and religion within the context of fishing. Astounded when his fishing buddy Leroy appeals in desperation to the great god Chinook, Dauble expounds on the mysteries of fishing and other unexplainable things.

Throughout this book of engaging and quirky essays, Dauble examines similarly profound topics such as the moral ambiguity of trespassing in search of a good fishing spot, Jacques Pepin’s technique for making fish sausages, and the hazards and pleasures of being the odd man out.

Dauble, who teaches fish biology and ecology at WSU Tri-Cities, was formerly a fisheries biologist with Pacific Northwest National Laboratory and previously...
Think About That by Chance McKinney ’96
2013 :: Review by Larry Clark ’94 :: As the rhythmic guitars launch “Son of a Gun,” the lead song from Chance McKinney’s album Think About That, it’s easy to get hooked into his industrial country music, a powerful blend of modern country and guitar-driven rock, with some unexpected surprises along the way.

If you can expect anything from McKinney’s music, it’s a solid dose of fun. In the second track, the organ, catchy melody, and backup singers from “Good Life” and one things to ponder in our lives. How can anyone resist a song that name-checks Johnny Cash, Def Leppard, and Chris Farley?

The fun-loving, good-time songs are balanced with some thoughtful ballads with true emotional resonance. The title track, for example, tells of some guys talking their friend out of a disastrous choice. A standout song on the album is “Some Bridges Don’t Burn,” where the hard lessons of relationships come home to the narrator.

One of my favorite tracks on Think About That is “When I Think About You,” a song that resonates with all of us who get easily distracted by the million

new & noteworthy

The Sunlight Solution: Why More Sun Exposure and Vitamin D Are Essential to Your Health by Laurie Winn Carlson ’04 PhD
PROMETHEUS BOOKS, 2009 :: Carlson, who teaches the history of medicine at Western Oregon University, details the vital relationship of humans with the sun. She asks whether we get the exposure to the sun we need for vitamin D, with significant health consequences.

Be Brave, Tah-hy! by Jack R. Williams
WSU PRESS, 2012 :: The twelve-year-old daughter of Chief Joseph of the Nez Perce, Tah-hy, narrates this illustrated biography of the young girl, the Nimiipuu tribe, and their harrowing journey across the American West while being pursued by the U.S. Army.

No Maybe Baby: My Journey through Infertility by Marc Hanson ’12
TATE PUBLISHING, 2013 :: Nurse instructor Hanson shares her and her husband’s struggles with infertility, eventual adoption of three children, and decisions to not pursue pregnancy.

Country Girl: Letting Love and Wanderlust Take the Reins by Sarah Reijonen ’06
LITTLE CAMPER PUBLISHING CO, 2012 :: Journalism alumna Reijonen recounts her globetrotting adventure and her search for the meaning of success and love.
MYTH #35 in the PLANNING YOUR ESTATE SERIES

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